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

In the Matter of	)	
	)	
Amendment of Part 11 of the Commission's Rules	)	PS Docket No. 15-94
Regarding the Emergency Alert System	)	
	)	

Comments of Sage Alerting Systems, Inc.
Regarding the National Association of Broadcasters Petition for Rulemaking on Software-based EAS

April 3, 2025

Sage Alerting Systems has been active in EAS since the FCC field test of 1993. We submit these comments in support of the NAB's March 31, 2025 petition for rulemaking.

1 Summary

- We agree with the NAB Petition, it is time to allow for better integration of EAS and modern technology.
- The practical effect of Part 11 is that it requires a separate hardware device that meets various audio, data, and environmental requirements, making it impractical to add EAS functionality to other components of the air chain.
- Advantages of removing hardware requirements:
    - Users are free to optimize their air chain design, placing EAS where it makes the most sense on a case-by-case basis, leading to reduced rack space, cabling, format conversion and overall complexity.
    - Allows may options: current discrete hardware design, mixed purpose hardware, EAS as a software module running on a PC, or in a standardized in-house server as larger groups are migrating to.
    - Allows for EAS-as-a-service and bring-your-own-hardware, reducing up-front hardware costs for users.
    - The hardware used to host the EAS software can be ruggedized as needed by the user's application – small users need not pay for those portions of traditional EAS hardware that they won't use. Large users can have high reliability, redundant power supply, hot spares, as they like.
    - Manufacturers can offer a wider range of solutions without the costs of certification for each product model.

2 Background

The current structure of the Part 11 rules dates back to 1994, based in part on the earlier EBS rules. While the procedures for EAS have evolved, such as handing of new events, timeout handing, CAP and its interaction with over-the-air AFSK "legacy" EAS; the hardware requirements have not. Part 11 requires an alphanumeric display, a speaker, visual indication of alert status, "data ports", two or more audio inputs, and one or more audio outputs. In addition, requirements for temperature and humidity, supply voltage variations, and operation in 10 V/m AM and 0.5 V/m FM must be met. The required audio outputs also have harmonic distortion and output level (into a 600 Ohm load) specs. As a practical matter, this requires a separate box for certification, and it must have analog audio ins and outs and an integrated display. Because the environmental rules do not apply to other elements of the air chain, special requirements for EAS hardware will not improve the overall performance of the air chain under emergency conditions.

These and other Part 11 requirements make certain assumptions about the circumstances in which EAS devices will be used: 1) that there is an operator stationed near the EAS equipment who will need all of these status indications and 2) that the device will be placed near the transmitter, and 3) that the device is analog in nature.

These assumptions are no longer correct for many, and possibly most, devices in modern usage. These requirements increase the cost of every EAS device on the market. A modern alphanumeric screen with up/down/left right/enter keys can add 10% to the hardware cost of an entry level device. Analog audio inputs and outputs, in a station where legacy EAS alerts are received via radios that stream and where audio is sent via AES67, also add to the hardware cost, in connectors, parts, and enclosure, as well as 4 times the rack space (3U full width vs 1U half width).

Modernization of the hardware requirements would result in cost savings. However, removing the hardware requirements completely would result in greater savings, as a reduction in analog interface requirements, allowing for a complete network stream in and network stream out, via simple streaming or AES 67. EAS could run on CPUs hosted in existing equipment, either as a plug-in card, or as a software component running on a shared computer. Many consoles, automation/play out, audio processors, transport, and transmission equipment run on this type of hardware. Removal of the EAS hardware requirements would allow EAS capability to be added to any of these components.

Software-only EAS would not preclude the use of a traditional standalone hardware device, but would allow for closer integration of EAS into radio and TV broadcast chains where EAS is made to work within the system, rather than trying to force the existing system to accommodate EAS.

Removal of specific hardware requirements will permit greater customization of the EAS component of a radio or TV station. Some applications will need hardened equipment at remote sites, but others will be in a typical office environment with an off-the-shelf PC providing audio and automation. Removing specific hardware requirements will allow users to select an EAS solution that fits their needs, and potentially runs in equipment they already have.

3 NAB Proposal

Sage agrees with the NAB that the time for a software-only option has come, with benefits to both large and small broadcasters, better integration, less likelihood of cabling and work flow round-peg-into-square-hole issues, and cost reductions in engineering and management time, as well as overall product cost. In particular, some implementations could be a software-as-a-service model, reducing up front cost as a barrier to entry to smaller new stations.

4 Other Considerations

4.1 Conformity Assessment

One issue that must be addressed is new product compatibility with the existing EAS ecosystem. Part 11 and the documents it references, such as the CAP protocol, the IPAWS profile, and the ECIG Implementation Guide[1], define protocols and procedures that make up the EAS system. These are complex, and only a few are tested for by FCC TCBs. All of the existing EAS equipment manufacturers ran through the FEMA-sponsored Conformity Assessment Program in 2011. This program is no longer available. Software-only EAS implementations should be required to submit the results of a modernized standard conformity assessment test before they can be used by EAS participants to meet FCC Part 11 requirements.

See https://www.sagealertingsystems.com/docs/TR-ENDEC-11814_MAR_2011.pdf for the Sage ENDEC's test results in the original Conformity Assessment Program.

4.2 EAS software in other hardware

Some of the advantages discussed here require manufacturers of equipment that aren't currently EAS capable to add EAS software to their systems. Some already have the ability to host "apps". Some have already integrated other software processing into their equipment, PPM is an often-mentioned example. As the NAB mentions, it is likely that these manufacturers will partner with existing EAS companies to add EAS capability to their products.

5 Sage 3644 ENDEC status

As the NAB notes in its petition, Sage is no longer building the Sage 3644 product. We continue to offer hardware repair, and user support via phone and email, as we have done since 2008. We will also continue to provide software updates. We hope that the FCC will permit software EAS in the future, and we would offer products in that arena.

Respectfully Submitted,
/s/
Harold Price
President, Sage Alerting Systems, Inc.

[1] 47 CFR 11.56(d)