

June 11, 2012



# TV TechCheck



The Weekly NAB Newsletter for Television Broadcast Engineers

## NAB Satellite Training Covers Theory, Operations, and Cost-control for DTV Satellite Transmission

If you are concerned about getting the best performance from your satellite links, while keeping your satellite transmission costs reasonable, the NAB Satellite Uplink Operators Seminar can help you. The seminar, to be held at NAB Headquarters on September 24 – 27, 2012, presents techniques that will give you the best performance and help keep your station's costs under control.

Sidney Skjei, P.E. of Skjei Telecom conducts the seminar for NAB. Mr. Skjei has over 35 years of experience in engineering and developing a wide range of hardware and software telecommunications products, systems and services. He is highly knowledgeable in all major satellite communications market areas – global, domestic U.S., and military.



The seminar, which has been regularly offered by the NAB since 1989, provides in-depth information on the theory of satellite communications, regulatory requirements, and all operational aspects of ground equipment for uplink and downlink facilities. The seminar's content is applicable to distribution of signals for both analog and digital television services. With broadcasters specifically in mind, Mr. Skjei covers satellite news gathering topics, including vehicle design and safety considerations. He also feels it is useful for satellite operators to have a basic understanding of other parts of the broadcast system. Digital television (DTV) and, in particular, high-definition digital television (HDTV), of course, have increasing importance through all parts of the broadcast television chain, from production to distribution to the home, so the seminar provides significant background information on these topics. The Compressed Digital Television and Transmission section of the seminar covers the theory of digital video, with an introduction to compression techniques and systems; it concentrates on the MPEG-2 video compression format, but also covers newer technologies such as MPEG-4 Part 10 (AVC), H.265 (HEVC) and JPEG 2000, all of which are planned or in use today for digital video backhaul and distribution. The various standard-definition (SDTV) and HDTV formats used in DTV are also discussed, with detailed analysis of how these are carried in satellite transmission systems. The increased bandwidth

requirements of HDTV can lead to higher satellite transmission costs. Mr. Skjei discusses how these can be reduced using new techniques enabled by advanced systems such as MPEG-4 AVC and the recently introduced DVB-S2 second-generation satellite transmission standard.

The four-day seminar provides operational training that minimizes the risk of satellite transmission interference. This is important because FCC rules require that “a trained operator be present at all times during transmissions, at either an earth station site or designated remote control point” [CFR 47 Section 25.271 (b)].

In addition to classroom instruction, participants will receive hands-on training in a satellite newsgathering (SNG) truck, as well as an all-day field trip to a nearby, large satellite teleport and operations center.

“The NAB course offers many features that other satellite operators courses do not, such as a variety of hands-on training sessions, more hours of personal instruction, and a general satellite



systems and television focus, as opposed to just training on a specific type of terminal – for example, a flyaway SNG terminal,” commented Mr. Skjei. “We also cover specific operations of SNG truck terminals, including a practical session that affords students a shirtsleeves experience in uplinking from an SNG truck.”

The seminar fee is \$1,250 for NAB members, and \$1,550 for non-members. The fee includes a Satellite Uplink Handbook, continental breakfasts and lunches. Space is limited, so if you want to take advantage of this important training opportunity, visit the Satellite Seminar [Web page](#), or call Cheryl Coleridge at (202) 429-5346. If you are interested in sponsorship opportunities for this event, contact NAB Advertising at (800) 521-8624 or [advertising@nab.org](mailto:advertising@nab.org).

## 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 all 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 dead line to September 30, 2011. On Friday September 16, 2011, the FCC released an order further extending the deadline to June 30, 2012.

This requirement was reaffirmed in the most recent FCC EAS Report and Order released January 10, 2012 (Fifth Report and Order in EB Docket No. 04-296 – “5<sup>th</sup> R&O”). The rules adopted in the 5<sup>th</sup> R&O also require 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 5<sup>th</sup> R&O is available [here](#). The order extending the CAP compliance deadline is [here](#).



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