Dolby® Pulse combines the efficiency of High Efficiency AAC (HE-AAC) audio coding with Dolby’s proven quality and broadcast expertise. Available in 2009, Dolby Pulse will assure you of compatibility throughout your next-generation broadcast chain.

Worldwide, standards organizations are increasingly specifying HE-AAC in addition to Dolby Digital and Dolby Digital Plus for use in televisions and set-top boxes. Part of the MPEG-4 standard, HE-AAC offers high-quality multichannel sound at low bit rates, making it ideal for bandwidth-constrained applications.

However, HE-AAC is an open standard and broadcasters can choose from several options. The challenge will be to implement the right HE-AAC solution, one that combines operational transparency with efficiency and compatibility.

Dolby makes the choice easy: Dolby Pulse. The Dolby Pulse system uses the optimum-efficiency HE-AAC core originally created by Coding Technologies and adds true Dolby metadata capability. The metadata parameters match those in Dolby Digital, so that broadcasters and program makers can be confident about how their mix will sound, regardless of the broadcast format. Dolby Pulse will be fully supported by upstream Dolby products and technologies.

For broadcasters with significant bandwidth constraints, Dolby Pulse provides the capability to broadcast stereo and 5.1-channel audio at the lowest bandwidth rates while maintaining high audio quality. Because it includes Dolby metadata, Dolby Pulse is the one HE-AAC solution that eliminates the need for a stereo simulcast with a 5.1 broadcast, further reducing bandwidth.

Alone among the variety of available HE-AAC implementations, Dolby Pulse assures broadcasters that their content will deliver a reliable, consistent experience on every consumer device. Listeners will receive programming exactly as the content creators intended. In addition, Dolby Pulse provides complete operational transparency to the broadcaster, saving time and effort.

Dolby Pulse will also help manufacturers meet the requirements for HE-AAC in HD receivers, as specified by major European standards bodies including EICTA, the French and Spanish HD forums, and NorDig.
Complete Broadcast Solutions
Over the next five to ten years, broadcast content will be a mix of legacy MPEG and Dolby Digital codecs, together with next-generation HE-AAC and Dolby Digital Plus. Dolby has a long history of developing innovative technologies for each step of broadcast production and delivery. We provide the best solution for every broadcast situation to ensure maximum efficiency, consistency, and compatibility. Dolby Pulse joins Dolby Digital and Dolby Digital Plus in offering complete solutions for today and for the future.

Real-World Recommendations
We recommend Dolby Pulse, which will be available in 2009, for broadcasters who want:

- The best bandwidth savings. Dolby Pulse provides a multichannel audio signal as low as 160 kbps.
- To author one audio bitstream for both traditional (TV, set-top box) and nontraditional (mobile, PC, Internet) broadcast devices.
- To start high-efficiency stereo broadcasts using HE-AAC now and switch to fully 5.1-capable Dolby Pulse when it becomes available in 2009.

We recommend Dolby Digital Plus—available now—for broadcasters who want:

- Some bandwidth savings over Dolby Digital. Dolby Digital Plus provides a multichannel audio signal from 256 kbps.
- To offer even better sound on their HD services than on their existing 5.1-channel SD services. Dolby Digital Plus delivers advanced quality levels at slightly higher data rates.
- To add more channels to existing Dolby Digital services or platforms.
- To migrate to 7.1-channel audio within the next two years.
- Complete metadata support and full compatibility with existing home theaters.

In regions with no Dolby Digital services yet on-air, Dolby Pulse provides operators with an extremely bandwidth efficient format for audio transmission today. It will also be compatible with future enhancements that Dolby is developing to fully enable 5.1 audio support.

Our technologies, such as Dolby Digital, deliver high audio quality while enhancing operational efficiency and ensuring compatibility for broadcasters and consumers alike. We plan to implement Dolby Pulse in all areas of the broadcast chain: hardware, OEM products, and licensed encoder and decoder products.