



INFORMATION ON NEXT MEETING

## *Dolby in Broadcast Domain*

Thursday 9th of April 2009, 17h00 at Télévision Suisse Romande,  
20 Quai Ernest Ansermet Genève, Salle Soutter

**SPEAKER:** Jason Power – Dolby Laboratories

**ORGANISER:** Patrick Boehm - TSR

**LANGUAGE:** English

Exciting, immersive Dolby 5.1 surround sound is becoming not just an expected feature of DVDs but of digital broadcasts too - in fact, many consider it to be an essential part of new HD broadcasts.

This presentation considers the trends for 5.1 in broadcast and some of the key considerations, including the role of audio metadata and the use of Dolby E. The audio needs of next generation broadcast and other digital media systems are also considered and two new audio formats, HE-AAC and Dolby Digital Plus, will be introduced.

### **Biography:**

**Jason Power** is Director, Broadcast Systems at Dolby Laboratories in England. In this position, he works closely with broadcasters across Europe to encourage and enable the use of high quality surround sound and other Dolby technologies to enhance broadcast programming. In 2005, he was recognized by the Academy of Television Arts and Sciences for his contribution towards the Emmy Award winning technology Dolby E, used by broadcasters to simplify the adoption of digital surround sound.

In addition to his work with broadcasters, Jason has been an active contributor to the UK Department of Culture, Media and Sport committee on electronic cinema and the European Digital Cinema Forum.

Before joining Dolby, Jason worked with AMS Neve plc, supporting the development and use of the first digital audio mixing consoles in film and TV studios from Hollywood to Bombay. He holds a BSc in Applied Physics with Electronics from Aston University, England.

REPORT ON PREVIOUS MEETING

***AVB – Audio Video Bridging***

Tuesday, 17<sup>th</sup> of March 2009, Hotel Ador, Bern

**SPEAKER:** Attila Karamustafaoglu, Studer Professional Audio GmbH

**REPORTER:** Attila Karamustafaoglu

The meeting was attended by 18 people. After a short introduction, the motivation for a new standard has been explained. In short, AVB tries to eliminate all major disadvantages of current Ethernet based audio network technologies.

Next, the basic principle of AVB was explained. AVB consists of three main substandards, IEEE 802.1AS, IEEE 802.1Qat and IEEE 802.1Qav. The first substandard is related on IEEE 1588 and implements PTP, the precision timing protocol. This allows the node to be precisely synchronous to one grandmaster time. The grandmaster is automatically elected amongst the nodes according to attributes like priority and clock class. The second substandard defines how audio and video data is packed into Ethernet frames and sent over the network. In difference to most current standards, AVB defines a presentation time which makes sure that signals played out at multiple nodes are exactly synchronous. Further, AVB uses time stamping which enables audio and video streams with individual sampling rates to be transported over the network. The third substandard specifies queuing and forwarding rules and was not discussed in detail in the presentation.

As with IEEE-1394, the firewire standard, AVB uses the IEC-61883 protocol standard to specify how audio and video data is packed and interpreted. An overview of the protocol encapsulation was given.

To conclude the pros and cons of the standard were discussed and possible applications were presented. As the consumer industry is the main driver behind AVB, the vision is that all audio and video equipment will only have AVB Ethernet connectors in the future and cabling is simplified to maximum extent. Even standard data or internet traffic can be transported over AVB networks without disturbing the bandwidth sensitive audio and video streams. In fact today's data networks would be replaced by AVB networks. As the technology is relatively cheap, once implemented in silicon, this vision is quite realistic.

The discussion continued as usual at the following dinner at the restaurant Tre Fratelli nearby.

The presentation can be downloaded at: [http://www.swissaes.org/downloads/material\\_090317.zip](http://www.swissaes.org/downloads/material_090317.zip)