Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

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

Comments of the Society of Broadcast Engineers, Inc.

The Society of Broadcast Engineers, Incorporated (SBE), the national association of broadcast engineers and technical communications professionals, with more than 5,000 members world wide, hereby respectfully submits its comments in the above-captioned notice of proposed rulemaking (NPRM) relating to the Emergency Alert System (EAS).

I. General Comments

- 1. SBE wishes to commend the FCC for its willingness to consider taking EAS to the next level, beyond limitations of the past that have prevented EAS from reaching its full potential. Many of the changes that are under consideration will go a long way toward transforming EAS into a more effective tool for public warning that can both be fully integrated into the National Weather Service (NWS) National Weather Radio (NWR), but also by state and local governments as well. It will also help to finally unleash the largely untapped power of EAS protocol, so as to reach more of the public with timely, accurate and secure life safety information more of the time. SBE fully understands that this task is daunting at best, but also understands the rewards that are possible.
- 2. SBE has been involved with EAS since it was conceived as the successor to the Emergency Broadcast System.¹ In the past several years our level of activity has increased significantly. It has included numerous SBE-sponsored EAS training sessions around the country, direct assistance to Local Emergency Communication Committees (LECCs) and State Emergency Communication Committees (SECCs), and SBE's close ties with the FCC's Media and Security Reliability Council (MSRC) and the Partnership for Public Warning (PPW). This experience has given SBE a unique perspective as the condition of EAS and what is required to

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Formerly referred to by its initials, EBS. However, the EBS tern has now been re-defined, in WT Docket 03-66, as referring to the Educational Broadband Service (formerly Instructional Television Fixed Service, or ITFS).

achieve the results we all seek. SBE, through PPW and MSRC, has also had the privilege of making significant contributions to the background material that the FCC has considered in formulating the EAS NPRM.

3. As the professional society for the engineering security and reliability of the broadcast resource, SBE stands ready to support the future of EAS and the public warning mission in any way it can. SBE is prepared what engineers do best, repair systems that are broken, and recommend improvements to make those systems better.

II. Upgrading Rather Than Replacing the EAS

- 4. At Paragraph 21, the NPRM notes that both MSRC and PPW support upgrading rather than replacing EAS. SBE general agrees with the positions PPW has taken on federal leadership regarding EAS. SBE believes that a truly effective public warning system, one that is used at various levels (national, state and local), requires uniformity, leadership and coordination at the federal level that have been absent in recent years. This federal participation is vital if EAS is to be integrated into the warning process as a necessary component of all-hazard homeland preparedness. The Department of Homeland Security (DHS) would be an excellent location for the management of this effort.
- 5. SBE agrees that DHS, with other federal agencies and stakeholders, should update and clearly designate EAS management, operational, and oversight responsibilities among the appropriate federal agencies and other authorities. SBE further agrees that for an effective public warning system to evolve from this process that *all* the various stakeholders and related government agencies must be committed and involved. This must be a fully cooperative undertaking.

III. MSRC Recommendations

- 6. MSRC recommends that a single federal entity should be responsible for assuring:
 - That public communications capabilities and procedures exist, are effective, and are deployed for distribution of risk communications and warnings to the public by appropriate federal, state and local government personnel, agencies and authorities.
 - That lead responsibilities and actions under various circumstances are established at federal, state and local levels within the overall discipline of emergency management.

- That a national, uniform, all-hazard risk communication warning process be implemented from a public and private consensus on what best meets the needs of the public, including people of diverse language and/or with disabilities, including sensory disabilities.
- 7. SBE generally supports the recommendations of MSRC. SBE feels that a lack of clear federal-level leadership managed from a central point of responsibility has been a major contributor to the problems EAS faces today.

IV. EAS Roles of FCC, DHS, FEMA and NOAA

- 8. SBE believes that operating under centralized leadership by DHS, the Federal Communications Commission (FCC), the Federal Emergency Management Agency (FEMA), and the National Oceanic and Atmospheric Administration (NOAA) all have roles to play in the successful implementation of an EAS/public warning system. There should also be an on-going means for committed participation by state and local governments, and by volunteer organizations such as SBE, the Society of Cable Telecommunications Engineers (SCTE), PPW, MSRC, and state broadcaster associations.
- 9. The creation of DHS brought together a number of related federal agencies and departments. As the United States moves forward with a unified EAS/public warning system there may be structural, procedural or legal obstacles encountered. It is imperative that these issues not stand in the way of this process.
- 10. SBE encourages the Commission to continue to use advisory committees, as it has done in the past. Such committees can provide an effective be-directional conduit for non-governmental stakeholders such as PPW, MSRC, state broadcasters associations, SCTE and SBE. It is also vital that there be a means whereby key state and local governmental entities can contribute to the process. SBE notes that a number of these entities have already been voluntarily involved. More must be brought into the family. This might take place within the framework of MSRC, PPW, or both.
- 11. SBE recommends that the advisory committee should include all interested stakeholders, but that this function go beyond a yearly "get together" for speech making. SBE would like to see the advisory committee, which SBE suggests be called the Public Warning System Advisory Committee (PWSAC), have the ability to not only recommend changes and improvements to the EAS, but that there be an established mechanism for implementing these recommendations on an on-going basis. We must streamline the process for inclusion of new and better ideas, and make sure that all stakeholders are at the table.

- 12. Communications is the key to functionality. In the past the only way to effectively deal with issues of this type has been periodic face-to-face meetings. With today's electronic communication tools (e-mail, List Servers, etc.) it is possible to have the PWSAC function in an on-going manner. Not only will this accelerate the process but will permit greater participation over a larger geographical area.
- 13. The SECC list serve that was started under the auspices of SBE and the former EAS National Advisory Council (NAC) is still up and running at no cost to committees or users. A growing number of LECC List Servers are also directly or indirectly supported by SBE resources, also at no cost to committees or users.
- 14. SBE believes that DHS is the logical federal agency for this function. DHS may, of course, designate an existing specific federal agency for dealing with specific tasks.
- 15. SBE urges the Commission and DHS to move beyond the concept that EAS is "just a broadcast station or cable system effort." EAS must be thought of as our public warning system link between government to the public that just happens to involve federally licensed communication facilities. DHS should oversee the operation of EAS with the FCC continuing its existing role as it relates to broadcasting, cable systems and other communications facilities that the FCC regulates.

V. Voluntary or Mandatory EAS Participation?

16. The NPRM asks if voluntary participation in EAS is consistent with the obligations noted in the Commission's Localism Notice of Inquiry (NOI),² and whether the dissemination of emergency information is a critical and fundamental component of broadcasters' local public service obligations. The lack of voluntary participation in EAS by many broadcasters stems from their experiences that EAS is not a viable system "from the top down." SBE submits that broadcasters' attitudes about EAS and their participation level will not increase until such time as the system is overhauled and can be clearly demonstrated to be a system worthy of their participation.

² MB Docket 04-233.

SBE notes that unless a station or cable entity has been issued a Non-participating National Authorization letter pursuant to Section 11.19 of the FCC Rules, it must relay all national level EAS messages. Howeer, entities that have been issued such letters are required to go off the air while a national level EAS message is active. SBE has no data on how many such letters have been issued, and suggests that the Commission check its records and release this information as part of further work for improving EAS.

- 17. The NWS, and state and local governments, know very well that EAS has the potential to provide them with a powerful warning tool. Right now, they, as well as SBE, are concerned that EAS may well not work when it is needed. The distrust that broadcasters have for the current EAS system discourages them from voluntary participation. This uncertainty, not knowing if any entity covered by Part 11 of the FCC Rules will relay the message, severely cripples the usefulness of EAS. Until such time as these issues are corrected as proposed in these comments, EAS will remain a tool with limited utility.
- 18. The Commission has been reminded of the need of funding for critical aspects of EAS. SBE submits that states and local areas are not likely to put money into enhancing their EAS until the obvious deficiencies have been corrected.

VI. Mandatory Broadcast Access for Local Emergency Managers?

- 19. The NPRM asks if broadcasters should be required to make their facilities available to local emergency managers. If indeed EAS is to become a workable and functioning public warning tool, the answer to this question is an emphatic but qualified "yes." SBE thinks that it is extremely premature to even think of requiring broadcasters to participate with local EAS systems, considering the dysfunctional condition of EAS will be resoundedly rejected by the broadcast industry. Is it any wonder that many licensee are not eager to voluntarily participate constructively in EAS? To SBE, this appears to be the crux of the matter.
- 20. If the answer to the above posed question is "yes," the NPRM next asks what the nature and scope of FCC rules requiring mandatory broadcast station access to emergency managers should be.

NWS and local emergency managers should first be required to undergo mandatory training and certification to ensure that they understand the gravity of issuing an EAS code that broadcast stations and cable systems, and likely other Commission licensees, receive. Such training has been an integral part of national level warning origination, so it is reasonable, SBE feels, to require such training for any person who originates EAS messages. SBE also believes that NWS has to convince broadcasters that it will do a better job of targeting warnings only to those Federal Information Processing Standards (FIPS) codes published by the U.S. Census Bureau)⁵

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⁴ SBE defines the term "emergency manager" to mean an officially designated employee of a state or local governmental entity specifically assigned to dealing with emergency situations affecting persons within a specific geographic area or geopolitical region.

⁵ See http://www.census.gov/geo/www/fips/fips.html .

representing communities or areas actually at imminent risk of a tornado, as opposed to "shot gunning" all the FIPS codes within an entire county.

- 21. The NPRM then asks what adverse effects might accrue to a mandatory access requirement. There would be adverse effects, should the relaying of even a few of the present EAS event codes be made mandatory. Overuse of EAS must not be allowed to overburden broadcast and cable operators, which would also have the effect of diluting the effectiveness of the warning system.
- 22. Uniform guidelines for NWS and for local emergency managers need to be developed to prevent abuse or overuse of the system. SBE would like to see a Further Notice of Proposed Rulemaking (FNPRM) specifically solicit comments on some form of emergency manager certification, most likely administered by DHS, and the requirement that only DHS-certified persons can initiate an EAS event code. The FNPRM should also take up the issue of training and certification of warning center personnel who would be responsible for issuing any EAS messages. SBE recognizes that DHS and/or NWS might well solicit comments on this topic from their constituencies in separate proceedings. SBE notes that perhaps few other EAS issues so clearly cry out for centralized responsibility and coordination.

VII. Participation Incentives

23. The NPRM asks if incentives should be provided to broadcasters and cable operators, to encourage more EAS participation, in lieu of transmission mandatory EAS event codes. The best incentive for greater voluntary participation will come after broadcasters and cable operators are assured that there is a viable and trustworthy system form which they can receive emergency messages.

VIII. Federal Standard for Transmission Mandatory EAS Codes?

- 24. The NPRM asks if there should be a federal standard when state emergency managers may and must activate EAS. The question, SBE feels, is not asked broadly enough. LECCs, at least those in mega-urban areas at high risk, should be included in this portion of the EAS decision making process. It is vital that there be in place uniform standards and procedures for the use of EAS by the NWS as well as by state and local governments.
- 25. If the answer to the above question is "yes," the NPRM then asks what the federal standard should be. The basis for any standard should be: When an emergency message clearly has the ability to save lives. It is likely that stakeholders will agree on this point.

- 26. SBE is aware of cases where EAS messages have been received and relayed for events that are located at distances so far from the broadcast station being asked to interrupt its regular programming as to make the warning meaningless. The solution to this problem is twofold: 1) greater attention by originating entities to the location coding capabilities within the EAS protocol; and 2) introducing Common Alerting Protocol (CAP) features to ultimately make EAS messages more user friendly to those at risk, and less burdensome to warning originators and entities covered by Part 11 of the FCC Rules.⁶
- 27. The NPRM asks if state EAS plans should be filed with, and approved by, the FCC. SBE says "yes." State (and local) EAS plans need to be approved by the federal government so as to ensure that certain agreed upon standardized procedures and criteria are followed. However, DHS should determine whether it makes sense to have the FCC take on this responsibility, or some other federal government agency. It is vital that certain aspects of EAS become standardized, nation-wide. This effort needs to be closely coordinated with issuance of all Non-participating National Authorization Letters by Section 11.19 of the FCC Rules, as well.
- 28. The NPRM asks if the FCC should adopt rules requiring states or local governments to adopt an EAS plan? State and local EAS plans must be reviewed and approved so as to ensure that standardized procedures and criteria are in place, and plans for adjacent and nearby states do not conflict or contradict each other, and broadcast and cable entities have clear and unambiguous responsibilities laid out. However, DHS should determine whether it makes sense to have the FCC take on this responsibility or some other governmental entity, or highly qualified contractor. It is vital that certain aspects of EAS become standardized, nation wide. SBE notes that states would need access to a list of stations that have been issued Non-participating National Authorization Letters, adding a level of coordination and complexity that might well call for national administration of some type.
- 29. SBE believes that if we are to have a truly effective nationwide public warning system, every state must have an EAS or public warning system plan. These plans must be written descriptions of elements that are required to make sure that EAS really works. An effective state plan is comprised of all of the local area plans within the state. DHS should make proper plan development a requirement and follow up with guidance, training, assistance and review as required. SBE notes that this is an area that may go beyond the traditional scope of the FCC in

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⁶ SBE feels, along with PPW, that the Common Alerting Protocol can and should be used to enhance EAS, not only to make EAS more user friendly, but so EAS can become much more of a dependable, information-rich, 24/7 targeted warning protocol.

that there may not be licensed facilities involved as a warning origination point. Thus, this is probably more a task for DHS than for the FCC.

- 30. The NPRM asks if the FCC should adopt guidelines and standards for the structure of state or local EAS plans. This is probably a job for DHS rather than the FCC. It is vital that certain aspects of all EAS plans be uniform. Today this is not the case, resulting in less than desirable situations along state borders. There will always be regional or local issues that need to be considered. This is a critical role for DHS to ensure that various EAS plans operate seamlessly.
- 31. The NPRM asks if there should be a specific standard of review for state and local level EAS plans, and, if so, what should it be? Yes. SBE submits that the existing involved federal agencies, FCC, NWS and DHS, along with perhaps PPW, MSRC, SCTE and SBE, as well as selected state or local government representatives and state broadcaster associations, should work to establish uniform EAS plan criteria as well as other issues that arise as a result of this activity.
- 32. The NPRM asks if the FCC is the appropriate agency to undertake this task. The FCC has historically been the federal agency involved with EAS. However, if EAS is to become a public warning system with a wider range of participants, it may be that the FCC's role will change. SBE recommends that DHS make this decision, working in concert with the FCC.

IX. SECCs and LECCs

- 33. The NPRM asks if state emergency communication committees (SECCs) and local emergency communication committees (LECCs) the appropriate mechanisms for generating EAS plans. In areas where there is a strong volunteer leader or EAS team, an SECC or LECC can be the core of a dynamic EAS system and an effective EAS plan. Without leadership, many areas may never create an effective EAS, or cease to function. It could be argued that local EAS structural problems are related to a lack of leadership at the federal level. SBE believes it would be easier to achieve strong and active SECCs and thereby strong and active LECCs with strong leadership, training, and guidance from the federal level. Most SECCs and LECCs have been operating on their own without instructions from anyone. Many have likened the existing situation to a ship without a captain in the wheelhouse. It is vital that there be leadership, training, coordination and supervision at the federal level.
- 34. SBE wishes to point out, as an example, the effectiveness and direct benefits of the Amber program. A great deal has been done, with minimal funding, in the creation of a very

effective means of locating abducted children. The reasons for this have been leadership and clarity and belief in the mission. In the process, Amber has a high level of voluntary participation. SBE feels there is a powerful lesson to be learned from the success of Amber that can and must be applied to EAS.

- 35. State EAS plans should, of course, be handled by SECCs. Local EAS plans should be created by LECCs, and approved by the appropriate SECC. Federal guidelines should be used to assure uniformity and, if necessary, a review and approval process.
- 36. The NPRM asks if the FCC or other federal entities currently have legal authority to require and oversee the development of EAS plans. This is a legal question, not within SBE's purview.
- 37. The NPRM asks where would enforcement action lie for failure to develop an appropriate EAS plan. SBE believes that this is a matter between DHS and the states, and likely should not involve the FCC.
- 38. The NPRM asks if state and local EAS plans should have ongoing review and updating requirements. To this SBE says "of course." EAS or public warning system plans should not be viewed as static documents, but rather as dynamic and evolving work in progress. All good EAS plans have been updated with changes as EAS has evolved. These modifications were precipitated by changes in personnel, contact information, communications systems, and federal and state rule changes. All EAS plans should be under constant review, to ensure that they remain current and effective. DHS, SBE feels, should oversee which changes state and local governments could routinely make, and which changes would require federal review and approval.
- 39. The NPRM asks if adjacent state and local jurisdictions should be required to implement standardized EAS plans so that responses to large-scale emergencies that impact more than one state or local area can be better coordinated. Yes. This is an existing problem in need of a solution. Whereas there has not been existing national level leadership, guidance and control, EAS plans in adjacent areas can be and often are quite different. In some cases interstate planning is very poor. This is a role for DHS. By working towards uniform EAS plan criteria and by providing national oversight, these situations can be quickly eliminated. The goal should be to make EAS mean the same thing to all parties in all locations.
- 40. The NPRM asks if multi-state regions should be defined, and EAS plans developed for them. Yes and yes. State and local EAS boundaries may well be different than established

political boundaries. For example, the State of Washington SECC, appreciating that Clark County, Washington, was really part of the Portland, Oregon metro, determined that this county should be part of the Portland EAS area. In another case, the northern counties of Idaho and some in western Montana are part of the Spokane Local EAS area. This means that the Washington state plan encompasses counties in two other states, underscoring the fact that traditional political boundaries may be obstacles to effective EAS planning. Support at the federal level for multi-state EAS plans will be very helpful. Geographic or political regions are not the only types of regions that need to be considered. SBE is aware that there are also "technical" regions emerging. Several northeast adjacent states have adopted the same or similar warning protocols and hardware. SBE also notes that the Common Alerting Protocol (CAP) stands ready to enable more seamless relay of warnings between different systems and protocols.

- 41. Certainly in the eastern part of the U.S., where states are smaller, it may well make sense for multi-state EAS regions. Once EAS has national level leadership that can see the "big picture," these issues can be handled much more effectively.
- 42. The NPRM asks if there should be a reporting requirement for local and state EAS activations, to facilitate the development of accurate reports. There is much that can be learned from state and local EAS activations. In the past the Commission has received informal "postcard" reports of state and local EAS activations. SBE suggests that DHS establish a reporting system to the degree necessary that actual use of EAS can be examined in detail for the purpose of sharing with other governmental entities, SECCs and LECCs. Sharing successes and failures will result in having an on-going process for fine tuning the system to make it more effective. SBE is aware of the perceived burden of more paperwork, in and out of government, but we do need to find a way to measure real-world EAS effectiveness.

X. National EAS Guidelines

43. The NPRM asks for comment on whether uniform national guidelines are preferred over the disparate manner in which states and localities implement EAS. Today our country resembles a "checkerboard" or patchwork of functional, partially functional, and dysfunctional EAS plans and systems. The reason for this situation is simply that the FCC left state and local EAS planning up to volunteers while no longer providing the level of review, guidance and leadership we had during the time of the Emergency Broadcast System. Due to the limitations of the FCC's involvement with the mandatory portion of EAS, beyond the distribution and broadcast of federal/presidential messages, EAS has come to mean many different things across the country. Some states have requested help teaching emergency managers and warning center operators on

how to make EAS an effective public warning tool. This underscores SBE's contention that had there been federal leadership for EAS, we would not be dealing with many of these issues now. It is clear to SBE that uniform guidelines and regulations for EAS plans are in our nation's best interest. The recommendations for how to correct this problem have been well communicated by PPW and MSRC.

- 44. The NPRM asks if the FCC should adopt rules to require all EAS participants to monitor the NWS where such signals are available. Absolutely. In many areas of the county EAS systems are only slightly evolved from the former Emergency Broadcast System. A local primary station (LPS) may well monitor NOAA weather radio (i.e., NWR) and, if they choose, relay emergency weather information to other broadcast stations and cable systems in the area. SBE submits that broadcast stations should never be used as relay devices and that all EAS participants should be required to monitor the NWS. With the vast majority of EAS messages being weather related, it is vital that these direct connections be made. With the integration of NWR into EAS and their increasing role as a provider of All Hazards warning, the FCC should swiftly move in this direction. SBE notes that for Washington State, and certain other areas, which have integrated EAS and NWR systems, that NWR is already a required monitoring assignment.
- 45. The NPRM asks if staff at any broadcast station or cable system continue to be permitted to initiate EAS alerts without concurrence from local or state emergency managers. No, they should not. The vast majority of EAS messages come from governmental agencies such as NWS, state or local emergency management, police, etc. The personnel of these agencies are trained in the creation of public warning messages; the employees of broadcast and cable systems most often are not. SBE submits that employees of broadcast or cable system are not hired on their ability to handle emergency messages, nor are they generally trained to do so.
- 46. The only instance where a local broadcaster or cable system operator should volunteer to initiate an EAS message is when the governmental entity that would normally issue such a message is unable to do so due to failures beyond their control and the urgency of the matter dictates that the message needs to go out. In those cases broadcasters could volunteer to initiate the message, provided they are given the exact content of the message, so as to avoid any chance of supplying misinformation or omitting important information.
- 47. The NPRM asks if the FCC or some other federal entity should establish standards for the issuing of public warnings by local or state emergency managers. SBE submits that the FCC, or perhaps DHS, should require that state and local governments distribute EAS messages via either established or newly created wireless communication circuits as an integral function of the overall

process of emergency management. Specifically, states should be required to create state relay networks (SRNs) using background VHF or UHF channels⁷ for the distribution of statewide EAS messages. These SRNs can be used to distribute federal-level EAS messages (EANs) statewide. This is already the case in the State of Washington and certain other states.

- 48. One of the major shortcomings of many state and local EAS plans is the continued use of what is commonly referred to as the "daisy chain." This is the process whereby an EAS message is relayed from one broadcast station to another as a means of message distribution. Local governments should be required, within their respective state overall emergency response plan, to create local relay networks (LRNs) for the distribution of local EAS messages. These systems would eliminate the need for local broadcast stations to act as relay agents, or worse, as warning originators, and would provide instant access to all electronic media outlets for local governments by all news media, and directly by other warning systems and even by the public.
- 49. SBE wishes to point out to the FCC that the above recommendations for SRNs and LRNs are already in operation in Washington State and several other areas. In these cases government entities prepare their EAS message using EAS encoders and distribute them to their state or local area, where all broadcast and cable systems can receive and immediately forward them to the general public. In SBE's recommendations for the creation of SRNs and LRNs, we submit that time-sharing of existing communications systems as the best and least expensive method. For example, in the case of the LRN, local or regional two-way radio systems used for public works have proven to be an acceptable method. A memorandum of understanding (MOU) between the licensee of the proposed shared channel, and the emergency management warning center, is usually all that is needed to establish the shared use, and the circumstances under which normal traffic on the channel will be pre-empted for EAS relay use.
- 50. In some cases, new, dedicated hardware and/or a dedicated LRN spectrum allocation may be required. The FCC should consider the allocation of spectrum for this purpose, perhaps in the 700 MHz band, when those frequencies become available. SBE respectfully reminds the Commission that this question was asked in the original EAS rulemaking. SBE supported the need for state and local EAS message distribution spectrum then, and we reiterate that need now.

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⁷ SBE believes that these channels should have sufficient bandwidth to produce listenable, low distortion, low noise audio with a minimum response range of 300 to 3,000 Hz.

XI. EAS Structure and EAS Codes

- 51. The NPRM asks if originating local agencies should transmit alerts directly to as many stations and cable systems as possible, without intervening relay stations. The creation of the local primary (LP) station as a means of enhancing the EBS/CPCS role had the effect of creating a redundant system for the relaying of EANs. In this regard EAS was an improvement. The Commission envisioned these LP stations relaying weather, state and local EAS messages to others within their local EAS area.
- 52. Due to the voluntary nature of non-federal EAS, a great many emergency messages never reach listeners because an LP station elects not to forward it. In some cases stations have discontinued to volunteer to a LP station due to the burden that it placed on their operation. For one thing, if an LP station is operated in the FCC-approved unattended mode, there is no one at the station to perform certain EAS functions in the manner many local and state EAS plans specify. In some cases stations have terminated their LP status in the belief that it put them at a competitive disadvantage to other and perhaps competing stations. The concept of having a LP station be a relay link for emergency weather and civil authority messages is, in many cases, a failure and is a major reason for the lack of effective local EAS.
- Broadcast stations, due to their voluntary participation, should only be a conduit to the public, and should never be used as an origination source for emergency or warning messages. No EAS plan can be deemed effective when it bases its message distribution on a system that may or may not be there when needed.
- Emergency managers must have a distribution system they can count on to make the best use of radio, television and cable to reach the public with emergency warnings, and follow-on information. The solution to this problem, as proven successful in Washington state and elsewhere, is to require state and local governments to encode their EAS messages using FCC-certified Part 11 systems and distribute them via established or existing communications systems. Coupling this with a requirement that broadcasters and cable operators install receiving equipment to monitor these channels, a robust EAS system is then created. SBE wishes to point out that the FCC may well wish to consider increasing the number and types of sources that broadcast stations and cable systems monitor so as to take advantage of this topology. For instance, SBE believes that some, if not all, local and state government entities can be encouraged to provide redundant local relay nodes to make sure their warnings always get through. SBE recommends that if we are to significantly increase the robustness of state and local EAS systems

there should be an increase in the number of recommended monitor input signals from two to four.

XII. Satellite Distribution

- 55. The NPRM asks if other technologies, such as satellite-delivered programs, be used as part of a backbone to distribute alerts to entry points. Yes. Private firms, such as ComLabs, with their EMNet, have proven themselves to be effective tools for EAS message distribution. Several states are now using this system or other satellite systems for their SRNs. It is interesting to note that private industry has provided these tools without governmental requirements. California is in the process of modifying its government owned and supported EDIS satellite delivery system to literally be their "front end" for EAS distribution. It is also somewhat discouraging to know that many states would be using these systems but cannot due to lack of funding. Use of public and private satellite delivery systems for this purpose is likely to increase and should be encouraged if not funded outright by the federal government, as part of overall homeland security strategy.
- 56. The NPRM asks if there is still a need to structure EAS with the Primary Entry Point (PEP) system. No. The existing PEP system is woefully inadequate for the task. Simply put, it falls very short of its goal of providing a national emergency message distribution system. One has only to look at the daytime and nighttime signal level contours of the existing AM PEP stations to see how there is a significant area of the country that cannot be reached by this system. Early on in EAS there were two methods of distribution of national level EAS messages: 1) the nation's radio and TV networks and 2) the "backup" PEP system. It was later decided to discontinue the role of the nation's radio and TV networks in the distribution of national level emergency messages. Many were puzzled by this decision, feeling that the wrong system had been disconnected.
- 57. The existing PEP system has become dated now that satellite systems have proved themselves to be reliable. SBE submits that the time has come to move the national EAS message distribution system to one using satellite distribution as a means to relay national level messages, or to shift this requirement to NWS/NWR.
- 58. Satellite XM Radio recently announced their public safety channel that, according to press releases, is already providing facilities for FEMA and NOAA. While SBE feels that the primary emergency lane for national warnings should be provided and maintained as a federal resource, services such as XM and Sirius might become redundant pathways.

- 59. Another possibility is to investigate shared use of cue channels or other channels not directly involved with program streams that are used by the national radio and TV networks, as well as other satellite systems. National Public Radio (NPR) is already assisting this effort with the use of their Squawk Channel to relay PEP messages.
- 60. SBE believes the operators of these systems can afford the minimal amount to time-sharing and equipment support that a national EAS message distribution system would require. Such a satellite system would enable true nation-wide coverage. With many existing receiving locations across the county this system could drive state and local relay networks that would effectively provide multiple "entry points" in all areas of the country that would result in a truly effective means to deliver EANs.
- This is a matter of who the government elects to do business with. SBE submits that an option might be to look toward time-sharing many multiple existing systems rather than trying to move the PEP to a single, dedicated satellite system. The Commission pointed out the benefits of a non-daisy chain "web" topology when it was outlining the advantages of EAS over the former EBS. With the use of existing and redundant national distribution systems we will finally have the "web" architecture the Commission proposed at the outset of EAS.

XIII. National EAS Guidelines

- 62. The NPRM asks if inconsistencies in the manner in which states implement EAS be alleviated by the adoption of national guidelines. This new national guidelines for EAS should include a requirement for the creation of government funded state and local relay networks (SRNs and LRNs). SBE submits that these should be interconnected to existing and proposed PEP systems. SBE reminds the Commission that when EAS was first "rolled out" that the distribution of the national level EAS messages from the PEPs to the local EAS areas was left up to the states. The Commission did not prescribe just how this was to be accomplished, nor did it provide any funding for the development of a distribution system. This omission is one of the contributors to today's outdated EAS system.
- 63. SBE wishes to point out that Washington sate, as well as certain other states, have taken it upon themselves to perform this task. Unfortunately this is the exception rather than the rule, again underscoring the need to start with a clean sheet of paper when addressing the need for a national public warning distribution system.

XIV. Updating of Existing EAS Hardware

- 64. The NPRM ask if existing EAS hardware should be upgraded. Yes. SBE's position on this issue is clear: EAS should mean the same thing to everyone, everywhere. In order to create a unified and standardized public warning system it is imperative that all EAS encoders and decoders respond equally to all events. This means updated EAS hardware. The NPRM asks how much time should be allowed for updated EAS hardware. All EAS equipment should be able to handle the new event codes introduced in the 2002 EAS Report & Order (R&O) at this time. Certainly, these upgrades should be uniformly deployed six months after the EB 04-296 R&O is published in the Federal Register.
- 65. The NPRM asks what the impact of EAS hardware upgrades on small cable operators and broadcasters would be. It is possible that these proposed changes could negatively impact certain small cable operators and broadcasters. SBE wishes to point out that EAS right now has a relatively poor image in the minds of many broadcasters and cable operators. This has less to do with the cost of the required upgrades as it does with the perception that EAS is not taken seriously by our government, except as a compliance issue. When and if the role for EAS is upgraded and expanded, and the system becomes a truly reliable and effective public warning system with more demonstrated life and property benefits, the resistance to upgrading equipment is likely to diminish. One EAS expert says that there are two kinds of EAS environments: 1) Those in areas that have had a major emergency and 2) those that will. We need only look to the relatively good image EAS has in parts of the U.S. subject to tornados or flash floods for the other side of the coin. In answer to those people in areas with poor EAS experience, these areas are often ones that come under the second category.
- 66. The NPRM ask if government funding to small business entities should be provided to mitigate the burden. In general, yes. SBE believes that there are a number of ways that government funds can and should be spent upgrading EAS, knowing that there is a limit to the amount of public money available. SBE submits that this matter be given to PWSAC (SBE's recommended stakeholder advisory committee) to resolve. It may be determined that the system would be better off with funds spent creating relay networks, or other enhancements.

XV. EAS and Digital Technology

67. The NPRM asks how digital technology be used to enhance warnings, and to what extent are broadcast stations currently making use of that technology. One of the biggest problems we have today with EAS is the "disconnect" that exists at TV stations and cable systems due to the

lack of text transmission capability. With a typical EAS message the header codes supply basic information as to the nature and location of the event. Meanwhile, the voice portion of the message contains the specifics.

- 68. It is vital to understand that EAS messages are composed of two elements: 1) The digital header code, which is used to drive the character generators at typical TV stations and cable systems, and 2) the voice message. Only when the information in these two portions of the EAS transmission are relayed to the viewer does that person receive the entire message.
- 69. The problem is that very few TV stations and cable systems have the ability to manually transcribe the information contained in the voice portion and enter this information into their character generator. The result is that it is possible, if not likely, for the crawl on the TV screen to contain misleading information. An incident took place in Washington state where the county issued an EAS evacuation (EVI) message for a portion of the county. The voice portion described by streets the boundary of the area to be evacuated. Meanwhile local TV stations and cable systems ran a crawl that called for the entire county to be evacuated. This resulted in very misleading information being transmitted to the residents of that county. This is a serious matter that must be resolved as part of this EAS overhaul.
- 70. There have been many discussions as to how to resolve this issue. The best and most logical answer is t enhance the EAS message with a form of text transmission tied to the EAS protocol. Several methods for doing this have been proposed. Some solutions propose transmitting text immediate after the EAS "package." If done through a LRN or SRN, this reduces the likelihood that lengthy text messages would get on the air in the audio portion of programming and either confuse listeners, or cause them to tune elsewhere or turn down the volume on their receivers. With the transmission of a text version of the specifics, character generators will be automatically able to transmit accurate and viable information to those that receive their EAS messages via visual means.
- 71. Other avenues for emergency message transmission are opened up in this process. These include:
 - EAS messages, with text, would be able to be automatically handled by NWR (NWS has been installing equipment to read text messages)
 - EAS messages could be read on text enable cell phones, personal wireless devices, etc.
 - Highway signs and other display devices could be fully integrated

- The hearing impaired community would, for the first time, be able to receive accurate and more informative EAS messages
- Transmission by textual radio receivers would be possible (RDS, HD Radio's PAD, and other data streams
- Translation into other languages would be made easier.
- Perhaps the most promising avenue for text transmission is the newly approved Common Alerting Protocol (CAP) standard. Fostered by PPW and others, CAP has been approved by the international standards setting group, OASIS, as a communications standard to enhance the warning process.⁸
- New solutions for warnings must be standardized and open. The CAP is an open, non-proprietary standard data interchange format that can be used to collect all types of hazard warning reports for input into a wide range of information management and warning dissemination systems. CAP acts on several of the recommendations of the "Effective Disaster Warnings" report issued in November, 2000, by the Working Group on Natural Disaster Information Systems, Subcommittee on Natural Disaster Reduction. It also draws on various earlier professional discussions such as the recurring "Common Alerting Protocol" thread in the Networks in Emergency Management e-mail forum during the 1990s.
- 74. The CAP subset of eXML already has real world applications up and running for warnings and the warning process. CAP is easily implemented, seamless means to exchange warnings in audio, text and video formats among different systems and protocols. CAP can literally become the language of warning appliances. CAP, simply put, is on its way to becoming to warning appliances what HTML has become to website design.
- 75. Implementation of the CAP standard at the origination points of EAS emergency messages would be a quantum improvement. There would be an expansion to the number existing CAP-aware or CAP-able applications, warning devices and appliances. CAP is fully compatible with the existing NOAA SAME/EAS protocol.
- 76. CAP is a key part of an overall concept that is referred to as the Advanced EAS Relay Network (AERN). AERN is literally the local relay network concept on steroids.⁹ The testing

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For more information on CAP, see http://www.incident.com/cap, and the OASIS Notifications, Methods and Standards Subcommittee, at http://www.oasis-open.org/committees/tc_home.php? wg abbrev=emergency-msg.

⁹ A comprehensive paper on AERN is available at http://www.incident.com/cap/docs.html site.

and implementation of AERN with CAP is recommended. AERN can augment existing local and regional EAS relay measures with a secure digital network based on non-proprietary CAP data as well as "streaming" audio. It can make possible activation of not just EAS, but also any other alerting technology with a single, coordinated warning message. AERN combines the security and robustness of data transmission with the flexibility and interoperability of a standards-based communication. AERN is not a product; it is an open source architecture employing CAP that can be implemented by any vendor or system integrator without licensing or patent restrictions and without significant changes to existing government regulations or policies. SBE submits that the time has come to permit this much need enhancement to EAS.

XVI. Extending EAS to Other Services

- 77. The NPRM notes that the FCC recently reached the tentative conclusion that EAS should apply to all audio streams broadcast by radio stations, such as IBOC, and asks if the FCC should adopt rules extending EAS obligations to other digital broadcast media, such as DBS, DTV and satellite DARS services. Absolutely. The goal of EAS, as a public warning system. should be to reach as many people as possible using as many communications systems as practical. In the case of HD Radio and DTV, the recipients are the general public. DBS involves a business relationship with the recipient to obtain service, but this is no different from cable systems. The conduits may have evolved, but their mission and responsibility should remain unchanged.
- 78. The NPRM asks if EAS should be continued by DTV stations after the transition period. Yes, of course. All broadcast stations, regardless of mode, should be encouraged to relay to their listeners/viewers public warning information.
- 79. The NPRM asks if digital cable should be treated in the same manner as over-the-air TV/DTV signals. Yes. It is SBE's core belief that in order to achieve a meaningful and working public warning system, short of creating an entirely new one, that emergency, life-saving messages should be transmitted by all means possible.
- 80. The NPRM asks if services that reach increasingly larger portions of the American public should continue to be exempt from an EAS requirement. No. The most effective warning strategy involving broadcast and cable system is one where an emergency, life saving, message is transmitted by all means possible. The driving factor is that one cannot predict when the omission of a particular station or system might result in a message not received and a life lost. Therefore, it is the belief of SBE that all parties should participate equally in EAS.

- 81. The NPRM asks if EAS carriage were required for DBS satellites, what effect would inclement weather have on their ability to relay such signals. Weather outages (i.e., rain fades) are an issue for 13 GHz Direct Broadcast Service (DBS) satellites. Also, for that matter, bi-annual sun outages. Nevertheless, this should not diminish the goal of making every effort to reach everyone. Accordingly, DBS satellites should be included in the mix of services that carry EAS.
- 82. The NPRM asks how EAS signals would be delivered to a DBS operator. Specifically, there should be redundant means of receiving and distributing all EANs or tests of the national system. In those areas where a DBS provider relays certain local stations, DBS can assist in the distribution of state and local EAS messages. SBE acknowledges that in some cases no DBS involvement may be needed.
- 83. The NPRM ask how DBS operators would conduct EAS tests, particularly national vs. local. At a minimum DBS operators should become part of national EAS and any national system should be tested on a periodic basis. Where a DBS system carries any local channels, the FCC should encourage participation in those region's EAS. At a minimum, the Commission should encourage local channels carried on DBS to relay state and local EAS messages.
- 84. The NPRM asks to what extent would software updates to set-top boxes, and what time frame should be allowed. First, a coalition of interested parties must unite on a goal to produced set top converters that are literally warning appliances, perhaps with the inclusion of NOAA weather radio receivers. Doing this could take warnings out the main program stream, making possible a voice, text and data warning system that could tie in to home computers and other devices. This approach would be available 24/7 and have a user-selected capability to warn when associated video displays are turned off, or displaying non-local broadcast or non-local cable sources.
- 85. The NPRM asks about legacy set top boxes that are already in place. SBE recommends that the cable and DBS industries be consulted for a replacement timetable.
- 86. The NPRM notes that DARS serves the public primarily on a nation-wide rather than regional basis, and asks if this distribution structure affects the ability of DARS licensees to effectively discharge their EAS obligations. SBE feels that an effective public warning system, utilizing existing infrastructure, should not exclude any. If such a system is a nation-wide operation then it should participate in national EAS. Due to the nature of these distribution points (point-to-multipoint) it may well be impractical to require local or regional EAS messages. The Commission may wish to consider establishing a method whereby emergency situations that

rise to a certain threshold be communicated to a national center where they could be forwarded to satellite providers. The action would enable public warnings in areas not otherwise reached by any other medium.

87. The NPRM asks whether the national distribution of satellite DARS services limits the ability to discharge state and local EAS obligations, are such limitations technological or regulatory in nature. This is a situation where there are technical solutions. With CAP and/or AERN, the limitations are not bound by technology or protocol. SBE sees nothing in the existing regulatory spectrum that would prevent voluntary implementation. Regulatory matters must always be weighed against overriding public need.

XVII. EAS and Digital Broadcasting

- 88. The NPRM asks for comment on what is need to extend EAS obligations to digital broadcasting. Specifically, the NPRM asks if DTV stations should be required to transmit EAS messages on all program streams. SBE believes that the overriding goal is to reach all citizens with life saving information. Therefore, the answer is "yes."
- 89. The NPRM asks if the EAS message should be only transmitted on one program stream, with receivers then force-tuned to that program stream. Whichever method yields the desired result is acceptable to SBE.
- 90. The NPRM notes that for DAB/IBOC, where the digital part of the signal replicates the analog portion, and asks if the EAS message should be carried on the analog, digital, or both portions of the signal. In that the digital transmissions of IBOC or HD Radio generally replicate the analog programming, EAS messages should appear on the analog as well as the digital portions. The FCC should require that EAS messages be broadcast on both the analog and digital portions of the signal.
- 91. The NPRM asks how EAS messages should be carried if the analog and digital portions are not simulcast. In the case of the NPR/Tomorrow system, where a separate program channel is transmitted, the question of whether to require EAS message transmission on this separate channel is raised. By the same reasoning, this question should also be raised for FM subcarriers. SBE submits that if we are to really enhance EAS as a public warning system, then we must ensure that warning messages are transmitted by available means. This includes multiple channels of IBOC.

- 92. The NPRM asks if IBOC receivers have the ability to be forced tuned. SBE notes that at this time there are very few HD Radio receivers in use. At this writing, SBE has no knowledge whether any of these receivers could be force tuned. It may be that this is a technique that will not be applied to HD Radio.
- 93. The NPRM asks if textual messages should be part of EAS messages sent by IBOC broadcasters. Many of today's car radios are equipped with the ability to display vest via RDS; additional the Ibiquity HD Radio/IBOC system has enhanced textual transmission capabilities. Most existing HD Radio receivers and many present FM receivers, via RDS, have the ability to display these text messages. Information about new, about to be marketed, receivers indicates that many manufacturers will have provisions for EAS messaging. SBE believes that this is a very viable means of displaying life saving information and participation in EAS message transmission should be encouraged. Receivers that comply with Phase II of the rollout will have enhanced display capabilities. SBE hopes that before that rollout, all interested parties will sit down with the goal of developing what SBE has referred to in the past as an "emergency lane" on the HD Radio superhighway.
- 94. The NPRM asks how other multicasting services, such as digital cable, be treated in regard to EAS messages and forced tuning. It is vital that all "information highways" that reach the public be a part of an enhanced EAS. SBE expects that SCTE will provide the Commission with input on this issue.

XVIII. Alternate Public Alert and Warning Mechanisms

- 95. The NPRM notes the limited distribution of the current EAS, and asks for comment on the acceptability of this limited level of penetration. SBE believes that EAS has effectively evolved beyond being just a "broadcast system." The participation by NWS/NWR illustrates this. Broadcast can only reach a certain percentage of people, some of the time. This is why it is vital to embrace all communications systems that have the ability to reach the public. The driving force behind Washington state (and other areas) that has fully integrated EAS and NWR so as to be able to reach the public with all EAS messages via the rather ubiquitous NOAA weather radio. This is the one system that Washington State has that can reach citizens 24/7.
- 96. Further, SBE believes that warnings exist only as the first part or "headline" for the story of the emergency. Warnings need to be integrated into an entire philosophy of seamless information handling during emergencies. If done correctly, this will yield faster, more accurate

warnings and follow-on information that will work together to bring all types of emergencies to a faster and more satisfactory conclusion.

- 97. The NPRM asks what level of penetration should the FCC seek, if the present level is deemed insufficient. Integration of NWR and EAS is becoming a fact and is something that must be built upon. At least one manufacturer of TV receivers has integrated a NWR receiver. SBE submits that the federal government should actively encourage this trend. In Seattle, the first "experiment" of fully integrating NWR took place, and it is now permitted and being installed in other portions of the Western U.S. SBE encourages funding and a dedication for a nation-wide rollout of this system and elimination of "white area" for NWR.
- 98. The NPRM asks if EAS is outdated, because of its current almost exclusive reliance on delivery through analog radio and TV broadcast stations and cable systems. No, EAS is not outdated, however, it is past time that all of its in-built capabilities are finally used, and, where necessary, enhanced. Only through the cooperation and integration of all existing communications systems can we achieve a greatly improved public warning system.
- 99. The NPRM asks if there should be a concerted government/industry effort to combine EAS with alternative public alert and warning systems (APAWS), to form a comprehensive national public warning system capable of reaching virtually everyone, all of the time. Today's communications is creating new systems and hardware at a blinding pace. The problem is getting these industries to include or integrate a public warning system into their designs. This is another illustration of the consequences of not having public warnings as a priority in our governmental structures that is described in an overall national warning strategy. The Commission has already noted a number of communications protocols (and devices) that could well become a part of a comprehensive public warning system.
- 100. SBE submits that there have been many missed opportunities and that catching up is likely to be painful. Clearly leadership at the federal level has been lacking and this has permitted a gap between what should have been done and the systems we have now. This should not stop our efforts toward creating a more effective public warning system. Representatives from common carriers and other developing commercial mobile radio service (CMRS) technologies must be brought into this process. This should be an urgent priority of DHS as a core element of homeland preparedness and public warning.

- 101. The NPRM asks if the FCC should distinguish between wireless systems used primarily for one-way versus two-way communications, or point-to-point versus point-to-multipoint broadcast. The questions that need to be asked are:
 - Does this communications system reach the general pubic?
 - Is it part of the infrastructure of a system that reaches the general public?
 - Can it carry a warning message to the public?

If any of the answers are "no," then it might, perhaps, be excluded from having EAS responsibilities. However, using enhancements that employ CAP, EAS messages can supply warning information to other systems. SBE believes that for maximum effectiveness, warnings should reinforce each other. PPW reminds us that sixty years of warning research tells us that people respond best to warnings that are complemented with reassuring information that comes from different warning paths and sources. Only in this way will those at risk have increased confidence in the primary warning message and take recommended protective actions more quickly.

- 102. The NPRM asks if, as an alternative, would it be appropriate to integrate EAS into a public alert and warning (PAW) "system of systems, by adopting and using a single, integrated interface that would link the emergency manager and all emergency notification and delivery systems, regardless of the technology on which a particular system is based. CAP, ECAP, PAW, etc. can be viewed as enhancements to EAS. SBE understands that technology is not a static thing and there will most certainly be enhancements available that will have the effect of creating a more viable and robust public warning system. What is critical is that an uncluttered and efficient mechanism is created that will enable these enhancements to be implemented. This underscores SBE's recommendation that there be a method created whereby all stakeholders can effectively deal with keeping EAS current in a rapid and efficient manner.
- 103. The NPRM notes that MSRC's Future Technologies/Digital Solutions Task Force recommends that the government coordinate development a media common alert protocol (MCAP), and asks for comments on this proposal. SBE feels that enhancements to public warning systems should and must be implemented. As to whether the best system for reaching the ever growing number of communication devices is MCAP and when to do this is challenging. The concept of CAP as a "front-end" for all public warning systems with EAS being one of the downstream branches has a good deal of appeal. It may well provide an easier path for developed systems to integrate public warning features. Integrating the myriad of devices and

systems out there now, and in the planning stages, into a unified public warning system is something that is likely to go well beyond the ability of this proceeding. SBE submits that this is yet another reason for the need to create a working group (a PWSAC, *etc.*) that involves the various stakeholders so as to be able to handle the huge challenge that this could well represent. All of this should not diminish our efforts to upgrade and improve EAS at this time. Upgrading EAS is likely to be an evolving process that will continue for some time.

104. The NPRM asks to what extend does an effective public warning system depend on the consumer electronics equipment that receives the warning. The integration of the EAS decoders or NWR receivers into consumer electronic equipment has been discussed elsewhere in these SBE comments. However, at this point there has been minimal integration. SBE submits that this is due to the fact that EAS has not been though of as a public warning system to the degree that manufacturers of consumer equipment would be able to see a developing market for themselves. SBE reminds the Commission that to many, EAS is still not a viable public warning system. SBE submits that this can change with EAS becoming an integral part of DHS. This can be though of a chicken-vs.-egg issue. With leadership from DHS and the elevation of EAS to a functional public warning system, the voluntary integration of consumer electronics equipment is much more likely to occur.

XIX. Public Warnings and Alerts for Individuals with Disabilities and Individuals for Whom English is a Second Language

105. The NPRM asks for comment on how individuals with disabilities can be notified of EAS activation or other emergency alerts. SBE again submits the need to immediately permit textual transmission. This will enable the transmission of accurate textual information, beyond the generic and often vague header information) that can be more easily translated into other languages.

106. The NPRM notes that the current EAS rules provide that EAS announcements may be made in the same language as the primary language of the station, and asks for comments of efficacy of this rule. The NPRM also asks, if a radio station is transmitting in English is located in a predominately Spanish speaking community, should the station be required to transmit EAS alerts in both English and Spanish. This is a complex question and the solution should depend on the exact nature of the programming on the non-English language station. In some cases Spanish is a second language and in some cases it many be the only language that is understood, or the station may program in multiple languages. Clearly there must be some discretion involved. SBE feels that this is a matter best left up to the broadcaster to decide, perhaps

working with the applicable LECC or SECC to ensure that the majority of the station's listeners indeed receive potentially life-saving messages.

107. The NPRM asks whether current methodologies for providing alert and warning to non-English speaking peoples are adequate. If not, what additional provisions are necessary, and at what cost? SBE submits that by incorporating textual transmissions of the information contained in the voice portion of the EAS message that this will greatly enhance the ability of non-English speaking broadcaster and cable systems to transmit emergency information to their listeners/viewers. Through the use of language translation software, the needs of non-English speaking listener/viewers can be addressed.

XX. Other Issues

- 108. The NPRM asks for comment on EAS security issues. Hopefully the greater attention being paid to EAS and efforts made to unify processes, the matter of security of EAS methods can be addressed. At this point SBE has no statistical information as to the number and methods for EAS circuits. Certainly security and immunity from hacking should be addressed.
- 109. The NPRM asks if password protection of all EAS encoders should be required. This is an excellent issue with which to task the PWSAC that SBE wants to see created.
- 110. The NPRM asks who should be responsible for system security and what security standards should be implemented. Again, this is a matter that should be discussed with the various stakeholders. DHS should require that there be protection methods in place that will not only prevent unauthorized use of EAS, but will help prevent unintentional EAS message transmission from occurring.
- 111. The NPRM ask how can the authenticity of EAS messages be verified, and how can broadcasters be protected from liability if they inadvertently rebroadcast a false or incorrect EAS message. SBE believes that this question underscores its contention that only in extreme circumstances should EAS messages be issued by any entity other than a government agency. DHS should institute unified processes that will ensure that messages transmitted are indeed not false or incorrect. Many broadcasters have negative experiences regarding EAS that have their roots in errors at the message source. It is critical that not only unified processes be developed for EAS message generation, but training should become a requirement. Many EAS message originator personnel fail to understand the need to "get it right," and the impact on broadcasting and cable when they get it "wrong." If support by broadcasters is desired, this aspect must receive critical attention.

- 112. The NPRM asks if adoption of the MRSC "Best Practices" would alleviate security concerns. SBE feels that this is a most serious matter that should be addressed in a method that involves all of the major stakeholders of EAS messages at the federal, state and local levels.
- 113. The NPRM notes that in 2002, the Commission modified its EAS rules to exempt satellite/repeater stations from the requirement to install EAS equipment, and acknowledges that this practice removes EAS equipment from satellite/repeater stations, and thereby precludes their participation in state of local EAS activations via the EAS network. The NPRM asks for comment on this issue. Satellite stations or translators present some unique problems for local governments and emergency managers, in that the inputs to these facilities are often located some distance away from the transmitter location. These radio and TV outlets may well have listeners/viewers within a local EAS area and yet the persons they reach can be unaware of a local emergency. In some cases this concern has resulted in the operator of the satellite or translator station stepping forward to voluntarily install EAS equipment at the local facility thereby permitting an input to the system by the local EAS or local emergency manager. Unfortunately, this is the exception rather than the rule.
- 114. If the federal government is committed to fully integrating all existing broadcast facilities into EAS, then ideally these facilities should install EAS equipment with monitoring capabilities consistent with other local broadcast stations and cable systems within their primary coverage area.
- 115. The NPRM asks if the above EAS hardware exemption should be extended to any other EAS providers, and would centralized placement of EAS equipment, such as at a cable headend, have a positive or negative impact on the efficacy of EAS as a national, state or local notification system. To examine this issue we must look at the various levels of EAS messages:

<u>National</u> For national level EAS messages it does not matter where the headend or uplink is located. To provide this ability the facility needs to be connected to either a PEP station to a participating NPR facility. Or to a future national EAS distribution system.

<u>Weather</u> The problem here is that weather forecasts are issued for specific geographic areas. In the case of a tornado warning issued for an area served by the system and the input location for the system is some distance away, the system's listeners/viewers will not receive the potentially life saving message.

State State level messages could be carried by these systems provided the input location is within the same state. In the event it is not, the messages may be meaningless.

<u>Local</u> Local EAS messages face the difficulties much like weather messages, in that persons who are tuned to these facilities may not be able to receive EAS messages, unless there is a local EAS input.

There is likely not much that can be done to resolve the issues involving satellite and cable systems so that they can become useful means of message distribution for NWR, state and local emergency management. However, every effort should be made to encourage this ability. At a minimum they should all be connected to the national EAS distribution system.

116. The NPRM asks where is the best place to locate EAS equipment so it can be the most useful and maintainable. In an ideal situation EAS equipment should be located so as to satisfy the need to inform their customers as to local weather and civil emergency messages. The determination of the exact location is likely to be a function of how the system is constructed. It may be wise to consider perhaps that a written warnings, or a disclaimer, be given to subscribers/customers of these systems to warn them that state/local or weather information should not be expected. As EAS is "ramped up" there is the danger that persons will begin to assume that these systems will indeed inform them of emergency situations. It is vital that we work to not only educate the public as to how EAS functions and its usefulness in their lives, but educate them as to where information is not available. In these cases, use of NWR appears to be a reasonable alternative, provided that all NWR facilities are fully integrated into EAS so as to be a true all-hazards public warning system.

XXI. Testing

117. The NPRM asks if comprehensive periodic testing of the entire national EAS, from the PEP stations on down to state and local broadcast stations and cable systems be required. SBE notes that there is already a code for a national EAS test, the NPT code. All public warning systems should be tested periodically to assure all that they will indeed function when needed. It is vital that testing of these and other warning systems include as much of the actual system as possible. Partial system tests leave to chance too many elements. SBE urges the FCC to require that all EAS tests be initiated by those governmental entities that generate them. It is important that all tests be constructed like the present Required Monthly Test (RMT) so all four components of real EAS message are tested. In addition to testing distribution systems, EAS tests are an effective training method. There needs to be a means for review and oversight of all EAS tests so as to be able to act quickly to correct any condition that could compromise the integrity of the system.

- 118. The NPRM asks how often tests should tests occur. SBE believes testing should be done as often as necessary to assure a stable and reliable warning system. As for the national level of EAS, SBE suggests that be done twice annually, with the audio portion voiced by the President or other high federal government person. These semi-annual national tests could be done between 1 AM ad 4 AM, so as to be the least obtrusive. These semi-annual national tests should also replace the RMT for that month. The test could come through the NWR system that is already monitored at most locations.
- 119. The NPRM asks if a special national level test code should be adopted. The answer to this question should await the decision as to what to do with the PEP system. SBE feels that the existing NPT event code is sufficient for testing the national level of EAS. There is no reason why an NPT could not be generated at the national level using the basis format of the RMT. If periodic tests were deemed necessary, and RWT with a voice message (really a weekly form of an RMT) could be transmitted. The DMO (demonstration) code could be used to test related infrastructure without triggering the final link to broadcast and cable systems.
- 120. The NPRM asks if a post-test report should be required. All tests of EAS should be accompanied by a method for evaluating the test. It is through the process of evaluating the test results that we are able to resolve issues that could compromise the system.
- 121. The NPRM asks if too many tests would become a nuisance, leading to the ignoring of actual EAS alerts by the public. Certainly testing has the potential to desensitize the public. Warning research available to SBE would say the we are far from that point since there is now no national EAS testing, and there is little evidence that the public is tuning out RMTs. The present policy calls for sending an EAS test message once per week with the provision that actual use can replace the week test (RWT) appears sound. The RWT has a deficiency, however. It does not contain any audio portion, and does not really assure that a real event, with real audio insertion, will work properly. Failures of concern to SBE have more to do with the reliability of relay links from warning originators to EAS entry points rather than of the reliability of EAS equipment in broadcast and cable facilities. SBE suggests to the Commission that only through coordination, unification, standardization and origination at the national level can periodic testing of the national level EAS be assimilated into existing state or local level test schedules, and add meaning, value and integrity to the public warning process.
- 122. The NPRM asks if required monthly tests adequately evaluate the statewide distribution of EAS alerts. SBE believes that all EAS systems require periodic tests. What is essential is that testing be complete. In other words, those that are the sources of actual EAS messages should

always initiate these tests. Similarly, tests should be received b those that are designed to receive them, the general public. The RWT test is deficient. It does not contain any audio portion and so does not really assure that an actual event, with a real audio insertion network, will work properly. As noted above, such failures have more to do with the reliability of relay links from warning originators to EAS entry points than of the reliability of EAS equipment at broadcasting and cable facilities.

- 123. The RMT is our most powerful and complete test; and yet, in many cases, it is only transmitted by a broadcast station completely leaving out vital portions of the system. SBE encourages the Commission to address issue by requiring all RMTs be initiated by the sources of actual EAS messages. The issuance of RMTs should exercise all portions of EAS with transmissions from NWR, state and local message sources. If possible, federal level transmission of an occasional NPT done in an RMT format should be considered. SBE submits that only by testing entire systems can testing be truly effective.
- 124. As an example of an existing effort to assure proper testing, the Washington state plan calls for one-third of all RMTs to be generated by the state, with two-thirds of the time having RMTs generated by local government entities or by NWR on a rotating basis. Using this method, over the course of a year, all EAS sources are tested end-to-end, source-to-citizen.

XXII. Training

- 125. The NPRM asks multiple questions about training. Here are SBE's thoughts. SBE has found that EAS is poorly understood in many areas of the country by many, and at all levels of government. Many states and local areas simply do not understand how to put EAS to work. In all too many instances, states and local areas have created EAS plans that are simply "warmed over" EBS plans. This is underscored by the fact that SBE's EAS chair has traveled to a number of states, essentially teaching how to make EAS work. Many feel that EAS is an un-funded federal mandate and when funding is supplied they will start getting interested. This is a situation that can and must be corrected.
- 126. The federal government, working with other stakeholders, should develop training materials that can be used to assist emergency managers. Seminars and workshops need to be frequently taking place. The lack of training has already led to a number of embarrassing and public EAS mistakes resulting in a negative image of EAS on the part of broadcasters and cable operators. This situation must be corrected if EAS is to be respected and better supported by broadcasters and cable operators.

- 127. At broadcast stations the level of knowledge about EAS is minimal at best and is often a reflection of the level of participation of these stations. At best all these people know is what to say and do when an FCC inspector comes to visit, but not much more. This is neither the fault of station management nor their duty operators; rather, it is because the Commission's EAS Checklist is of minimal help and requires heavy editing to be applicable in most cases. The only exception to this situation is where EAS is used frequently, for instance, in the "tornado alley" portion of the mid West. If there is not an active EAS use in the area, EAS is likely to be just a binder on the shelf. Like CPR or first aid, EAS requires frequent training to remain "sharp" and viable. SBE encourages the FCC, and all other federal agencies, to seriously investigate the significant knowledge shortfall that exists.
- 128. The NPRM asks who should provide EAS education and training. The first step is to train the trainers. SBE would be pleased to be involved with this process at some point. However, like all organizations that rely on volunteers, there is a limit to the extent of SBE's abilities in this area. Once a number of teachers are trained, they can move out and train others. In the process training materials can be developed and the process can move to the states and local areas. It's a daunting task, but it can be done. And funding is needed; it is doubtful that volunteers can be tasked with this responsibility.
- 129. The NPRM asks if the is a need to educate the public about EAS and public warning. The public has a very poor understanding of EAS. A recent ABC 20/20 program underscored this reality where the host severely mixed up EBS, EAS and the color-coded threat level and in general made fun of the situation. No one stepped forward to refute that popular program's misinformation, thereby giving the misinformation credence. At the state and local levels the situation is similar in all but a few areas.
- 130. The NPRM asks who should be responsible for EAS education. Governments should fund their own training, as should broadcasters, but to ensure uniform training materials are needed. Perhaps this training should be coordinated by the SECCs, who can work with local governments, state broadcaster associations and SBE.
- 131. The NPRM asks who would incur the costs of training materials and employee time. DHS is, at this time, the obvious place to look for training materials and funding. The cost of employee time should be contributed by the entity involved. This should be viewed as a national cooperative project. We are all involved and we must all be willing to "step up" to the challenge. The issue here is to clearly establish the need and rationale for a public warning system and then educate as to the financial requirements.

XXIII. Small Operators

132. The NPRM asks if the level of EAS participation should be dependent on the size of the participating entity, as well as whether financial assistance to small operator should be provided. A public warning system, generally, should not make a distinction as to the size of the participating entity. Every broadcast station and cable system has the ability to send a life saving message. SBE encourages the FCC, or DHS, to establish criteria for when a small business entity would be eligible for financial assistance for the purchase of new or updated EAS hardware.

XXIV. Enforcement

- 133. The NPRM asks if higher forfeitures should be imposed for EAS noncompliance, and if there are additional ways to ensure compliance. SBE does not feel that higher forfeiture amounts are likely to yield greater compliance. SBE believes that there are several reasons why there has been an on-going compliance issue with EAS:
 - Lack of belief in the system. Some view EAS as an un-funded federal mandate with no other purpose than to cause financial hardship.
 - Lack of EAS leadership in their area (no SECC or LECC).
 - Lack of actual use of the system. Many have never used EAS for any of its real or intended purposes.
 - Poor understanding of what EAS is all about, and lack of training.
 - Poor previous experience with EAS.

SBE believes that a high percentage of EAS compliance problems will find their resolution once the system is supported from the top down and becomes demonstratively viable.

134. The NPRM asks if the Commission should seek legislation from Congress to increase the maximum forfeiture for an EAS violation from \$32,500 per day to \$325,000 per day. Again, SBE does not feel that increased fine amounts will yield significantly greater EAS compliance. This is a classic carrot and stick issue. The Commission's efforts should be focused on improving EAS and making it believable and viable, as opposed to considering greater punishment for those that are not in compliance. This is not to say that compliance enforcement is not a present and likely to be an on-going issue. SBE does support FCC enforcement of EAS rules. SBE suggests that this issue should be revisited after the much needed overhaul of EAS.

Respectfully submitted,

Society of Broadcast Engineers, Inc.

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