

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

**FIFTH REPORT AND ORDER**

**PETITION FOR RECONSIDERATION**

**I. INTRODUCTION**

1. In the *Fifth Report and Order* the Commission addressed a number of issues regarding incorporating technological advancements into the Emergency Alert System (EAS) and included further clarifications regarding the manner in which EAS Participants must be able to receive alert message formatted in the Common Alerting Protocol (CAP). A review of comments filed during the proceeding lead the Commission to decisions on many aspects regarding monitoring CAP message sources. These decisions led to amendments to the Part 11 Emergency Alert System rules.
2. Through Executive Order 13407 and DHS Delegation 9001.1 the Federal Emergency Management Agency was directed to “establish or adopt, as appropriate, common alerting and warning protocols, standards, terminology, and operating procedures for the public alert and warning system to enable interoperability and the secure delivery of coordinated messages to the American people through as many communication pathways as practicable, taking account of Federal Communications Commission rules as provided by law” and to “administer the Emergency Alert System (EAS) as a critical component of the public alert and warning system.” In the execution of these duties FEMA worked with industry and other government entities to develop the CAP Integrated Public Alert and Warning System (IPAWS) Profile, which was accepted by the Organization for the Advancement of Structured Information Standards (OASIS) as an international standard, and to develop additional standards, guidelines and procedures for authoring, authentication and distribution of CAP messages. FEMA also established and operates a CAP message aggregator to serve Federal, state, local, tribal and territorial emergency management communities.

## II. SUMMARY

3. The Commission, in the release of its *Fifth Report and Order*, has taken actions which severely limit the ability of local emergency management officials to reap the full benefits of the CAP messaging standards as established by FEMA and industry groups, the unintended consequences of which were not fully explored by the Commission in rendering the next version of its EAS rules.

## III. DISCUSSION

4. In paragraph 38 of the *Fifth Report and Order* the Commission chooses to deviate from the EAS-CAP Industry Group (ECIG) Implementation Guide (the Guide) in the matter of text-to-speech conversion. While the Commission makes a determination that the matter of text-to-speech conversion is “best reserved for a separate proceeding” and chooses to “defer these issues at this time”, action is taken by the Commission to disallow text-to-speech conversion by CAP-EAS devices. In supporting this non-decision, the Commission cites comments filed by Sage which in context were supportive of a marketplace approach to text-to-speech conversion where in some areas of the country jurisdictions may choose to employ locally tuned text-to-speech engine at the CAP message origination point or to otherwise generate or record an audio message which properly and efficiently addresses location names that might present a challenge to some text-to-speech engines. The action taken by the Commission in disallowing text-to-speech in EAS Participant owned CAP-EAS devices precludes any marketplace activity and thus discourages and limits further development of text-to-speech technology in support of EAS. If, instead of disallowing text-to-speech, the Commission were to accept the ECIG Implementation Guide recommendation, an alert originator could remain in control of the audio content of an EAS message by providing an audio message file if they so desired. In section 3.5.1.1 of the Guide it states that if there is a referenced EAS recording or streaming audio the EAS device SHALL use the provided audio instead of generating an audio message using text-to-speech.
5. One possible unintended consequence of disallowing text-to-speech conversion by CAP EAS devices is that CAP messages supplied without audio content, such as those intended for dissemination via CMAS which also meet the IPAWS requirements for dissemination to EAS devices may cause a CAP-EAS device to interrupt the programming of a EAS participants and only convey an EAS SAME data header, possibly an alert signal and an End Of Message (EOM). If this message were to interrupt a video service it is possible that the message content will begin to scroll across the screen, perhaps only to be cut short by the EOM. In the case of an aural only service no information usable by the public would be conveyed. In both cases, if a follow-up EAS message based upon the initial message were transmitted by an LP source with an audio payload, it will most likely be rejected by monitoring EAS devices as a repeat of a previously transmitted message.
6. In another scenario, an alerting official may originate a text-only CAP message using currently available technology and software from the scene of an event such as a hazardous chemical spill causing a CMAS alert to go out but due to the lack of a referenced audio file

no EAS Participants transmit the full detail alert message and the public is left to make life saving decisions based upon a 90 character CMAS message alone.

7. Following FEMA's formal endorsement of the ECIG Guidelines, FEMA did not submit comments to the FCC during the instant proceeding in explicit support of text-to-speech conversion as specified in the ECIG Guidelines as such action was considered unnecessary and redundant. Reading the comments submitted by others, FEMA did not note any comments calling for the prohibition of text-to-speech, therefore reply comments on the subject were likewise considered unnecessary. FEMA has participated in numerous briefings, panel discussions and trade shows, often in concert with representatives of the FCC, wherein the benefits of text-to-speech conversion following the ECIG Guidelines were extolled and often demonstrated. It was therefore assumed that the Commission was well aware of how text-to-speech was a well integrated function central to the operation of the IPAWS.
8. Soon the National Weather Service (NWS) will begin disseminating weather related alerts and warnings through the FEMA IPAWS OPEN CAP message aggregator. These alerts will be delivered to Commercial Mobile Service Providers (CMSPs) for dissemination via CMAS and to EAS Participants for dissemination via EAS. The National Weather Service will not be furnishing audio files to accompany these alerts and warnings. The text-to-speech technology in use by the NWS occurs for the most part at the Weather Forecast Office level as a function of the Console Replacement System (CRS) just prior to dissemination to NWS Weather Radio transmitters. With the prohibition of text-to-speech technology as established in the instant Report and Order any CAP based alert furnished by the National Weather Service must be ignored by EAS Participant's CAP-EAS devices unless there is manual intervention at the EAS Participant level. Manual intervention is not possible in cases of unattended operation, which is common business practice at most radio stations and some television stations during at least some portion of the broadcast day. This does not serve the public interest.
9. The Report and Order indicates that there are comments in the record expressing concern "whether text-to-speech software is sufficiently accurate and reliable to deliver consistently accurate and timely alerts to the public." FEMA fails to see where in the record the timeliness of text-to-speech technology is called into question and note that bandwidth limitations may cause significant delays in retrieving a referenced audio file to occur which may call the timeliness of audio file availability into question.
10. Creating and serving a referenced audio file for a CAP message as recommended alternative to the use of text-to-speech technology is not necessarily a trivial function. Some CAP authoring tool vendors do include audio file generation as a basic function of their software. Once created, a referenced audio file must be loaded on to an Internet file server and the file's associated Universal Resource Locator (URL) incorporated into the CAP message prior to digitally signing the CAP message and passing the message on to a CAP aggregator. While IPAWS CAP Profile 1.2 does include provision for the generation of a hash digest of the referenced file, this is not a mandatory CAP 1.2 component and a standard method of generating and confirming the hash digest has yet to be incorporated into best practice. A review of CAP authoring tools demonstrated at the International Association of Emergency Managers (IAEM) conference indicates that solutions most likely to appeal to emergency

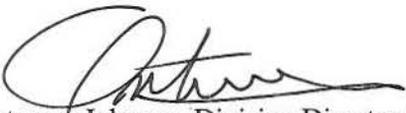
managers with limited resources are the least likely to include referenced file serving capability. The prohibition of the use of text-to-speech technology in CAP-EAS devices will have the greatest impact on those jurisdictions with the fewest resources; the ones that need it the most.

11. Washington State has a well developed CAP based EAS system in place that has been in operation since October 2010. Using this system alerting officials in 39 counties and cities and the State of Washington compose alert and warning messages which are made available through a contracted CAP message aggregator. EAS Participants retrieve these messages using commercially available CAP-EAS devices and convey them to their listeners/viewers using the CAP-EAS device's text-to-speech technology. The prohibition of the use of text-to-speech technology in CAP-EAS devices would require the State of Washington and at least two other states to stop using this active, tested method of alerting the public.

#### **IV. RECOMENDATION**

12. FEMA recommends that the Commission reconsider the statement in CFR 47 §11.56(a)(2) regarding exceptions to the ECIG Guidelines and delete the reference to "using text-to-speech technology". While not explicitly endorsing or mandating use of text-to-speech technology this would allow use of text-to-speech technology to be a marketplace decision driven by the resources of local alerting officials and EAS Participants with due consideration to the performance of available text-to-speech engines and challenges presented by local place names and dialects.

Respectfully,



Antwane Johnson, Division Director  
Integrated Public Alert and Warning System (IPAWS)  
Federal Emergency Management Agency