

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

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

Re: PUBLIC SAFETY AND HOMELAND SECURITY BUREAU SEEKS COMMENT
REGARDING EQUIPMENT AND OPERATIONAL ISSUES IDENTIFIED FOLLOWING THE
FIRST NATIONWIDE TEST OF THE EMERGENCY ALERT SYSTEM

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1 The Need for Industry and Cross-Industry Consensus

Monroe Electronics broadly concurs with sentiments expressed by both the National Association of Broadcasters and the National Cable Television Association, that the best path towards resolution of technical and operational issues that arose during the national EAS is through collaboration with industry, and achieving technical consensus through industry organizations including various industry standards setting bodies, and/or the Communications Security, Reliability, and Interoperability Council (CSRIC).¹

We concur with the NAB’s comment – which very much applies across industries to encompass broadcasting, cable and IPTV alike - that because the ecosystems of all these

¹ Comment of the National Cable Television Association Regarding Equipment And Operational Issues Identified Following The First Nationwide Test Of The Emergency Alert System, EB Docket No. 04-296, November 4, 2013, and Comment of the National Association of Broadcasters Regarding Equipment And Operational Issues Identified Following The First Nationwide Test Of The Emergency Alert System, EB Docket No. 04-296, November 4, 2013.

operations are extremely diverse, “many of the technical issues raised in the Notice require practical and, above all, flexible solutions. Imposing a one-size-fits-all regulatory regime for emergency alerting would be counterproductive.”²

It is also important to note that there is no single standard architecture among the varied and independent cable TV, IPTV and even broadcast TV systems deployed nationwide. In this sense, we again echo the comments of the National Association of Broadcasters that one size may not fit all in terms of EAS regulation.

2 The EAS Header Code and Time of Transmission

Monroe reiterates and amplifies NCTA’s comments to the effect that that much of today’s cable, IPTV and many broadcast TV systems utilize time-sensitive equipment in various key systems downstream of their CAP/EAS equipment.³ We understand that for many such systems, time accuracy and synchronization is a requirement for the overall functioning of operations. Significant examples of equipment and services downstream and separate of EAS equipment rely upon that “time stamp” for processing of the EAS alert. As NCTA put it succinctly, *“In today’s advanced cable systems, time variables matter. The accuracy of the “time of release” element is integral to the effective functioning of EAS and next generation alerting systems. If this element is not correctly configured by the message originator, the message may not be processed properly in downstream systems.”* We would add that this statement also applies to a number of broadcast television stations, which are also using advanced systems with time sensitive requirements.

We respectfully suggest that the Commission should bear in mind the very real impact that changes in EAS requirements may have on many cable TV, IPTV and broadcast television systems. Even if the “equipment characteristics” in EAS equipment were universally modified to immediately release an EAN (without respect to the Time of Release), the downstream systems and services may demonstrate varying responses to such an unsynchronized message, ranging from successful forwarding, to message rejection, to other unpredictable system behavior.

² NAB Comments.

³ NCTA Comments.

This downstream dependency is not the design of, or in the control of, any EAS manufacturer. However, these sensitivities are a technical reality that EAS manufacturers cannot disregard when dealing with various complex downstream systems. While many systems can "ignore" time, the increasingly complex nature of many other media involved a fundamental reality that "time" matters. We would also take this opportunity to caution that various methods or "workarounds" suggested by at least one other EAS manufacturer are technologically unsupportable due to the requirements of existing embedded systems deployed throughout these operations, as well as likely being inconsistent and in conflict with existing and broadly accepted industry standards.⁴

We concur with NCTA's assessments regarding the recognition and processing of header code elements. All elements of the EAS header are essential and should continue to be required.⁵ The ORG (originator) code must be present, as of course must the EEE (event) code. As discussed elsewhere, the PSSCCC (location) must be present, as must be the JJHHMM (time of initial release) and TTTT (duration) parameters. The JJHHMM and TTTT parameters are essential in defining the Valid Time Period for the alert, providing a key safeguard by establishing the expiration time for the alert. The JJHHMM parameter also has essential signaling functions downstream of the CAP EAS equipment in many systems.

The Commission asked the extent to which EAS equipment is programmed to recognize and apply any, all, or none of the elements of a Header Code when the event code is an EAN. The Monroe Electronics One-Net™ and Digital Alert Systems DASDEC™ utilize all elements in the EAS header for filtering of alert. The only limited exception - at present - is in the case of the EAN event code, in which the EAN alert will be forwarded, "overriding" the FIPS geo-location filter to permit the EAN to be forwarded even if the user has not enabled the particular FIPS location contained in the EAN messages. This, for example, allows an EAN with a Washington DC FIPS to be auto-forwarded, even if the DC FIPS was not selected by the user for auto-forwarding of other event codes. This same logic would apply to any other FIPS code(s) that the EAN originator may select.

⁴ Comment of Sage Alerting Systems Regarding Equipment and Operational Issues Identified Following The First Nationwide Test Of The Emergency Alert System, EB Docket No. 04-296, November 4, 2013.

⁵ NCTA Comments.

For Monroe Electronics' part, we now reiterate (as stated in our 15 December 2011 ex parte comments to the Commission) that we are prepared to provide the user with the option to forward immediately regardless of Time of Release, or forward when the Time of Release time is synchronized with actual clock time.⁶ In this way, EAS Participants that do not have time dependent downstream systems may forward the EAN immediately, while EAS Participants that have time dependent systems are afforded the capability of successfully issuing the EAN at their earliest opportunity.⁷ We have not fielded this capability to date, pending further clarification from the Commission on the proper course of action.

3 A National EAS Location Code and Regionalized EANs

Monroe Electronics concurs with and supports the position of NCTA and its members that the EAS rules should be amended to establish a national location code of six zeros (000000).⁸ At the same time, we also recognize NCTA's cautionary note that additional research, testing and evaluation by the cable television industry is required to determine the extent by which the embedded base of deployed equipment – both EAS equipment and equipment and services downstream.

The EAS equipment provided by Monroe Electronics and Digital Alert Systems can readily allow the use of a national 000000 location code. In regards to the comment by the Federal Emergency Management Agency's IPAWS Program office that it "has received requests from representatives of the system user that the EAS system should be capable of relaying an EAN directed to a specific region of the country," Monroe Electronics would also support

⁶ Comments of Monroe Electronics on the National EAS Test Findings and Recommendations, EB Docket No. 04-296, December 15, 2011. By "system user" we infer this to refer to a White House entity.

⁷ In this regard, we note the recognition on the part of the Federal Emergency Management's IPAWS Program Management Office as to the technical realities in a significant number of EAS Participants. As FEMA astutely commented, "While FEMA understands that technical plant limitations may require some EAS Participants to slightly delay re-transmission of an EAN and other similar time-critical messages. Even in these cases re-transmission must occur in the most expeditious fashion possible." Comment of the Federal Emergency Management Agency's IPAWS Program Management Office Regarding Equipment and Operational Issues Identified Following the First Nationwide Test of the Emergency Alert System, EB Docket No. 04-296, November 4, 2013. However, as we discuss separately in these comments, we very respectfully submit that the mitigation of such delays will also be in great part enhanced by the issuance of well-formed messages from EAS originators, to include accurate time stamps in EAS messages, and properly synchronized time or clock settings on systems used to originate those EAS alerts.

⁸ NCTA Comments.

extending required filtering by the FIPS code to the EAN to provide national authorities with the enhanced ability to geo-target an EAN nationally or even regionally, should a use-case be presented for such sub-national geo-targeting of alerts.⁹ In this manner, national authorities could elect to send a national alert via the 000000 location code (or other, as such may specified by the FCC), and could likewise issue a regional EAN by a number of FIPS codes for state/local locations for geographically tailored emergency communications. Such a modification to the EAS platforms provided by Monroe Electronics and Digital Alert Systems could readily and simply be accommodated via software update.

4 Visual Display of Textual Alerts

In respect to the visual display of alert information (text), we generally concur with NCTA's conclusion that "government-imposed standards are not warranted."¹⁰ We concur with both NCTA and NAB that this is an issue which could be addressed by the EAS working group under the FCC's Communications Security, Reliability and Interoperability Council (CSRIC). The development of any such specifications should be a matter of industry consensus and best practice, to most efficiently reflect both community requirements and the technical capabilities of manufacturers in this particular space.

However, the issue of the textual content of the EAN message is a singular issue in which FCC guidance may be desirable. Again, in the textual content of the EAN, EAS manufacturers appear to have made interpretations. For instance, in the case of an EAN, many manufacturers follow the Part 11 specification to display the geographic area of the alert, as identified in the FIPS (PSSCCC) location parameter. In this case, the EAN alert may indicate a location of "Washington, DC" if that FIPS code is utilized. Other vendors have improvised to indicate a location of "United States" regardless of what FIPS code is utilized during an EAN. Without opining on the merits of either approach, we simply submit that this is an area that likely requires clarification, particularly if authorities desire to leave room for the possibility of a regionalized EAN capability, as referenced by the Federal Emergency Management Agency (FEMA) in their recent comments to the FCC.¹¹ In simple terms,

⁹ FEMA Comments.

¹⁰ NCTA Comments.

¹¹ FEMA Comments

should the FCC clarify the desired textual output from the EAN header, we will readily support and implement that decision.

5 EAN Testing and the NPT Event Code

We agree in part with the position of NCTA member companies that the NPT code may be well suited for nationwide testing.¹² That is, while the NPT code provides an already-specified and implemented event code for testing the national EAS relay, the NPT code has never been defined to support the unlimited-audio duration capability of the EAN. In this regard, the EAN code is unique. To support the NCTA's objective of backwards compatibility to with both the embedded base of deployed cable equipment and EAS standards, such as the JSTD-042A-2007: A Joint Standard Developed by the Society of Cable Telecommunications Engineers (SCTE) and the Consumer Electronics Association (CEA) – Emergency Alert Messaging for Cable, we strongly feel that the NPT code should remain within its current specification of supporting audio message duration limited to two minutes.

The EAN provides for the ability for both the government and EAS Participants to accurately determine the full output of the alert over a wide variety of EAS Participant networks and configurations. The drawback to the EAN is that the alert text itself does not indicate that the event is just a test, rather than an actual event. Various EAS manufacturers – at the suggestion of their customers, industry associations and the government – rapidly introduced a feature during the 2011 National EAN test that provided additional text indications that the EAN was just a test. This approach was successful where used, however, imposed significant requirements and costs on the part of both EAS manufacturers and their EAS Participant customers to introduce and support the feature. For this reason, we would not recommend following this approach again, despite the issue that the EAN test would not indicate that the message is not a test.

Alternatively, we support the usage of the NPT event code for testing, which provides the benefit of clearly identifying in the textual output that the alert is indeed a test. It is technically feasible to use an NPT on a national basis. It may also be technically feasible to

¹² NCTA Comments.

use a standard RMT (required monthly test). PEP stations may simply need to have their equipment reprogrammed to support these codes, if they do not do so already.

Because the EAN is the only event code specifically identified to support unlimited voice, NPT was defaulted to two minutes in many EAS devices as well as many downstream services and equipment. Therefore, the NPT code can be used to effectively test the relay of the national alert message, though it will not test the “unlimited duration” which is unique to the EAN. We suggest the NPT alert should not be afforded the same level of priority as an EAN, as it may be inadvisable for a "test" message to potentially delay or preclude an actual local alert message related to life and safety. It would also be useful for the Commission to clarify whether the NPT must be forwarded for dissemination to the public as with the RMT, or is a "log only" event akin to the RWT.

With the EAS systems provided by Monroe Electronics and Digital Alert Systems, there is no "minimum" amount of time a test has to run to allow the equipment to operate properly. However, as with the NPT, an EAN test of 2 minutes or less would suffice principally to test the robustness of the monitoring relay system and the ability to switch back to normal programming. An EAN test of greater than two minutes would allow EAS participants to test their ability to support an extended national alert message through their respective downstream systems.

We generally concur with NCTA’s conclusion that the federal government may be best served by conducting nationwide EAS (EAN) tests every two to three years and such tests should be scheduled at a time and day that is least disruptive to viewers.¹³ However, we also believe that nationwide NPT tests could occur somewhat more frequently than an EAN (up to annually) with less disruption to both the market place and the viewing public, insofar as the specification of the NPT code as a two-minute message is not modified by the Commission.

6 New Event Codes

We reviewed with interest the National Weather Services’ request to add several EAS event codes (including an Extreme Wind Warning, Storm Surge Watch and Storm Surge Warning),

¹³ NCTA Comments

as well as FEMA's request to one or more events codes for different purposes.¹⁴ Without commenting on the relative merits of adding such event codes, we do note that the addition of these codes in CAP EAS equipment would entail a certain degree of software programming on the part of the CAP EAS device manufacturer, and a straightforward software update to the CAP EAS equipment by the EAS Participant. However, there may need to be additional examination by industry to determine any potential impact from the addition of additional event codes on downstream equipment, systems and services.

7 EAS Device Maintenance and Clock Time

We suggest the Commission and its partner agencies should at the very least find means of encouraging alert originators – whether Federal, state, local, tribal or territorial - to properly maintain their EAS encoding equipment, including but not limited to ensuring that those devices are properly time synched. This principal should apply to both alert originators (as a best practice) and EAS participants (as an affirmative obligation). This is not an unreasonable expectation in a professional environment. Authorities need to take the responsibility to maintain their own systems to safeguard against issuance of a malformed EAS message.

8 Automated EAN/NPT Reporting

Regarding a suggestion posed by the Broadcast Warning Working Group regarding automated status reporting – via email or other means - from the EAS device to some third party (presumably government) address, we do not take a particular position on this suggestion, except to note that Monroe Electronics' EAS equipment could currently support such a requirement technologically, however we would defer to authorities to begin any examination of questions this raises regarding practical, operational, privacy, security and other related matters.¹⁵

¹⁴ National Weather Service Request for Changes to Part 11 EAS Rules, EB Docket 04-296, November 15, 2013

¹⁵ Comment of the Broadcast Warning Working Group Regarding Equipment and Operational Issues Identified Following The First Nationwide Test Of The Emergency Alert System, EB Docket No. 04-296, November 4, 2013.

9 EAS Specifications and Disclosure

As a manufacturer, we rely on specifications throughout the conduct of our business. However, it appears that guidelines defining the Emergency Alert System have not proved sufficiently precise in defining requirements for the system in various key areas. As such, over time, EAS equipment manufacturers have sometimes derived differing conclusions and interpretations of ambiguities in the FCC rules for EAS. In this regard, BWWG's statements on the application of EAS Header Code elements cause us to remind both the commenters and the Commission that if these rules are to be treated as specifications, they must be precise and unambiguous. Reflecting the ambiguities and differing interpretations of these EAS rules, commentary filed by BWWG and several others have made note of what was "believed" or various interpretations of the original intent of the rules, including the possibility of "private" and undocumented communications between government staff and manufacturers in the absence of published and precise specifications.¹⁶ From a manufacturer's perspective, the potential for differing communications, private instructions, and unpublished guidelines can be highly problematic.

We read with interest the reply comments filed by Mr. Sean Donelan, regarding the private clarification of EAS technical details.¹⁷ We generally concur that there should be – and indeed should have been - uniform disclosure of technical discussions and specifications, to provide for a consistency in interpretation of the EAS implementation guidelines. As an example, we read with some concern the comments filed by one EAS manufacturer who apparently was provided informal and undocumented guidance on the format of an EAN. In this regard, we concur with Mr. Donelan that any discussion of format and specifications should have been, and should be going forward, a matter of public record and published specification, to best promote EAS interoperability and functionality while providing EAS manufacturers with equal and impartial access to such information.

¹⁶ BWWG Comment. Sage Comment.

¹⁷ Reply Comment of Sean Donelan Regarding Equipment and Operational Issues Identified Following The First Nationwide Test Of The Emergency Alert System, EB Docket No. 04-296, November 4, 2013.

10 Conclusion

We value and respect the work of the Commission in its efforts to define and maintain the Emergency Alert System. As an EAS equipment manufacturer, we look forward to a continued dialogue on technical and operational solutions, as well as industry best practices, to strengthen the nations' public alert and warning capabilities.

Respectfully,

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