April 13, 2023

Marlene H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, D.C. 20554

Re: Notice of *Ex Parte* Communication, PS Docket Nos. 15-94, 15-91, and 22-329

Dear Ms. Dortch:

On April 11, 2023, Steve Shultis of New York Public Radio (NYPR), Alan Jurison of iHeartMedia, Inc., Roswell Clark of Cox Media Group, Peter Sockett of Capitol Broadcasting Co., Anthony Plosz of Graham Media, and Lynn Claudy, David Layer, and the undersigned of the National Association of Broadcasters (NAB) met with David Furth, David Sieradzki, James Wiley, Steven Carpenter, Maureen Bizhko, and Chris Fedeli of the Public Safety and Homeland Security Bureau, regarding the above-captioned proceeding.[1]

The parties expressed strong support for the Commission's goal in the Notice to enhance the security and reliability of the Emergency Alert System (EAS). To that end, NAB has offered a proposal that would provide EAS participants the option to virtualize certain elements of their EAS system.[2] Specifically, NAB has proposed that the Commission amend or clarify its rules, as needed, to allow EAS participants to use software-based EAS encoder/decoder technology in place of a physical hardware equipment box.

In addition to support for NAB's proposal in the record,[3] the parties noted that we recently discussed this proposal with the Federal Emergency Management Office (FEMA) Integrated Public Alert and Warning Systems (IPAWS) office. During that meeting, we described the possible architecture of such an approach and various public

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[1] *Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System, Wireless Emergency Alerts, Protecting the Nation's Communications from Cybersecurity Threats*, Notice of Proposed Rulemaking, PS Docket Nos. 15-94, 15-91, and 22-329 (rel. Oct. 27, 2022) (Notice).

[2] Comments of the National Association of Broadcasters, PS Docket Nos. 15-94, 15-91, and 22-329 at 24-26 (Dec. 23, 2022).

[3] Reply Comments of National Public Radio, Inc. at 5-6, PS Docket Nos. 15-94, 15-91, and 22-329 (Jan. 23, 2023); Reply Comments of Gray Television, Inc. at 5-6, PS Docket Nos. 15-94, 15-91, and 22-329 (Jan. 23, 2023).

safety benefits that would result. After a detailed discussion of the proposal, the FEMA IPAWS staff offered a clear endorsement of NAB's proposal to modernize EAS and encouraged us to make the FCC aware of their position.

During the meeting, the parties emphasized that NAB's proposed approach would be purely voluntary. EAS participants would be free to continue using hardware encoder/decoder boxes and receive the manufacturer-provided services attached to such boxes. If parties wanted to adopt NAB's proposed option, they would unlock a number of benefits as detailed in the attached slide deck.

We explained that any new software encoder/decoder products would have to function seamlessly within the existing EAS system and have no negative impact on baseline EAS operations. Regarding integration into broadcasters' existing facilities, we discussed options for the testing and certification by vendors of such software in only certain servers or systems, similar to the process used for many other software products used in the broadcasting industry, such as Nielsen PPM ratings watermarking software. We also noted that, regardless of the specific configuration or equipment used, EAS operations will remain subject to weekly, monthly, and nationwide periodic tests that will detect problems and help ensure functionality.

We stated that such a virtual option would provide EAS participants with more flexibility to simplify their facilities. In this vein, we clarified that the baseline proposal contemplates the creation of autonomous software-based EAS functions located at the edge of a broadcaster's operation, similar to other systems used in modern frameworks. Like today's legacy EAS hardware boxes, a software-defined EAS mechanism at the broadcaster's edge would still operate if Internet or cloud connectivity is interrupted. NAB is not advocating a fully cloud-based approach.

Of relevance to this proceeding, the parties stated that allowing broadcasters to virtualize certain elements of their EAS system would enhance the security, operational readiness, and resiliency of EAS by: (1) reducing or eliminating the down-time currently needed to repair malfunctioning equipment; (2) reducing the time needed to install security-related software patches; (3) enable the immediate failover to standby equipment if needed; and (4) allow the use of redundant, geographically diverse locations of encoder/decoder operations in cases of extreme disasters. We also explained that a virtualized approach could help improve overall EAS system monitoring, data collection, and visibility into operational readiness.
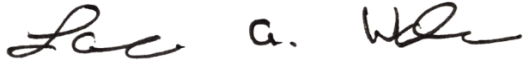
For the above reasons, the parties submitted that NAB's proposal is directly relevant to the FCC's inquiry in the Notice, and ripe for consideration within this proceeding.

Finally, the parties expressed our continued support for the existing EAS system and stated that we are agnostic regarding the development of the desired software. We

anticipate, and would likely prefer, that the current vendors of EAS equipment take the lead in such an effort, because this would allow industry to reap the benefits of their experience and expertise in this somewhat niche area of technology.

Please direct any inquiries regarding this matter to the undersigned.

Respectfully Submitted,

Larry Walke
Associate General Counsel
Legal and Regulatory Affairs
National Association of Broadcasters

Attachment

Virtualization of EAS operations

Presented to:

National Association of Broadcasters
Washington, DC

April 11, 2023

Executive summary

- Hardware EAS encoders/decoders are currently a requirement under FCC rules
  - This creates problems for broadcasters as many air chains are now implemented in software

- NAB is proposing that the FCC allow use of software-based EAS encoders/decoders
 - Host of benefits would be realized

Virtualization of EAS encoder/decode box

- Allow for use of software-based EAS encoders/decoders
  - Hardware solutions are becoming obsolete, unwieldy
  - EAS hardware has become the sole un-virtualized component

- Guiding principles:
  1) Function seamlessly within EAS system – new software products will function with legacy EAS, broadcast systems
  2) Backwards compatibility – no impact to baseline operations and functionality of EAS
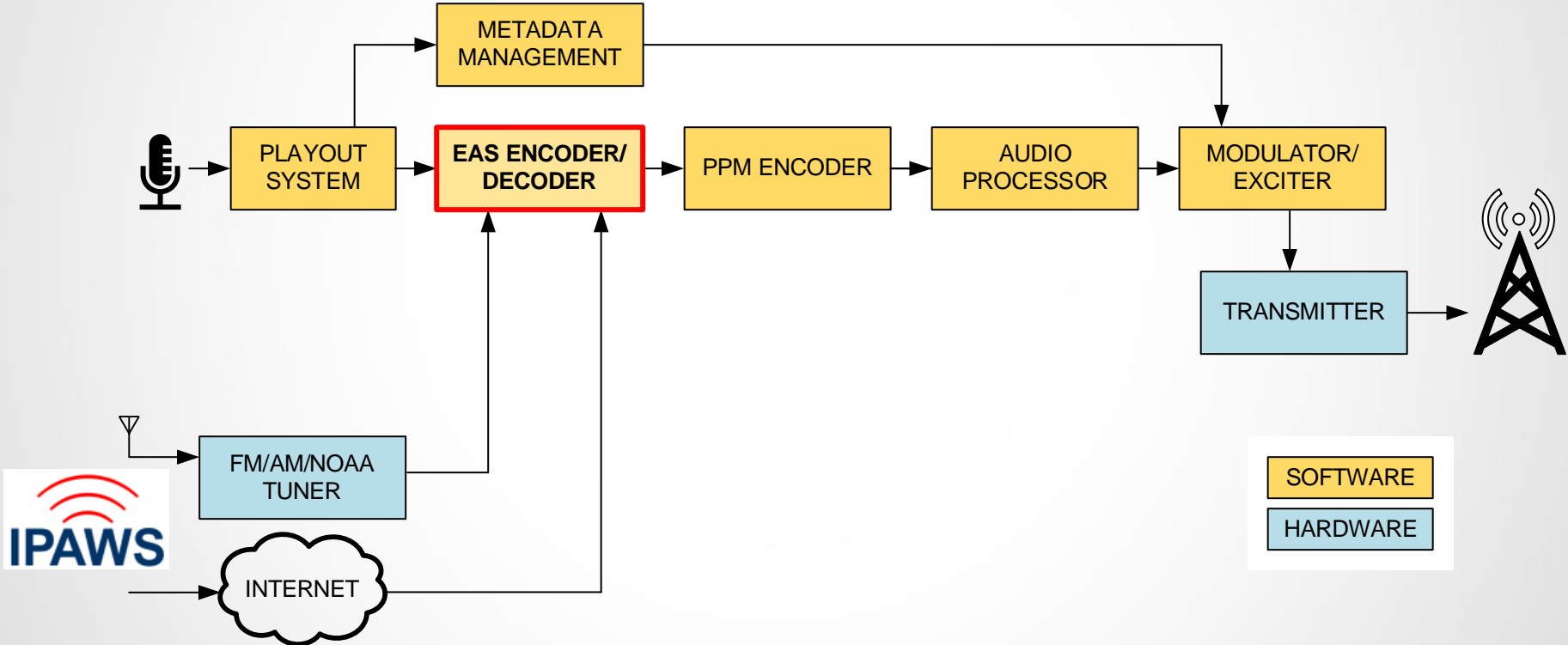 **3) Optional for broadcasters** – no mandatory adoption requirements

EXISTING
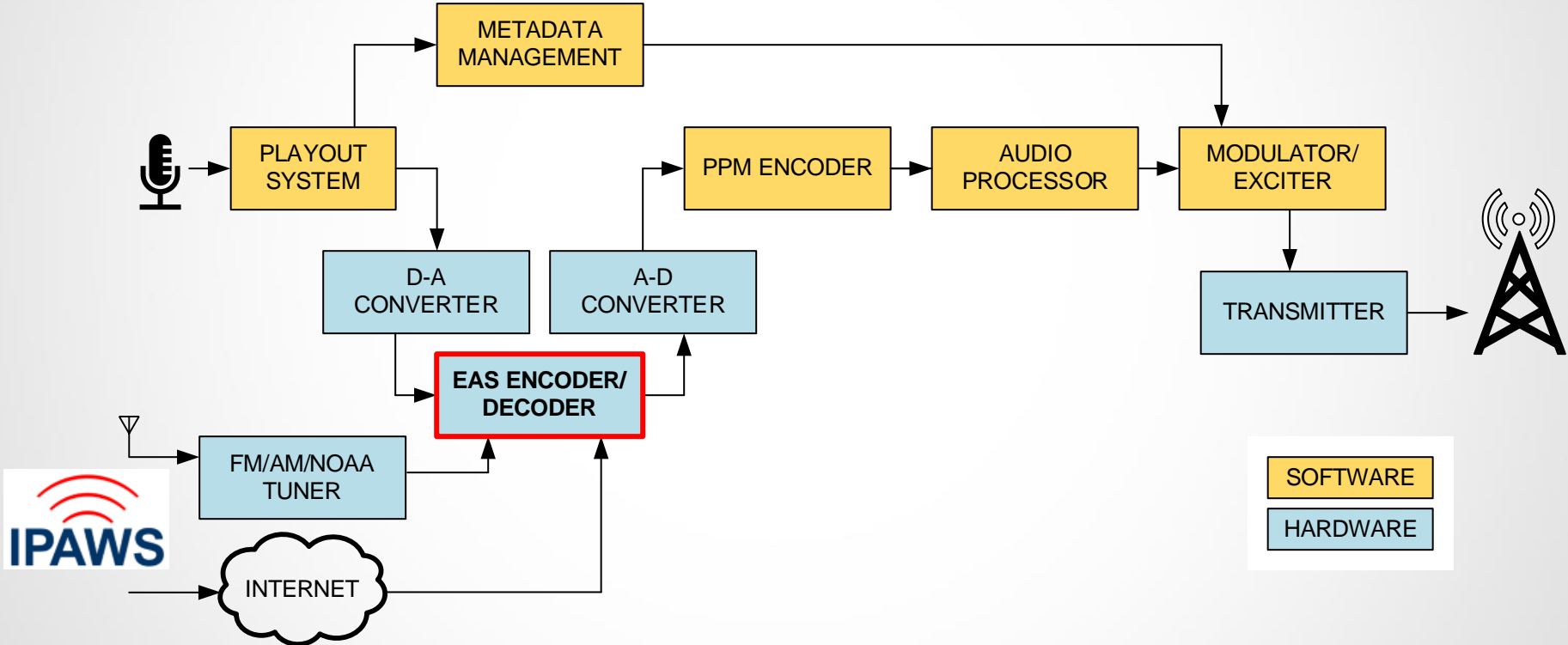
Benefits of EAS encoder/decoder virtualization

- Simplifies radio broadcast plant
  - Easier to support at transmitter site, eliminating studio-to-transmitter link

- Greatly improves EAS system resiliency and operational readiness
  - Eliminates down-time resulting from repair of malfunctioning equipment
  - Reduces time to implement security-related patches

- Software-based architecture allows for immediate fail-over
  - Supports multiple instances in diverse geographic locations

Benefits of EAS encoder/decoder virtualization

- Greatly improves system monitoring and alerting
  - Near-real time, automated collection of activity data

- Streamlines ability to manage and route messages to different broadcast streams
  - Analog, HD Radio main and multicast channels

Virtualization widely supported in Proceeding

- Support for this proposal from broadcaster and equipment suppliers

- Recognize need for effective certification framework in developing next-gen, software-based EAS

- EAS community (FCC, FEMA, broadcasters, manufacturers) can join together to fulfill this goal