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

In the Matter of	)	
	)	
Review of the Emergency Alert System	)	EB Docket No. 04-296
	)	
	)	

NOTICE OF PROPOSED RULEMAKING

Adopted: June 25, 2014 **Released: June 26, 2014**

Comment Date: (30 days from the date of publication in the Federal Register)
Reply Comment Date: (45 days from the date of publication in the Federal Register)

By the Commission:

TABLE OF CONTENTS

APPENDIX B - Rules
APPENDIX C - Commenting Parties
APPENDIX D - Electronic Test Reporting System (ETRS) Forms

I. INTRODUCTION

1. Today we take steps to strengthen the Emergency Alert System (EAS) by proposing revisions to our EAS rules to address problems encountered during the first nationwide test of the EAS. Specifically, in light of the lessons learned from the nationwide EAS test, which occurred on November 9, 2011,[1] this *Notice of Proposed Rulemaking* proposes to: (1) establish a national location code for EAS alerts issued by the President; (2) amend our rules governing a national EAS test code for future nationwide tests; (3) require broadcasters, cable service providers, and other entities required to comply with the Commission's EAS rules (EAS Participants)[2] to file test result data electronically; and (4) require EAS Participants to meet minimal standards to ensure that EAS alerts are accessible to all members of the public, including those with disabilities.[3]

2. The actions we take today are the first in a series of steps to enhance the existing paradigm for the testing, exercise and use of the EAS in a way that maximizes its overall effectiveness as a public alert and warning system.[4] The above-referenced rule changes are necessary to facilitate another nationwide EAS test in the near future.[5] We believe these proposals also establish key components of the EAS in a manner that provides maximum flexibility and minimal regulatory burden for EAS Participants, emergency managers, government alert originators, communications service providers and other alerting stakeholders who are responsible for testing the reliability of the EAS. In the future, we plan to consider further enhancements to the EAS, such as standardizing the waiver process for EAS "live code" exercises,[6] as well as considering and taking action on recent and future recommendations of the

[1] *See* FEDERAL COMMUNICATIONS COMMISSION PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, STRENGTHENING THE EMERGENCY ALERT SYSTEM (EAS): LESSONS LEARNED FROM THE FIRST NATIONWIDE EAS TEST 13-15 (2013) *available at* http://www.fcc.gov/document/strengthening-emergency-alert-system (*EAS Nationwide Test Report*).

[2] *See* 47 C.F.R. § 11.1(c) (including analog radio and television stations, and wired and wireless cable television systems, DBS, DTV, SDARS, digital cable and DAB, and wireline video systems among the entities required to comply with the Commission's EAS Rules, and defining them as "EAS Participants").

[3] As explained below, we also decline to propose changes to, or otherwise seek comment on, the Commission's rules regarding the processing of header codes and the time of release of Presidential alerts. The current rules are clear, and we find no reason to propose amendments to, or to seek further comment on those issues. *See infra* ¶¶ 51-57.

[4] The FCC, in conjunction with the Federal Emergency Management Agency (FEMA) and the National Weather Service (NWS), implements EAS at the federal level. FEMA has been delegated responsibility for the initial transmission of Presidential alerts and is responsible for the overall administration of the system. NWS develops emergency weather information to alert the public of imminent, dangerous weather conditions. The FCC adopts, administers and enforces rules governing communications service provider participation in the EAS and ensures that EAS state and local plans developed by industry conform to the FCC EAS rules and regulations. *See* Memorandum, Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995) (1995 Presidential Statement).

[5] FEMA has expressed a desire to test the EAS "in the near future." *See infra* ¶ 7 and note 33.

[6] "Live codes," as compared to "test codes," are used as public readiness exercises in areas where particular emergencies (*e.g.*, tornadoes, tsunamis, and other natural and weather-related emergencies) can be expected to occur. *See* Public Safety & Homeland Security Bureau Provides Guidance Regarding Live Code Testing of the Emergency Alert System, DA 09-694, *Public Notice*, 24 FCC Rcd 3701 (2009) (providing guidance to assist EAS Participants seeking to participate in live code testing). EAS alerts containing live codes produce visual and audio messages that indicate that an actual emergency event is imminent, whereas test codes such as the Required Monthly Test (RMT) are used only to evaluate the readiness of the EAS for an actual alert, and produce audio and visual messages that indicate that "This is only a Test." *See* 47 C.F.R. § 11.61. The Commission has granted conditional

(continued….)

Commission's Communications Security, Reliability, and Interoperability Council (CSRIC)[7] regarding the streamlining of the EAS State Plan process,[8] the addition of other elements of the Federal Emergency Management Agency (FEMA)'s Integrated Public Alert and Warning System (IPAWS) to the testing paradigm, and basic EAS security guidelines.[9] Today's action is consistent with the Commission's long-standing goals of ensuring that the EAS is an effective component of a system that provides the public with timely and accurate emergency alerts over as many communications platforms as possible.

II. BACKGROUND

A. The Broadcast-Based EAS Architecture

3. The EAS provides the President and other government alert originators with the capability to send critical alerts and warnings to the public over broadcast and other media communications facilities. Under the Commission's rules, EAS Participants must be able to receive and retransmit EAS alerts initiated by the President.[10] EAS Participants may receive and transmit EAS alerts issued by other government agencies on a voluntary basis.[11] Under the traditional architecture, EAS alerts are distributed via the so-called "daisy chain," a hierarchical, broadcast-based alert message distribution architecture in which a message originator at the local, state, or national level formats a message in the

(Continued from previous page)
waivers of 47 C.F.R. § 11.45, prohibiting false or deceptive EAS transmissions, to entities seeking to use live EAS tones in a non-misleading manner. *See* Letter, Tom Beers, Chief, Public Safety and Homeland Security Bureau, Policy Division, Federal Communications Commission, to Frank Jazzo, Attorney for the Alaska Broadcasters Association (Mar. 18, 2013); *see also* Waiver of Section 11.45 of the Commission's Rules to Allow Broadcast of Public Service Announcements Produced by the Federal Emergency Management Agency to Educate the Public on the Wireless Emergency Alert System, PS Docket No. 07-287, *Public Notice*, 28 FCC Rcd 8176 (2013) (granting a waiver of Section 11.45 for a Public Safety Announcement educating the public on the Wireless Emergency Alert (WEA) tones). On May 21, 2014, this waiver was extended for an additional 18 months, until November 21, 2015. *See* Waiver of Section 11.45 of the Commission's Rules to Allow Broadcast of Public Service Announcements Produced by the Federal Emergency Management Agency to Educate the Public on the Wireless Emergency Alert System, EB Docket 04-296, *Order*, DA 14-689 (rel. May 21, 2014). The waiver is granted pursuant to 11 C.F.R. § 1.3 and 11 C.F.R. § 0.392.

[7] The CSRIC is a federal advisory committee charged with providing recommendations to the FCC to ensure, among other things, the optimal security and reliability of communications systems, including telecommunications, media, and public safety systems, subject to the requirements of the Federal Advisory Committee Act (FACA). *See* 5 U.S.C.A. § 10.

[8] Last year, the Bureau released a Public Notice reminding State Emergency Communications Committees (SECCs) to review and update their state EAS plans. *See* Public Safety and Homeland Security Bureau Encourages State Emergency Communications Committees to Review and Amend State Emergency Alert System Plans to Ensure Up-To-Date Monitoring Assignments, EB Docket No. 04-296, *Public Notice*, 28 FCC Rcd 6239 (2013). In addition, earlier this year, the Commission received recommendations on ways to improve the state EAS plan process from CSRIC. *See* CSRIC IV, WORKING GROUP THREE, EMERGENCY ALERT SYSTEM, STATE EAS PLANS SUBCOMMITTEE, FINAL REPORT 9 (2014), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC_IV_WG3_FINAL_03252014.pdf (recommending a standardized tabular matrix for all EAS State Plan filings); *see also id.* at 12 (recommending that EAS Participants' filing information be cross-referenced with the FCC's Universal Licensing System (ULS), including each filer's unique FCC Facility ID).

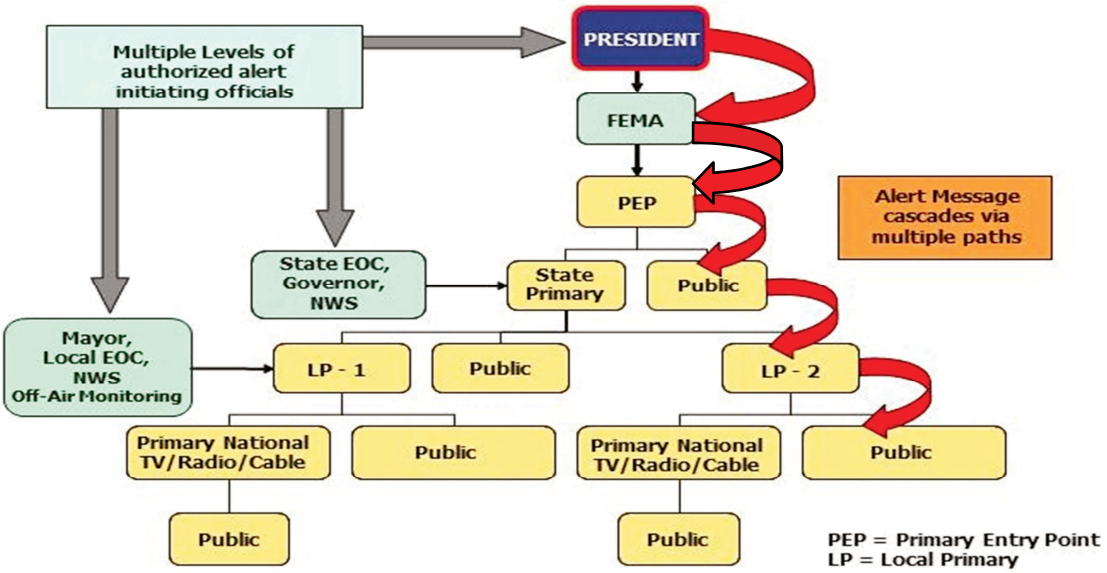
[9] We note that the CSRIC, at its June 18, 2014 meeting, adopted recommendations regarding many of the issues discussed here. We will place CSRIC's report in the docket and consider its recommendations as part of the record in this proceeding.

[10] *See* 47 C.F.R. § 11.2(a).

[11] *See* 47 C.F.R. § 11.41(b)(2).

"EAS Protocol."[12] The message originator then initiates the transmission of the alert at a designated entry point, after which the alert is relayed from one designated station to another until all affected EAS Participants have received the alert and delivered it to the public.[13]

Figure 1. EAS Architecture



B. First Nationwide EAS Test

4. At 2:00 p.m., EST, on Wednesday, November 9, 2011, FEMA initiated the first nationwide test by delivering an Emergency Action Notification (EAN), the live code that would be used by the President in an actual emergency,[14] to the EAS Primary Entry Point (PEP) stations,[15] which, in

[12] *See* 47 C.F.R. §§ 11.31(a) (describing the EAS protocol as a four-part message: (1) preamble and EAS header codes, which 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, and describing the required format for each part).

[13] *See infra* Figure 1; *see also* 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, EB Docket No. 04-296*, Fifth Report and Order*, 27 FCC Rcd 642, 647, ¶ 7 (2012) (*Fifth Report and Order*) (stating that, "[a]t the national level, EAS message distribution starts at Primary Entry Point (PEP) stations," which are a group of geographically diverse, high-power radio stations designated and tasked by FEMA to transmit "Presidential Level" messages initiated by FEMA); *id.* (stating that the PEP stations broadcast the EAN to the public and encode the EAN to be rebroadcast by "Local Primary" (LP) stations that monitor the PEP and, in turn, rebroadcast the EAN and encode it for rebroadcasting by all other EAS Participants); *id.* ("This process of relaying EAS messages from station to station is often referred to as the "daisy chain").

[14] *See* 47 C.F.R. § 11.2(a). The defining characteristics of an EAN are that it automatically takes precedence over all other EAS alerts and can be of indefinite duration, as opposed to all other EAS alerts that are limited to two minutes in length. *See* 47 C.F.R. §§ 11.33(a)(9), (11).

[15] *See* 47 C.F.R. § 11.2(b) (defining PEP stations as the private or commercial radio broadcast stations that cooperate with FEMA to provide emergency alert and warning information to the public prior to, during, and after incidents and disasters); *see also id.* (stating that the PEP stations serve as the primary source of initial broadcast for a Presidential or National EAS message, and noting that this select group of geographically disparate, independently powered, and electromagnetic pulse (EMP) hardened radio stations collectively can reach over 90% of the American populace).

turn, initiated the distribution of the EAN throughout the nation.[16] The purpose of the test was to allow FEMA and the Commission to assess how the broadcast-based national EAS architecture would perform in practice, and to develop and implement any necessary improvements to ensure that the national EAS, if activated in a real emergency, would perform as designed.[17]

5. On April 12, 2013, the Public Safety and Homeland Security Bureau (Bureau) released a report summarizing the findings from the test as well as recommendations for strengthening the EAS.[18] The Bureau concluded that, based on the results of the test, the national EAS distribution architecture was fundamentally sound.[19] However, the report highlighted various problems that impeded the ability of some EAS Participants to receive and/or retransmit the EAN during the test. These problems included poor audio quality, lack of PEP stations, and short test length,[20] as well as inconsistencies in EAS equipment programming.[21] With respect to equipment inconsistencies the report indicated that manufacturers had made different assumptions about the EAS rules that pertain to the receipt, processing, and retransmission of EAS header codes.[22] As a result, alerting information was not processed and retransmitted in a uniform manner throughout the EAS ecosystem.[23] For example, some EAS Participants reported an inability to process the Washington, D.C. location code that was used for the test.[24] Other EAS Participants reported that there was a three-minute delay in their rebroadcast of the EAN due to one EAS equipment manufacturer's interpretation of the Commission's rules regarding the Time of Release code.[25] Finally, some EAS Participants and consumers reported that "the language in the text crawl that EAS equipment generates from the EAN differs among manufacturers, and many EAS Participants'

[16] *See supra* paragraph 3 and note 15 (describing the daisy chain distribution architecture).

[17] *See EAS Nationwide Test Report*, *supra* note 1, at 3. The first nationwide EAS test did not test CAP or the EAS IPAWS-based delivery system. *See id*. at 17, n.45.

[18] *EAS Nationwide Test Report*, *supra* note 1.

[19] *See id.* at 3.

[20] *See id.* at 13. Poor audio quality, lack of PEP stations, and short test length are all issues that fall within FEMA's purview as administrator of the EAS. As the Bureau notes in its report, FEMA has taken steps to address these issues. *See id.* at 14.

[21] *See id.* at 13.

[22] *See id.* at 15 (describing anomalies in the way that EAS equipment handled various aspects of the first nationwide EAS test alert).

[23] *See id.*

[24] *See id*. The EAS rules define the term "location code" as the six digits "PSSCCC" of the EAS header indicating the geographic area affected by the EAS alert. *See* 47 C.F.R. § 11.31(c). The location code uses the Federal Information Processing Standard (FIPS) numbers as described by the U.S. Department of Commerce in National Institute of Standards and Technology publication FIPS PUB 6-4. Each state is assigned an SS number. Each county and some cities are assigned a CCC number. A CCC number of 000 refers to an entire state or territory. P defines county subdivisions as follows: 0 = all or an unspecified portion of a county, 1 = Northwest, 2 = North, 3 = Northeast, and so on around the compass rose. *See id.* Thus, an alert containing "six zeroes" as the location code would specify all states and counties in the U.S. by default. *See* Review of the Emergency Alert System, EB Docket No. 04-296, *Third Report and Order*, 26 FCC Rcd 1460, 1473, ¶ 31 (2011) (*Third Report and Order*). Other numbers may be designated later for special applications.

[25] *See EAS Nationwide Test Report* at 13, 15-16; *see also* 47 C.F.R. § 11.31(c) (stating that, under Coordinated Universal Time (UTC), the day, JJJ, is 0 to 365 (366 for leap year), and the time is HH on a 24 hour clock and minutes, MM, 1 to 60, abbreviated JJJHHMM); *Coordinated Universal Time (UTC) Explained*, TIMEANDDATE.COM, http://www.timeanddate.com/time/aboututc.html (explaining UTC) (last visited Mar. 6, 2014). In its *Ex Parte*, Monroe characterizes this code element as "time of transmission." *See* Monroe *Ex Parte*, at 2. We refer to this element as the "Time of Release" code.

equipment generated a text crawl that went by too quickly or was in a difficult to read font."[26]

6. On September 23, 2013, the Bureau released the *EAS Operational Issues Public Notice* seeking comment on recommendations it should make to the Commission regarding steps the Commission could take to address the problems raised by the November, 2011 test.[27] In particular, the *EAS Operational Issues Public Notice* sought comment on whether the Commission should adopt a national location code,[28] and whether, as an alternative to the use of the live EAN code, the National Periodic Test (NPT) code should be used as the national test event code for future tests.[29] The *EAS Operational Issues Public Notice* also sought comment on how the Commission could ensure that the text crawl and audio portions of EAS messages convey equivalent information, such that members of the public, including those who may have sensory disabilities, would be able to have equal access to emergency information and, specifically, whether the Commission should adopt display specifications to ensure that EAS alerts would be fully accessible to the public.[30] Finally, the *EAS Operational Issues Public Notice* sought comment on whether stakeholders believed that the Commission's rules governing EAS equipment processing of header codes and time of release associated with Presidential EAS messages should be revised.[31]

7. Over 20 parties responded to the *EAS Operational Issues Public Notice*. Most commenters support the adoption of a national location code and use of the NPT in future nationwide EAS tests.[32] Of particular note, FEMA expresses a desire to test not only the EAS, but the entire IPAWS "in the near future."[33] Although FEMA does not provide test specifics in its comments, it does state that it wishes to use an NPT that simulates EAN operation in future testing.[34] Other comments and *ex parte* discussions with EAS stakeholders, including EAS equipment manufacturers, suggest that there are significant technical and operational issues that must be resolved before the NPT is used as part of a future test. Accordingly, in the discussion below we discuss two alternative methods for implementing the NPT.

III. NOTICE OF PROPOSED RULEMAKING

A. Scope

8. Since the first nationwide EAS test in 2011, there have been technological advances and deployments of new systems in the alerting landscape. Most relevant to EAS has been the changeover to alerting that uses the Internet-based Common Alerting Protocol (CAP).[35] In addition to CAP

[26] *EAS Nationwide Test Report*, *supra* note 1, at 16.

[27] Public Safety and Homeland Security Bureau Seeks Comment Regarding Equipment and Operational Issues Identified Following the First Nationwide Test of the Emergency Alert System, EB Docket No. 04-296, *Public Notice*, DA 13-1969 (rel. Sept. 23, 2013) (*EAS Operational Issues Public Notice*), at 3-13.

[28] *See supra* note 24 (defining the location code).

[29] The "event code" describes the type of event triggering the alert. *See EAS Operational Issues Public Notice*, at 11.

[30] *See id.* at 10.

[31] *See id.* at 3-7.

[32] *See* Appendix C for a list of commenters responding to the *EAS Operational Public Notice*.

[33] FEMA Comments at 2.

[34] *See id*. The Commission's rules reference the NPT. *See* 47 C.F.R. §11.31(e). However, the rules do not provide guidelines on how the NPT is to be used or how EAS equipment is to respond when the code is transmitted.

[35] CAP is an open, interoperable, XML-based standard developed by the Organization for the Advancement of Structured Information Standards (OASIS). *See* OASIS, COMMON ALERTING PROTOCOL, V. 1.2 USA INTEGRATED PUBLIC ALERT AND WARNING SYSTEM PROFILE VERSION 1.2 (2009), http://docs.oasis-

(continued….)

implementation, beginning in April 2012, FEMA, the Commission and the wireless industry deployed the Wireless Emergency Alert (WEA) system, which allows the public to receive geographically-targeted alerts over WEA-capable cell phones and other mobile devices.[36] Further, the Nation's communications networks are in the midst of technology transitions which will entail fundamental and comprehensive changes in how data and voice are communicated end to end (involving virtually all aspects of the routing and coding of such communications).[37] Many stakeholders, realizing the impact that this transition will have on the way in which consumers will be able to receive timely and accurate emergency alerts, express the need and desire to routinely test and exercise not only the EAS, but also the WEA and the entire IPAWS to ensure that Americans continue to have access to an effective emergency alert system.[38]

9. While we agree with this assessment and understand the desire for prompt testing of these systems, we believe it is imperative first to establish at the national level overarching parameters for such testing. Such an alerting paradigm would allow alert originators at the federal, state and local levels, as well as other stakeholders, to ensure that these systems are an effective and viable tool for alerting the public. Consequently, with this *Notice*, we continue our dialogue with federal government partners, state and local governments, communications service providers and other alerting stakeholders to achieve this

(Continued from previous page)

open.org/emergency/cap/v1.2/ipaws-profile/v1.0/cs01/cap-v1.2-ipaws-profile-cs01.doc (CAP 1.2 Standard). CAP-formatted alerts can include multimedia such as streaming audio or video. CAP messages contain standardized fields that facilitate interoperability between and among devices. CAP is backwards-compatible with the EAS Protocol. *See Fifth Report and Order*, 27 FCC Rcd 642, 648, ¶ 10. Since June 30, 2012, the Commission's rules have required EAS Participants to receive CAP-formatted EAS alert messages from the IPAWS and convert them into EAS-protocol compliant messages so that they can then be successfully distributed over the legacy EAS via the daisy chain process in compliance with the *EAS-CAP Industry Group* (*ECIG) Implementation Guide*. *See* 47 C.F.R. § 11.56(a); *see also* Tom Wood, *ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0*, EB Docket 04-296 (2010), http://eas-cap.org/ECIG-CAP-to-EAS_Implementation_Guide-V1-0.pdf (*ECIG Implementation Guide* or *Guide*). An EAS Participant that receives a CAP-formatted message can utilize its contents to generate messages in visual and audio formats, which can then be broadcast to its local viewers and listeners. 47 C.F.R. §§ 11.51(d), (g)(3), (j)(2).

[36] WEA is a national emergency alert system intended to complement the EAS that uses CAP to send 90-character, text-like messages with a unique audio signal and vibration cadence to WEA-capable mobile devices. *See Your Wireless Life: Wireless Emergency Alerts*, CTIA.COM (November, 2013), http://www.ctia.org/your-wireless-life/consumer-tips/wireless-emergency-alerts. Since becoming available in April 2012, WEA has already begun saving lives. *See id.* (citing, for example, the first WEA AMBER Alert that prompted a teenager to call 911, leading police to safely recover the abducted child within minutes; an East Windsor, CT alert that helped save the lives of a camp counselor and her students; and an Elmira, NY alert that warned residents about an impending tornado); *see also* Mark Trujillo, *Schock: Warning System Saved Lives*, THEHILL.COM, (Nov. 18, 2013, 10:53 AM), http://thehill.com/video/house/190551-schock-warning-system-saved-lives (stating the opinion of Rep. Aaron Schock that the death toll from recent Midwestern tornadoes would have been higher if not for WEA); Leslie Stimson, *Report: Boston Did Use Wireless Alerts*; RADIOWORLD.COM, (Apr. 24, 2014), http://www.radioworld.com/article/report-boston-diduse-wireless-alerts/219096#sthash.DDQk4Cmj.dpbs (stating that WEA alerts were effective in reminding people to tune to their local station for an EAS alert containing detailed information about how to respond to the bomb threat); *Your Wireless Life: Wireless Emergency Alerts: AMBER Alerts via WEA*, CTIA.COM (December, 2013), http://www.ctia.org/your-wireless-life/consumer-tips/wireless-emergency-alerts/amber-alerts-via-wea ("Southern California residents first received an AMBER Alert via WEA for an abducted teen. Thanks to tips from individuals who saw the alerts on their wireless devices as well as from televisions and radio stations, the alert was expanded to the rest of California as well as other states. Several days later, the teen was safely recovered in Boise, ID.").

[37] *See* Technology Transitions, et al., GN Docket No. 13-5 et al., *Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative*, FCC 14-5 (rel. Jan. 31, 2014).

[38] *See* GOVERNMENT ACCOUNTABILITY OFFICE, REPORT TO CONGRESSIONAL REQUESTERS: EMERGENCY ALERTING CAPABILITIES HAVE IMPROVED, BUT ADDITIONAL GUIDANCE AND TESTING ARE NEEDED 26 (2013) ("[R]egular nationwide EAS testing is essential to ensure that the system will work as intended during an emergency.").

result.

10. As we continue this discussion, it is crucial that we first take steps to address known vulnerabilities in the EAS. In this *Notice*, the Commission seeks comment on proposed rule changes designed to address two of the problems identified by the 2011 Nationwide EAS Test, specifically the lack of a national location code, and the lack of minimum comprehensibility and accessibility guidelines to ensure that the public, including those with disabilities, can clearly understand alerts provided to them. The Commission also seeks comment on whether it should adopt an electronic EAS Test Reporting System (ETRS), and how the Commission should define use of the NPT code for future nationwide tests.

B. Proposed Rule Changes Affecting Header Code Elements

1. Use of a National Location Code

11. Section 11.31(c) of the Commission's rules requires, among other things, that all EAS alert messages include a geographic location code to indicate the affected area of an emergency.[39] The EAS rules contain a list of location codes for the States, Territories and offshore Marine Areas that EAS equipment are required to recognize.[40] The EAS rules do not contain a location code for the entire United States. In the *Third Report and Order*, the Commission declined to adopt a national location code for the first nationwide EAS test out of concern that to do so would require significant reprogramming of EAS equipment.[41] Rather, for the first test, the Bureau and FEMA elected to use the Washington, D.C. location code.[42] Use of this code resulted in inconsistent results across the country. As detailed in the *EAS Nationwide Test Report*, although many EAS Participants outside of Washington, D.C. were able to process the Washington, D.C. code, some EAS Participants reported that their EAS and other network equipment rejected the "out of area" alert, and terminated the test alert partway through the transmission.[43] In the *EAS Operational Issues Public Notice*, the Bureau noted the difficulties arising from the use of the Washington D.C. location code and sought comment on whether the Commission should adopt a national location code for future testing, and if so, what that code should be.[44]

12. Most commenters, including FEMA, support adoption of a national location code to facilitate national activations and testing of the EAS. In particular, commenters overwhelmingly support the adoption of "six zeroes" (000000) as the national location code.[45] Commenters provide an array of

[39] The location code is a six-digit, standardized code conforming to the National Standards Institute (ANSI) standard ANSI INCITS 31-2009 that utilizes six character numbers assigned to various states, counties, cities and portions of counties. *See* 47 C.F.R. § 11.31(c).

[40] *See* 47 C.F.R. § 11.31(f).

[41] *See Third Report and Order*, 26 FCC Rcd 1460, 1473, ¶ 31-32.

[42] *See* Public Safety & Homeland Security Bureau Provides Additional Information to EAS Participants for the November 9, 2011 Nationwide Test of the Emergency Alert System, DA 11-1444, *Public Notice*, 26 FCC Rcd 11461, 11462 (2011).

[43] EAS equipment is programmed to retransmit only such alerts that pertain to the geographic location in which the encoder/decoder is located. Although the Bureau believed that all EAS equipment was programmed to receive and retransmit an alert with the Washington, D.C. location code as though it pertained to the entire nation, some EAS equipment ignored the EAN during the first nationwide EAS test because the Washington, D.C. code was processed as though it only pertained to Washington, D.C.. *See*, *e.g.*, *EAS Nationwide Test Report*, *supra* note 1, at 14 (citing *Emergency Alert System Didn't Work in Oregon*, KVAL.COM (Nov. 9, 2011, 10:06 AM), http://www.kval.com/news/national/133545908.html).

[44] *EAS Operational Issues Public Notice*, at 8-9.

[45] *See supra* note 24 (defining location code); *see also* FEMA Comments at 2 (supporting the use of "six zeroes" as the national location code); NCTA Comments at 4 (supporting the use of "six zeroes" as the national location code because this would "ensure that the national EAN alert is activated the same by all EAS equipment across the country.").

justifications for their position. FEMA asserts that use of the "six zeroes" location code will further harmonize the Commission's EAS rules with CAP standards, which already recognize "six zeroes" as the national location code.[46] Trilithic adds that the addition of the "six zeroes" code for general use is a prerequisite for geo-targeting of the EAN, as EAS equipment would otherwise ignore the location codes if the event code is an EAN.[47] NCTA states that use of "six zeroes" as the national location code will ensure that the EAN is processed and retransmitted in the same format throughout the EAS ecosystem.[48] Sage also supports the use of "six zeroes" as the national location code, but concedes that the "DC code may have a smaller total system cost."[49] Only DirecTV does not support the "six zeroes" location code, stating its belief that "[r]ather than embark upon an untested approach that would rely upon a new nationwide location code . . . the Commission would be better served by continuing to use the approach taken for the Nationwide EAS Test."[50]

13. With regard to the steps that equipment manufacturers need to take to integrate a "six zeroes" location code into their equipment, Monroe and Trilithic note that most equipment is already capable of processing "six zeroes" as the national location code either because the code is resident in the equipment, or because the software in the equipment can be upgraded to accommodate the location code.[51] Other manufacturers note that equipment that reaches the end of its lifecycle will need to be replaced because manufacturers no longer support such equipment and will not provide the type of software upgrade necessary to activate the "six zeroes" national location code.[52] NCTA comments that, notwithstanding the fact that the software in most of its members' EAS equipment can be upgraded to accommodate the "six zeroes" national location code, cable and other multichannel video programming distributors (MVPD) will have to upgrade various "downstream" portions of their networks to accommodate the "six zeroes" code and accurately deliver alerts.[53]

14. Based on the comments received in response to the Bureau's *EAS Operational Issues Public Notice*, we propose that EAS Participants be required to have the capability to receive and process a national location code, and that "six zeroes" be designated as that code.[54] We believe that the addition of this national location code will bring additional consistency to the operation of EAS equipment in both national and local activations. In addition, the equipment and network upgrades that will enable the use of a national location code, taken in conjunction with the Commission's rules requiring that EAS equipment recognize all header codes, will prevent EAS equipment from programmatically ignoring location header codes when used with an EAN event code,[55] thus enabling FEMA to use other specific

[46] *See* FEMA Comments at 2; *see also* CAP 1.2 Standard, *supra* note 35, at 11 ("000000" refers to ALL United States territories).

[47] Trilithic *Ex Parte* at 2.

[48] *See* NCTA Comments at 4.

[49] Sage Reply Comments at 6.

[50] DirecTV Comments at 2.

[51] *See* Monroe Reply Comments at 4 (concurring with NCTA that the "six zeroes" code should be used and stating that its equipment can readily allow the use of "six zeroes"); *see also* Trilithic Comments at 4 ("[O]ur Encoder/Decoders already process the '000000'code and identify it as the entire United States."); Sage *Ex Parte* at 5 (stating that the software update required for processing the "six zeroes" location code "can be done by the user remotely via the internet if their firewall is set up to allow it, some users will need to go on site); *id.* ("Some will have in-house engineering or other station staff install the update, others will need a contract engineer to be involved.").

[52] *See* Sage *Ex Parte* at 6 (stating that the use of the "six zeroes" code would obsolete many legacy devices).

[53] *See* Second NCTA *Ex Parte* at 1-2.

[54] *See* 47 C.F.R. § 11.34; *see also* proposed revision to §11.31(f) in Appendix B attached hereto.

[55] *See infra* ¶¶ 52-54 (requiring that EAS equipment recognize all EAS header codes).

location codes for a geo-targeted EAN should the President wish to address a particular part of the country rather than the nation as a whole.[56] We also agree with FEMA that adoption of "six zeroes" as the national location code has the additional long-term benefit of ensuring consistency between the Commission's EAS rules and industry CAP standards, which, in turn, will facilitate the integration of the EAS into IP-based alerting systems such as IPAWS.[57] We seek comment on our proposal and rationale.

2. Use of the National Periodic Test Code (NPT)

15. In the *Third Report and Order*, the Commission chose to use the EAN for the first nationwide EAS test primarily because an EAN-based test most closely mirrored an actual alert.[58] At that time, the Commission also acknowledged that there was value to testing the national-level EAS without using a live code, and concluded that it would consider an alternative to live code testing such as the NPT in the future.[59] For that first test, in order to minimize confusion from the use of the live EAN code and its attendant video text crawl announcing a national emergency,[60] EAS Participant stakeholder organizations provided "This is only a Test" slides for broadcast and MVPD EAS Participants to display during the test.[61] Not all cable service providers were able to display the slide,[62] and as noted in the *EAS Nationwide Test Report*, while the use of the EAN had been successful, some deaf and hard of hearing people had reported confusion caused by the inability of some EAS Participants to visually display the "This is only a Test" slide.[63] The *EAS Nationwide Test Report* noted that one way to avoid such confusion in the future would be to use the NPT, and that "use of the NPT would allow FEMA and the FCC to conduct nationwide EAS tests without the need for an extensive public outreach campaign such as that necessary for the first nationwide EAS test."[64]

16. In the *EAS Operational Issues Public Notice*, the Bureau sought comment on whether it should consider amending its rules to facilitate use of the NPT code instead of the EAN for future testing.[65] The Bureau also sought guidance on the technical feasibility and operational requirements of an NPT activation, and whether the Commission's rules should "require that EAS messages containing the NPT code be promulgated throughout the EAS just like an EAN."[66] In its comments, FEMA expresses a desire to use the NPT code for the next nationwide test of the EAS component of IPAWS – a test that FEMA also notes that it wishes to conduct "in the near future[67] – but acknowledges that the EAS rules do

[56] *See* Trilithic *Ex Parte* at 2, FEMA Comments at 2. *See also* Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System, FO Docket No. 91-301, *Memorandum Opinion and Order*, 10 FCC Rcd 11494, 11500 ¶ 41(1995) (contemplating the use of the EAN on a regional basis, stating that "alerting the nation on a regional basis would be much more manageable and reliable but would retain effective and timely warning capability.").

[57] *See* FEMA Comments at 2.

[58] *See Third Report and Order*, 26 FCC Rcd 1460, 1469-70, ¶ 24.

[59] *See id.* at 1469-70, ¶ 23.

[60] The audio clearly announced that the event was "only a Test."

[61] *EAS Nationwide Test Report*, *supra* note 1, at 10.

[62] *Id.* at 10, n.20.

[63] *Id.*

[64] *Id.* at 18, n.47.

[65] *See EAS Operational Issues Public Notice* at 11.

[66] *Id.* at 12.

[67] *See* FEMA Comments at 3.

not provide enough guidance on how EAS equipment must process the NPT.[68] Accordingly, FEMA requests that the Commission provide such guidance, and notes its preference that the NPT be "relayed and forwarded in the same fashion and with the same immediacy as an EAN."[69] Other commenters agree that the NPT should be used for most nationwide EAS tests, but also believe that the NPT does not need to fully emulate the EAN duration function to be an effective test code.[70]

17. Commenters support the use of the NPT,[71] but most agree that requiring the NPT to emulate the EAN's priority and duration qualities will entail significantly more substantial software and hardware upgrades for EAS Participants than those required for the national location code we propose today.[72] Commenters also state that use of an NPT that fully emulates the EAN will require testing, and updates to software and standards for downstream equipment such as cable set top boxes and Digital Network Control Systems (DNCS).[73] NCTA, in particular, notes that requiring an NPT coded test to trigger automatically, immediately upon receipt, and to last longer than two minutes would require

[68] *See* FEMA Comments at 2 ("NPT is currently listed as a required event without specified relay performance parameters."); *see also EAS Operational Issues Public Notice* at 11.

[69] *See* FEMA Comments at 2.

[70] *See* NCTA Comments at 7-8 (adding that the test should only be as long as is necessary to test this bypass function, keeping in mind the cost imposed by the interruption of cable broadcast due to force tuning); Monroe Comments at 7 ("it may be inadvisable for a 'test' message to potentially delay or preclude an actual local alert message related to life and safety"); Monroe Comments at 7 (noting that while in its equipment the NPT is programmed as a two minute alert, a shorter NPT "would suffice principally to test the robustness of the monitoring relay system and the ability to switch back to normal programming"); *but see* NCTA Comments at 7 ("the ability to test the reliability and effectiveness of nationwide alerting requires the test to simulate a real event (an EAN) as closely as possible."); *id.* (urging that the "bypass feature should be tested to ensure that it works as designed for national alerting"); Trilithic Comments at 7 ("If the NPT is the event code used to test the operation of an EAN then the rules need to specify that the NPT operates identically to an EAN, including the priority, with the exception that an EAN has higher priority than an NPT.").

[71] *See* BWWG Comments at 3; *see also* NCTA Comments at 6 ("NCTA member companies believe that the NPT code may be suitable for nationwide testing, provided the two key attributes of the EAN are incorporated into the NPT code protocol."); Trilithic Comments at 7 ("EAS Encoder/Decoders would require software updates to make the NPT follow the same operation as an EAN. Cost would be minimal."); Monroe Second *Ex Parte* at 3 ("[T]he DASDEC and One-Net EAS solutions already support use of an NPT event code for a national test.").

[72] *See* NCTA *Ex Parte* at 2 ("[A]ny rule changes involving the use of the NPT event code would necessitate even longer lead time for evaluation because the NPT has never been used and EAS encoder/decoders and downstream systems and equipment would need to be tested and likely updated. This is particularly so if the NPT is of unlimited duration and/or used in conjunction with the national six-zero location code."); *see also* Sage *Ex Parte* at 4 ("Making the NPT work just like an EAN, with special handling and no time limit would require a software update for all Sage devices, and based on discussions with other vendors, all EAS devices . . . The decision [also] would obsolete much of the legacy equipment in the field."); Monroe Second *Ex Parte* at 4 ("If the rules were modified to specify that the NPT must also support unlimited audio, a significant software update would need to be developed and provided by the manufacturer"); *cf.* Trilithic *Ex Parte* at 3 (stating that it is "possible to make the NPT behave like the EAN, including raising its priority to over-ride other messages" and that "[t]his would require more extensive firmware changes than simply adding the 000000 FIPS code," but not stating the extent of additional costs implicated by such an upgrade).

[73] *See* Monroe Second *Ex Parte* at 4 ("a change of this nature in altering the NPT with unlimited audio could imply a profound economic impact in terms of change to embedded plant."); *see also* Sage *Ex Parte* at 4 ("In the cable and IPTV case, that feature will require changes to equipment downstream of the EAS equipment."); NCTA Comments at 6 ("important EAS standards, such as the JSTD-042A-2007: A Joint Standard Developed by the Society of Cable Telecommunications Engineers (SCTE) and the Consumer Electronics Association (CEA) – Emergency Alert Messaging for Cable, would need to be updated").

changes to the SCTE 18 2013 standard,[74] as well as to corresponding product specifications and system design changes that would affect the entire MVPD industry. According to NCTA, this process would take as long as three years to complete, and would be significantly more expensive than requiring the "six zeroes" location code alone.[75]

18. According to commenters, a less expensive and more rapidly deployable method of utilizing the NPT for a national EAS test would simply be to enable the NPT as it is currently programmed in most, if not all, EAS equipment.[76] Specifically, Sage recommends that programming EAS equipment to treat the NPT as a "normal" EAS alert would be a simpler and equally effective way to test the integrity of the links in the EAS distribution hierarchy.[77] As the Commission noted in the *Third Report and Order*, although such use of the NPT would be limited to two minutes, EAS Participants could ensure mandatory carriage of the NPT by manually reprogramming their EAS equipment to automatically respond to the NPT.[78]

19. The Commission agrees with the majority of commenters that there should be a non-EAN option for future EAS testing, and that the NPT is the obvious alternative.[79] The Commission is aware that it must balance the need for regular testing of the EAS with a clear standard by which such tests should be conducted, and that any EAS testing rules should offer FEMA maximum flexibility to test the EAS and the other IPAWS elements that FEMA administers. At the same time, we want to ensure that our rules provide a benefit that fully justifies the costs that implementing any proposed rules would impose on EAS Participants. Accordingly, we propose to amend our rules to create an option to use the NPT for EAS testing. That being said, we are cognizant that the NPT can be tailored in different ways, with different costs and benefits. We therefore seek comment on the manner in which the NPT should be deployed for any upcoming EAS tests.

20. We first seek comment on whether we should require that the NPT be activated like any other EAS alert. This option, according to commenters, offers almost all the benefits of full EAN emulation.[80] However, it would not test the reset functionality of EAS equipment by lasting longer than two minutes, and it would not override all other EAS alerts.[81] An NPT event code that does not exceed two minutes in length is consistent with the existing Part 11 rules,[82] as the EAN is the only event code that

[74] SCTE 18 2013, also known as ANSI J-STD-42B-2013, is a standard that defines an emergency alert signaling method for use by cable systems to signal emergencies to digital receiving devices. *See* CEA/SCTE Standard Emergency Alert Messaging for Cable J-STD-42-B (2013), *available at* http://www.scte.org/FileDownload.aspx?A=3512.

[75] NCTA Second *Ex Parte* at 2.

[76] *See* Monroe Second *Ex Parte* at 3 ("We reconfirmed that the DASDEC and One-Net EAS solutions already support use of an NPT event code . . . Users can enable that location setting simply through the device user interface."); *see also* Trilithic *Ex Parte* at 3 ("Customers will need to enable the NPT in their event filters. Typically this involves logging in to [*sic*] the Encoder from a PC and modifying the configuration.").

[77] *See* Sage *Ex Parte* at 4 (recommending that the NPT be "kept as a 'normal' EAS alert, *i.e.*, within the normal time limit, FEMA can use the NPT to verify transport of messages through various parts of the system.").

[78] *See Third Report and Order*, 26 FCC Rcd 1460, 1469-70, ¶ 23.

[79] *See supra* note 73.

[80] *See*, *e.g.*, Sage *Ex Parte* at 4; Monroe Reply Comments at 4-5.

[81] *See* 47 C.F.R. § 11.33(a)(9) ("Operators shall be able to select a time interval, not less than two minutes, in which the decoder would automatically reset if it received an EAS header code but not an end-of-message (EOM) code. Messages received with the EAN Event Codes shall disable the reset function so that lengthy audio messages can be handled."); 47 C.F.R. § 11.33(a)(11) ("A header code with the EAN Event code specified in § 11.31(c) that is received through any of the audio inputs must override all other messages.").

[82] *See* 47 C.F.R. §§ 11.61(1), (2) (requiring that EAS Participants conduct regular weekly and monthly EAS tests).

does not limit the duration of the alert.[83] The Bureau currently has the delegated authority to require that EAS Participants use the NPT for future national testing, and the Bureau may exercise this authority at any time to require the NPT to be used in a nationwide EAS test in a manner consistent with the current rules, *i.e.*, that it be treated like any other event code.[84] Treating the NPT like any other EAS activation also would satisfy FEMA's stated desire for a test in near future, and would do so in a manner that imposes minimal costs on EAS Participants. Thus, should FEMA decide to schedule a nationwide EAS test that does not exceed two minutes in length, the Bureau may, should this issue still be pending before the Commission, require that EAS Participants reprogram their EAS equipment to automatically process the NPT.

21. We also seek comment on whether the Commission should revise the Commission's rules to define the NPT as a test code that fully emulates the EAN in all of its characteristics – particularly its priority over any other message, and its indefinite length. We note that an NPT that fully emulates the EAN would create a test environment that closely approximates real emergency conditions, thereby maximizing the information that can be derived from testing the EAS with a non-EAN option. On the other hand, it would be a far more costly option for EAS Participants, and the extra time that it would take for EAS Participants to implement an EAN-emulating NPT would preclude FEMA's ability to use such an NPT for a test conducted in the near future. Thus, would the benefits of full emulation outweigh the costs? We also seek comment on whether a test that lasts more than two minutes is necessary. Can the question of whether EAS equipment will reset after the first two minutes of an EAN alert (or an EAN-emulating NPT test) be answered in a test bed, or does such a test require that the entire "daisy chain" linkage be involved? If a test of more than two minutes is needed, could FEMA avoid the expense of such a test by using the EAN option instead? How would the cost of conducting another EAN-based nationwide test compare with the costs of conducting a test with an NPT that fully emulates the EAN? What were the costs to EAS Participants to participate in the first nationwide EAS test, including any efforts to conduct public outreach in advance of the test? Would the costs of a new EAN-based test differ from those of the first nationwide EAS test? How would such costs compare to a test using the NPT that operates within a two minute duration, the approach suggested by some commenters? Commenters should offer specific figures and data to support their comments and should include costs of any public outreach that would be required with each type of test. We also seek comment on whether the three-year time period for full implementation of an EAN-emulating NPT, suggested by some commenters, is reasonable or necessary. Can an EAN emulating NPT be deployed in a shorter period of time? Would deploying an NPT that fully emulates the EAN increase costs fourfold, as some commenters suggest?[85] Parties should offer specific technical and cost-based support to their comments.

C. Updated EAS Test Reporting System (ETRS)

22. In the *Third Report and Order*, the Commission adopted a new Section 11.61(a)(3)(iv) to require that EAS Participants submit nationwide test result data to the Commission within 45 days following the test (*i.e.*, by December 27, 2011, for the first test).[86] EAS Participants had the option of

[83] *See* 47 C.F.R. § 11.33(a)(9); *see also* 47 C.F.R. § 11.13.

[84] *See* 47 C.F.R. § 11.61(a)(3) ("All EAS Participants shall participate in national tests as scheduled by the Commission in consultation with the Federal Emergency Management Agency (FEMA)"); *see also id.* ("The coded message shall utilize EAS test codes as designated by the Commission's Rules."); *Third Report and Order*, 26 FCC Rcd 1460, 1471, ¶ 25 ("Accordingly, we delegate authority to PSHSB, in consultation with other stakeholders, to determine whether to use the EAN or another code such as the NPT for national testing following the first national test.").

[85] NCTA Second *Ex Parte* at 2.

[86] *See Third Report and Order,* 26 FCC Rcd 1460, 1486, ¶ 68; *see also* 47 C.F.R. § 11.61(a)(3)(iv) ("Test results as required by the Commission shall be logged by all EAS Participants and shall be provided to the Commission's Public Safety and Homeland Security Bureau within forty five (45) days following the test"); FCC Reminds EAS (continued….)

complying with the reporting requirements either with a paper filing or through an electronic reporting system.[87]

23. As the Bureau reported in the *EAS Nationwide Test Report,* over 16,000 EAS Participants submitted test result data; the vast majority chose to file electronically rather than submit paper filings.[88] The data available from the electronic reporting system allowed the Commission to generate reports that would not have been feasible with paper filings alone. As a result of the positive response to the electronic filing system employed in the first nationwide EAS test, the *EAS Nationwide Test Report* recommended that the Commission develop a new electronic reporting system and related database to expedite filing of test result data by EAS Participants.[89] Subsequently, at its March 20, 2014 meeting, the CSRIC also recommended that the Commission adopt a federal government database to contain EAS Participants' monitoring assignments.[90]

1. Mandating ETRS

24. EAS Participants and other stakeholders support use of an electronic reporting system to facilitate filing of EAS test result data.[91] NAB suggests improvements, primarily the addition of a filing receipt to provide verification that the EAS Participant has successfully and timely submitted its report.[92]

25. Based on the preference shown for the electronic filing option prior to and during the first nationwide EAS test, and on the largely positive responses to a permanent electronic filing system in general,[93] we propose to designate in the Commission's EAS rules the ETRS (as defined below) as the primary EAS reporting system, and to require that all EAS Participants submit nationwide EAS test result data electronically via the ETRS for any future national EAS tests.[94] As we discuss in further detail below, we also propose to require EAS Participants to file ETRS Form One, the self-identifying portion of the ETRS, within one year of the effective date of the rules we ultimately adopt, and to update the

(Continued from previous page)
Participants About November 9, 2011 Nationwide EAS Test, DA 11-1788, *Public Notice*, 1 (rel. Oct. 26, 2011) (*Nationwide EAS Test Reporting System Public Notice*).

[87] *See Third Report and Order*, 26 FCC Rcd 1460, 1485, ¶ 67 (announcing that the Commission would institute a voluntary, electronic reporting system as a reporting alternative closer to the test date); *see also Nationwide EAS Test Reporting System Public Notice*, at 1-2 (establishing the voluntary electronic reporting system).

[88] *See EAS Nationwide Test Report*, *supra* note 1, at 11 (containing a table illustrating the number and kind of post-test reports received).

[89] *See id.* at 19.

[90] *See* CSRIC IV, WORKING GROUP THREE, EMERGENCY ALERT SYSTEM, STATE EAS PLANS SUBCOMMITTEE, FINAL REPORT (2014), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric4/CSRIC_IV_WG3_FINAL_03252014.pdf ("The subcommittee concludes that State Emergency Communications Committees (SECC) need the resource of a federal government database to assure EAN dissemination"); *see also* Hearst Reply Comments at 6 (describing the post-nationwide test reporting requirements as "an important and meaningful way for the Commission to collect and compile information about the performance of the EAS during the nationwide test."); NAB Comments at 4; *EAS Nationwide Test Report*, *supra* note 1, at 19.

[91] *See* NAB Comments at 4 (noting that the lack of filing receipt caused confusion among broadcasters and proposing "that a receipt for filing be incorporated in the online reporting system for future nationwide EAS testing").

[92] *Id*.

[93] *See supra* note 90.

[94] *See infra* ¶ 26 (defining ETRS).

information that EAS Participants are required to supply in Form One on a yearly basis, and as required by any updates or waivers to EAS State Plans.[95]

26. The ETRS adopted for the 2011 Nationwide EAS Test is comprised of the following three web-based forms: Form One asked each EAS Participant for identifying and background information, including EAS designation, EAS monitoring assignments, facility location, equipment type, and contact information, and other relevant data. Form Two asked each EAS Participant whether it received the Nationwide EAS Test alert code and, if required to do so, whether the EAS Participant propagated the alert code downstream. Form Three asked each EAS Participant to submit detailed information regarding its receipt and propagation, if applicable, of the alert code, including an explanation of any complications in receiving or propagating the code. We propose that we adopt the identical format for the permanent ETRS, subject to the revisions we propose below regarding filing receipts and the pre-population of the forms with identifying data already in the Commission's possession.[96] We seek comment on this proposal and the proposed forms.[97]

27. Based on the Bureau's experience during the first nationwide EAS test, and on stakeholder comments, we also agree that the next iteration of the ETRS should give filers the capability to review filings prior to final submission and to retrieve previous filings to correct errors. We seek comment on this proposal.

28. We further propose that EAS Participants not be required to input into the ETRS data that EAS Participants may have previously provided to the Commission elsewhere. We agree with the recent CSRIC Report that pre-populating the ETRS with data such as transmitter location, call signs, *etc.*, that are already in the possession of the Commission would lessen the burden of filing and make the reporting process more cost effective for EAS Participants.[98] We seek comment on what data should be included in this category. We further propose that data drawn from other systems, such as a licensing database, not be editable in the ETRS by the filer.[99] We seek comment on these proposals.

2. State Plan Data Tables

29. We next propose that we revise our rules to integrate the identifying information provided by Form One of the new ETRS into the EAS State Plans filed pursuant to Section 11.21 of the Commission's EAS rules.[100] This rule requires that EAS State Plans include "a data table, in computer readable form, clearly showing monitoring assignments and the specific primary and backup path for EAN messages that are formatted in the EAS Protocol (specified in Section 11.31), from the PEP to each

[95] *See* Proposed Form One attached in Appendix D. The information that EAS Participants would input into Form One does not include any information pre-populated into the form from other databases, such as the Commission's broadcast license database.

[96] See the proposed forms attached as Appendix D.

[97] We note, however, that ETRS filing would not obviate the requirement that EAS Participants otherwise comply with Part 11, particularly the requirements in Section 11.35 that during an FCC inspection, EAS Participants will be able to demonstrate that monitoring and transmission functions are available and operational, and will be able to produce any required logs with entries that note whether any EAS tests were not received and the cause of any failure to receive required tests or activations. *See* 47 C.F.R. § 11.35(a).

[98] *See supra* note 8.

[99] For example, although some licensing information may be used to pre-populate certain ETRS fields, any changes to that licensing information must be made through the modification process outlined in the licensing rules for the relevant service. *See*, *e.g.*, 47 C.F.R. § 73.1690 (procedures and restrictions for broadcast transmission system license modification).

[100] 47 C.F.R. § 11.21. EAS State Plans contain guidelines which must be followed by EAS Participants' personnel, emergency officials, and NWS personnel to activate the EAS.

station in the plan."[101] The rules further require that such tables be combined into an FCC Mapbook that "organizes all broadcast stations and cable systems according to their State, EAS Local Area, and EAS designation."[102] The CSRIC endorses the use of a tabular matrix for the collection of test data from EAS Participants.[103] To date, however, the State Emergency Communication Committees (SECCs) have not been able to supply the Commission with the data necessary to populate the data tables or Mapbook.

30. In our review of the data from the first nationwide EAS test, we noted that the data from Form One of the ETRS could be used to create the required data table and the FCC Mapbook, and that both could be maintained in a dynamic, consistently updated manner. We believe that using the data from the ETRS in this fashion has great value, as it transforms the ETRS from a one-time burden into a permanently useful tool that will allow the Commission and authorized state authorities to see how an EAN (or any other EAS alert) is actually propagated through the EAS architecture, and see any vulnerabilities and single points of failure in the distribution architecture before such a failure could cause real harm. Accordingly, we propose that the ETRS be maintained on a permanent basis to act as a complement to the EAS State Plans that are filed with the Commission.[104]

D. Visual Crawl and Audio Accessibility

1. Visual Crawl

31. It is the Commission's statutory obligation,[105] as well as longstanding Federal government[106] and Commission policy,[107] to ensure that all members of the public, including those with disabilities, have access to emergency alerts. The Commission's EAS rules are designed to provide such

[101] *See* 47 C.F.R. § 11.21(a) (citing 47 C.F.R. § 11.31(c)).

[102] 47 C.F.R. § 11.21(c).

[103] *See supra* note 8.

[104] *See supra* ¶ 28 (discussing how pre-populating data into ETRS will alleviate a portion of the reporting burden that would otherwise be placed on EAS Participants).

[105] *See*, *e.g.*, 47 U.S.C. § 613 (video programming accessibility); *Twenty-First Century Communications and Video Accessibility Act of 2010*, Pub. L. No. 111-260 (requiring, among other things, that the Commission promulgate rules to require video programming providers, distributors, and owners to convey emergency information in a manner accessible to people who are blind or visually impaired) and Pub. L. No. 111-265 (containing technical amendments to the CVAA); *Rehabilitation Act of 1973*, Pub. L. No. 93-112, *as amended*, § 504, 29 U.S.C. § 794 (prohibiting discrimination against individuals with disabilities under any program or activity that either receives Federal financial assistance or is conducted by any Executive agency or the United States Postal Service); § 508, 29 U.S.C. § 794(d) (requiring Federal electronic and information technology to be accessible to people with disabilities, including employees and members of the public).

[106] *See*, *e.g.*, Exec. Order No. 13347, 69 Fed. Reg. 44573 (July 26, 2004) (creating the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities "to ensure that the Federal Government appropriately supports safety and security for individuals with disabilities in situations involving disasters, including earthquakes, tornadoes, fires, floods, hurricanes, and acts of terrorism"); Exec. Order No. 13407, 71 Fed. Reg. 36975 (June 26, 2006) (including in the public alert and warning system the capability to alert and warn all Americans, including those with disabilities).

[107] *See*, *e.g.*, *Fifth Report and Order*, 27 FCC Rcd 642, 653, ¶ 2 (stating that for the past fifty years the Commission has implemented its mandate to promote the safety of life and property "by adopting rules that set technical and other requirements to provide the public with an effective national public alert and warning system."); Reminder Regarding Video Programming Distributors' Obligation to Make Emergency Information Accessible to Persons who are Deaf or Hard of Hearing and/or Blind or Visually Impaired, DA 13-1983, *Public Notice*, 28 FCC Rcd 13865 (2013) (annual reminder to comply with the Commission's rules to make televised emergency information accessible); The Commercial Mobile Alert System, PS Docket No. 07-287, *Notice of Proposed Rulemaking*, 22 FCC Rcd 21975, 21983, ¶ 23 (2007) (seeking comment on how to make the Commercial Mobile Alert System, now known as WEA, accessible to the elderly).

accessibility by requiring that EAS Participants deliver EAS alerts in both audio and visual form.[108] The visual form of an EAS alert generally takes the form of a text crawl that is displayed at the top of the screen.[109]

32. According to several comments and other feedback we received, the test message transmitted during the first nationwide test was inaccessible to many consumers.[110] For example, stakeholders note that the visual message in some of the text crawls generated for the EAN scrolled across the screen too quickly, or its font was difficult to read.[111] Others state that "the national EAS test message did not consistently present the alert in both audio and visual formats."[112]

33. In the *EAS Operational Issues Public Notice*, the Bureau noted that although the EAS rules require that EAS alerts be presented visually, the rules do not specify font size or text crawl speed.[113] The Bureau sought comment on whether and how the Commission should address this lack of guidance.[114] Specifically, the Bureau asked whether the Commission should encourage the development of industry best practices, amend its EAS rules to establish minimum specifications for the presentation of EAS text crawls, or propose other solutions.[115] The Bureau invited suggestions for how specifications could be crafted for all text crawl elements.[116]

[108] *See* 47 C.F.R. § 11.51(d) (stating that broadcast stations must transmit a visual message containing the Originator, Event, Location and the valid time period of an EAS message. The Section also states that effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the *ECIG Implementation Guide*); *see also* 47 C.F.R. § 11.51(c) (stating that analog and digital radio and television stations must transmit EAS messages in the main audio channel; DAB stations on all audio streams; and DTV broadcast stations on all program streams); 47 C.F.R. § 11.61(a)(1) (stating that EAS Participants must conduct RMTs that includes script content developed by SECCs in cooperation with affected EAS Participants).

[109] *See* 47 C.F.R. § 11.51(d).

[110] *See*, *e.g.*, *EAS Nationwide Test Report*, *supra* note 1, at 14-15 (noting poor audio nationwide).

[111] *See Ex Parte* Letter from Helena Mitchell, Ph.D., Executive Director, Center for Advanced Communications Policy, and Principal Investigator, Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC), Georgia Institute of Technology, to Marlene H. Dortch, Secretary, FCC (Mar. 22, 2012), and accompanying "Report on the National EAS Test On-line Survey and Focus Group Findings" at 19, 23-24 (Mar. 20, 2012) (*Wireless RERC 2012 EAS Report*). Survey respondents and focus group participants also noted the lack of audible and visual attention signals, and use of unfamiliar acronyms such as "EAS." *Id.* at 17, 23. Survey respondents who listened to the EAN test by radio reported difficulty understanding the audio message, when provided, because the voices used in the message were either themselves unclear or obscured by background noise. *Id.* at 20-21.

[112] *See Wireless RERC 2012 EAS Report* at 19. The Wireless RERC also reported that 35.8% of 229 individuals with disabilities who responded to a survey conducted prior to the nationwide EAS test indicated that they had problems understanding EAS messages: 39.8% did not hear the alert attention signal and missed part of the on-screen information; 18.3% heard the attention signal but there was no audio describing the emergency; and 41.9% had other problems, including no captions, blocked text, text too small, text crawl too fast, audio unclear, and no additional information. *See id.* at 9-10. When questioned about EAS alerts prior to the nationwide EAS test, focus group participants discussed the "need to have both audio and visual formats for the alert message" and on the lack of access by individuals who are blind or have low vision. *Id.* at 26.

[113] *EAS Operational Issues Public Notice*, at 9.

[114] *See id.*

[115] *See id.* at 10.

[116] *See id.*

34. Most commenters agree that EAS alert accessibility must be improved.[117] Some commenters emphasize the importance of equal access to information, and assert that information provided visually also should be provided audibly, and vice versa.[118] Despite this general agreement, no party provides detailed recommendations for achieving this goal. In addition, EAS Participants and other stakeholders argue that, rather than "one size fits all" rules, the Commission should address this issue by encouraging the development of voluntary best practices either through an initiative spearheaded by the CSRIC, or by encouraging consumer groups and industry organizations to engage in joint efforts themselves.[119] Industry stakeholders argue that text crawls are generated in multiple fashions and by various pieces of equipment other than EAS encoder/decoders.[120] As a result, these commenters argue, the process is too "decentralized" to be encompassed within the EAS rules.[121] Commenters also claim – without supplying specific cost data – that any Commission "one size fits all" rules would lead to "astronomical" costs because such rules would necessitate replacement of much of the multi-use hardware involved in message display.[122]

35. We are mindful of EAS Participants' concerns about cost and the desire for flexibility in managing their technical systems. However, all members of the public should be able to receive timely and accurate EAS alerts so that they can take quick action to protect their lives as well as those of family members. It is critical, therefore, that the EAS be accessible to all members of the public, including those with disabilities. Moreover, as noted above, FEMA expresses a desire to test the EAS again in the near future.[123] Even more importantly, a national emergency requiring activation of the EAS by the President

[117] *See*, *e.g.*, Wireless RERC Comments at 4 (quoting a survey finding that "television broadcasters were inconsistent in their use of audio; there was no audio accompanying the TV crawl; and the text crawl was too small or too fast to decipher"); Consumer Groups & RERC-TA Reply Comments at 2 (highlighting the importance of timely information during emergencies for the deaf and hard of hearing community); ACA Reply Comments at 5 ("ACA fully supports efforts to ensure the readability of EAS alerts."); *but see* DirecTV Comments at 2 ("DIRECTV does not see the need for the Commission to establish minimum specifications for the manner in which EAS Participants must present text crawls.").

[118] *See* Wireless RERC Comments at 7 (recommending "audio and visual formats of alert content for all types of alerts"); *see also* Consumer Groups & RERC-TA Reply Comments at 2 ("We recommend a simple rule: that all auditory information in alerts must be provided visually and vice versa.").

[119] *See*, *e.g.*, NAB Comments at 1 (urging the Commission "to focus on industry collaboration to guide resolution of many of the technical issues raised in the *Notice*, particularly the formatting of EAS visual crawls"); ACA Comments at 5 (recommending that "the Commission consider alternatives, such as working through industry groups, before imposing a mandate"); Wireless RERC Comments at 8 (recommending "an iterative research, development and evaluation process that includes input from people with a variety of disabilities"); *but see* Sage Reply Comments at 5 (proposing that, "in most instances, the text presentation can be fine-tuned with weekly and monthly tests").

[120] *See* Sage Comments at 10; *see also* Trilithic Comments at 5.

[121] *See* Sage Comments at 9 (stating that "[i]n the case of radio-based text presentation, such as Ibiquity's Active Radio, the text is always generated by the end user's radio"); *see also id.* ("Many TV stations use existing character generator capability somewhere in the video chain."); Trilithic Comments at 5.

[122] Trilithic Comments at 6 ("Specifying fonts, crawl speeds, font sizes, or even (for example) left to right crawls could result in astronomical costs to the cable, and wireline industries, and significant costs to broadcasters."); *see also* Sage Comments at 10 ("the cost of a character generator is typically three to six times the cost of an encoder/decoder for centralized text insertion"); *but see id.* (pointing out that "the number of set top boxes is larger than the number of encoder/decoders by a few orders of magnitude," militating for such costs to be imposed centrally on encoder/decoder manufacturers, if they are to be imposed at all, rather than on the more ubiquitous end user devices used to display alerts broadcast over TV and radio); ACA Comments at 5 (commenting that these costs could be reduced by adopting changes "through typical equipment lifecycles").

[123] *See supra* ¶ 7.

could come at any time. In light of this, we believe it is imperative that the Commission consider the option of establishing minimum accessibility requirements now. In so doing, our goal is to ensure that EAS alerts are delivered in a format that is readily understood by the public and therefore can accomplish their intended impact, *i.e.*, to warn the public about impending threats to life and property. Accordingly, as discussed below, we propose to amend our EAS rules to require minimum standards for EAS visual crawls, specifically with respect to crawl speed, completeness and placement. We seek comment on these proposals. In addition, we encourage parties representing industry and consumers, including those with disabilities to work together to develop alternative recommendations and to submit them promptly in the record for the Commission's consideration in this proceeding.

36. *Crawl Speed*: We believe that the Commission's closed captioning rules provide a useful guide in addressing the visual crawl speed issue. Those rules require that "captions be displayed on the screen at a speed that can be read by viewers."[124] We believe that such a standard should apply to EAS alerts and thus propose to revise Section 11.51(d) of the Commission's EAS rules to require that an EAS text crawl be displayed on the screen at a speed that can be read by viewers. We seek comment on this proposal. In addition, we seek comment on what might constitute "a speed that can be read by viewers," and whether we should include a specific crawl speed in our rules. Is there research demonstrating whether text crawls of certain word or character lengths and speeds are more or less challenging to read or comprehend? We also seek comment on a standard for non-English alerts.[125]

37. *Completeness*: Under the closed captioning rules, "completeness" requires that closed captions must run from the beginning to the end of the program, to the fullest extent possible.[126] We believe that a text crawl describing the nature of the EAS alert or test should continue throughout the duration of the EAS activation. Thus, we propose to revise Section 11.51(d) of the Commission's EAS rules to require that an EAS text crawl must be displayed continuously throughout the duration of any EAS activation. We seek comment on this proposal.

38. *Placement*: Under the Commission's closed captioning rules, captions must be "well-placed."[127] In other words, they "shall not block other important visual content on the screen," caption font should be sized appropriately for legibility, lines of captions should not overlap one another, and

[124] *See* Closed Captioning of Video Programming Telecommunications for the Deaf & Hard of Hearing, Inc. Petition for Rulemaking, CG Docket No. 05-231, *Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking*, FCC 14-12, n.120 (rel. Feb 24, 2014) (*Closed Captioning Quality Report and Order*) ("While we recognize that everyone reads at a different speed, captions should not blink on and off at a speed that is too quickly to read or otherwise be paced at a speed that is difficult to read.").

[125] *See* Petition for Immediate Interim Relief filed by the Independent Spanish Broadcasters Association, the Office of Communications of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council, EB Docket 04-296 (filed Sept. 22, 2005) (requesting that the Commission "ensure that populations that do not speak English as a primary language will have access to readily understandable EAS alerts and non-EAS emergency information."); Comment Requested to Refresh the Record in EB Docket No. 04-296, on Petition Filed by the Minority Media & Telecommunications Council Proposing Changes to Emergency Alert System (EAS) Rules to Support Multilingual EAS & Emergency Information, EB 04-296, *Public Notice*, DA 14-336 (rel. Mar. 11, 2014). This proceeding is pending with the Commission.

[126] *See Closed Captioning Quality Report and Order*, ¶ 31 (defining the standard for program completeness); *see also* Closed Captioning and Video Description of Video Programming, Implementation of Section 305 of the Telecommunications Act of 1996, Video Programming Accessibility, MM Docket No. 95-176, *Report and Order*, 13 FCC Rcd 3272, 3368, ¶ 211 (1997) (requiring that "all video programming providers, regardless of distribution technology, to ensure that programming with closed captions is delivered to viewers in a complete manner.").

[127] *See Closed Captioning Quality Report and Order*, ¶ 32 (defining the standard for placement).

captions should be adequately positioned so that they do not run off the edge of the video screen.[128] We believe that the EAS rules already contain a portion of this requirement, stating that an EAS text crawl "shall be displayed at the top of the television screen or where it will not interfere with other visual messages."[129] We believe that adding the remainder of the closed caption placement standard to our rules would address the difficulties that certain members of the public had understanding the text crawls during the first nationwide EAS test,[130] and would do so in a manner that provides EAS Participants and other EAS stakeholders with sufficient flexibility to accommodate various broadcast and MVPD ecosystems. Accordingly, we propose that we revise Section 11.51(d) of the Commission's EAS rules to incorporate the language of the closed captioning rules with respect to text crawl placement. In other words, an EAS text crawl must be displayed in a manner that (1) does not block other important visual content on the screen, (2) utilizes a text font that is sized appropriately for legibility, (3) prevents overlap of lines of text with one another, and (4) positions the text crawl adequately so it does not run off the edge of the video screen. Similarly, we propose prohibiting MVPD EAS Participants from placing crawls or other information on the video screen in a manner that would interfere with the ability of the public to read EAS crawls. We seek comment on these proposals.

2. Audio Accessibility

39. At the outset, we note that FEMA has already addressed and corrected the primary audio quality problems experienced during the first nationwide EAS test*, i.e.*, a technical malfunction that occurred at the National Primary level that affected the underlying quality of EAS audio nationwide.[131] Thus, our primary concern in this Section is to seek comment on how the Commission may improve the accessibility of EAS audio by taking steps to ensure that the audio and visual elements of an EAS alert convey the identical, or at a minimum, comparable text. Currently, the visual element of an EAS alert (*i.e.*, the text crawl) is generated from header codes (location, event, *etc.*) that are preprogrammed into EAS equipment, whereas the audio portion may be recorded by the alert originator (*e.g.*, the National Weather Service). Because the audio and visual elements of an EAS alert are generated from two different sources, they can differ significantly in language and detail, notwithstanding that they are describing the same event. We believe that for an EAS alert to be fully accessible, the audio and visual elements should convey the same message. What steps would need to be taken to achieve this goal? For example, how would the Commission ensure that the public is able to receive the same, *i.e.*, comparable, information, irrespective of whether they receive the alert in an audio or visual format? In furtherance of this goal, we note that the implementation of the CAP standard enables alert message originators to include enhanced text in their messages, and that the Commission's rules require EAS Participants to utilize enhanced text, when available, for the generation of text crawls.[132] We note that the *ECIG*

[128] *See id.*; *see also* FCC CONSUMER ADVISORY COMMITTEE, REPORT: IN THE MATTER OF DTV CONSUMER EDUCATION INITIATIVE, 6-7 (2007) (raising concerns about these caption features as a result of technical changes that were implemented as part of the transition to digital television).

[129] 47 C.F.R. §11.51(d).

[130] *See Wireless RERC 2012 EAS Report* at 19; *see also EAS Nationwide Test Report*, *supra* note 1, at 14-15 (noting poor audio nationwide).

[131] *See EAS Nationwide Test Report*, *supra* note 1, at 14.

[132] *See Fifth Report and Order*, 27 FCC Rcd 642, 655, ¶ 30. Similarly, beginning May 26, 2015, the Commission's Section 79.2 rules require emergency information that is provided visually during programming that is neither a regularly scheduled newscast, nor a newscast that interrupts regular programming, to be made accessible to individuals who are blind or visually impaired through the use of a secondary audio stream to provide the emergency information aurally. *See* 47 C.F.R. § 79.2(b)(2)(ii); *see also ECIG Implementation Guide*, at 17 ("The originator SHOULD take into account that the text may be the only text displayed to the user, or passed to an announcer as a script, and SHOULD include all important information, and the information required in the EAS regulations. This information should include the type of event, effected audience and area, expiration time, description, call to action, etc.").

Implementation Guide states that "[i]t is a recommended practice that the recorded audio message match the alert text display message."[133] Should the Commission take further steps to achieve this goal?

40. We also note that text to speech (TTS) may also offer a mechanism to provide audio-visual alert message parity. TTS refers to an artificial process of converting text into human speech.[134] Although the Commission initially declined to allow EAS equipment to use TTS software to generate the visual crawl element of an EAS alert,[135] in the *Fifth Report and Order on Reconsideration*, in response to a strong record of support for TTS solutions,[136] the Commission revised its earlier position and allowed EAS Participants to deploy text-to-speech solutions to generate the audio portion of EAS alerts.[137] To what extent are EAS Participants currently using TTS technology to generate EAS audio? Has it proven to be an effective manner of ensuring parity between the audio and visual elements of an EAS alert? We seek comment on whether text-to-speech is sufficiently technologically advanced to become a mandatory element of the Commission's EAS Rules.

E. Proposed Effective Dates

41. Based on the record, we propose that a reasonable, minimally burdensome time for all EAS Participants to replace unsupported equipment and to perform necessary firmware upgrades and required testing to implement the rules we propose today regarding the national location code, the ETRS and our proposed accessibility rules would be six months from the effective date of any rules we may adopt as a result of this *Notice*. We believe that the public safety benefits of our proposed rules, plus FEMA's stated desire to conduct a further test, militates for a more rapid implementation period than commenters request.[138] As the record indicates, most equipment and systems already have the capability to implement our proposed rules. We believe that a six month period will allow EAS Participants and equipment manufacturers to schedule any required equipment replacement, software or certification upgrades and necessary testing, and that this schedule will have minimal impact on the costs discussed in this Section.[139] We seek comment on this proposal. We note that the record indicates that an NPT that

[133] *ECIG Implementation Guide*, at 15.

[134] *See* Paul Taylor, *Text-to-Speech Synthesis*, UNIVERSITY OF CAMBRIDGE 1 (2006).

[135] *See Fifth Report and Order*, 27 FCC Rcd 642, 658, ¶ 38.

[136] *See*, *e.g.*, CSRIC III, WORKING GROUP NINE, CAP IMPLEMENTATION, FINAL REPORT 11-14 (2014), *available at* http://transition.fcc.gov/bureaus/pshs/advisory/csric3/CSRIC-III-WG9-Final-Report.pdf.; *Federal Emergency Management Agency Petition for Reconsideration*, EB Docket 04-296 (filed March 12, 2012).

[137] *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, EB Docket No. 04-296, *Fifth Report and Order, Order on Reconsideration*, 27 FCC Rcd. 4429, 4432, ¶ 8 (2012) (*Fifth Report and Order on Reconsideration*) (revising 47 C.F.R. § 11.56(a)(2) to replace the parenthetical phrase "except that any and all specifications set forth therein related to using text-to-speech technology and gubernatorial 'must carry' shall not be followed" with the phrase "except that any and all specifications set forth therein related to gubernatorial 'must carry' shall not be followed, and that EAS Participants may adhere to the specifications related to text-to-speech on a voluntary basis").

[138] *See*, *e.g.*, Second NCTA *Ex Parte* at 2 ("our companies uniformly reported that at least one year is needed to deploy the new location code effectively once it is adopted by the Commission"); Comcast *Ex Parte* at 1 ("it would take at least one year from adoption of the rules to fully upgrade impacted systems to implement a Nationwide Location header code"); *cf.* Trilithic *Ex Parte* at 3 ("Testing and deployment of firmware/software updates typically take about six months for some of the larger Cable and IPTV providers.").

[139] We consider these changes to be Class I permissive changes, not requiring further equipment certification. *See* 47 C.F.R. § 11.34(f) ("Modifications to existing authorized EAS decoders, encoders or combined units necessary to implement the new EAS codes . . . will be considered Class I permissive changes that do not require a new application for and grant of equipment certification under part 2, subpart J of the chapter."); *see also Fifth Report and Order*, 27 FCC Rcd 642, 697-706, ¶ 155-180 (containing a thorough description of the Commission's equipment certification requirements).

fully emulates an EAN cannot be implemented in six months and that, if FEMA wants to have a test in such a near term, a test of more than two minutes using an NPT would not be an option. We seek comment on this view. We also seek comment on what would be a reasonable date for compliance with our proposed rule requiring the NPT fully to emulate the EAN. For example, would a three year period from the effective date of any rules adopted as a result of this notice be appropriate?[140]

F. Cost Benefit Analysis

42. In this Section, we compare the expected costs that would be imposed by our proposed rules to their expected benefits and seek comment on the accuracy of these estimates. We believe that the significant public safety benefit of the rules we propose today far outweighs the costs associated with those rules.[141] In particular, we believe that by proposing rules that require EAS equipment to distribute alerts consistently, accessibly, and in a manner that can be accurately measured, we ensure that the public is provided with the most effective alerting system currently possible. Our cost estimates are based on industry figures submitted in response to questions raised in the *EAS Operational Issues Public Notice*.[142] According to these figures, we anticipate that our proposed requirements would impose costs on EAS Participants in three affected areas: (1) EAS national location code and NPT in lieu of EAN for tests,[143] (2), Electronic Test Reporting System,[144] and (3) visual and audio accessibility.[145] As we discuss in greater detail in below, we seek comment on estimates that put the total cost for EAS Providers to implement the requirements we propose today between $7.0 million and $13.6 million.[146] With regard to benefits, we estimate that the minimum expected benefit common to all of our proposed changes is $9.1M.[147] We believe all three proposed changes are essential for the EAS to function properly and thus share the common benefit of saving human lives, reducing injuries, mitigating property damage, and minimizing the disruption of our national economy.

43. Our proposed rules pertaining to the national location code and NPT, as well as those pertaining to test reporting and accessibility, will establish the baseline for a rigorous program of EAS testing and use that will allow the Commission to continue to improve the EAS. Further, our proposed rules will allow us to quantify the EAS's effectiveness as a lifesaving tool, as well as its progress towards CAP compatibility, an improvement that will enhance the overall efficacy of the EAS in the future. We therefore request comment that will enable us to weigh the costs and benefits associated with these proposed rules. We request that commenters provide specific data and information, such as actual or estimated dollar figures for each specific cost or benefit addressed, including a description of how the data or information was calculated or obtained and any documentation or other support.

44. *Proposed National Location Code Rules.* Commenters claim that the costs associated with implementing our proposed rules regarding the national location code will include both operational costs associated with the installation, configuration, and testing of necessary software updates in EAS and

[140] *See* Second NCTA *Ex Parte* at 2 ("The whole process [of adopting an NPT that mimics the EAN]–from standards update to implementation– could take up to three years.").

[141] *See infra* ¶ 50 (weighing the total cost of our proposed rules against their anticipated benefit).

[142] *See generally EAS Operational Issues Public Notice*.

[143] *See supra* ¶¶ 11-14. The costs of the national location code and the NPT would be $1.1 million. According to NCTA, costs associated with full emulation of the EAN by the NPT increase the $1.1 million fourfold, totaling $4.4 million. *See* Second NCTA *Ex Parte* at 2.

[144] *See supra* ¶¶ 22-30.

[145] *See supra* ¶¶ 31-40.

[146] The $6.6M difference depends on the manner in which the Commission implements the NPT. *See infra* ¶ 50.

[147] *See infra* ¶ 50.

related equipment,[148] as well as capital costs associated with hardware replacement, where necessary.[149] According to Sage and Trilithic, operational costs for most broadcaster EAS Participants will be minimal.[150] According to NCTA, cable provider EAS Participants face additional operational costs associated with programming middleware, set-top boxes and other downstream equipment to accept the new code.[151] Commenters agree that the costs associated with implementing our proposed rules can be reduced by bundling all required upgrades into a regularly scheduled system update.[152] Further, EAS Participants in both the cable and broadcast industries may need to replace older EAS equipment if they are using EAS equipment that has exceeded its useful life, is no longer supported by the manufacturer, and thus cannot be upgraded to comply with our proposed rules.[153] We seek comment on the reasonableness of this analysis and its underlying assumptions.

45. NCTA asserts that implementing our proposed rules regarding the national location code will present cable service provider EAS Participants with approximately $1.1 million in aggregated capital and operational costs for the entire cable industry.[154] We seek comment on this assessment, and whether such costs are outweighed by the benefits of adopting the proposed national location code. While broadcasters would not experience the operational costs that cable providers would face, there are approximately three times as many broadcast-based EAS Participant facilities as there are cable EAS Participant facilities.[155] Accordingly, we seek comment on whether a similar $1.1 million figure would

[148] *See* Second Monroe *Ex Parte* at 2; *see also* Trilithic *Ex Parte* at 2 ("Customers will need to apply the upgrade. Some customers will need to test changes and approve the new firmware in their labs."); Comcast *Ex Parte* at 1 ("Comcast would also incur operational costs in developing, testing, and deploying new code in our downstream equipment.").

[149] *See* Sage *Ex Parte* at 2 (stating that a software update would obsolete legacy equipment); *see also id.* at 3 ("Allowing the user to enter a code of 000000 to use as a location for filters will require a software update."); Comcast *Ex Parte* at 1 ("[N]ew equipment would be required in some circumstances, thereby resulting in sizable capital expense."); Trilithic *Ex Parte* at 3.

[150] *See* Sage *Ex Parte* at 5 ("The technical difficulty is not high, and the time required is not large. Given sufficient lead time, software updates and settings file changes can be made . . . For current Sage equipment, installing a software update takes less than 10 minutes to download the update, install it in the ENDEC, and verify that the update is in place. No design thought is required by the user. Changing settings files does require some thought, especially if the user's filters are complex . . . The actual mechanics involved in uploading the settings is [*sic*] less than 10 minutes."); *see also* Trilithic Comments at 5 (stating that the effort required to implement the software update associated with the new location code "would be negligible, with little if any impact or cost.").

[151] *See* Second NCTA *Ex Parte* at 2.

[152] *See* ACA Comments at 5 (recommending that the Commission could minimize costs to EAS Participants by allowing them to adopt the specifications we propose today "through typical equipment lifecycles"); *see also* Comcast *Ex Parte* at 2 (stating that an accelerated compliance deadline would result in greater cost and risk of error); Second NCTA *Ex Parte* at 2 ("To minimize cost, the preference is to make this change during scheduled periodic annual equipment review/upgrade cycles.").

[153] Some EAS Participants may be using "intermediary devices," *i.e.*, stand-alone devices that monitor, receive, and decode CAP-formatted messages, and then convert such messages into a format that can be input into a separate, stand-alone legacy EAS device to produce an output that complies with the Part 11 rules. *See Fifth Report and Order*, 27 FCC Rcd 642, 670, ¶ 70. The Commission allows EAS Participants to use such devices to meet their CAP-related EAS obligations, provided that such devices otherwise comply with the Part 11 EAS rules. *See id.* at 672, ¶ 74. To the extent that EAS Participants can use intermediary devices to comply with the rules we propose today, we would continue to allow their use.

[154] *See* Second NCTA *Ex Parte* at 2.

[155] *See* FCC, *Broadcast Station Totals as of December 31, 2013*, http://transition.fcc.gov/Daily_Releases/Daily_Business/2014/db0108/DOC-325039A1.pdf (stating that there were 20,332 radio broadcasters in the United States as of the end of 2013, not including FM, VHF and UHF translators); *see also The Number of Cable Headends in the United States,* STATISTA.COM (2014),

(continued….)

apply to the broadcast industry, including the reasonableness of this analysis and its underlying assumptions.

46. *Proposed NPT rules*. The costs associated with implementation of the rules we propose today regarding the NPT would vary, depending on whether the NPT is deployed as a "normal" EAS alert,[156] or whether we revise our rules to implement the NPT in a manner that fully emulates an EAN. In the case of the former, we seek comment on whether the costs would be *de minimis*. The NPT is already present in the Part 11 rules and programmed into EAS equipment. As Sage notes, costs would largely be limited to those incurred by EAS Participants having to manually reprogram their EAS equipment to automatically respond to the NPT,[157] a cost which could further be mitigated by bundling any reprogramming with that required for the national location code. Should the Commission revise its rules to define the NPT as an event code that would fully emulate the EAN, NCTA asserts that such a requirement would add approximately $3.3 million to the cost, thus totaling $4.4 million to accommodate all rules changes, and would require approximately three years, as opposed to one year, to complete.[158] According to NCTA, these additional costs would be necessary because requiring the NPT to emulate the EAN would require the underlying SCTE 18 standard to be revised, sub-standards rewritten, EAS and MVPD downstream equipment reprogrammed, and significant testing to be undertaken.[159] Although broadcasters in general do not have as extensive downstream facilities as do cable facilities, they do possess such facilities, and this also will be affected by the necessary standards revision. Thus, we seek comment whether the same three year time frame would also be borne by the broadcast industry. Further, and as we discuss above, the greater number of broadcasters may increase their overall cost to an amount that could approximate the $4.4 million dollar cost for cable. We note, however, that costs associated with use of the NPT could be offset by savings elsewhere. For example, as we discuss in paragraph 15 above, EAS Participant stakeholder organizations provided "This is only a Test" slides for broadcast and MVPD EAS Participants to display during the test, a requirement that would be obviated were the NPT to be used. Further, as noted in the *EAS Nationwide Test Report*, the various stakeholders engaged in significant outreach to avoid any public confusion associated with the use of the live code EAN.[160] We seek comment on whether all parties would incur cost savings associated with not having to conduct such "live code" test outreach, and if so, what such cost savings might be. We otherwise seek comment on the reasonableness of this analysis and its underlying assumptions.

47. *Proposed ETRS Rules.* Regarding our proposed ETRS rules, we seek comment on whether any costs that arise from the adoption of the ETRS, either for test reporting purposes or for integration into Commission's EAS State Plan rules will be minimal. Most of the information that we propose EAS Participants submit to the ETRS has already been populated in other FCC databases, and thus compliance with this requirement may require little further action beyond a simple review for accuracy. For the few data fields that EAS Participants would need to supply, the Commission has already determined that compliance would entail a one-time cost of approximately $125.00 per EAS Participant, a figure that has already been reviewed and approved by the Office of Management and

(Continued from previous page)
http://www.statista.com/statistics/186996/number-of-cable-headends-in-the-united-states-since-1998/ (stating that in 2011 there were 7,136 cable headends in the United States).

[156] *See* Sage *Ex Parte* at 4 (recommending that the NPT be "kept as a 'normal' EAS alert, *i.e.*, within the normal time limit, FEMA can use the NPT to verify transport of messages through various parts of the system.").

[157] *See infra* note 150; *see also Third Report and Order*, 26 FCC Rcd 1460, 1470, ¶ 23 (expressing commenters' concerns that use of the NPT in the first nationwide EAS test "could lead to a significant risk of errors because each EAS facility operator would have to manually alter its encoder/decoder programming configuration to recognize and accept the new code.").

[158] *See id.*

[159] *See* Second NCTA *Ex Parte* at 2.

[160] *EAS Nationwide Test Report*, *supra* note 1, at 9.

Budget.[161] Accordingly, the cost associated with our proposed ETRS rules may be a one-time cost of $125.00 per EAS Participant, or approximately $3.4 million in the aggregate for all EAS Participants.[162] We seek comment on the reasonableness of this analysis and its underlying assumptions.

48. *Accessibility Rules.* Finally, regarding the accessibility standards that we propose today, we break these down into their two constituent elements: the visual text crawl element and the audio element. With regard to the visual text crawl element, one approach to estimating its cost would be the methodology adopted by the Commission in its *Closed Captioning Order*.[163] Using this approach, we calculate that text crawls might be necessary for approximately 50 hours of alerts.[164] Thus, at a cost of $500 an hour, if we were requiring EAS closed captions, the aggregate costs of our proposed visual crawl rules for all EAS Participants under this methodology could be as much as $25,000. However, EAS text crawls are not closed captions. They are largely generated automatically and employ the same or similar language for the extreme weather and child abduction incidents that comprise the vast majority of EAS alerts, and thereby require far less time to produce. Thus, the costs associated with that proposed rule change may be *de minimis*, potentially far less than $25,000. We seek comment on this analysis.

49. Regarding our proposed audio accessibility rules, as we discuss above, we believe that an effective way to ensure that the audio and text portions of an EAS alert are equivalent is to use CAP-based text to speech functionalities.[165] Thus, our cost estimate for our proposed audio equivalency rule is based on the aggregate cost for all EAS Participants to employ TTS. We believe that the number of EAS Participants that would need to employ hardware and/or software TTS upgrades is approximately 2,750.[166] Given that the TTS upgrade will cost, on average, $500,[167] the aggregate one-time cost for EAS Participants to comply with our proposed audio equivalency rules could be no more than approximately $1.4 million (*i.e.*, 2,750 x $500 = $1,375,000). We seek comment on this analysis.

50. *Comparison of total costs and benefits.* The EAS must remain a resilient public alert and warning tool if it is to save lives and protect property during times of national, state, regional, and local

[161] Public Information Collections Approved by the Office of Management and Budget (OMB, 76 FR 68756-01 (November 7, 2011).

[162] *See supra* note 155 (stating that there are 20,332 total broadcaster EAS Participants and approximately 7,136 total cable headend EAS Participants for a total of 27,468 entities).

[163] *See Closed Captioning Quality Report and Order*, ¶ 70.

[164] Except for a Presidential alert (which has never been issued), the maximum time for an EAS alert is two minutes. *See* 47 C.F.R. §11.33(a)(9). Approximately 1,500 EAS alerts are sent in a given year. In the *Fifth Report and Order*, the Commission noted that "although the Commission does not require EAS Participants to report the number of EAS alerts they receive from the NWS or state agencies, the Partnership for Public Warning, in its EAS Assessments, noted that 1,448 alerts were generated in 1990; 1,309 in 1991; and 1,412 in 1992." *Fifth Report and Order*, 27 FCC Rcd 642, 737, n.23 (citing "The Emergency Alert System (EAS); An Assessment," Partnership for Public Warning, PPW Report 2004-1, February 2004).

[165] *See supra* ¶ 40.

[166] The Commission's rules require EAS Participants to be CAP compliant, and that the vast majority of EAS Participants already use TTS in some form or other. Thus, the cost of compliance with this proposed rule will be that borne by those EAS participants that are not currently fully CAP compliant. Based on the Commission's record of those EAS Participants currently seeking waiver of the CAP requirement, we believe that at least 90% of current EAS Participants have TTS installed and enabled. *See* EB Docket No. 04-296 (containing 22 outstanding requests for waiver).

[167] *See*, *e.g.*, Monroe Electronics, Inc., *Order Form*, MONROE ELECTRONICS EMERGENCY ALERT SYSTEMS (2014), http://monroe-electronics.com/EAS_pages/pdf/CAP_order_form.pdf; *see also Digital Alert Systems TTS Premium Text-to-Speech Software Option*, SCMS, Inc. (2012), https://www.scmsinc.com/shop-item/studio-products-eas-equipment-and-systems/tts-digital-alert-systems-tts-premium-text-to-speech-tts-software-option/ (providing a list price of $470.25 for the DASDEC encoder/decoder).

emergencies.[168] We now seek comment on whether the costs associated with the proposals we make today are the most cost-effective solutions to accomplish the goal of ensuring that the EAS is sufficiently robust to perform its life saving task, or whether there are more effective means available. By aggregating the three cost components discussed above, we estimate that the total cost of our proposed rules would at most be $13.6 million.[169] One measure against which we can balance this cost is the Department of Transportation model, which estimates the value of risk reduction, measured in terms of an expected life saved, to be $9.1 million.[170] Under this yardstick, even two lives saved could more than offset the costs of the system upgrades imposed by our proposals. We seek comment on whether the DOT statistic is the most appropriate yardstick to measure the benefits our proposals. We seek comment on whether there is a better measure for our NPT and ETRS proposals, and if so, commenters should specify what specific measure should be used. We do note, however, that none of the commenters' responding to the *EAS Operational Issues Public Notice* objected on the grounds that the cost of our proposed rules would be prohibitive, or even burdensome. We encourage EAS Participants and equipment manufacturers to include with their comments any data relevant to our analysis of the costs and timing involved with the implementation of today's proposals.[171]

IV. OTHER ISSUES

51. The *EAS Nationwide Test Report* indicated that EAS equipment manufacturers had made inconsistent assumptions about whether the requirement in the EAS rules that the EAS header code must not be amended, extended or abridged without FCC authorization pertained to an EAN, and whether the "time of release" element in the header code had any impact on the requirement in the rules that an EAN be transmitted immediately upon receipt.[172] In the *EAS Operational Issues Public Notice*, the Bureau sought comment on whether the unique nature of the EAN as a mandatory nationwide live alert code somehow obviated the above stated requirements.[173] As we discuss in more detail below, we find no basis to propose rule revisions nor do we seek comment on these issues, as the rules are clear on their face and we see no reason for changing them.

---

[168] *See The Emergency Alert System (EAS), Background*, FEMA.GOV (2014), http://www.fema.gov/emergency-alert-system.

[169] This total is comprised of a combined maximum cost of $2.2 million for our proposed national location code rules, $3.4 million for our proposed ETRS rules, $1.4 million for our proposed video and audio accessibility rules, and $6.6 million for implementing an NPT that fully emulates an EAN.

[170] An accepted model developed by the United States Department of Transportation presently estimates the value of a statistical life (VSL) at $9.1 million. *See* Memorandum from Polly Trottenberg, Under Secretary for Policy, Office of the Secretary for Transportation, and Robert S. Rivkin, General Counsel, Department of Transportation, Guidance on Treatment of the Economic Value of a Statistical Life in U.S. Department of Transportation Analyses, 1 (2013), http://www.dot.gov/sites/dot.gov/files/docs/VSL Guidance_2013.pdf. The Department of Transportation defines VSL as "the additional cost that individuals would be willing to bear for improvements in safety (that is, reductions in risks) that, in the aggregate, reduce the expected number of fatalities by one." *Id.* at 2.

[171] Although commenters agree that testing will be required prior to adoption of Commission rules, at least one commenter argues that the Federal government should take responsibility for such testing. *See* Sage Comments at 8 (recommending that the "FEMA and the Joint Interoperability Test Command (JITC) use their test setup to verify the operation of an EAN with a 000000 code" prior to any FCC decision). Others state that any necessary testing can be handled by EAS Participants and equipment manufacturers. *See* NCTA Reply Comments at 3 ("cable operators would need to conduct further research, testing and evaluation with their EAS equipment manufacturers to ensure that the use of a new location code 000000 is properly supported by the embedded base of deployed EAS equipment."); *accord* Monroe Reply at 4; Trilithic *Ex Parte* at 2 ("Some customers will need to test changes and approve the new firmware in their labs.").

[172] *See supra* ¶ 5*; see also EAS Nationwide Test Report, supra* note 1, at 13.

[173] *See EAS Operational Issues Public Notice*, at 4.

A. Acknowledgement of all EAS Header Codes

52. Section 11.31 of the Commission's EAS rules establishes the EAS protocol, a four-part message that contains the header code elements of an EAS alert.[174] Header codes contain basic identifying information about the alert, including the identity of the message originator, the event code, the location code, the valid time period for the message, the Time of Release code, and the identification of the entity transmitting or retransmitting the message.[175] Section 11.31(c) states that "[t]he EAS protocol, including any codes, must not be amended, extended or abridged without FCC authorization."[176] There is no exception for EANs, and, indeed, the definition of "Emergency Action Notification (EAN)" clearly envisions that EANs can be formatted in the EAS protocol as defined in Section 11.31.[177]

53. Despite this rule, some EAS manufacturers apparently programmed their EAS equipment to ignore some of the header codes by processing those codes as "wildcards."[178] This action resulted in a lack of uniformity in EAS message dissemination across the nation.[179] In the *EAS Operational Issues Public Notice*, the Bureau sought comment on this practice, asking whether the unique nature of the EAN as a mandatory, nationwide, live alert obviated the need for EAS equipment to acknowledge header code elements such as the location code.[180]

54. Based on our review, we find that Section 11.31 prohibits any amendment, extension or abridgement of any part of the EAS protocol, except in cases where the FCC has authorized such action. As wildcards and other shortcuts serve to "abridge" the EAS protocol, they are prohibited by the FCC rules. While we recognize that these shortcuts may have been taken to address gaps associated with the EAN (*e.g.,* lack of a national location code), there is nothing in the rules that allows for a different result in the case of an EAN or any other type of EAS alert. Indeed, use of such programming shortcuts, in the absence of FCC authorization, undermines the effectiveness of the EAS. As several commenters note, the presence of EAS header codes enhances the reliability of the EAS ecosystem[181] and is necessary for header validity checking, and duplicate detection.[182] According to commenters, even in equipment that uses wildcards, if any header code element is missing from an alert, equipment currently deployed in the field will discard otherwise valid messages.[183] Finally, the use of wildcards and other programming

[174] *See supra* note 12 (defining the EAS Protocol).

[175] *Id.*

[176] *See* 47 C.F.R. § 11.31(c).

[177] *See* 47 C.F.R. § 11.2(a) (discussing dissemination of EAN messages "that are formatted in the EAS Protocol (specified in § 11.31)" and originated from a governmental origination point or at the State or local level).

[178] *See EAS Nationwide Test Report*, *supra* note 1, at 16. A "wildcard" is a programming shortcut used in some EAS equipment whereby the encoder/decoder can be made to accept as valid any entry within a given header code field, no matter what data it contains. *See* Sage *Ex Parte* at 2-4. The Sage ENDEC currently ships with user-settable parameters that use a wildcard setting for EANs. *See id.* at 2. Other EAS equipment may also use wildcards. *See* Second Monroe *Ex Parte* at 2 ("The PSSCCC (location) parameter must be present, though in the case of the EAN, can include any FIPS geocode."); *see also* Trilithic *Ex Parte* at 2 ("[E]xceptions to location filtering that were added after early EAN tests will need to be removed.").

[179] *See*, *e.g.*, *EAS Nationwide Test Report*, *supra* note 1, at 14 (citing *Emergency Alert System Didn't Work in Oregon*, KVAL.COM (Nov. 9, 2011, 10:06 AM), http://www.kval.com/news/national/133545908.html).

[180] *EAS Operational Issues Public Notice*, at 4.

[181] *See* Sage Comments at 3; *see also* Trilithic Comments at 2 ("Making the EAN more consistent with other types of EAS messages will ultimately make it more reliable."); Second Monroe *Ex Parte* at 1.

[182] *See* Second Monroe *Ex Parte* at 1 ("[T]he DASDEC and R189 One-Net utilize several key elements in EAS message headers for validation, filtering and duplicate detection.").

[183] *See* Trilithic Comments at 2 (stating that if the header code fails to comply with the EAS protocol, the data may be discarded by downstream firmware or hardware).

shortcuts also undermines EAS testing in that such actions can preclude the Commission, FEMA and other stakeholders from gaining an accurate picture of whether the EAS works in the manner contemplated by FCC rules and other standards.

B. Retransmission of EAN Immediately Upon Receipt

55. The Commission's rules require that an EAN must be broadcast "immediately" upon receipt.[184] As the Bureau noted in its report, although FEMA initiated the alert at 2:00 p.m. EST,[185] some EAS equipment apparently held the test alert for release until 2:03 EST, apparently because FEMA erroneously included a Time of Release code indicating 2:03 pm EST,[186] three minutes after the scheduled start time of the test.[187] As the *EAS Nationwide Test Report* indicated, this caused further delay to EAS message propagation.[188]

56. Several of our rules make clear that the EAN must be transmitted upon receipt. No rule provides for the transmission based on the Time of Release. Simply put, under the Commission's rules, EAS equipment must transmit the EAN immediately upon receipt, regardless of the Time of Release provided by the alert originator. We note that most EAS manufacturers understand this reading of the rule. Indeed, one commenter notes that equipment manufacturers have integrated the "transmission upon immediate release" requirement into current EAS technical standards which apply to broadcast as well as CAP-based EAS.[189]

57. Requiring transmission of EANs immediately upon receipt is consistent with our goal of ensuring that the public has access to timely and accurate EAS alerts. As some commenters argue, any delay in processing an EAN undermines its value as a tool for the President of the United States to communicate with the American people in an emergency.[190] Moreover, retransmitting an EAN alert

---

[184] *See* 47 C.F.R. §§ 11.51(m)(2), (n) (requiring that encoders air EANs "immediately" whether operating in automatic or manual mode); *see also* 47 C.F.R. § 11.52(e)(2) (requiring that EAS Participants interrupt "normal programming" when an EAN is received "immediately" when operating in manual mode (no time period is expressed for interrupting normal programming in automatic mode)); 47 C.F.R. § 11.33(a)(11) (requiring, with respect to decoders, that a "header code with the EAN event code specified in § 11.31(c) that is received through any of the audio inputs must override all other messages"); 47 C.F.R. § 11.54(a) (requiring immediate rebroadcast upon receipt for the EAN).

[185] *See EAS Nationwide Test Report*, *supra* note 1, at 12.

[186] *See id.* at 16.

[187] *See* Monroe *Ex Parte* at 3 ("We observe that several versions of EAS equipment adhered to the 'time of transmission' of the alert, treating the EAN message as valid upon that time (1903 GMT)."); *see also* Chriss Scherer, *Passing the EAS Test,* RADIOMAGONLINE.COM, (Dec. 1, 2011, 2:00 AM), http://radiomagonline.com/viewpoint/passing_the_eas_test_1211 (noting that there were a "few EAS units that delayed relaying for three minutes").

[188] *EAS Nationwide Test Report*, *supra* note 1, 16.

[189] *See* Sage Comments at 4 (stating that the Time of Release code only indicates "when the message was initially released by the originator" not when it should be retransmitted by an alert recipient) (citing 47 C.F.R. § 11.31(c)); *see also* CAP 1.2 Standard, *supra* note 35, at 10 (stating that both effect and onset times are "ignored if present. Alerts shall be effective upon issuance."); SOCIETY OF CABLE TELECOMMUNICATIONS ENGINEERS, AMERICAN NATIONAL STANDARD ANSI/SCTE 18 (2007) (evincing that immediate retransmission upon receipt is also required for downstream equipment such as set top boxes, stating that "[r]eceiving devices shall process cable_emergency_alert () messages upon their reception, even if the event_start_time field indicates a time in the future.").

[190] *See* Hearst Reply Comments at 4 ("Any delay in the processing of an EAN would effectively undermine the value of the EAN. The basic premise of a Presidential alert is that there has been an event serious enough to justify the President interrupting regular broadcast to deliver a message to the American public. Such a message would by definition be critical and would need to be communicated immediately to as many people nationwide as possible."); (continued….)

immediately upon receipt is the only possible method to transmit alerts uniformly and consistently within an EAS ecosystem that is not time synchronized.[191] Any divergence from the immediate release would have a ripple effect throughout the system that could affect the receipt of the EAN by other EAS Participants and the public.[192]

V. PROCEDURAL MATTERS

A. *Ex Parte* Rules

58. The proceeding initiated by this *Notice of Proposed Rulemaking* shall be treated as "permit-but-disclose" proceedings in accordance with the Commission's *ex parte* rules.[193] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must: (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made; and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

B. Comment Filing Procedures

59. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments in response to this *Notice of Proposed Rulemaking* on or before the dates indicated on the first page of this document. Comments may be filed

(Continued from previous page)
see also BWWG Comments at 2 (stating that if messages were allowed to be held until a future time of release "[t]he negative impact of any delay, should a real EAN ever be issued, could be significant.").

[191] *See* Trilithic Comments at 3 (concluding that "the only synchronization method available . . . is to activate as soon as possible after receipt."); *see also* BWWG Comments at 2 (offering that "[c]oordination, clarity and timeliness are keys to [the EAN's] messaging goal."). On the other hand, commenters agree that EAS alerts could be time synchronized with minimal effort. *See* Sage Comments at 7 (pointing out that the best way to reconcile any seeming discrepancy between immediate release of an EAN and information in the Time of Release code is simply for the alert originator to issue the message with the correct time stamp); *see also* Monroe *Ex Parte* at 6 (stating that there is "little reason why the current generation of EAS equipment cannot be time-synched automatically, using Network Time Protocol (NTP), GPS clock or other means."). Although this solution would only require EAS Participants to properly maintain alert origination equipment, the initial decision to time-synchronize an EAN is entirely within FEMA's purview, and thus outside of the scope of this proceeding.

[192] Thus, the prohibition in Section 11.31(c) against altering the header codes not only applies to aspects of the codes that may not be entirely necessary, but also to aspects of the codes that may contain errors. While a prohibition that bars the correction of header codes may seem counterintuitive, a flat prohibition against any alteration of these codes will yield better results than an approach that tolerates *ad hoc* tinkering throughout a national daisy chain message distribution system

[193] 47 C.F.R. §§ 1.1200 – 1.1216.

using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.

- Paper Filers: Parties that choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

  Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

  1. All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
  2. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
  3. U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

C. Accessible Formats

60. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

D. Regulatory Flexibility Analysis

61. As required by the Regulatory Flexibility Act of 1980, see 5 U.S.C. § 604, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The IRFA is set forth in Appendix A. Written public comments are requested in the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to this *Notice of Proposed Rulemaking* as set forth on the first page of this document, and have a separate and distinct heading designating them as responses to the IRFA.

E. Paperwork Reduction Analysis

62. This *Notice of Proposed Rulemaking* contains proposed new or modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and OMB to comment on the information collection requirements contained in this document, as required by PRA. In addition, pursuant to the Small Business Paperwork Relief Act of 2002,[194] we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."[195]

VI. ORDERING CLAUSES

63. Accordingly, IT IS ORDERED that pursuant to Sections 1, 2, 4(i), 4(o), 301, 303(r), 303(v), 307, 309, 335, 403, 624(g),706, and 715 of the Communications Act of 1934, as amended, 47

[194] Pub. L. No. 107-198.

[195] 44 U.S.C. § 3506(c)(4).

U.S.C. §§ 151, 152, 154(i), 154(o), 301, 303(r), 303(v), 307, 309, 335, 403, 544(g), 606, and 615, this *Notice of Proposed Rulemaking* IS ADOPTED.

64. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rulemaking* including the Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact of the proposals described in the attached *Notice of Proposed Rulemaking* on small entities. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments in the *Notice of Proposed Rulemaking*. The Commission will send a copy of the *Notice of Proposed Rulemaking*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the *Notice of Proposed Rulemaking* and IRFA (or summaries thereof) will be published in the Federal Register.[3]

A. Need for, and Objectives of, the Proposed Rules

2. Today's *Notice of Proposed Rulemaking* proposes rules to resolve problems with the EAS uncovered in the first nationwide Emergency Alert System (EAS) test conducted on November 9, 2011, and proposes further rules to evolve the paradigm for the future testing, exercise and use of the EAS to enhance the effectiveness of the EAS as an alerting tool for the public. In this *Notice of Proposed Rulemaking,* we propose that a national location code be adopted, that "six zeroes" should be that code; and that the National Periodic Test code be used to evaluate the readiness of the EAS for a live EAN. We also propose to establish a reporting requirement using an updated, online EAS test reporting system (ETRS). Finally, we propose to establish minimum standards for visual crawl speed, completeness and placement that will improve the accessibility of EAS alerts. These proposed rules will help to ensure that the EAS better protects the life and property of all Americans.[4]

B. Legal Basis

3. Authority for the actions proposed in this *Notice of Proposed Rulemaking* may be found in Sections 1, 2, 4(i), 4(o), 301, 303(r), 303(v), 307, 309, 335, 403, 624(g),706, and 715 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(o), 301, 303(r), 303(v), 307, 309, 335, 403, 544(g), 606, and 615.

C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

4. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein.[5] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[6] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[7] A "small business

[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *See* 5 U.S.C. § 603(a).

[3] *Id.*

[4] *See* Appendix B at ¶ 2 for description of rules the Commission adopted in the *Second Report and Order*.

[5] 5 U.S.C. § 604(a)(3).

[6] 5 U.S.C. § 601(6).

[7] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity

(continued….)

concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration ("SBA").[8]

5. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions*. The rules proposed in the attached *Notice of Proposed Rulemaking* may, over time, affect small entities that are not easily categorized at present, beyond the list of representative entities listed in the subsequent paragraphs. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards.[9] First, nationwide, there are a total of approximately 27.9 million small businesses, according to the SBA.[10] In addition, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[11] Nationwide, as of 2007, there were approximately 1,621,315 small organizations.[12] Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[13] Census Bureau data for 2011 indicate that there were 89,476 local governmental jurisdictions in the United States.[14] We estimate that, of this total, as many as 88,506 entities may qualify as "small governmental jurisdictions."[15] Thus, we estimate that most governmental jurisdictions are small.

6. *Television Broadcasting*. The SBA has developed a small business sized standard for television broadcasting, which consists of all such firms having $13 million or less in annual receipts.[16] Business concerns included in this industry are those "primarily engaged in broadcasting images together with sound."[17] According to Commission staff review of BIA Publications, Inc. Master Access

(Continued from previous page)
for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

[8] 15 U.S.C. § 632.

[9] *See* 5 U.S.C. §§ 601(3)–(6).

[10] *See* SBA, Office of Advocacy, *available at* http://www.sba.gov/sites/default/files/FAQ_Sept_2012.pdf (last viewed Jan. 31, 2014).

[11] 5 U.S.C. § 601(4).

[12] INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

[13] 5 U.S.C. § 601(5).

[14] U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007).

[15] The 2007 U.S Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89, 476 small governmental organizations in 2007. If we assume that county, municipal, township and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, the total of these organizations is 52,125. If we make the same assumption about special districts, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 special districts. Therefore, of the 89,476 small governmental organizations documented in 2007, as many as 89,506 may be considered small under the applicable standard. This data may overestimate the number of such organizations that has a population of 50,000 or less. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 2011, Tables 427, 426 (Data cited therein are from 2007).

[16] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 515120.

[17] Office of Management and Budget, North American Industry Classification System: United States, 1997, at 509 (1997). This category description continues, "These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studios, from an affiliated network, or from external sources." Separate census categories pertain to businesses primarily engaged in producing programming. *Id*. at 502-05, NAICS code 512120, Motion Picture and Video Production; NAICS code 512120,
(continued….)

Television Analyzer Database, as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States had revenues of $12 million or less. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[18] must be included.[19] Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. There are also 2,127 low power television stations ("LPTV").[20] Given the local nature and power limits of this service, we will presume that all LPTV licensees qualify as small entities under the SBA size standard.

7. *Radio Stations.* The revised rules and policies potentially will apply to all AM and commercial FM radio broadcasting licensees and potential licensees. The SBA defines a radio broadcasting station that has $6.5 million or less in annual receipts as a small business.[21] A radio broadcasting station is an establishment primarily engaged in broadcasting aural programs by radio to the public.[22] Included in this industry are commercial, religious, educational, and other radio stations.[23] Radio broadcasting stations which primarily are engaged in radio broadcasting and which produce radio program materials are similarly included.[24] However, radio stations that are separate establishments and are primarily engaged in producing radio program material are classified under another NAICS number.[25] According to Commission staff review of BIA Publications, Inc. Master Access Radio Analyzer Database on March 31, 2005, about 10,840 (95 percent) of 11,410 commercial radio stations have revenue of $6 million or less. We note, however, that many radio stations are affiliated with much larger corporations having much higher revenue. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action.

8. *Cable and Other Program Distribution*. The SBA has developed a small business size standard for cable and other program distribution, which consists of all such firms having $12.5 million or less in annual receipts.[26] According to Census Bureau data for 1997, in this category there was a total of 1,311 firms that operated for the entire year.[27] Of this total, 1,180 firms had annual receipts of under $10 million, and an additional 52 firms had receipts of $10 million to $24,999,999.[28] Thus, under this size standard, the majority of firms can be considered small. In addition, limited preliminary census data for

(Continued from previous page)
Motion Picture and Video Distribution; NAICS code 512191, Teleproduction and Other Post-Production Services; and NAICS code 512199, Other Motion Picture and Video Industries.

[18] "Concerns are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

[19] "SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic concern's size." 13 C.F.R. § 121.103(a)(4).

[20] *Broadcast Station Totals as of September 30, 2002*, FCC News Release (rel. Nov. 6, 2002).

[21] *See* 13 C.F.R. § 121.201, NAICS code 515112.

[22] *Id*.

[23] *Id*.

[24] *Id*.

[25] *Id*.

[26] 13 C.F.R. § 121.201, NAICS code 517510.

[27] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, *Establishment and Firm Size (including Legal Form of Organization)*, Table 4, NAICS code 513220.

[28] *Id*.

2002 indicate that the total number of cable and other program distribution companies increased approximately 46 percent from 1997 to 2002.[29]

9. *Cable System Operators (Rate Regulation Standard)*. The Commission has developed its own small business size standard for cable system operators, for purposes of rate regulation. Under the Commission's Rules, a "small cable company" is one serving 400,000 or fewer subscribers nationwide.[30] We have estimated that there were 1,065 cable operators who qualified as small cable system operators at the end of 2005.[31] Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, the Commission estimates that there are now fewer than 1,065 small entity cable system operators that may be affected by the rules and policies proposed herein.

10. *Cable System Operator (Telecom Act Standard)*. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[32] The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed $250 million in the aggregate.[33] Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.[34] We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed $250 million,[35] and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

11. *Broadband Radio Service (BRS)*. The proposed rules apply to Broadband Radio Service (BRS), operated as part of a wireless cable system. The Commission has defined "small entity" for purposes of the auction of BRS frequencies as an entity that, together with its affiliates, has average gross annual revenues that are not more than $40 million for the preceding three calendar years.[36] This definition of small entity in the context of BRS auctions has been approved by the SBA.[37] The

[29] *See* U.S. Census Bureau, 2002 Economic Census, Industry Series: "Information," Table 2, Comparative Statistics for the United States (1997 NAICS Basis): 2002 and 1997, NAICS code 513220 (issued Nov. 2004).

[30] 47 C.F.R. § 76.901(e). The Commission developed this definition based on its determination that a small cable system operator is one with annual revenues of $100 million or less. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393 (1995), 60 FR 10534 (February 27, 1995).

[31] Paul Kagan Associates, Inc., Cable TV Investor, February 29, 1996 (based on figures for Dec. 30, 1995).

[32] 47 U.S.C. § 543(m)(2); *see* 47 C.F.R. § 76.901(f).

[33] 47 C.F.R. § 76.901(f); *see* Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

[34] These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

[35] The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. *See* 47 C.F.R. § 76.909(b).

[36] 47 C.F.R. § 21.961(b)(1).

[37] *See* Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, MM Docket No. 94-131 and PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589 (1995).

Commission completed its BRS auction in March 1996 for authorizations in 493 basic trading areas. Of 67 winning bidders, 61 qualified as small entities. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees.

12. *Cable and Other Subscription Programming*. This industry comprises establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis. The broadcast programming is typically narrowcast in nature (*e.g.*, limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from. The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.[38] The SBA size standard for this industry establishes [39]as small any company in this category which receives annual receipts of $15 million or less. Based on U.S. Census data for 2007, in that year 659 establishments operated for the entire year. Of that 659,197 operated with annual receipts of $10 million a year or more. The remaining 462 establishments operated with annual receipts of less than $10 million. Based on this data, the Commission estimates that the majority of establishments operating in this industry are small.[40]

13. *The Educational Broadband Service (EBS)*. The proposed rules would also apply to The Educational Broadband Service (EBS) facilities operated as part of a wireless cable system. The SBA definition of small entities for pay television services also appears to apply to EBS.[41] There are presently 2,032 ITFS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in the definition of a small business.[42] However, we do not collect annual revenue data for EBS licensees, and are not able to ascertain how many of the 100 non-educational licensees would be categorized as small under the SBA definition. Thus, we tentatively conclude that at least 1,932 are small businesses and may be affected by the established rules.

14. *Incumbent Local Exchange Carriers ("LECs")*. We have included small incumbent LECs in this present IRFA analysis. As noted above, a "small business" under the RFA is one that, *inter alia*, meets the pertinent small business size standard (*e.g.*, a telephone communications business having 1,500 or fewer employees), and "is not dominant in its field of operation."[43] The SBA's Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not "national" in scope.[44] We have therefore included small incumbent local exchange carriers in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer

[38] UNITED STATES CENSUS BUREAU, NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM, http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=515210&search=2007.

[39] See 13 C.F.R 121.201, NAICS Code 515210.

[40] AMERICAN FACT FINDER, http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_51SSSZ1&prodType=table.

[41] 13 C.F.R. § 121.201, NAICS code 515210.

[42] 5 U.S.C. § 601(3).

[43] 15 U.S.C. § 632.

[44] Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of "small-business concern," which the RFA incorporates into its own definition of "small business." *See* 15 U.S.C. § 632(a) (Small Business Act); 5 U.S.C. § 601(3) (RFA). SBA regulations interpret "small business concern" to include the concept of dominance on a national basis. *See* 13 C.F.R. § 121.102(b).

employees.[45] According to Commission data,[46] one-thousand three-hundred and three carriers have reported that they are engaged in the provision of incumbent local exchange services. Of these 1,303 carriers, an estimated 1,020 have 1,500 or fewer employees and 283 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our proposed rules.

15. Competitive (LECs), Competitive Access Providers (CAPs), "Shared-Tenant Service Providers," and "Other Local Service Providers." Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.[47] According to Commission data,[48] 769 carriers have reported that they are engaged in the provision of either competitive access provider services or competitive local exchange carrier services. Of these 769 carriers, an estimated 676 have 1,500 or fewer employees and 93 have more than 1,500 employees. In addition, 12 carriers have reported that they are "Shared-Tenant Service Providers," and all 12 are estimated to have 1.500 or fewer employees. In addition, 39 carriers have reported that they are "Other Local Service Providers." Of the 39, an estimated 38 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, "Shared-Tenant Service Providers," and "Other Local Service Providers" are small entities that may be affected by our proposed rules.

16. *Satellite Telecommunications and Other Telecommunications*. The Commission has not developed a small business size standard specifically for providers of satellite service. The appropriate size standards under SBA rules are for the two broad categories of Satellite Telecommunications and Other Telecommunications. Under both categories, such a business is small if it has $12.5 million or less in average annual receipts.[49] For the first category of Satellite Telecommunications, Census Bureau data for 1997 show that there were a total of 324 firms that operated for the entire year.[50] Of this total, 273 firms had annual receipts of under $10 million, and an additional twenty-four firms had receipts of $10 million to $24,999,999. Thus, the majority of Satellite Telecommunications firms can be considered small.

17. The second category – *Other Telecommunications* – includes "establishments primarily engaged in … providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems."[51] Of this total, 424 firms had annual receipts of $5 million to $9,999,999 and an additional 6 firms had annual receipts of $10 million to $24,999,990. Thus, under this second size standard, the majority of firms can be considered small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

18. This *Notice of Proposed Rulemaking* proposes that EAS Participants submit data concerning their compliance with the EAS rules via a mandatory electronic reporting system, the

[45] 13 C.F.R. § 121.201, NAICS code 517110.

[46] *Trends in Telephone Service,* Table 5.3.

[47] 13 C.F.R. § 121.201, NAICS code 517110.

[48] *Trends in Telephone Service,* Table 5.3.

[49] 13 C.F.R. § 121.201, NAICS codes 517410 and 517910.

[50] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, *Establishment and Firm Size (Including Legal Form of Organization)*, Table 4, NAICS code 513340.

[51] Office of Management and Budget, North American Industry Classification System, 513 (1997) (NAICS code 517910.

Electronic Test Reporting System (ETRS). The Commission proposes that any reporting under the ETRS would be identical that required of all EAS Participants, including small entities, in the November, 2011 Nationwide EAS Test, a collection that was approved by OMB. The impact on small entities of the ETRS is consistent with their past OMB-approved practice under the EAS, and thus would impose no undue burden.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

19. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage of the rule, or any part thereof, for small entities."[52]

20. The *Notice of Proposed Rulemaking* is technologically neutral in order to enable small entities flexibility to comply with our proposed rules using EAS equipment offered by a variety of vendors. Commenters are invited to propose steps that the Commission may take to minimize any significant economic impact on small entities. When considering proposals made by other parties, commenters are invited to propose significant alternatives that serve the goals of these proposals. We expect that the record will develop to demonstrate significant alternatives. In particular, we expect that the record will develop to indicate whether EAS Participants who otherwise would be required to replace their EAS equipment can comply with the rules we propose today by deploying an intermediary device.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

21. None.

[52] 5 U.S.C. §§ 603(c)(1)-(c)(4).

APPENDIX B

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 C.F.R. Part 11 to read as follows:

PART 11 – EMERGENCY ALERT SYSTEM (EAS)

1. The authority citation for part 11 continues to read as follows:

Authority: 47 U.S.C. 151, 154 (i) and (o), 303(r), 544(g) and 606.

2. Amend § 11.21 by revising paragraphs (a) and (c) to read as follows:

§ 11.21 State and Local Area plans and FCC Mapbook.

* * * * *

(a) The State EAS Plan contains procedures for State emergency management and other State officials, the NWS, and EAS Participants' personnel to transmit emergency information to the public during a State emergency using the EAS. EAS State Plans should include a data table, in computer readable form, clearly showing monitoring assignments and the specific primary and backup path for emergency action notification ("EAN") messages that are formatted in the EAS Protocol (specified in §11.31), from the PEP to each station in the plan. If a state's emergency alert system is capable of initiating EAS messages formatted in the Common Alerting Protocol (CAP), its EAS State Plan must include specific and detailed information describing how such messages will be aggregated and distributed to EAS Participants within the state, including the monitoring requirements associated with distributing such messages. Consistent with the requirements of paragraph 11.61(a)(3)(iv) of this Part, EAS Participants shall provide the identifying information required by Form One of the EAS Test Reporting System (ETRS) no later than 60 days after the effective date of this Subsection, and shall renew the Form One information on a yearly basis or as required by any revision of the EAS Participant's State EAS Plan filed pursuant to Section 11.21 of this Part.

* * *

(c) The FCC Mapbook is based on the consolidation of the data table required in each State EAS plan with the identifying data contained in Form One of the ETRS. The Mapbook organizes all EAS Participants according to their State, EAS Local Area, and EAS designation.

* * * * *

3. Amend § 11.31 by revising paragraph (f) to read as follows:

§ 11.31 EAS protocol.

* * * * *

(f) The State, Territory and Offshore (Marine Area) ANSI number codes (SS) are as follows. County ANSI numbers (CCC) are contained in the State EAS Mapbook.

	ANSI#
All U.S.	00
State:	
AL	01
AK	02
AZ	04
AR	05
CA	06
CO	08
CT	09
DE	10
DC	11
FL	12
GA	13
HI	15
ID	16
IL	17
IN	18
IA	19
KS	20
KY	21
LA	22
ME	23
MD	24
MA	25
MI	26
MN	27
MS	28
MO	29
MT	30
NE	31
NV	32
NH	33
NJ	34
NM	35
NY	36
NC	37
ND	38
OH	39

OK	40
OR	41
PA	42
RI	44
SC	45
SD	46
TN	47
TX	48
UT	49
VT	50
VA	51
WA	53
WV	54
WI	55
WY	56
Terr.:	
AS	60
FM	64
GU	66
MH	68
MH	68
PR	72
PW	70
UM	74
	78
Offshore (Marine Areas)[1]:	
Eastern North Pacific Ocean, and along U.S. West Coast from Canadian border to Mexican border	57
North Pacific Ocean near Alaska, and along Alaska coastline, including the Bering Sea and the Gulf of Alaska	58
Central Pacific Ocean, including Hawaiian waters	59
South Central Pacific Ocean, including American Samoa waters	61
Western Pacific Ocean, including Mariana Island waters	65
Western North Atlantic Ocean, and along U.S. East Coast, from Canadian border south to Currituck Beach Light, N.C	73
Western North Atlantic Ocean, and along U.S. East Coast, south of Currituck Beach Light, N.C., following the coastline into Gulf of Mexico to Bonita Beach, FL., including the Caribbean	75
Gulf of Mexico, and along the U.S. Gulf Coast from the	77

Mexican border to Bonita Beach, FL	
Lake Superior	91
Lake Michigan	92
Lake Huron	93
Lake St. Clair	94
Lake Erie	96
Lake Ontario	97
St. Lawrence River above St. Regis	98

[1] Effective May 16, 2002, analog radio and television broadcast stations, analog cable systems and wireless cable systems may upgrade their existing EAS equipment to add these marine area location codes on a voluntary basis until the equipment is replaced. All models of EAS equipment manufactured after August 1, 2003, must be capable of receiving and transmitting these marine area location codes. EAS Participants that install or replace their EAS equipment after February 1, 2004, must install equipment that is capable of receiving and transmitting these location codes.

* * * * *

4. Amend § 11.51 by revising paragraph (d) as follows:

§ 11.51 EAS code and Attention Signal Transmission requirements.

* * * * *

(d) Analog and digital television broadcast stations shall transmit a visual message containing the Originator, Event, Location and the valid time period of an EAS message. Effective June 30, 2012, visual messages derived from CAP-formatted EAS messages shall contain the Originator, Event, Location and the valid time period of the message and shall be constructed in accordance with §3.6 of the "ECIG Recommendations for a CAP EAS Implementation Guide, Version 1.0" (May 17, 2010), except that if the EAS Participant has deployed an Intermediary Device to meet its CAP-related obligations, this requirement shall be effective June 30, 2015, and until such date shall be subject to the general requirement to transmit a visual message containing the Originator, Event, Location and the valid time period of the EAS message. If the message is a video crawl, it shall be displayed:

(1) At the top of the television screen or where it will not interfere with other visual messages or otherwise block other important visual content on the screen,

(2) At a speed that can be read by viewers,

(3) Continuously throughout the duration of any EAS activation,

(4) In a font sized appropriately for legibility,

(5) In a manner where lines of any video crawl not overlap with one another, and are adequately

positioned so they do not run off the edge of the video screen.

6. Amend § 11.61 by revising paragraphs (a)(3)(iv) as follows:

§ 11.61 Tests of EAS procedures.

(iv) Test results as required by the Commission shall be logged by all EAS Participants into the EAS Test Reporting System (ETRS) as follows.

(1) EAS Participants shall provide the identifying information required by Form One initially no later than 60 days after the effective date of this Subsection, and shall renew the Form One information on a yearly basis or as required by any revision of the EAS Participant's State EAS Plan filed pursuant to Section 11.21 of this Part.

(2) "Day of test" data as required by Form Two shall be filed in the ETRS within 24 hours of any nationwide test or as otherwise required by the Public Safety and Homeland Security Bureau.

(3) Detailed post-test data as required by Form Three shall be filed in the ETRS within forty five (45) days following any nationwide test or as otherwise required by the Public Safety and Homeland Security Bureau.

APPENDIX C

List of Commenters to the Operational Issues Public Notice

Comments in EB Docket No. 04-296

Commenters	Abbreviation
Bell, Frank W.	Bell
Broadcast Warning Working Group	BWWG
Cohen, Dippell & Everist, P.C.	CD&E
DIRECTV, LLC	DirecTV
Donelan, Sean	Donelan
Federal Emergency Management Agency	FEMA
Flores, Nicole	Flores
National Association of Broadcasters	NAB
National Cable and Telecommunications Association	NCTA
National Public Radio	NPR
Sage Alerting Systems, Inc.	Sage
Trilithic, Inc.	Trilithic
Wireless RERC	Wireless RERC

Reply Commenters	Abbreviation
American Cable Association	ACA
Cohen, Dippell & Everist, P.C.	CD&E
Consumer Groups & Wireless RERC-TA	CG & RERC-TA
Donelan, Sean	Donelan
Hearst Television, Inc.	Hearst
Monroe Electronics, Inc.	Monroe
Named State Broadcasters Associations	NSBA
National Oceanic and Atmospheric Administration's National Weather Service	NOAA NWS
Ohio Association of Broadcasters, North Carolina Association of Broadcasters, Virginia Association of Broadcasters	The Associations
Sage Alerting Systems, Inc.	Sage

Ex Parte Commenters	Abbreviation
Comcast, Inc.	Comcast
Monroe Electronics, Inc.	Monroe

National Cable and Telecommunications Association	NCTA
Nevada Broadcasters Association	NBA
Sage Alerting Systems, Inc.	Sage
Trilithic, Inc.	Trilithic

APPENDIX D

Proposed Electronic Test Reporting System

Figure 1: Login Screen

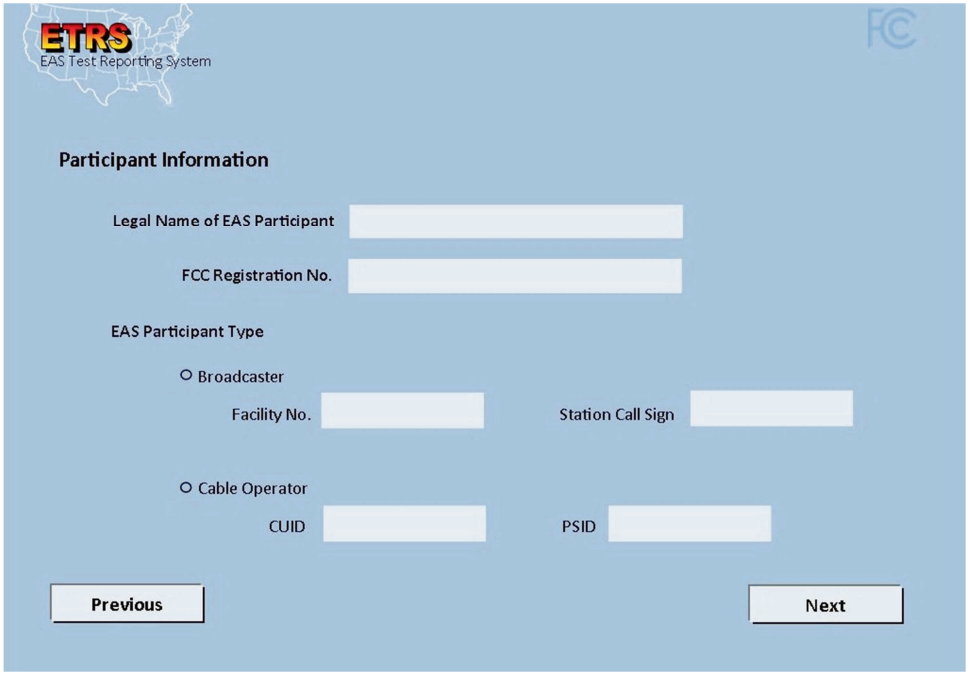


Figure 2: Form One – part one

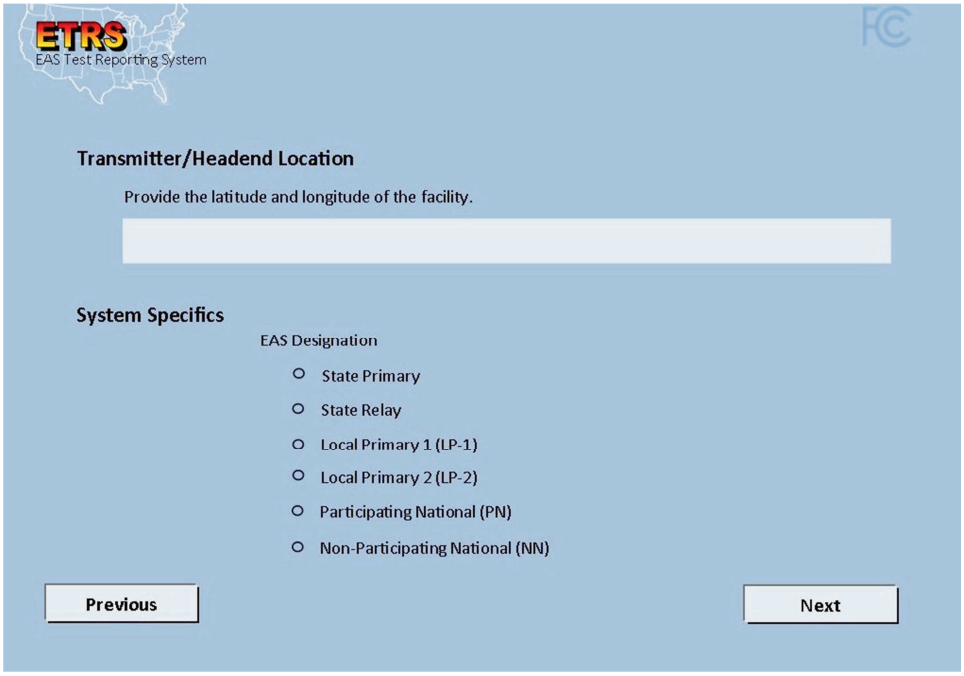


Figure 3: Form One – part two

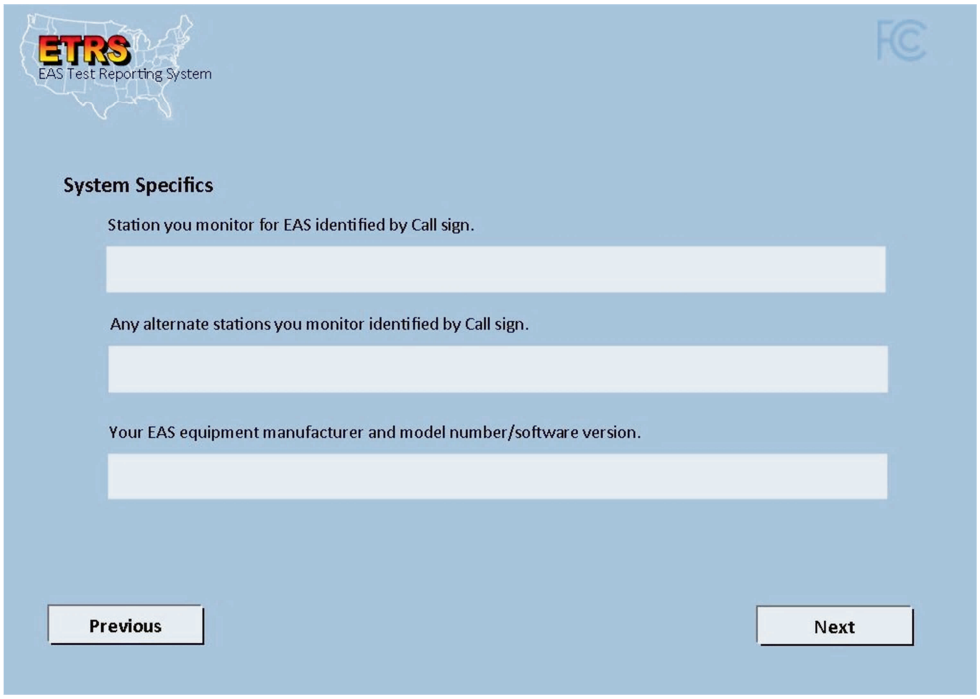


Figure 4: Form One – part three

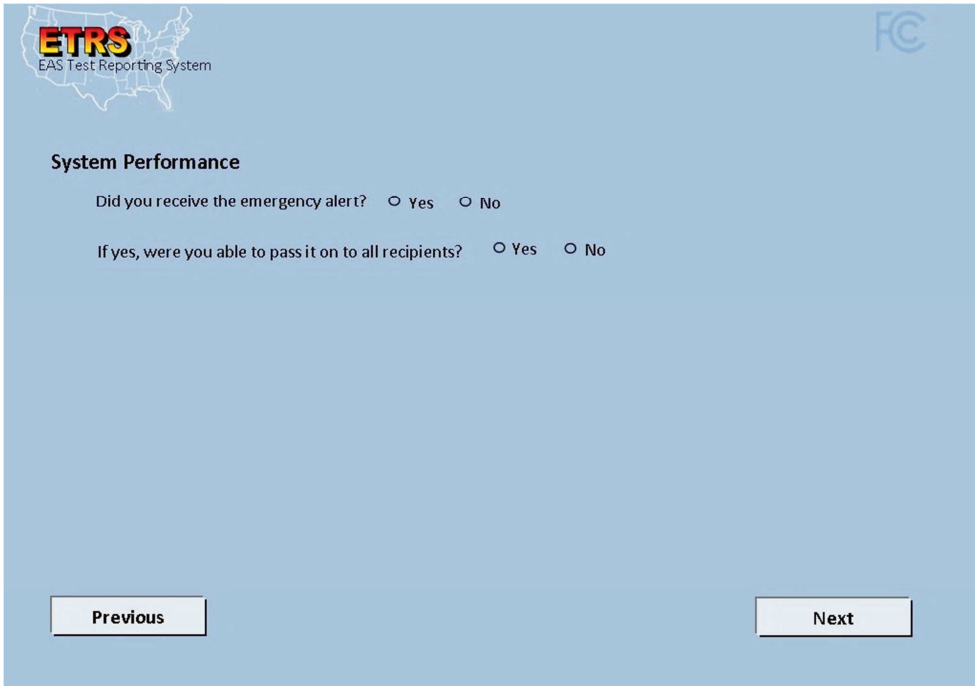


Figure 5: Form Two

Figure 6: Form Three