May 14, 2012

TV TechCheck

NAB NATIONAL ASSOCIATION OF BROADCASTERS

The Weekly NAB Newsletter for Television Broadcast Engineers

Reminder: June 30 EAS CAP Deadline

No later than June 30, 2012, all broadcast stations must have CAP-capable EAS equipment installed and operating in their facilities. FCC rule 11.56 requires that all EAS participants, which includes cable headends, satellite TV providers and broadcasters, to have equipment installed and operating that can receive and decode National Level (federal) Emergency messages (EANs) encoded in the Common Alerting Protocol (CAP) format.

The original CAP compliance deadline was March 31, 2011. In response to a petition filed by NAB and others, the FCC extended that deadline to September 30 2011. On Friday September 16, 2011, the FCC released an order extending the deadline again to June 30, 2012.

This requirement was reaffirmed in the most recent FCC EAS Report and Order (EB Docket No. 04-296) released January 10, 2012. In this Fifth Report and Order (5th R&O) the FCC further revised its Part 11 EAS rules to specify how broadcasters and other EAS Participants must be able to process CAP-formatted EAS alert messages. The R&O also formalizes the integration of EAS with FEMA's IPAWS infrastructure and detailed the requirements necessary for broadcasters to receive and process federal alert messages. In addition, the rules adopted in the 5th R&O require all broadcasters to interface with and monitor FEMA's Integrated public Alert and Warning System (IPAWS) server for those federal CAP-formatted EAS messages. However, because IPAWS monitoring will be largely conducted via an Internet connection, the FCC will consider, on a case by case basis, applications for waivers from this monitoring requirement based on the physical lack of availability of broadband.

The 5th R&O also requires that effective June 30, 2012 broadcasters must use the enhanced text data in CAP-formatted message – when available – to create the visual display elements (*i.e.* text crawl) of an EAS alert. It further allows for the use of intermediary devices that receive and convert CAP-formatted messages into SAME format messages that would be inputted into a station's legacy EAS equipment for broadcast over the air. However, the rules require an intermediary device to meet the CAP related obligations with respect to use of the enhanced text capability no later than June 30, 2015. 5th R&O also shortens the duration of the EAS 2-tone attention signal to eight seconds.

The 5th R&O is available here. The order extending the CAP compliance deadline is here.

Times, They are a-Changing

Whenever the International Bureau of Weights and Measures decides that the current offset of Coordinated Universal time (UTC) is too far in error with respect to International Atomic Time (TAI), a correction is made. It has been decided that a positive leap second will be introduced at the end of June 2012.

Since A/65 contains an adjustment for the offset between the GPS time (which is kept in synch with TAI) and the UTC time, the GPS to UTC offset will need to be changed from the current **15** second value to **16** seconds. The user interface to control the setting of the GPS_UTC_offset field of the system time table varies by makes and model of PSIP generator, so if it is not clear what to do, please contact your equipment vendor.

The sequence of dates of the UTC second markers will be:

2012 June 30,	23h 59m 59s
2012 June 30,	23h 59m 60s
2012 July 1,	0h 0m 0s

Ideally the offset change should take place in synch with the UTC second markers, but receivers being in error by one second for a while should have no significant impact.

While most GPS receivers use the time offset in the GPS message to develop a UTC output; verification that your GPS receiver does so is recommended. Those stations not using GPS as the source for their UTC should verify that the UTC is correct after the change.

IEEE Broadcast Technology Society Issues Call for Papers

A Call for Papers has been issued for the 2012 IEEE Broadcast Symposium, to be held October 17-19, 2012, in Alexandria, Va. The Symposium Committee seeks timely and relevant technical papers relating to all aspects of broadcast technology, in particular on the following topics:

- Digital radio and television systems: terrestrial, cable, satellite, Internet, wireless
- Mobile DTV systems (all aspects, both transmission and reception)
- Technical issues associated with the termination of analog television broadcasting
- Transmission, propagation, reception, re-distribution of broadcast signals
- AM, FM, and TV transmitter and antenna systems
- Tests and measurements
- Cable and satellite interconnection with terrestrial broadcasters
- Transport stream issues – ancillary services
- Unlicensed device operation in TV white spaces
- Advanced technologies and systems for emerging broadcasting applications
- DTV and IBOC reception issues and new technologies
- ATSC and other broadcast standards developments
- Broadcast spectrum issues – re-packing, sharing

The submission deadline for abstracts has been extended to May 31, 2012. Visit the symposium website for additional information. This Symposium is produced by the IEEE Broadcast Technology Society.