



## ATSC-Based Replacement for PRO channel IFB Announced

Many television stations currently send IFB to talent in the field during ENG situations via the PRO audio channel in their NTSC TV signal. Some stations have switched to wireless/cell phones or 2-way radio but those operations that rely on the use of the PRO channel for cueing will face a problem after the analog cut-off on February 17, 2009 because there will be no more NTSC and hence no more PRO channel. Modulation Sciences, Inc. (Somerset, N.J.) has announced that it has developed technology that will allow stations to send IFB via the ATSC Transport Stream (TS) in their DTV signal.

This technology places MPEG-1 encoded audio into the TS which must be assigned its own PID. The number of IFB channels available is limited only by the bandwidth the station is able to allocate for this purpose. Each MPEG-1, layer 2 data stream requires 96 kbps. Each audio channel takes 48 kbps but they must be assigned in pairs. Most MPEG encoders already have the ability to generate the MPEG-1 layer 2 data streams. Stations should check with their encoder manufacturer for guidance.



Once the IFB audio is in the station's TS, a receiver located in the ENG vehicle is tuned to the DTV channel, the MPEG-1 data stream is extracted and IFB or cue audio is output to the talent. This operates much like a digital version of analog PRO receivers in use today. The receiver includes LG Electronics' 6th generation DTV receiver chip set which provides significantly improved ATSC over-the-air reception. The receiver specs are listed below:

### Receiver Sensitivity

- -87 dBm typical
- -78 dBm minimum

### Audio Coding

- MPEG-1 layer 2, dual monaural

### IFB Audio Out

- Two Channels (A & B)
- Male XLR-type connector
- Balanced line-level output, low impedance

### Antenna Input

- 75 ohm, BNC connector ("F"adapter provided)

It was generally believed previously that there was too much latency in the ATSC DTV signal to use it for an effective IFB system. However, Modulation Sciences has indicated that it recently measured an end-to-end latency with this technology at just less than 100 mSec. The product is called "DIGITAL PROceiver" and will be available for delivery no later than the end of the third quarter of this year. For more information see [www.modsci.com](http://www.modsci.com).

## DEADLINE EXTENDED FOR 63rd NAB BROADCAST ENGINEERING CONFERENCE CALL FOR PAPERS



NAB Show will host the 63rd NAB Broadcast Engineering Conference on April 18 – 23 at the Las Vegas Convention Center in Las Vegas, Nevada.

The NAB Broadcast Engineering Conference is a highly technical conference where presenters deliver technical papers ranging over a variety of topics relevant to the broadcast and allied industries. We invite you to submit a proposal to present a technical paper at our conference. The deadline for submitting your proposal is **October 27, 2008**.

To submit a technical paper proposal, [click here and complete the electronic form](#). If you have questions regarding the NAB Broadcast Engineering Conference, please contact [John Marino](#).



**Register Now!**

**Discounted Registration Rate is only available until 1 October 2008**

The IEEE Broadcast Technology Society  
58th ANNUAL IEEE BROADCAST SYMPOSIUM  
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15 - 17 October 2008  
The Westin Alexandria  
Alexandria, VA, USA

Keynote speakers to include: Richard E. Wiley, Wiley Rein, LLP and Peter Fannon, Panasonic Corporation. Please visit the [Registration](#) page for additional information.

### **ALERT: Action Needed for New Daylight Savings Time Change**

Daylight Savings Time (DST in the United States) ends at 2:00 a.m. local time on November 2, 2008. In order to technically comply with 47 CFR 73.682(d), all stations, effective October 3, 2008 (between 12:00 and 12:01 a.m.) need to send DS\_day\_of\_month set to '2' with DS\_status = '1' in their STT. The value for DS\_hour normally needs to be set to '2' (unless for programmatic reasons you shift out of DST at another time). Please refer to A/65C, Annex A for exactly when the DS\_status changes to '0' if the STT is provided by the network and/or more than one time zone is covered.

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