

# Press Release

## **Coding Technologies, Philips and Linear Acoustic to unveil MPEG Surround/PCM multi-channel audio solution for professional broadcasting**

*New solution enables broadcasters to efficiently employ high quality multi-channel audio for contribution and distribution over existing stereo infrastructures*

**Vienna, Austria, Audio Engineering Society 122, May 7, 2007** — Coding Technologies, together with Philips Applied Technologies and Linear Acoustic, announced today the availability of a new professional broadcasting hardware/software solution based on MPEG Surround. The groundbreaking new solution enables the contribution and distribution of high quality multi-channel audio over existing stereo infrastructures. Linear Acoustic will be the first company to offer the new solution in their professional audio processing products.

Developed by Coding Technologies, Agere, Philips and Fraunhofer, MPEG Surround is a recently ISO standardized, codec agnostic compression technique for delivering multi-channel audio signals. In the new solution, MPEG Surround creates a stereo audio signal from a multi-channel audio source, and a small set of parameters describing the original surround sound signal.

The new solution employs MPEG Surround in conjunction with a digital PCM stereo audio signal and a technique from Philips Applied Technologies known as “Buried Data technique” to embed the MPEG Surround parameters into a fully backwards compatible PCM stereo audio signal. An MPEG Surround decoder can then recreate the full multi-channel audio based on the embedded MPEG Surround parameters.

The demonstration features an upMAX-MPS professional broadcasting encoder and decoder from Linear Acoustic, operating the MPEG Surround

and Buried Data technique to transport the multi-channel audio signal in high quality over a single AES/EBU stereo audio connection.

The combined MPEG Surround/PCM stereo audio combination represents the world's first solution for deploying high quality multi-channel audio for contribution and distribution in a professional broadcasting environment.

It is expected that such a solution will serve remote event locations with multi-channel audio production facilities such as sports venues or concert halls. The solution enables broadcasters to transport stereo and multi-channel audio, both in the highest possible quality, over a single AES/EBU connection to the studio, without any necessary change of the existing stereo infrastructure. The audio signal is then further utilized and delivered in plain stereo or multi-channel as required.

“As high definition content is entering digital broadcasting, multi-channel audio is at the very heart of user’s expectations”, says Stefan Meltzer, Vice President Business Development at Coding Technologies. “The combination of MPEG Surround and Philips’ buried data technique offers a highly efficient and flexible solution to the broadcaster, needing to deliver stereo and multi-channel audio.”

“In the development of new technologies for the media world, creating high synergies has always been our goal”, says Leon van de Kerkhof, program manager at Philips Applied Technologies. “As one of the developing parties of MPEG Surround, we are proud to also contribute our buried data technique to spur the adoption of surround sound in digital broadcasting. The early availability of the first professional encoder/decoder products is the most valid proof of concept a solution like this can achieve.”

“Working with Coding Technologies and Philips Applied Technologies, we are excited to offer the first practical embodiment of this excellent technology in professional broadcast hardware” offers Linear Acoustic president/founder Tim Carroll. “Combined with advanced audio metadata capabilities, this new hardware will further accelerate the rapid growth of surround sound production.”

The new combined MPEG Surround/PCM buried data solution will be demonstrated at the AES show at the Austria Center Vienna, from May 5-8, at Coding Technologies’ stand #2337.

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### **Coding Technologies**

*Coding Technologies provides the best audio compression for mobile, broadcasting, and Internet. SBR™ (Spectral Band Replication) from Coding Technologies is a backward and forward compatible method to enhance the efficiency of any audio codec; putting the "PRO" in mp3PRO and the "Plus" in aacPlus. Parametric Stereo from Coding Technologies and Philips again significantly increases the efficiency of audio codecs for stereo signals at low bit rates. Products from Coding Technologies are fundamental enablers of open standards such as 3GPP, 3GPP2, MPEG, DVB, Digital Radio Mondiale, HD Radio, and the DVD Forum.*

*Coding Technologies is a privately held company with offices in Sweden, Germany, China, and the USA. Founded in 1997 in Stockholm, the company later merged with a spin-off of the renowned Fraunhofer Institute in Germany, the inventor of MP3. Coding Technologies' customers include America Online, EMP, iBiquity Digital, KDDI, O2, Nokia, Orange, RealNetworks, SK Telecom, Sprint, T-Mobile, Thomson, Texas Instruments, Vodafone, and XM Satellite Radio.*

*For more information, visit [www.codingtechnologies.com](http://www.codingtechnologies.com).*

### **Linear Acoustic**

*Linear Acoustic is the designer and manufacturer of the acclaimed AEROMAX-TV™, StreamStacker™, upMAX™ and AutoNorm™ technologies. The company has been involved in projects with Sirius Satellite Radio, Microsoft, major terrestrial networks, multiple local stations, HBO, Viacom, Disney, Sony Studios and others. It is also actively involved in the ATSC and other industry organizations, as well as being members of the AES, IEEE and a sustaining member of the Society of Motion Picture and Television Engineers (SMPTE).*

*Company founder Tim Carroll previously served as Product Manager, Professional Audio Division, at Dolby Laboratories, where he helped define and develop Dolby Digital, Dolby E, and Dolby Surround products for HDTV, DVD, and Digital Cinema. He is also co-inventor of a patent-applied-for audio dynamic range processing system for professional and consumer applications. Tim remains actively involved in the creation of Digital Television standards and practices and is currently the chairman of the Standards Evaluation Working Group (SEWG) and of the Audio Issues Ad-hoc Group of the ATSC. He also authored "Audio Notes," a monthly column for "TV Technology" magazine and was a co-editor and co-author of the 10<sup>th</sup> Edition of the NAB Engineering Handbook.*

*For more information, please visit [www.linearacoustic.com](http://www.linearacoustic.com)*

**Royal Philips Electronics**

Royal Philips Electronics of the Netherlands (NYSE: PHG, AEX: PHI) is a global leader in healthcare, lifestyle and technology, delivering products, services and solutions through the brand promise of "sense and simplicity". Headquartered in the Netherlands, Philips employs approximately 124,300 employees in more than 60 countries worldwide. With sales of EUR 27.0 billion in 2006, the company is a market leader in medical diagnostic imaging and patient monitoring systems, energy efficient lighting solutions, personal care and home appliances, as well as consumer electronics.

News from Philips is located at [www.philips.com/newscenter](http://www.philips.com/newscenter).

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