

Emergency Text-to-Speech Secondary Audio Program (SAP) Creation and Insertion

In April 2013, the Federal Communications Commission (FCC) issued new rules for U.S. television stations regarding the accessibility of televised emergency information. By the issued deadline of May 26, 2015, all of the nation's television stations are required to use a secondary audio stream, enabling on-screen emergency information crawls to be conveyed aurally. This will ensure that emergency information is accessible to everyone, including the visually impaired.

To help U.S. television broadcasters comply with this FCC requirement, Imagine Communications offers a choice of award-winning processing solutions – Selenio X100™ and Selenio X50™ 1RU processors and the highly integrated Selenio™ MCP modular platform, all with unique Rules Engine capabilities. These products enable Text-to-Speech (TTS) functionality in the SAP channel, enabling prompt compliance.

Supporting third-party emergency TTS generators from companies such as Quest Research & Development, WSI, CGS Automation and Newsroom Solutions News Ticker, the Imagine Communications Selenio processors feature a built-in Rules Engine that works in two ways: by using General Purpose Interface (GPI) input triggers/contact closures; or without GPIs, using automatic detection of the TTS audio signal.

The TTS generator provides an audio signal (including the mandatory Emergency Alert System or EAS attention tone) based on the emergency text that can be switched into the SAP audio output. The Selenio X50, Selenio X100, or the Selenio MCP frame sync (FS) and conversion (XD) modules can be used to switch the audio content from the normal SAP mode to the audio generated by the companion TTS generator. The Selenio 1RU processors and Selenio MCP modular products can also initiate the audio switch through the versatile Rules Engine.

Rules Engine Solution

When using the GPI feature, the Custom GPI Scripts can be used to switch audio based on input triggers from an automation or EAS device. When using the Parameter Control Scripts, the audio can be switched based on the presence of the emergency speech on an audio input.

If the Video Descriptive Service (VDS) audio channel is present at the input of the audio processing device, it can be detected and passed through to the SAP channel. If it is missing during normal programming, it is possible to provide a "Smart Substitution" by processing the program audio content for substitution on the SAP channel. Program audio can be detected as Dolby®-encoded or stereo PCM and decoded, downmixed, summed (if necessary), loudness controlled and output on the SAP channel.

Excerpt from the FCC 79-2 SAP Audio NAB Report:

May 26, 2015 Deadline to Make Emergency Crawls Audible

In April 2013, the Federal Communications Commission (FCC) adopted a Report and Order and Further NPRM (FCC 13-45) that included new rules regarding the accessibility of televised emergency information. The new rules require all Television stations (and other entities covered under the existing emergency information requirements in Section 79.2 of the rules) to use a secondary audio stream to convey televised emergency information aurally, when that information is conveyed visually (i.e., in an on-screen crawl) during video programming other than newscasts and Emergency Alert System (EAS) activations beginning May 26, 2015. Audio accessibility applies to all digital channels.

Thus, when a station runs an on-screen crawl that contains emergency information (as defined in Section 79.2(a)(2) of the rules), it must also transmit an audio transcription of the information contained in that crawl on the station's second audio service (sometimes referred to as "SAP" channel). The new rules do not require a verbatim aural translation of textual emergency information. However, it is required that the information presented aurally accurately and effectively communicate to consumers who are blind or visually impaired the critical details about a current emergency and how to respond to it to the same extent that this information is conveyed in the crawl. Also, if the crawl includes visual but non-textual information such as a graphic of a map showing affected counties for a weather alert, an aural description of this information must also be included on the SAP channel.

During standard operation, if the SAP audio content is provided with described video, it is routed to the SAP audio channel output. If the TTS audio signal is present at the input of the Selenio X100 or X50 1RU processor or the Selenio MCP module, it is automatically switched to the SAP audio output. For example, in normal programming, the SAP output will either be the normal audio content or the described video (when present at the input). When the TTS audio content is present, it overrides the normal audio content with the emergency information.

The diagram below provides a detailed view of the audio processing in the Selenio platforms:

Selenio 1RU X Series (X50, X100) or Selenio Modular MCP (FS, XD)

