



2010 HPA Tech Retreat Audio Loudness Panel

Pat Waddell, Harmonic, moderator

Audio Loudness Panelists

- ▶ Jim DeFilippis, Fox: The New ATSC RP on Loudness (A/85) and Its Impact on Production and Post
- ▶ David Wood, EBU: P/LOUD and ITU-R Loudness
- ▶ Steve Silva, Fox: Hands-On Experience with BS.1770 Loudness Measurements
- ▶ Ken Hunold, Dolby: The Boundary Issue
- ▶ David Wood, Ensemble Designs: AGC that Preserves Dynamics

- ▶ Panel discussion, time permitting



Why Loudness? Why Now?

- ▶ This issue arose as an unintended consequence of the conversion from analog to digital
 - Analog audio dynamic range was limited to about 40 dB
 - Digital audio dynamic range is in excess of 100 dB
 - Analog audio noise is related to audio level - in digital it is not
- ▶ These factors work together to permit a wide variation of “operating points” for digital audio
 - The root of channel to channel variation
 - You also experience it on certain CD’s (classical and jazz)
- ▶ The ATSC started the work which led to A/85 back in 2007!
 - This is a “non-trivial” subject!



The Elephants in the Room

- ▶ The “CALM” Act - HR 1084
 - “Require the FCC ... to preclude commercials from being broadcast at a louder volume than the program material they accompany.”
- ▶ ITU-R BS.1770
 - Just how comfortable are we with its measurements?

