

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

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

**SECOND REPORT AND ORDER  
 AND FURTHER NOTICE OF PROPOSED RULEMAKING**

Adopted: May 31, 2007 Released: July 12, 2007

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

By the Commission: Chairman Martin, and Commissioners Copps, Adelstein, Tate, and McDowell  
 issuing separate statements.

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## I. INTRODUCTION

1. In this *Second Report and Order (Order)*, we revise the Commission's Part 11 Emergency Alert System (EAS) rules as part of our continuing effort to provide the American public a state-of-the-art, next-generation national EAS ("Next Generation EAS").<sup>1</sup> We also take steps today to fulfill the Commission's responsibilities under the President's Public Alert and Warning System Executive Order.<sup>2</sup> Specifically, in order to ensure the efficient, rapid, and secure transmission of EAS alerts in a variety of formats (including text, audio, and video) and via different means (broadcast, cable,

<sup>1</sup> See 47 C.F.R. Part 11. In 2005, the Commission sought comment on expediting the development of a Next Generation EAS network. See Review of the Emergency Alert System, EB Docket No. 04-296, *First Report and Order and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 18625 (2005) (*First Report and Order and Further Notice*). Appendix A provides a list of commenters to the *Further Notice* and abbreviated names. See also Review of the Emergency Alert System, EB Docket No. 04-296, *Notice of Proposed Rulemaking*, 19 FCC Rcd 15775 (2004) (*2004 NPRM*). XM Radio, Inc. filed a petition for reconsideration of the requirement adopted in the *First Report and Order* for Satellite Digital Audio Radio Service (SDARS) to conduct weekly and monthly tests on every channel. Separately, PanAmSat, SES Americom, and Intelsat jointly petitioned for reconsideration, arguing that EAS requirements adopted in the *First Report and Order* should not apply to fixed satellite service (FSS) operators on Ku-band frequencies selling or leasing satellite capacity to direct-to-home (DTH) distributors. The Commission will address these petitions, and related filings, in a subsequent order(s).

<sup>2</sup> Public Alert and Warning System, Exec. Order No. 13407, 71 Fed. Reg. 36975 (June 26, 2006) (*Executive Order*). Section 3(b)(iii) of the *Executive Order* directs the Commission to "adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the public alert and warning system."

satellite, and other networks), we adopt a requirement for various entities required to participate in EAS pursuant to this *Order* and prior Commission orders (EAS Participants) to accept a message using a common EAS messaging protocol, Common Alerting Protocol v1.1 (CAP),<sup>3</sup> no later than 180 days after FEMA publicly publishes its adoption of such standard. Second, we require EAS Participants to adopt Next Generation EAS delivery systems no later than 180 days after FEMA publicly releases standards for those systems. Third, we preserve the current EAS network but enhance its effectiveness, scope, and redundancy by enabling EAS delivery system upgrades and by including wireline common carriers providing video programming (“Wireline Video Providers”) in EAS. Fourth, we require EAS Participants to transmit state and local EAS alerts that are originated by governors or their designees no later than 180 days after FEMA publishes its adoption of the CAP standard,<sup>4</sup> provided that the state has a Commission-approved EAS state plan that provides for delivery of such alerts.<sup>5</sup> Fifth, we concurrently adopt a Further Notice of Proposed Rulemaking to explore further certain EAS-related issues. In sum, the actions that we take today will increase the reliability, security, and efficacy of the nation’s EAS network and will enable the President, the National Weather Service (NWS),<sup>6</sup> and state officials to rapidly communicate with citizens in times of crisis, over multiple communications platforms.

## II. BACKGROUND AND SUMMARY

2. *Further Notice.* In the November 2005 *Further Notice*, the Commission sought comment on how to improve EAS. It stated that a reliable “wide-reaching public alert and warning system is critical to public safety” and that the EAS network should permit “officials at the national, state and local levels to reach affected citizens in the most effective and efficient manner possible.”<sup>7</sup> The Commission requested comment on a wide range of issues, including: enhancing the EAS network architecture and message distribution,<sup>8</sup> adopting a common EAS messaging protocol,<sup>9</sup> the feasibility of satellite television and radio service providers delivering state and local emergency messages,<sup>10</sup> whether to require Wireline Video Providers to transmit EAS alerts,<sup>11</sup> and the provision of EAS alerts to persons with sight and hearing disabilities.<sup>12</sup> The Commission also sought comment on providing EAS alerts to non-English speakers,<sup>13</sup> and on certain related issues raised in a Petition for Immediate Relief, which was jointly filed

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<sup>3</sup> Cap v1.1 was developed by the Organization for the Advancement of Structured Information Standards (OASIS), a non-profit, international consortium that develops standards. See <http://www.oasis-open.org/home/index.php>.

<sup>4</sup> The Mayor of the District of Columbia, as well as the Governors of the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, American Samoa, and Guam also will have this capability. 47 U.S.C. § 153(40) (“the term “state” includes the District of Columbia and the Territories and possessions”).

<sup>5</sup> See 47 C.F.R. § 11.21, and discussion at ¶¶ 14, 53-64 *infra*.

<sup>6</sup> The National Weather Service is the primary source of weather data, forecasts and warnings for the United States. See <http://www.nws.noaa.gov/>. It is an organization within the National Oceanic and Atmospheric Administration (NOAA).

<sup>7</sup> *Further Notice*, 20 FCC Rcd at 18651, ¶ 62.

<sup>8</sup> *Id.* at 18652, ¶ 66.

<sup>9</sup> *Id.* at 18652, ¶ 67.

<sup>10</sup> *Id.* at 18652-53, ¶ 68.

<sup>11</sup> *Id.* at 18653, ¶¶ 69, 70.

<sup>12</sup> *Id.* at 18654-57, ¶¶ 74-80.

<sup>13</sup> *Id.* at 18657-58, ¶ 81.

by the Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council on September 22, 2005.<sup>14</sup> Numerous parties filed detailed comments and made presentations to FCC staff in response to the *Further Notice*, resulting in a well-developed record.<sup>15</sup>

3. Congress established the Commission “for the purpose of the national defense, [and] for the purpose of promoting the safety of life and property through the use of wire and radio communication” networks.<sup>16</sup> For nearly fifty years, the Commission has implemented this mandate, in part, by affording the American public an effective national alert and warning system. During most of its existence, this system was known as the Emergency Broadcast System (EBS).<sup>17</sup> Its name was changed to the Emergency Alert System in 1994, however, when it was upgraded and automated.<sup>18</sup>

4. As explained in more detail below, it is well established that the Commission has authority to regulate participation in EAS under Sections 1, 4(i) and (o), 303(r), and 706 of the Communications Act.<sup>19</sup> The Commission, in conjunction with FEMA and NWS, implements EAS at the federal level. Their respective roles are based on a 1981 Memorandum of Understanding between FEMA, NWS, and the Commission,<sup>20</sup> a 1984 Executive Order,<sup>21</sup> and a 1995 Presidential Statement of EAS Requirements.<sup>22</sup> In addition, State Emergency Coordination Committees (“SECCs”) and Local Emergency Coordination Committees (“LECCs”) develop state and local EAS plans. FEMA, NWS, and the Commission work closely with EAS participants as well as state, local, and tribal governments to ensure the integrity and utility of EAS.

5. *Executive Order*. On June 26, 2006, pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended,<sup>23</sup> and the Homeland Security Act of 2002, as amended,<sup>24</sup>

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<sup>14</sup> *Id.*

<sup>15</sup> The record is available on the Commission’s Electronic Comment Filing System, at [http://gullfoss2.fcc.gov/prod/ecfs/comsrch\\_v2.cgi](http://gullfoss2.fcc.gov/prod/ecfs/comsrch_v2.cgi).

<sup>16</sup> 47 U.S.C. § 151.

<sup>17</sup> A more detailed history of EAS is set forth in the first Notice of Proposed Rulemaking in this docket. *See 2004 NPRM*, 19 FCC Rcd at 15776-77, ¶¶ 6-8.

<sup>18</sup> *See* Amendment of Part 73, Subpart G, of the Commission’s Rules Regarding the Emergency Broadcast System, FO Docket Nos. 91-301, 91-171, *Report and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 1786 (1994) (*1994 Report and Order*) (subsequent history omitted).

<sup>19</sup> 47 U.S.C. §§ 151, 154(i) and (o), 303(r), 606.

<sup>20</sup> *See* 1981 State and Local Emergency Broadcasting System (EBS) Memorandum of Understanding Among the Federal Emergency Management Agency (FEMA), Federal Communications Commission (FCC), the National Oceanic and Atmospheric Administration (NOAA), and the National Industry Advisory Committee (NIAC) *reprinted as* Appendix K to Partnership for Public Warning Report 2004-1, *The Emergency Alert System (EAS): An Assessment*.

<sup>21</sup> *See* Assignment of National Security and Emergency Preparedness Telecommunications Functions, Exec. Order No. 12472, 49 Fed. Reg. 13471 (1984).

<sup>22</sup> FEMA acts as Executive Agent for the development, operation, and maintenance of the national-level EAS. *See Memorandum*, Presidential Communications with the General Public During Periods of National Emergency, The White House (Sept. 15, 1995) (*1995 Presidential Statement*).

<sup>23</sup> 42 U.S.C. § 5121 *et seq.*

President George W. Bush issued a “Public Alert and Warning System” Executive Order. The *Executive Order* provides, in relevant part, that:

It is the policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people in situations of war, terrorist attack, natural disaster, or other hazards to public safety and well-being (public alert and warning system), taking appropriate account of the functions, capabilities, and needs of the private sector and of all levels of government in our Federal system, and to ensure that under all conditions the President can communicate with the American people.<sup>25</sup>

6. The *Executive Order* requires the Secretary of Homeland Security to “administer the Emergency Alert System (EAS) as a critical component of the [national] public alert and warning system,” including a requirement to “establish, or adopt, as appropriate, common alerting and warning protocols, standards, terminology, and operating procedures for the public alert and warning system.”<sup>26</sup> Under the *Executive Order*, the Secretary must submit a plan to the President for implementation of the order,<sup>27</sup> and issue guidance that addresses the subject matter of the *1995 Presidential Statement*.<sup>28</sup> Upon issuance of such guidance, the *1995 Presidential Statement* will be revoked.

7. Section 3(b)(iii) of the *Executive Order* directs the Commission to “adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the [national] public alert and warning system.”<sup>29</sup> The Commission is committed to working with the Secretary, FEMA, and other governmental entities to ensure the effective implementation of the *Executive Order*.

8. *WARN Act*. On October 13, 2006, the President signed the Security and Accountability For Every Port Act (Safe Port Act) into law. Title VI of the SAFE Port Act – the Warning, Alert and Response Network Act (“WARN Act”) – establishes a framework for commercial mobile service (CMS) providers to voluntarily elect to transmit emergency alerts.<sup>30</sup> As the statute required, the Commission established a Commercial Mobile Service Alert Advisory Committee that is developing recommendations for technical standards and protocols to facilitate the voluntary transmission of emergency alerts by CMS providers.<sup>31</sup> The Committee must submit its recommendations to the Commission within one year of the enactment of the statute.<sup>32</sup> Following the submission of the

(Continued from previous page)

<sup>24</sup> 6 U.S.C. § 101 *et seq.* The Homeland Security Act of 2002 authorizes the Secretary of Homeland Security, acting through the Under Secretary for Emergency Preparedness and Response, to develop “a comprehensive national incident management system with Federal, State, and local government personnel, agencies, and authorities,” in order to respond to terrorist attacks, major disasters, and other emergencies. 6 U.S.C. § 312(5).

<sup>25</sup> *Executive Order*, section 1.

<sup>26</sup> *Id.*, sections 2(a)(ii).

<sup>27</sup> *Id.*, section 4.

<sup>28</sup> *Id.*, section 5(b).

<sup>29</sup> *Id.*, section 3(b)(iii).

<sup>30</sup> Security and Accountability For Every Port Act, Pub. L. No. 109-347, 120 Stat. 1936-1943 (2006).

<sup>31</sup> WARN Act § 603(a). The Commission announced the members of the Committee on December 5, 2006. Notice of Appointment of Members to the Commercial Mobile Service Alert Advisory Committee; Agenda for December 12, 2006 Meeting, *Public Notice*, 21 FCC Rcd 14175 (2006).

<sup>32</sup> WARN Act § 603(c).

Committee's recommendations, the Commission will initiate a rulemaking to develop technical standards and other requirements to facilitate CMS providers' transmission of emergency alerts.<sup>33</sup> Accordingly, in light of the passage of the WARN Act, we do not address commercial wireless carrier participation in EAS in this *Order*.

9. *Independent Panel.* In January 2006, Chairman Kevin J. Martin established a Federal Advisory Committee to study the impact of Hurricane Katrina on communications infrastructure,<sup>34</sup> which submitted a comprehensive report to the Commission on June 12, 2006. The Commission, in turn, issued a Notice of Proposed Rulemaking on June 19, 2006, to address the panel's recommendations, including what actions it could take to improve communication of emergency information to the public.<sup>35</sup> The Independent Panel recommended that the Commission improve and facilitate the use of the EAS network during disasters, educate state and local officials and the public about EAS, and ensure that the disabled and non-English speaking communities have ready access to EAS warnings.<sup>36</sup> The panel also noted that wireless technology offers the potential for enhancing the existing EAS network.<sup>37</sup>

10. Accordingly, we take key steps today necessary to ensure the development of a next-generation EAS network, steps which are grounded in the Commission's November 2005 *Further Notice* and related record. We also seek to implement the Commission's responsibilities under the President's *Executive Order* and to address certain of the EAS-related recommendations of the Hurricane Katrina Independent Panel.

11. *Current EAS Participants and Message Distribution.* EAS equipment is in place in television, radio, and cable facilities nationwide and has been used effectively for state and local emergencies for decades. The EAS currently is comprised of analog and digital radio broadcast stations, including AM, FM, and low-power FM stations; analog and digital television (DTV) broadcast stations, including Class A television and low-power TV stations; analog, digital, and wireless cable systems; Direct Broadcast Satellite (DBS) systems, Satellite Digital Audio Radio Systems (SDARS); and other entities and industries operating on an organized basis during emergencies at the national, state, and local levels.<sup>38</sup> EAS messages currently are distributed via a multi-level distribution system.<sup>39</sup> The current EAS network includes numerous message entry and distribution points:

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<sup>33</sup> WARN Act § 603(a) and (b).

<sup>34</sup> See 71 Fed. Reg. 933 (Jan. 6, 2006). The panel was known as the "Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks" (Independent Panel).

<sup>35</sup> See Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, EB Docket. No. 06-119, *Notice of Proposed Rulemaking*, 21 FCC Rcd 7320 (2006) (*Hurricane Katrina NPRM*). The Notice also sought comment in three other broad areas: (1) pre-positioning the communications industry and the government for disasters in order to achieve greater network reliability and resiliency; (2) improving recovery coordination to address existing shortcomings and to maximize the use of existing resources; and (3) improving the operability and interoperability of public safety and 911 communications during crises.

<sup>36</sup> *Hurricane Katrina NPRM*, 21 FCC Rcd at 7326-27, ¶ 18 (noting that EAS was not used by state and local officials to provide emergency evacuation information). *Id.* at Appendix B, Report and Recommendations to the Federal Communications Commission, p. 28.

<sup>37</sup> *Id.* As we discuss herein, because the WARN Act makes EAS participation voluntary for commercial mobile service providers and mandates that the Commission initiate a rulemaking regarding such participation at a later date, today's *Order* does not address wireless EAS participation.

<sup>38</sup> See 47 C.F.R. § 11.11. SDARS and DBS were required to participate in the existing EAS by December 31, 2006 and May 31, 2007, respectively. *First Report and Order*, 20 FCC Rcd at 18641-43.

- **National Primary (NP)** stations are the primary entry point for Presidential messages delivered by FEMA.<sup>40</sup> These stations are responsible for broadcasting a Presidential alert to the public and to State Primary stations within their broadcast range.<sup>41</sup>
- **State Primary (SP)** stations are the entry point for State messages, which can originate from the Governor or a designated representative. Messages may then be sent via the State Relay Network.<sup>42</sup>
- **State Relay (SR)** stations are part of the State Relay Network and relay National and State emergency messages into Local Areas.<sup>43</sup>
- **Local Primary (LP)** stations provide EAS Local Area messages. An LP source is responsible for coordinating the carriage of emergency messages from sources such as the NWS or local emergency management offices as specified in its EAS Local Area Plan. LP stations receive Presidential and State EAS messages from SP and SR stations.
- **Participating National (PN)** stations transmit EAS National, State, or Local Area messages directly to the public.
- **Non-participating National (NN)** sources have elected not to participate in the National level EAS and hold an authorization letter to that effect. They may transmit EAS State or Local Area messages.<sup>44</sup>

12. *EAS Protocol.* All EAS message originators (whether FEMA, NWS, or a state or local authority) currently must transmit messages using the EAS protocol and codes specified in section 11.31 of the Commission's rules.<sup>45</sup> Dedicated equipment currently is required to initiate, receive, and retransmit EAS alerts, and must be installed by every EAS Participant. Sections 11.32 and 11.33 of the Commission's rules set forth minimum requirements for EAS encoders and decoders, respectively,<sup>46</sup> the functions of which can be combined into a single unit referred to as an Encoder/Decoder (ENDEC).<sup>47</sup> In (Continued from previous page) \_\_\_\_\_

<sup>39</sup> A system in which stations relay emergency messages from one to others is also known as a daisy-chain. *See 1994 Report and Order*, 10 FCC Rcd at 1790-91, ¶ 10 n.9.

<sup>40</sup> 47 C.F.R. § 11.18(a).

<sup>41</sup> 47 C.F.R. § 11.14.

<sup>42</sup> 47 C.F.R. § 11.18(c).

<sup>43</sup> 47 C.F.R. § 11.18(d). The State Relay Network is composed of state relay sources, leased common carrier communications facilities, or any other available communication facilities. In addition to EAS monitoring, satellites, microwave, FM subcarrier, or any other communications technology may be used to distribute state emergency messages. 47 C.F.R. § 11.20.

<sup>44</sup> 47 C.F.R. § 11.18(d). Upon activation of the national level EAS, NN sources are required to broadcast the EAS codes, Attention Signal, and the sign-off announcement in the EAS Operating Handbook, and then stop operating. All NN sources are required to comply with 47 C.F.R §§ 11.51, 11.52 and 11.61.

<sup>45</sup> 47 C.F.R. § 11.31. Under this protocol, an EAS alert uses a four-part message: (1) preamble and EAS header codes (these codes contain information regarding the identity of the sender, the type of emergency, its location and valid time period of the alert); (2) audio attention signal; (3) message; and (4) preamble and EAS end of message codes. 47 C.F.R. § 11.31(a).

<sup>46</sup> 47 C.F.R. §§ 11.32, 11.33.

<sup>47</sup> 47 C.F.R. § 11.34(c). EAS equipment also provides a means to automatically interrupt regular programming and is capable of providing warnings in the primary language that is used by the station or cable system. *See* 47 C.F.R. §§ 11.33(a)(4), 11.51(k)(1), 11.54.

this *Order*, once FEMA adopts the CAP protocol, we require existing EAS Participants to receive alert messages formatted to CAP, a standard alert message format that specifies data fields to facilitate data sharing across different distribution systems.<sup>48</sup> As explained below, timely adoption of CAP by all EAS Participants is an essential component of and prerequisite for the development of Next Generation EAS.

13. *New EAS Participants.* The Commission enhanced the EAS network in the 1990s to include cable television systems<sup>49</sup> and wireless cable systems.<sup>50</sup> The Commission further enhanced the EAS network in 2005 to include providers of DTV,<sup>51</sup> digital audio broadcasts (DAB), digital cable television, DBS, and SDARS.<sup>52</sup> In order to increase the reliability and efficacy of the nation's EAS network, and for other reasons stated below, we augment the EAS distribution network to include Wireline Video Providers.

14. *State EAS Alerts.* The EAS network originally was conceived to provide the President with the ability to rapidly communicate via radio and TV broadcast networks with the American public during a national crisis, such as a nuclear attack.<sup>53</sup> The system also has been used for the provision of state and local emergency alerts to the public since it was opened to state and local participation in 1963. Several thousand state and local EAS messages are transmitted annually. More than 70 percent of all state and local EAS messages are vital weather-related alerts (such as flash flood, hurricane, and tornado warnings), which are originated by the NWS via the NOAA Weather Radio (NWR) network.<sup>54</sup> NWR includes more than 940 transmitters covering all 50 states and the District of Columbia, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories.<sup>55</sup> NWR uses an EAS

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<sup>48</sup> A CAP-formatted alert may include fields for message type, scope, event information, event certainty, sender, geographic scope, and expiration, among others. CAP-formatted messages also can include links to data, audio and video files, and can be validated and authenticated through the use of digital signatures and encryption.

<sup>49</sup> *EAS 1994 Report and Order*, 10 FCC Rcd 1786.

<sup>50</sup> Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System, FO Docket Nos. 91-301, 91-171, *Second Report and Order*, 12 FCC Rcd 15503 (1997).

<sup>51</sup> DTV is any digital technology used to provide advanced television services such as high definition television programming, multiple standard definition programming streams, and other advanced features and services. See *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, *Sixth Further Notice of Proposed Rulemaking*, 11 FCC Rcd 10968, 10970 n.1 (1996).

<sup>52</sup> See *First Report and Order*, 20 FCC Rcd at 18632-650, ¶¶ 19-58.

<sup>53</sup> The Commission's EAS rules are intended to ensure that national activation of EAS would enable the President to communicate with the American public within ten minutes from any location at any time. These messages must take priority over any other messages and preempt other messages in progress. *First Report and Order*, 20 FCC Rcd at 18628, ¶ 8; 47 C.F.R. § 11.44(a).

<sup>54</sup> See *The Emergency Alert System (EAS): An Assessment, Partnership for Public Warning Report 2004-1*, at 7 and Appendix E (EAS Activation Statistics); see also CEA Comments at 3-4 (stating that EAS alerts most often are originated on a local, regional, or state level using NWR facilities and then broadcast simultaneously directly to the public and to EAS Participants), Radio Shack Comments at 6 (stating that NWR is, or should be, the backbone of EAS). NOAA describes NWR as an "All Hazards" radio network—a single source for comprehensive weather and emergency information. See <http://www.nws.noaa.gov/nwr/> (August 30, 2006).

<sup>55</sup> See <http://www.nws.noaa.gov/nwr/> (March 6, 2007). According to CEA, NWR covers 97 percent of the country. See CEA Comments at 4. NWR requires a special radio receiver (that can be programmed to respond to messages by the type of event and location) or scanner capable of receiving the signal in the 162 MHz (VHF) public service band on one of seven frequencies. See <http://www.nws.noaa.gov/nwr/> (March 6, 2007). The seven NWR frequencies (MHz) are: 162.400, 162.425, 162.450, 162.475, 162.500, 162.525, and 162.550. *Id.*

compatible digital protocol,<sup>56</sup> which supplies local EAS encoded alerts to broadcast and cable EAS entry points pursuant to EAS state and local plans.<sup>57</sup> Under the Commission's current EAS rules, EAS Participants may voluntarily transmit NWS, state, and local EAS messages to the public.<sup>58</sup> If they do, they must follow the Commission's Part 11 EAS rules. In this *Order*, we find that the public interest will be served by continuing to allow these entities to voluntarily participate in the delivery of NWS and certain state and local messages via the existing EAS. As explained more fully below, however, we will enable state governors (or their designees) to deliver CAP-formatted EAS messages to EAS Participants on both existing and Next Generation EAS. EAS Participants must then issue message-based alerts based on the information received.

### III. DISCUSSION

#### A. Next Generation EAS

15. In this *Order*, we reaffirm the obligations of today's EAS Participants to maintain existing EAS and establish the framework for the nation's Next Generation EAS. This Next Generation EAS will include new and innovative technologies and distribution systems that will provide increased redundancy and resiliency for the delivery of emergency alerts. We also take steps to ensure that the upgraded EAS will meet the needs of all Americans, including persons with hearing and vision disabilities and those who do not speak English. Finally, we will continue to harness the benefits of existing EAS while the Next Generation EAS is developed and deployed. The combination of the existing and Next Generation EAS systems will ensure the continuity of EAS while the Next Generation EAS is being implemented, and ensure that EAS alerts reach the largest number of affected people by multiple communications paths as quickly as possible.

16. Below, we describe the four cornerstones of the Next Generation EAS: 1) maintaining the existing EAS network; 2) utilizing a common messaging protocol, CAP, to be implemented by all EAS Participants following its adoption by FEMA; 3) incorporating new authentication and security requirements; and 4) fostering the deployment of new, redundant EAS delivery systems, including satellite, Internet, and wireline networks.

#### 1. Maintaining Existing EAS

17. Although a Presidential alert has never been sent over the EAS, the current EAS network has been used for state, local, and weather-related emergencies. We recognize that in certain emergency situations, battery-powered AM or FM receivers may be the primary source of emergency information for the general public. Broadcast and cable personnel are familiar with current EAS equipment and are trained in its use. In addition, it would be inadvisable to require immediate use of a new system until that system is fully in place and its reliability tested. We therefore do not agree with those commenters who argue that the existing EAS should be wholly abandoned or replaced at this time.<sup>59</sup>

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<sup>56</sup> The digital protocol is known as Specific Area Message Encoding (SAME). See *The Emergency Alert System (EAS): An Assessment, Partnership for Public Warning Report 2004-1*, at 18.

<sup>57</sup> See *id.* at 7. In some localities, emergency managers can originate EAS alerts through NWS, through a broadcaster or cable operator, or through their own equipment if they have made prior arrangements that are documented in EAS plans. *Id.*

<sup>58</sup> 47 C.F.R. § 11.55(a); see also Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System, EB Docket No. 01-66, *Report and Order*, 17 FCC Rcd 4055, 4056-57, ¶ 3 (2002) (*2002 Report and Order*); *1994 Report and Order*, 10 FCC Rcd at 1809, ¶ 66.

<sup>59</sup> See, e.g., SBE Comments at 10; WTOP 10/29/04 Comments at 8.

18. Instead, we conclude that broadcast, cable and other current EAS Participants should maintain the existing EAS, particularly since alternative delivery mechanisms, although potentially more robust, have yet to be deployed.<sup>60</sup> We recognize, however, that EAS currently uses a station-relay message dissemination process that lacks the flexibility and redundancy of certain evolving digital communications systems.<sup>61</sup> Consequently, we also require these current EAS Participants to upgrade their networks to the Next Generation EAS, as discussed below, while maintaining existing EAS.

19. *NOAA Weather Radio.* In addition, we disagree with those commenters who suggest that NWR should replace the existing EAS. We believe, however, that the NWR system should continue to be closely integrated with EAS. NWR is one of the principal sources of alert information,<sup>62</sup> and is likely to continue to be the primary originator of weather-based alerts. We also recognize that voluntary efforts, including CEA's Public Alert™ Certification and Logo Program launched in April 2004, further enhance the value and potential of this proven emergency-alert delivery system.<sup>63</sup> The record demonstrates that redundant alert-delivery systems will enhance the overall reach, efficacy, and reliability of the EAS as a whole. NWR provides an alternative source of emergency alerts, and we expect that it will continue to be an important component of EAS and the overall national public alert and warning system. We nevertheless caution EAS Participants that retransmit NWR alerts to ensure that such retransmission is consistent with our EAS rules and associated protocols.

## 2. Common Alerting Protocol (CAP) for EAS

20. In the *Further Notice*, the Commission sought comment on the widespread assertion in the record that a common messaging protocol should be adopted to permit a digitally-based alert or warning to be distributed simultaneously over multiple platforms.<sup>64</sup> The Commission noted that the Partnership for Public Warning had endorsed the OASIS Common Alerting Protocol (CAP) for this purpose and that many public and private organizations responsible for alerts believed that CAP offered the most practical means of quickly creating an effective interface between emergency managers and

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<sup>60</sup> We note that (1) analog radio broadcast stations, including AM, FM, and low-power FM ("LPMF") stations, (2) analog television broadcast stations, including Class A television ("CA") and low-power TV ("LPTV") stations, (3) analog cable systems, (4) wireless cable systems, which may consist of Broadband Radio Service ("BRS"), or Educational Broadband Service ("EBS") stations, (5) direct broadcast satellite ("DBS") service providers, and (6) SDARS service providers currently are subject to the existing EAS.

<sup>61</sup> See, e.g., PPW 10/27/04 Comments at 3.

<sup>62</sup> See, e.g., EEWN Comments at 2.

<sup>63</sup> See CEA Comments at 6-10. CEA states that its Public Alert Technology Alliance, comprised of product manufacturers and government representatives working in a voluntary cooperative venture, adopted voluntary uniform requirements for consumer receivers that display the Public Alert logo and trigger alerts by decoding the entire digital data string (rather than 1050 Hz analog tones) transmitted over NWR broadcasts. *Id.* at 6. CEA states that this type of voluntary activity and flexible standard is more conducive than rigid FCC mandates and rules to maintaining state-of-the-art emergency systems at a time of significant technological change. *Id.* at 7, 11 n.10 (citing *Receiver Performance Specification for Public Alert Receivers* (CEA-2009), approved December 2003) (latest update, CEA-2009-A, was approved and published in March 2005). According to Putkovich, Public Alert™ certified receivers currently are available from three major manufacturers, several others plan to market them, and plans are in progress to incorporate the AlertGuard television technology developed by Thomson (RCA) into HDTV systems for sale in 2007. See Putkovich Comments at 8. Merrell states that all Public Alert™ devices incorporate SAME, which allows the device to respond only when an alert matches the specific area(s) the user has chosen for alert coverage, and also provide automatic translation for all alerts into multiple language text. See Merrell Comments at 2-5.

<sup>64</sup> *Further Notice*, 20 FCC Rcd at 18652, ¶ 67.

multiple emergency alert distribution platforms.<sup>65</sup> Accordingly, the Commission asked whether CAP should be adopted as the common messaging protocol for any future digital alert system, and particularly for EAS alerts.<sup>66</sup> The Commission also asked whether CAP would allow simultaneous distribution to radio, television, and wireless media such as mobile telephones and personal digital assistants (PDAs), and how it would ensure uniformity of alerts across multiple platforms.<sup>67</sup> Currently, the EAS and the NWS utilize the SAME<sup>68</sup> protocol, which introduces special digital codes at the beginning and end of messages. SAME provides information concerning the originator of the alert, the event type, the areas affected, the duration of the alert, the time the alert was issued, and the station's call sign. SAME originally was developed to be transmitted over a radio medium with relatively simple devices receiving the message. For the most part, it performs well for the existing EAS and NWR but does not fully utilize the capabilities inherent in digital transmission.<sup>69</sup>

21. The need for a more robust and flexible protocol that can take full advantage of digital technology has long been recognized. In 2000, the U.S. National Science and Technology Council issued its report, *Effective Disaster Warnings*, concluding that a "standard method should be developed to collect and relay instantaneously and automatically all types of hazard warnings and reports locally, regionally, and nationally for input into a wide variety of dissemination systems."<sup>70</sup> In 2001, more than 130 emergency managers and technologists initiated development of a common alert message standard.<sup>71</sup> In 2003, this work became a part of the OASIS standards process<sup>72</sup> of the Emergency Management Technical Committee.<sup>73</sup> A year later, the Emergency Management Technical Committee released CAP version 1.0, which was revised in 2005 as CAP v. 1.1.<sup>74</sup>

22. CAP is an open, interoperable standard that incorporates a language developed and widely used for web documents.<sup>75</sup> Its standardized alert message format – based on the World Wide Web

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<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> NOAA Weather Radio SAME Info, <http://www.nws.noaa.gov/nwr/nwrsame.htm>; Specific Area Message Encoding (SAME), National Weather Service Instruction 10-1712 (Feb. 12, 2007) <http://www.nws.noaa.gov/directives/010/pd01017012b.pdf>.

<sup>69</sup> Use of a more robust and flexible digital protocol should enable EAS Participants to address this concern.

<sup>70</sup> National Science and Technology Council Subcommittee on Disaster Reduction, *Effective Disaster Warnings*, p. 25 (2000), [http://www.sdr.gov/NDIS\\_rev\\_Oct27.pdf](http://www.sdr.gov/NDIS_rev_Oct27.pdf).

<sup>71</sup> Common Alerting Protocol, v. 1.0, oasis-200402-cap-core-1.0, p.3. OASIS is a not-for-profit, international consortium that drives the development, convergence, and adoption of e-business standards. OASIS – Who We Are, <http://www.oasis-open.org/who/>.

<sup>72</sup> Common Alerting Protocol, v. 1.0, oasis-200402-cap-core-1.0, p.3.

<sup>73</sup> The OASIS Emergency Management Technical Committee works on "answering requirements for data exchange among emergency management, public safety, homeland security and related applications and systems." OASIS – Emergency Management TC, <http://www.oasis-open.org/committees/emergency charter.php>. Its membership currently includes DHS and the Department of Interior. OASIS Emergency Management TC, [http://www.oasis-open.org/committees/membership.php?wg\\_abbrev=emergency](http://www.oasis-open.org/committees/membership.php?wg_abbrev=emergency).

<sup>74</sup> OASIS, Common Alerting Protocol v. 1.1, OASIS Standard CAP-V1.1 Section 1.2 History (October 2005), [http://www.oasis-open.org/committees/download.php/15135/emergency-CAPv1.1-Corrected\\_DOM.pdf](http://www.oasis-open.org/committees/download.php/15135/emergency-CAPv1.1-Corrected_DOM.pdf).

<sup>75</sup> See "Roadmap for Open ICT Ecosystems," Berkman Center for Internet & Society at Harvard Law School, p. 6 (2005); <http://cyber.law.harvard.edu/epolicy/roadmap.pdf> (defining an "open standard" as one which cannot be (continued....))

Consortium's ("W3C's") Extensible Markup Language ("XML")<sup>76</sup> – is a text-based format that facilitates data sharing across different distribution systems. As noted by various commenters, the agreed-upon XML format of CAP can be accepted by a wide variety of devices or systems.<sup>77</sup> The format also permits links to voice, audio or data files, images, and multilingual translations of the alert, and to links providing further information.

23. The CAP standard specifies what fields an alert message can contain and what information can be included in the particular fields. A CAP alert provides fields such as message type, scope, incident, event information, event certainty, sender, geographic scope,<sup>78</sup> and the time when an alert becomes effective and expires.<sup>79</sup> Because CAP has standardized alert elements, commenters assert it will facilitate accurate and meaningful message creation<sup>80</sup> and decrease the potential for operator error.<sup>81</sup> CAP also facilitates interoperability between devices, an attribute essential to establishing an EAS that can operate over multiple platforms.<sup>82</sup>

24. Commenters who addressed the issue generally support the use of CAP as a means for standardizing emergency messages; and no parties indicated that CAP-based messages could not be readily accepted and processed by all EAS Participants.<sup>83</sup> The USGS notes its own experience using (Continued from previous page) \_\_\_\_\_

controlled by any one entity, evolves in a transparent process, is platform independent, is openly published, is available royalty free or at a minimal cost, and is approved through an open process); *Definition of Open Standards*, Denmark Ministry of Science, National IT and Telecom Agency (June 2004), [http://www.oio.dk/files/040622\\_Definition\\_of\\_open\\_standards.pdf](http://www.oio.dk/files/040622_Definition_of_open_standards.pdf); NASCIO Comments at 3-4 (noting advantages of open standards); Harris 10/28/04 Comments at 4-5 (noting that non-proprietary standards avoid intellectual property issues).

<sup>76</sup> W3C is the international consortium that develops World Wide Web standards. See "About W3C" <http://www.w3.org/Consortium/>. Extensible Markup Language (XML) refers to the extensible markup language that commonly is used for web documents. XML is a simple, very flexible, text format derived from SGML (ISO 8879), and created and maintained by W3C. <http://www.w3.org/XML/>. XML 1.0 was released in 1998; its predecessor dates back to 1986 (ISO 8879:1986). There is extensive experience and expertise with XML, which has led to multiple other successful XML standards, including RSS, Atom, GML, and AJAX.

<sup>77</sup> CAP is not an Internet Protocol standard. It is a standard that, by design, will work over any feasible transmission medium. See *Contra Costa* 10/29/04 Comments at 10.

<sup>78</sup> CAP also incorporates geospatial elements to permit precise geographic targeting of alerts. For example, if a CAP message is used to provide an alert for an approaching, severe thunderstorm, the message could include the Federal Information Processing Standards ("FIPS") Codes that correspond to the counties and independent cities expected to be affected by the storm. EAS Participants receiving the CAP message would then be able to provide warnings to their customers located within those counties and cities who have customer equipment capable of receiving CAP-formatted transmissions.

<sup>79</sup> CAP Standard, Sec. 3.2. See also "Filtering and Routing of Alert Messages using Common Alerting Protocol (CAP)," Eliot Christian, USGS Slide 14 (Feb. 2005) <http://www.search.gov/cap/routing.ppt>.

<sup>80</sup> TFT Comments at 3-10.

<sup>81</sup> PPW 10/25/04 Comments at 21.

<sup>82</sup> PPW 10/25/04 Comments at 21-22.

<sup>83</sup> See, e.g., Airit2me Comments at 4; Entergy Comments at 3 (the Federal government should adopt the CAP standard for use by manufacturers of devices capable of receiving digital signals); FEMA Comments at 3 (FEMA is aware of states' concerns who have invested in their own alert and warning systems, IPAWS is intended to be fully interoperable with those systems using common alerting protocols); NAB Comments at 15-16; Putkovich Comments at 9-10; TDI Comments at 2; TIA Comments at 3; TFT Comments at 10; USGS Comments at 4-5; Wireless RERC Comments at 4; MSTV Reply Comments at 2; NAB Reply Comments at 1; Cellular Emergency Alert Service (continued....)

CAP, and argues that CAP is an effective content standard that can be applied at interfaces between senders, transmitters, and receivers of alerts covering many of the common natural and man-made hazard situations.<sup>84</sup> USGS concludes that CAP should be mandatory for the EAS.<sup>85</sup> NASCIO also recognizes the flexibility of CAP, noting that any EAS initiator can take information from a CAP-based message and translate it into any other standard for distribution over a particular channel, network, or technology.<sup>86</sup> CAP also is supported by individuals with hearing and sight disabilities, because it enables equivalent, multiple text and audio messages to be sent concerning the same event to a variety of devices that are accessible to such individuals.<sup>87</sup>

25. We note that CAP also supports capabilities for a digital signature to authenticate the sender and validate the integrity of the text,<sup>88</sup> and an encryption field that enables the encryption of the CAP message. An EAS initiator may encrypt, address, and otherwise secure a CAP alert, thus in part addressing security concerns that arise due to CAP's open text format.<sup>89</sup> Further, CAP uniquely identifies each specific alert. Finally, CAP has been implemented by several government agencies including the USGS,<sup>90</sup> NOAA NWS,<sup>91</sup> and the Oregon Amber Alert Program.<sup>92</sup> CAP also has been implemented in the Disaster Management Interoperability Services.<sup>93</sup> Several governmental agencies, including FEMA<sup>94</sup> and NOAA HAZCOLLECT,<sup>95</sup> are testing CAP,<sup>96</sup> and other agencies, such as the

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 Association ("CEASA") 10/20/04 Comments at 5; Contra Costa County Community Warning System ("Contra Costa") 10/29/04 Comments at 2; National Association of State Chief Information Officers ("NASCIO") 10/29/04 Comments at 3-4; PPW 10/25/04 Comments at 21; SWN 10/29/04 Comments at 2; Timm (Wisconsin SECC) 10/28/04 Comments at 7 (the current updating of the EAS should keep in mind the incorporation of an alerting protocol such as CAP, which will allow the inclusion of cellular telephone and paging systems into the EAS network).

<sup>84</sup> USGS Comments at 4-5.

<sup>85</sup> *Id.* at 5.

<sup>86</sup> NASCIO 10/29/04 Comments at 3-4

<sup>87</sup> TDI Comments at 2; Wireless RERC Comments at 4.

<sup>88</sup> CAP v. 1.1, Sec. 3.3.2.1.

<sup>89</sup> See [http://www.oasis-open.org/committees/download.php/15135/emergency-CAPv1.1-Corrected\\_DOM.pdf](http://www.oasis-open.org/committees/download.php/15135/emergency-CAPv1.1-Corrected_DOM.pdf) (CAP 1.1 Standards document, line 15).

<sup>90</sup> USGS Earthquake Hazards Program, <http://earthquake.usgs.gov/eqcenter/recenteqsww/catalogs/>; USGS Volcano Hazards Program, <http://volcanoes.usgs.gov/>; USGS Landslide Hazards Program: Advisories, <http://landslides.usgs.gov/advisories/>.

<sup>91</sup> NOAA National Weather Service, <http://www.weather.gov/alerts/>.

<sup>92</sup> Oregon Amber Alert Program Alert Web Portal FAQs ("It uses the new Department of Justice XML standards and the new Common Alert Protocol.") <http://www.oregon.gov/OSP/AMBERALERT/FAQ.shtml>.

<sup>93</sup> DMI-Services – Training: Course 6: Lesson 2: Alerts, [http://www.dmi-services.org/includes/PhoenixTraining/06\\_ToolsCourse/06\\_02\\_22ToolsCAPAlert\\_files/frame.htm](http://www.dmi-services.org/includes/PhoenixTraining/06_ToolsCourse/06_02_22ToolsCAPAlert_files/frame.htm); DMI-Services: Documentation <https://interop.cmiservices.org/documentation.jsp>. See also Presidential Initiatives: Disaster Management <http://www.whitehouse.gov/omb/egov/c-2-2-disaster.html>. (The White House website on Presidential Initiatives: Disaster Management states that the Disaster Management Interoperability Services was upgraded to incorporate CAP. As of August 4, 2005, 1400 CAP messages had been transmitted through DMIS. The White House lists as a next step: "assist agencies in deploying the DMIS toolset and in implementing the capability to send and receive alert messages using the CAP standard.").

<sup>94</sup> Statement of Reynold N. Hoover on Public Alert and Warning, Director, Office of National Security Coordination, FEMA, DHS, Before the Subcommittee on Disaster Prevention and Prediction, Committee on Commerce, Science, (continued....)

Center for Disease Control<sup>97</sup> and the Virginia Department of Transportation,<sup>98</sup> have endorsed it. We note that the U.S. Department of Defense and the U.S. Department of the Interior both voted for the adoption of CAP-V1.1.<sup>99</sup>

26. We conclude that all EAS Participants will be required to accept alerts and warnings in the CAP format should that protocol be adopted by FEMA.<sup>100</sup> This requirement applies to an EAS Participant regardless of whether the participant is utilizing existing EAS or the Next Generation EAS established in this *Order*. Although this requirement requires action by FEMA, we find that adopting it now furthers the prompt development of a state-of-the-art, next-generation national EAS. Significantly, many EAS Participants currently are implementing other revisions to their EAS systems, and they can incorporate CAP into these revisions. Specifically, should FEMA adopt CAP as the common alerting protocol for EAS alerts, EAS Participants must accept CAP-based alerts 180 days after the date that FEMA publishes the applicable technical standards for such CAP alerts.<sup>101</sup> Because most commenters urge the Commission to adopt the CAP format, we find that EAS Participants are already aware that CAP will likely be adopted, and we believe that 180 days will give them adequate time to prepare to receive CAP alerts. EAS Participants have been on notice since November 10, 2005, when the *FNPRM* was issued, that the EAS delivery standards might change. Thus, we find that 180 days will give EAS participants a reasonable period of time in which to implement changes that they should have been expecting for over 18 months since the *FNPRM* was issued. We further find that 180 days is reasonable in light of the significant public interest, to protect life and property, in implementing next generation EAS systems as soon as possible. We also note that EAS Participants will have the time period between the release of this *Order* and FEMA action for preparation.

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and Transportation (July 27, 2005), <http://commerce.senate.gov/pdf/hoover.pdf> (“With that in mind, IPAWS is intended to be fully interoperable with those systems using common alerting protocols.”). See also FEMA Tests Digital Alert System, FCW (April 11, 2005) <http://www.fcw.com/article88522-04-11-05-Print> (FEMA test used CAP); Testimony of John M. Lawson, President and CEO, Association of Public Television Stations, Before the Senate Subcommittee on Disaster Prevention and Prediction, Committee on Commerce, Science, and Transportation (July 27, 2005) <http://commerce.senate.gov/pdf/lawson.pdf> (describing an APTS and FEMA Digital Emergency Alert System Pilot Project that employed CAP).

<sup>95</sup> NOAA HAZCOLLECT, “HazCollect: Speeding Emergency Messages to the Public,” (Sept. 30, 2005), [http://www.weather.gov/os/hazcollect/resources/HazCollect\\_Intro\\_v2005-0930v.2.ppt](http://www.weather.gov/os/hazcollect/resources/HazCollect_Intro_v2005-0930v.2.ppt).

<sup>96</sup> See also US Department of Justice, Information Technology Initiatives, Global Justice XML Data Model 3.0.3, <http://it.ojp.gov/jxdm/3.0.3/> (referencing CAP).

<sup>97</sup> “PHIN Preparedness: Partner Communications and Alerting Functional Requirements,” Center for Disease Control, Version 1.0 (Apr. 2005), <http://www.cdc.gov/phn/preparedness/PCA%20RSv1.0.pdf> (“Partners must be able to send cascade communications and alerts using the PHIN specification of the Common Alerting Protocol”).

<sup>98</sup> *Id.*

<sup>99</sup> See <http://www.oasis-open.org/committees/ballot.php?id=839>.

<sup>100</sup> See *Executive Order*, sections 2(a)(ii), 3(b)(iii); supra ¶¶ 5-7. By adopting a requirement to accept CAP messages sent by FEMA, we do not intend to conclude or assume that FEMA will adopt the CAP protocol; however, should FEMA adopt the CAP protocol, we find that there is ample evidence in the record to support the CAP requirements set forth herein.

<sup>101</sup> See 47 C.F.R. § 11.11(a).

### 3. Authentication and Security

27. In the 2004 NPRM, the Commission noted that security and encryption were not the primary design criteria when EAS was developed and initially implemented, and that emergency managers were becoming more aware of potential vulnerabilities within the system.<sup>102</sup> The Commission expressed concern that the EAS may be subject to unauthorized access, and that a legitimate EAS signal could be subject to hacking or jamming.<sup>103</sup> Although ENDECs currently have the capability for password protection, it is up to each EAS Participant to implement the safeguard, and there is no means to monitor the extent to which EAS Participants employ passwords.<sup>104</sup> Additionally, when facilities are operating unattended, no one is available on-site to intervene should unauthorized use occur.<sup>105</sup> Accordingly, the Commission sought comment on how to improve the security of EAS distribution methods, information, and equipment and how to ensure the security of any public warning system.<sup>106</sup> It also sought comment on the authentication and verification of EAS alerts.<sup>107</sup> Cox agrees with the FCC that there are legitimate concerns regarding the security of the EAS, and contends that any attacks on EAS or unauthorized use could be devastating. As such, Cox urges the adoption of methods to keep the system secure from intentionally false control or sabotage.<sup>108</sup> Radio stations WTOP(AM), WTOP-FM, and WXTR(AM) (WTOP) contend the security of EAS distribution channels is crucial to the system working properly. WTOP suggests that the security of emergency and test messages can be improved by switching to a system which encrypts messages and guarantees secure delivery with password protection and confirmation of delivery.<sup>109</sup> NAB urges the FCC to coordinate with FEMA and equipment manufacturers to look for technical solutions for ensuring the security of EAS.<sup>110</sup> Contra Costa states that digital technology, particularly the use of the CAP protocol, can protect and verify the security of public warning communication links, and can enable the consistent and comprehensive monitoring of all kinds and levels of warning activity nationwide. Contra Costa states just as the Internet Protocols enable various kinds of computers to work together, CAP can provide the basis for a secure "warning internet" that can leverage all our warning assets to achieve more than any single system can alone.<sup>111</sup>

28. We agree with commenters that all EAS Participants should authenticate the source of, and validate the contents of, EAS alerts. As discussed above, CAP has the capability to allow those who initiate and retransmit EAS alerts to encrypt, authenticate, and validate EAS alerts. We believe that EAS Participants that configure their networks to receive CAP-formatted messages will be able to satisfactorily authenticate and validate EAS alerts in consultation with FEMA. Accordingly, should FEMA adopt CAP as the common alerting protocol for EAS alerts, all EAS Participants must configure their systems to incorporate CAP security functions within 180 days after FEMA publishes the standards

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<sup>102</sup> See 2004 NPRM, 19 FCC Rcd at 15790-91, ¶ 41.

<sup>103</sup> *Id.*

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> *Id.* at 15791, ¶ 41.

<sup>107</sup> *Id.*

<sup>108</sup> Cox Comments at 8.

<sup>109</sup> WTOP Comments at 11.

<sup>110</sup> NAB Comments at 14-15.

<sup>111</sup> Contra Costa 10/29/04 Comments at 10.

for authentication and validation of CAP-formatted alerts.<sup>112</sup> We expect EAS Participants to cooperate with FEMA in its efforts to develop policies, plans, and procedures that meet FEMA's requirements for the new delivery systems and CAP protocol adopted by FEMA.

#### 4. Next Generation Distribution Systems

29. Recent experience demonstrates that natural disasters and terrorist incidents can adversely impact terrestrial telecommunications infrastructure. To achieve the Commission's goals of enhancing the redundancy, reliability and security of EAS, we enable the use of diverse EAS distribution platforms. Our actions today also will ensure that the Secretary of Homeland Security can implement the President's directive to provide "as many communications pathways as practicable" to reach the American people during crises.<sup>113</sup>

30. The development of alternative distribution systems is already underway. For example, we note that the Association of Public Television Stations ("APTS") has proposed a hybrid, satellite/DTV broadcast system that was an integral part of FEMA's Digital Emergency Alert System (DEAS) National Capital Region Pilot.<sup>114</sup> On July 12, 2006, FEMA and APTS announced the successful completion of Phase II of the DEAS pilot, and that the new DEAS would be operational in the Gulf Coast and Atlantic regions by the end of 2006, and will be deployed nationally by the end of 2007.<sup>115</sup>

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<sup>112</sup> See 47 C.F.R. § 11.11(a).

<sup>113</sup> See *Executive Order*, Section 2(a)(iii). Section 3(b)(iii) of the *Executive Order* directs the Commission to "adopt rules to ensure that communications systems have the capacity to transmit alerts and warnings to the public as part of the public alert and warning system."

<sup>114</sup> *Id.* To implement the DEAS, FEMA signed a cooperative agreement with APTS to conduct a Digital Emergency Alert System National Capital Region Pilot Program (DEAS-NCR) to demonstrate how public television's satellite infrastructure can act as a wireless datacasting network to relay alerts to cell phones, the Internet, pagers, and bulletin-board systems. The purpose of the DEAS-NCR was to show that the DTV broadcast stream was sufficiently congestion-free that its bandwidth could support public alert systems as well as closed networks to enable public safety and emergency management agencies to transmit securely critical time-sensitive information. In the pilot, data originating from FEMA was embedded within the PBS broadcast stream and sent over the PBS satellite system to the PBS stations nationwide (as well as to any radio stations, such as Primary Entry Points (PEPs), and other facilities set up to receive the down link). The PBS station, in turn, then would carry the alert within its digital TV signal to personal computers or local area networks equipped with an inexpensive DTV tuner card and a small antenna, that would allow the EAS Participant to decode the alert and then send it to the public. Local broadcasters and cable providers could program their ENDECs to receive a datacast alert, and thus bypass potential points of failure in the existing EAS by interconnecting at a more local level. Although national in scope, the system is scalable to work locally, thereby enabling potentially life-saving, critical information to be disseminated to both rural and urban communities.

In Phase I of the pilot project, DEAS text, voice, and video were broadcast by public television stations, and CAP messages were successfully relayed to cell phones, the Internet, pagers, and electronic bulletin boards. Due to the success of Phase I, DHS extended the pilot program (Phase II) in order to lay the foundation for a national roll-out of a digitally based federal public-safety-alert system. As developed during Phase II, this national deployment is planned to include construction and timeline estimates, technical risk determinations, and other implementation options. This system will integrate with the existing national-level EAS system, and according to APTS it could supplement the digital broadcast EAS as a national alert system once fully constructed.

<sup>115</sup> See [http://www.aptis.org/news/dhs\\_71206.cfm](http://www.aptis.org/news/dhs_71206.cfm). However, according to a recent project status update, the DHS revised the Gulf Coast and Atlantic region completion to be by the end of summer 2007, and completion of the Pacific and Midwest regions by the end of December 2007.

31. We agree with commenters that satellite-based alert distribution could be a valuable complement to the existing EAS station-relay distribution method.<sup>116</sup> The vast coverage area of satellite signal footprints would allow immediate alerting of substantial portions of the country with appropriate equipment. Satellite systems also are generally immune from natural disasters and therefore may provide critical redundancy in the event that terrestrial wireline or wireless infrastructure is compromised. We also agree with commenters that Internet-based systems may enhance the resiliency of the EAS distribution network.<sup>117</sup> The Internet is a robust, packet-switched network with intelligent routing,<sup>118</sup> and is designed to provide alternative routes to reach almost all users.<sup>119</sup> Moreover, the Internet is ubiquitous and can enhance the geographic reach of EAS. The open design of the Internet also means that EAS applications can be designed to meet the specific needs of EAS without limitation by the network.

32. We conclude that the distribution architecture of the existing EAS should be enhanced. The record underscores that EAS could be improved by authorizing the delivery of alerts through the existing EAS coupled with new redundant, distribution systems for EAS.<sup>120</sup> We conclude, however, that FEMA is best positioned to determine the types of additional EAS systems that should be accommodated by EAS Participants.<sup>121</sup> We expect that EAS Participants will collaborate closely with FEMA and other governmental entities to fully implement such requirements. Accordingly, should FEMA announce technical standards for any Next Generation EAS alert delivery system, EAS Participants must configure their networks to receive CAP-formatted alerts delivered pursuant to such delivery system, whether wireline, Internet, satellite or other, within 180 days after the date that FEMA announces the technical standards for such Next Generation EAS alert delivery.<sup>122</sup>

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<sup>116</sup> See, e.g., Cox Comments at 3; APTS Comments at 4-5; State Associations Comments at 10.

<sup>117</sup> SBE Comments at 11. TFT notes that outlying areas, too far from high-power broadcast facilities and on the fringes of satellite footprints, can still avail themselves of the ubiquitous nature of the Internet to originate and receive EAS messages. TFT Comments at 6-7

<sup>118</sup> Definitions of the Internet: 47 U.S.C. § 231(e); Federal Networking Council: Definition of the Internet (1995) [http://www.nitrd.gov/fncInternet\\_res.html](http://www.nitrd.gov/fncInternet_res.html).

<sup>119</sup> The Internet is designed to detect obstructions to the network (*i.e.*, congestion, destruction, or other failures), determine alternative routes, and deliver data with a high degree of success.

<sup>120</sup> See, e.g., Sage Alerting Systems ENDEC Developers 10/28/04 Comments at 3 (compatibility with the existing EAS/WRSAME standards should be maintained and dissemination should be broadened beyond radio, TV and cable channels to include cell phones, satellite TV, digital radio, DARS, HDTV channels, and any medium which can reach the public); FEMA Comments at 2 (delivery of EAS messages should expand beyond the current universe of analog radio, TV, and cable); The National Center for Missing & Exploited Children 10/29/04 Comments at 1 (supports enhancing the EAS to deliver urgent messages to all possible information pathways during crises so that damage to property is limited and lives are saved); Maine State Emergency Communications Committee 10/29/04 Comments at 2 (recent technological advances, microwave, satellite, and other alternative delivery methods, can make the EAS system more effective); North Carolina State Emergency Communications Committee 10/29/04 Comments at 1, 4-5 (emergency managers should extend delivery into other mediums in parallel to the current system).

<sup>121</sup> See *Executive Order*, sections 2(a)(ii), 3(b)(iii); *supra* ¶¶ 5-7.

<sup>122</sup> See 47 C.F.R. § 11.11(a).

## B. CAP and Next Generation EAS: Better Serving the Needs of Persons with Disabilities and Non-English Speakers

### 1. Background

33. *Serving the needs of persons with disabilities.* The Commission's EAS rules currently require that EAS provide visual and aural messages.<sup>123</sup> Under the rules, a visual EAS alert does not have to be an exact transcription of an audio alert, but must be "any method of visual presentation which results in a legible message conveying the essential emergency information."<sup>124</sup> In the *Further Notice*, the Commission sought comment on how it could make EAS alerts more accessible to persons with disabilities.<sup>125</sup> The Commission sought comment on whether to require all video programming distributors subject to Part 11 to provide the same information in both the visual and audio versions of EAS messages, instead of only the header code information that EAS Participants now provide visually.<sup>126</sup>

34. A number of commenters suggest that the audio and visual formats are equally important and should contain the same information, especially for persons with disabilities.<sup>127</sup> Service providers, however, request that the Commission not require video programming distributors to provide the same information for visual and aural versions of emergency messages, unless the digital message received by the station includes sufficient information to generate an aural and visual message automatically.<sup>128</sup> These commenters argue that it would be technically and economically infeasible for a broadcaster or other EAS Participant to provide an accurate simultaneous transcription of an audio EAS alert.<sup>129</sup> A number of commenters noted that CAP-formatted alerts could provide the same alert in text, aural, and video formats, and multiple languages, thus providing broad access to the public.<sup>130</sup>

35. *Serving the non-English speaking community.* In the *Further Notice*, the Commission sought comment on the issues raised in a September 20, 2005 Petition for Immediate Interim Relief filed by the Independent Spanish Broadcasters Association, *et al.*<sup>131</sup> The Petitioners requested that the

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<sup>123</sup> 47 C.F.R. § 11.51. The rules require that the national message crawl be displayed at the top of the television screen, where it will not interfere with other messages. 47 C.F.R. § 11.51(d).

<sup>124</sup> 47 C.F.R. § 73.1250(h).

<sup>125</sup> *Further Notice*, 20 FCC Rcd at 18654, ¶ 74.

<sup>126</sup> In many cases, descriptive information will be contained in the voice message, but the text-crawl contains only basic facts.

<sup>127</sup> *See, e.g.*, AFB Comments at 3; MSTV Comments at 10-11; SBE Comments at 23-25; TDI Comments at 6-7; WGBH Comments at 8-9; MSTV Reply Comments at 7; TDI Reply Comments at 7; Maine SECC 10/29/04 Comments at 2; Timm 10/28/04 Comments at 6.

<sup>128</sup> CBA Comments at 3; NAB Comments at 10-11.

<sup>129</sup> *See, e.g.*, CBA Comments at 3 (very few stations have the resources to transcribe accurately and in real time); NAB Comments at 7-13.

<sup>130</sup> Airt2me Comments at 5; AFB Comments at 2-3; SBE Comments at 25; TIA 10/29/04 Comments at 3; TFT Comments at 8-11; WGBH Comments at 9-10. RadioShack observes that it and many other manufacturers make products that include connections to activate flashing lights and bed shaking devices for persons with hearing disabilities and voice activation for the blind. RadioShack Comments at 9; *see also* Putkovich Comments at 21.

<sup>131</sup> "Petition for Immediate Interim Relief," filed Sept. 20, 2005 by the Independent Spanish Broadcasters Association, the Office of Communication of the United Church of Christ, Inc., and the Minority Media and Telecommunications Council. On October 14, 2005, NAB filed an opposition to the petition.

Commission significantly revise our EAS rules by expanding the system to provide for multilingual EAS messages.<sup>132</sup>

## 2. Discussion

36. *Serving the needs of persons with disabilities.* President Bush's Executive Order mandates that the Secretary of Homeland Security "include in the public alert and warning system the capability to alert and warn all Americans, including those with disabilities and those without an understanding of the English language."<sup>133</sup> We believe that CAP could provide an important tool for helping to accomplish this goal.

37. CAP should facilitate the provision of functionally equivalent EAS alerts and warnings to persons with disabilities.<sup>134</sup> Using CAP, the original format of warning messages could be converted into various formats, including text, video, and audio.<sup>135</sup> Critical information graphically portrayed, scrolled, or crawled on the screen also could be accompanied by an audio description.<sup>136</sup> Persons with hearing disabilities would be able to read the entire emergency message instead of a brief summary. Audio and visual formats are both important and could contain the same information.<sup>137</sup> Moreover, a

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<sup>132</sup> The Petitioners requested the following:

- Revise section 11.14 to provide that all NP stations air Presidential messages in both English and Spanish. LP-1 stations monitoring the NP stations, and local stations monitoring the LP-1 stations would also air the message in English and Spanish.
- Revise section 11.18(b) to include a Local Primary Spanish ("LP-S") designation, and have an LP-S station in each area where an LP-1 station has been designated, in each radio market with a Latino population of 50,000 or 5 percent of the total market population. The LP-S station would monitor and rebroadcast Presidential messages and serve as the entry point for state and local authorities and the NWS to distribute emergency information in Spanish.
- Revise section 11.18(b) to include a Local Primary Multilingual ("LP-M") designation in areas with a population of a language minority (not Spanish) of either 50,000 or 5 percent of the total market population.
- Revise section 11.52(d) to provide that at least one broadcast station in each market would monitor and rebroadcast emergency information carried by LP-S and LP-M stations.
- Revise section 11.52(d) to provide that if during an emergency a local LP-S or LP-M station loses its transmission capability, stations remaining on the air should broadcast emergency information in the specified language or languages (in at least part of their broadcasts) until the affected LP-S or LP-M station is on the air.
- The Commission should encourage all broadcasters to assist the LP-S or LP-M stations damaged during an emergency to return to the air as soon as possible.

<sup>133</sup> *Executive Order*, section 2(a)(iv).

<sup>134</sup> See TIA 10/29/04 Comments at 3; SBE Comments at 13, 21-22; TDI Reply Comments at 5; LogicaCMG 10/29/04 Comments at 16; WGBH Comments at 9; Wireless RERC Comments at 4.

<sup>135</sup> RadioShack observes that it and many other manufacturers make products that include connections to activate flashing lights and bed shaking devices for persons with hearing disabilities and voice activation for the blind. RadioShack Comments at 9; see also Putkovich Comments at 21; NAB Comments at 6; WGBH Comments at 9-10.

<sup>136</sup> AFB Comments at 2-3; SBE Comments at 22-25.

<sup>137</sup> SBE Comments at 25; TDI Comments at 6; WGBH Comments at 9-10; MSTV Reply Comments at 7; TDI Reply Comments at 7.

CAP-formatted message could be converted to synthesized speech, as is done by NWS weather alerts, for visually impaired persons.<sup>138</sup> Accordingly, in this *Order*, we promote the delivery of audio, video, and text messages to persons with disabilities by requiring EAS Participants to accept CAP-formatted alerts and warnings, should CAP be adopted by FEMA.

38. While CAP is promising, however, it may not be the whole answer for making EAS alerts accessible to persons with disabilities, and it does not address the broader question of making emergency and public safety information available to persons with disabilities. For example, Section 79.2 of the Commission's rules requires video programming distributors<sup>139</sup> to make the audio portion of emergency information accessible to persons with hearing disabilities using closed captioning or other methods of visual presentation.<sup>140</sup> Video programming distributors also must ensure that emergency information provided in the video portion of a regularly scheduled newscast, or a newscast that interrupts regular programming, is accessible to persons with visual disabilities through aural description in the main audio, such as open video description.<sup>141</sup> Emergency information is defined as information about a current emergency that is intended to further the protection of life, health, safety, and property, *i.e.* critical details regarding the emergency and how to respond to the emergency.<sup>142</sup>

39. We are issuing a *Further Notice of Proposed Rulemaking* to re-examine the best way to make EAS and other emergency information accessible to persons with disabilities. We will invite

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<sup>138</sup> SBE Comments at 22; Dodds Comments at 2; WGBH Comments at 11.

<sup>139</sup> See 47 C.F.R. § 79.1(a)(2) (defining "video programming distributors," as "[a]ny television broadcast station licensed by the Commission and any multichannel video programming distributor as defined in § 76.1000(e) of this chapter, and any other distributor of video programming for residential reception that delivers such programming directly to the home and is subject to the jurisdiction of the Commission"); see also 47 C.F.R. § 76.1000(e) (defining "multichannel video programming distributor" as "an entity engaged in the business of making available for purchase, by subscribers or customers, multiple channels of video programming. Such entities include, but are not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, a television receive-only satellite program distributor, and a satellite master antenna television system operator, as well as buying groups or agents of all such entities").

<sup>140</sup> 47 C.F.R. § 79.2(b)(1)(i); see also 47 C.F.R. § 79.1(a)(4) (defining closed captioning as the "visual display of the audio portion of video programming"); *Obligation of Video Programming Distributors To Make Emergency Information Accessible To Persons with Hearing Disabilities Using Closed Captioning*, Public Notice, DA 06-2627 (Dec. 29, 2006) (addressing obligations of video programming distributors to make emergency information accessible in light of the 100% closed captioning requirement).

<sup>141</sup> 47 C.F.R. § 79.2(b)(1)(ii). Section 713 of the Act defines "video description" as "the insertion of audio narrated descriptions of a television program's key visual elements into natural pauses between the program's dialogue." 47 U.S.C. § 613(g). Video programming distributors may use this definition as guidance in meeting the requirements of section 79.2(b)(1)(ii). See 47 C.F.R. § 79.2(b)(1)(ii). For example, if a map is displayed on the screen, the video programming distributor must provide an aural description of the geographic location encompassed by the map and any areas highlighted on the map in order to make the information accessible to persons with visual disabilities. In addition, emergency information provided in the video portion of programming that is not a regularly scheduled newscast, or a newscast that interrupts regular programming, such as a "crawl" or "scroll," must be accompanied by an aural tone to alert persons with vision disabilities that they should tune to another source, such as a radio, for more information. See 47 C.F.R. § 79.2(b)(1)(iii).

<sup>142</sup> Emergency situations in which the broadcasting of information is considered as furthering the safety of life and property include, but are not limited to, the following: tornadoes, hurricanes, floods, tidal waves, earthquakes, icing conditions, heavy snows, widespread fires, discharge of toxic gasses, widespread power failures, industrial explosions, civil disorders, school closings and changes in school bus schedules resulting from such conditions, and warnings and watches of impending changes in weather. See 47 C.F.R. §§ 73.1250(a), 79.2(a)(2).

comment on: (1) presentation of the audio feed in text format, and vice-versa; (2) making emergency information available to various devices commonly used by persons with disabilities; and (3) providing emergency messages in multiple formats to meet the needs of persons with disabilities.

40. *Serving non-English Speakers.* We also affirm our commitment that non-English speakers should have access to EAS alerts as soon as the simultaneous transmission of multilingual messages is practicable.<sup>143</sup> We believe that the first step toward more effectively serving non-English speakers, consistent with the Secretary of Homeland Security's responsibility to enable alerting of "those without an understanding of the English language"<sup>144</sup> is to require the use of CAP, conditional on its adoption by FEMA. Requiring EAS Participants to be able to receive CAP-formatted alerts will facilitate more accurate and detailed multilingual alerts. At the same time, we also expect that EAS participants will simultaneously transmit multilingual CAP-formatted messages by EAS Participants as soon as such transmission is practicable. For example, this could happen either as a result of the development of comprehensive, nation-wide Next Generation EAS under FEMA's auspices, or pursuant to the earlier development of CAP-based transmission systems at the state level per coordination between state planners and FEMA. This requirement will ensure that the initiator of any EAS alert has the technological capability to deliver simultaneously messages in English and any other language determined to be appropriate for a given alert.

41. The Rules we adopt today provide the groundwork for transmission of multilingual EAS alerts and warnings. CAP, however, may not be a complete answer for making EAS alerts available to non-English speakers, and is not a comprehensive solution for making general emergency and public safety information available to non-English speakers. Indeed, we believe that Petitioners' request is broader than the formal EAS structure and raises important questions about the availability of emergency information to the non-English speaking audience. We initiate today a Further Notice to seek additional comment on these proposals. Although we hope that the stakeholders will work together, under our auspices, to reach a resolution prior to the conclusion of our proceeding on these issues, we are prepared to issue an order addressing these issues within six months.<sup>145</sup>

42. In order to begin focusing on these issues quickly, we direct the Public Safety and Homeland Security Bureau to convene a discussion (or a series of discussions) at the Commission among stakeholders as soon as possible, and to place a report describing the results in the public docket within 30 days of release of this Order.

### **C. Expanding the Base of EAS Participants**

#### **1. Wireline Video Participation in EAS**

##### **a. Background**

43. Under the Commission's current EAS rules, wireline common carriers are not required to participate in EAS. In the *Further Notice*, the Commission noted that some traditional telephone companies have indicated that they intend to compete with cable television service and DBS providers in bringing multichannel video programming service to customers' homes through fiber optic

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<sup>143</sup> Commenters recognize that EAS alerts must be available to non-English speaking people as well as people with visual or hearing disabilities. See, e.g., AFB Comments at 3-4; State Associations Comments at 15-17; T-Mobile Comments at 17-18; Maine SECC 10/29/04 Comments at 2; SWN 10/29/04 Comments at 2; TDI 10/24/04 Comments at 4.

<sup>144</sup> *Executive Order*, section 2(a)(iv).

<sup>145</sup> See also, *infra*, n. 230.

connections.<sup>146</sup> The Commission sought comment on whether Wireline Video Providers should have public alert and warning responsibilities similar to those of other providers subject to the EAS rules, if there are particular attributes of wireline technology that would make it easier (or more difficult) to deliver alerts and warnings to the public, and whether there are policy considerations the Commission should consider regarding requiring Wireline Video Providers to provide alerts and warnings.<sup>147</sup>

#### b. Comments

44. Most commenters, including Wireline Video Providers, agree that Wireline Video Providers should be subject to the same EAS obligations as other multichannel video programming distributors (MVPDs).<sup>148</sup> These commenters agree that it will be important to ensure that all consumers receive the benefits and protections of EAS, regardless of the technology used to deliver the video services. They also argue that because many consumers will likely use television programming services offered by Wireline Video Providers, the Commission should require such offers to be EAS-compliant to ensure that the greatest possible number of consumers is alerted in the case of an emergency.

45. Verizon states that its FiOS service already complies with the EAS obligations that apply to cable operators.<sup>149</sup> AT&T asserts that it will “participate in the EAS” whether or not Commission rules mandate it.<sup>150</sup> AT&T argues, however, that only a limited set of EAS system receivers provide alert information in an IP format and that video vendors are not technically capable of routing EAS messages to the correct end user. AT&T states that it is developing an IPTV-specific EAS solution for non-broadcast channels, and is working on an interface between EAS equipment and IPTV middleware.<sup>151</sup> Thus, it requests that no deadlines for non-cable-operator EAS compliance be set before June 30, 2008, and that rules do not “unduly restrict” how IP service providers distribute and display information.<sup>152</sup>

#### c. Discussion

46. We agree with commenters that Wireline Video Providers should be considered Participants under our EAS rules. The EAS plays a critical role in providing vital public safety information. The long-term resilience of the EAS could be significantly increased by careful implementation that could better accommodate, and even harness, the innate flexibility of IP-based

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<sup>146</sup> *Further Notice*, 20 FCC Rcd at 18653, ¶ 70.

<sup>147</sup> *Id.*

<sup>148</sup> Verizon Comments at 2 (EAS should apply to any broadcast video services carried over FTTP and other advanced broadband networks); Letter to Marlene H. Dortch, Secretary, FCC, from Glenn Reynolds, Vice President-Regulatory, BellSouth, at 2 (filed April 20, 2006) (“BellSouth is fully supportive... of applying equivalent EAS obligations on all multi-channel video providers, regardless of the platform used.”); BellSouth Reply Comments at 4; NCTA Comments at 8-11 (telephone companies providing video services should be subject to the EAS rules applicable to cable operators); TDI Reply Comments at 6 (telco-delivered video and multi-channel video service providers should have the same EAS obligations).

<sup>149</sup> Verizon Comments at 2.

<sup>150</sup> AT&T Comments at 2-4.

<sup>151</sup> *Id.* at 5-6. For local broadcasts, AT&T states that it will “pass through” all EAS alerts (local and national) provided by local broadcast channel feeds. AT&T also states it would pass through national alerts transmitted by cable services, but argues that layering EAS alerts on top of local broadcast feeds likely would obscure or interfere with the information being provided.

<sup>152</sup> *Id.* at 6; Letter to Marlene H. Dortch, Secretary, FCC, from Thomas J. Hughes, Vice President-Federal Regulatory, AT&T Services Inc. (filed April 6, 2007) (AT&T April 6, 2007 Letter).

networks that can route around damaged nodes. Moreover, a viewer's reasonable expectation regarding the availability of alerts over television programming is identical, whether the programming is over-the-air broadcasting, cable, DBS, or a new wireline video service. By adopting a technologically neutral EAS obligation today, the Commission is enabling these emerging service providers to integrate EAS at an early developmental stage.

47. Under section 624(g) of the Act and the Commission's EAS regulations, providers of "cable systems" must participate in EAS.<sup>153</sup> Section 624(g) of the Act provides that "each cable operator shall comply with such standards as the Commission shall prescribe to ensure that viewers of video programming on cable systems are afforded the same emergency information as is afforded by the emergency broadcasting system pursuant to Commission regulations in subpart G of part 73, title 47, Code of Federal Regulations."<sup>154</sup> The Commission imposed EAS regulations on cable operators pursuant to this mandate in 1994, concluding that cable "is invaluable in the dissemination of information during emergencies."<sup>155</sup> The term "cable operator" means a person "who provides cable service over a cable system,"<sup>156</sup> including "a facility of a common carrier which is subject, in whole or in part, to the provisions of title II of this Act ... to the extent such facility is used in the transmission of video programming directly to subscribers, unless the extent of such use is solely to provide interactive on-demand services."<sup>157</sup> Thus, section 624(g) expressly authorizes the imposition of EAS requirements on Wireline Video Providers to the extent that they qualify as "cable operators" under the Act.

48. To the extent that Wireline Video Providers do not qualify as "cable operators" under the Act, we require that they participate in EAS pursuant to our Title I ancillary jurisdiction and in connection with our specific responsibilities under sections 624(g) and 706.<sup>158</sup> As a general matter, the Commission has discretion to use ancillary jurisdiction when the Commission has Title I subject matter jurisdiction over the service and the assertion of jurisdiction is "reasonably ancillary to the effective performance of [its] various responsibilities."<sup>159</sup> Wireline Video Providers fall within the scope of the Commission's jurisdiction because they provide "interstate . . . communication by wire."<sup>160</sup> At least some of their services involve transmission across state lines, meeting the definition of "interstate communication,"<sup>161</sup> and they are "wire communication," which is "transmission of . . . pictures . . . and sounds . . . by aid of wire, cable, or other like connection."<sup>162</sup> Thus, the Commission has subject matter jurisdiction over these services. We also find that imposing an EAS requirement is reasonably ancillary

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<sup>153</sup> 47 U.S.C. § 544(g).

<sup>154</sup> *Id.*

<sup>155</sup> *1994 Report and Order*, 10 FCC Rcd at 1806, ¶ 57.

<sup>156</sup> 47 U.S.C. § 522(5); *see id.* at §§ 522(6) (defining a "cable service" as "the one-way transmission to subscribers of . . . video programming . . . and subscriber interaction, if any, which is required for the selection or use of such video programming . . ."), 522(7) (defining a "cable system" as "a facility . . . designed to provide cable service").

<sup>157</sup> *Id.* at § 522(7)(C); *see id.* at § 153(10) (defining common carrier).

<sup>158</sup> 47 U.S.C. §§ 151, 152(a), 154(i), 154(o), 544(g), 606.

<sup>159</sup> *See United States v. Southwestern Cable Co.*, 392 U.S. 157, 178 (1968); *IP-Enabled Services*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, 10261, ¶ 27 & n.87 (2005) (*VoIP 911 Order*) (citing additional precedent and authority).

<sup>160</sup> 47 U.S.C. § 152(a).

<sup>161</sup> 47 U.S.C. § 153(22).

<sup>162</sup> 47 U.S.C. § 153(52).

to the effective performance of our responsibilities.<sup>163</sup> Wireline Video Providers' participation in the EAS will advance the animating purpose of section 624(g) by ensuring that their video subscribers have access to the same emergency information as broadcast and cable television viewers.<sup>164</sup> Indeed, we believe that their EAS participation is necessary to preserve and advance the goals of section 624(g), as Wireline Video Providers offer competitive alternatives to the video programming available through broadcast and cable television, and are likely to reach increasingly large portions of the American public as they deploy their services.<sup>165</sup> Moreover, requiring Wireline Video Providers to participate in EAS also will further our core public safety mission under Title I, which requires us to take steps to "promot[e] safety of life and property,"<sup>166</sup> and section 706, and is consistent with prior Commission actions. Accordingly, we conclude that we have ancillary jurisdiction to require even those Wireline Video Providers that may not be cable operators under the Act to participate in EAS.

49. As a policy matter, we believe that the reasonable expectations of viewers should guide our efforts to encourage the development of a more comprehensive EAS system. We reaffirm that our long-term goal is to incorporate as many communications technologies as possible into a comprehensive, flexible, and redundant system to deliver EAS alerts quickly to the largest number of consumers.

50. Wireline Video Providers should be subject to the same EAS requirements as providers of Digital Cable Systems.<sup>167</sup> We therefore amend our EAS rules to specifically include Wireline Video Providers. Wireline Video Providers are EAS Participants, however, only to the extent they provide video services; our EAS rules do not impose mandatory EAS obligations on wireline telephone companies providing traditional landline telephone services at this time.<sup>168</sup>

## 2. Wireless Participation in EAS

### a. Background

51. In the *Further Notice*, the Commission noted that wireless devices are used to reach the American public quickly and efficiently.<sup>169</sup> The Commission specifically noted the participation of the wireless industry in FEMA's DEAS pilot projects and asked what further steps it should take to facilitate wireless provision of EAS alerts, including whether to require wireless carriers to provide emergency

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<sup>163</sup> See *VoIP 911 Order*, 20 FCC Rcd at 10262, ¶ 29.

<sup>164</sup> See 47 U.S.C. § 544(g); *U.S. v. Midwest Video Corp.*, 406 U.S. 649, 667-68 (1972) (cable regulation was reasonably ancillary to the Commission's statutory responsibilities where it would "further the achievement of long-established regulatory goals in the field of television broadcasting").

<sup>165</sup> See *1994 Report and Order*, 10 FCC Rcd at 1806, ¶ 57 (imposing EAS obligations on cable systems because cable had become an "invaluable link in the dissemination of information during emergencies" in light of their high penetration levels).

<sup>166</sup> 47 U.S.C. § 151.

<sup>167</sup> 47 C.F.R. § 11.51(p)(1)-(3).

<sup>168</sup> The current wireline voice networks are not suited for EAS. Verizon Comments at 3 ("Data and voice services are point-to-point or circuit-switched services that, by their very nature, are not well situated for broadcasting emergency notifications on a wide scale."); see also Letter to Marlene H. Dortch, Secretary, FCC, from Paul Brigner, Executive Director, Verizon Regulatory, Attachment at 4 (filed Aug. 9, 2006) (PSTN is engineered to facilitate a "[c]ommunication path ... between specific nodes," "to include concentration, but avoid blockage," and "to handle typical peaks in traffic (e.g., Mother's Day)," and is "[s]ubject to overload and failure under extreme calling volumes.").

<sup>169</sup> *Further Notice*, 20 FCC Rcd at 18653, ¶ 69.

alerts.<sup>170</sup> It also noted that commenters to the 2004 NPRM had identified technologies that would enable wireless handsets to receive EAS alerts and requested comment on these and other approaches to wireless alert and warning.<sup>171</sup> The Commission directed commenters to address the extent to which each approach would permit the use of a common messaging protocol and whether handsets would have to be replaced. Numerous parties responded to these and related questions specified in the *Further Notice*, resulting in a well-developed record.

#### b. Discussion

52. As discussed in paragraph 8 above, on October 13, 2006, the President signed the WARN Act into law. Because the WARN Act directs the Commission to initiate a rulemaking regarding the establishment of an alerting system for commercial mobile service (CMS) providers that voluntarily elect to transmit emergency alerts, and the schedule set by the WARN Act precludes initiation of such rulemaking until a later date, we do not address commercial wireless carrier participation in EAS in this *Order*.

### D. State-Level and Geographically Targeted EAS Alerts

#### 1. Background

53. EAS Participants currently have the discretion whether to receive and retransmit alerts from state and local EAS entities,<sup>172</sup> and we applaud the numerous entities that have chosen to serve the public by voluntarily participating in state and local EAS activations.<sup>173</sup> In the *Further Notice*, the Commission acknowledged the essential role that state and local governments play in providing emergency information to the public,<sup>174</sup> and specifically noted the close nexus between state and local alerting and federal efforts to provide disaster relief. The Commission observed that the public interest may be served by affording state governors the ability to disseminate emergency information via EAS facilities, and sought comment on whether EAS Participants should be required to transmit EAS messages delivered by the governor of any state in which they provide service.<sup>175</sup>

54. As many commenters have noted, nearly all emergencies affect regional, state or smaller areas.<sup>176</sup> Although EAS is frequently used to provide the public vital localized weather-related announcements (such as tornado warnings), it generally has not been used by states to formally provide the public state-wide EAS alerts regarding emergencies such as natural disasters or terrorism incidents. For example, during Hurricanes Katrina, Wilma, and Rita, broadcasters provided localized emergency information to the public, while none of the affected state governors formally activated EAS to provide

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<sup>170</sup> *Id.*

<sup>171</sup> *Id.* Participating wireless industry organizations included Cingular, Sprint Nextel, T-Mobile, Verizon Wireless, CTIA, and USA Mobility, among others.

<sup>172</sup> See 47 C.F.R. § 11.41(b)(2).

<sup>173</sup> If any entity chooses to participate in state and local EAS activations, it must comply with the Commission's Part 11 EAS rules.

<sup>174</sup> *Further Notice*, 20 FCC Rcd at 18654, ¶ 73.

<sup>175</sup> *Id.* The Commission also asked whether, if it were to require carriage of state-level alerts, it should adopt an additional originator code for state governors in section 11.31(d) of the Commission's rules. *Id.*

<sup>176</sup> To date, the EAS has not been used to deliver a Presidential message to the American public.

the public evacuation, shelter or other critical information.<sup>177</sup> We believe that, consistent with the Commission's fundamental mandate to promote the safety of life and property through the use of wire and radio communications,<sup>178</sup> we should go further to encourage and facilitate state use of the EAS network.

## 2. Discussion

### a. Receipt of State-Level Messages

55. We believe that voluntary participation by cable and broadcast EAS Participants in accommodating state and local level alerting in the existing EAS has been generally successful. Nevertheless, we conclude there are compelling policy reasons to order EAS Participants to receive CAP-formatted EAS alerts activated by state governors or their designees. First, we again note that EAS use to date has been overwhelmingly related to weather and state and local alerts.<sup>179</sup> We also believe that states will be more inclined to deploy the necessary resources to upgrade to Next Generation EAS, including the ability to simultaneously transmit multiple and differentiated CAP-formatted messages, if the states have a particular – and FCC-enforceable – stake in the EAS during state and local emergencies. We conclude, therefore, that all EAS Participants within a state<sup>180</sup> are required to be prepared to receive state-level messages delivered to the participant by the state's governor (or the governor's designee) within 180 days from the date FEMA adopts CAP, so long as such delivery is explicitly described in a state EAS plan that is submitted to and approved by the Commission. In addition, we believe that other public officials may, in appropriate circumstances, activate EAS alerts. We seek comment in the attached Further Notice about which officials should be permitted to activate EAS alerts and under what circumstances.

56. We recognize that requiring EAS Participants to receive emergency alerts directly from state political subdivisions, such as counties and cities, could be unduly complex and costly and would create the potential for some alerts to reach those who may not be affected by a particular emergency. Accordingly, we will only require EAS Participants to receive CAP-formatted EAS messages delivered to them by a state governor (or the governor's designee), or by FEMA (or its designee) on behalf of a state.<sup>181</sup> We find that requiring EAS Participants to receive CAP-formatted EAS messages delivered by a state governor of any state in which they provide service falls within the scope of our Title I subject matter jurisdiction as well as our public interest authority to grant licenses for radio communication under Title III of the Act. “[P]romoting safety of life and property through the use of wire and radio communication” is a core mission of the FCC under Title I,<sup>182</sup> Title III authorizes the FCC to grant radio licenses in the public interest,<sup>183</sup> and the Commission is authorized to “make such rules and regulations . . .

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<sup>177</sup> *Hurricane Katrina NPRM* at Appendix B, Report and Recommendations to the Federal Communications Commission, p. 28.

<sup>178</sup> 47 U.S.C. § 151.

<sup>179</sup> See *supra* ¶ 14 n. 58.

<sup>180</sup> As explained below, this requirement does not apply to SDARs and DBS providers.

<sup>181</sup> The Mayor of the District of Columbia, as well as the Governors of the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, American Samoa, and Guam will also have this capability. *Accord* 47 U.S.C. § 153(40) (“the term “state” includes the District of Columbia and the Territories and possessions”).

<sup>182</sup> 47 U.S.C. § 151.

<sup>183</sup> *Id.* at §§ 301, 307(a), 309(a).