PRESS RELEASE

Fraunhofer IIS Demonstrates Real-Time MPEG-H Audio Encoder System for Broadcast Applications at IBC

Fraunhofer Achieves Critical Step Toward Deployment of MPEG-H System for Broadcast of Live Content

Amsterdam, September 10, 2014 – At IBC 2014 Fraunhofer IIS is showcasing the next milestone in interactive 3D sound transmission for broadcasters. This new TV audio system is based on the MPEG-H Audio standard, and will allow TV broadcasters to offer live broadcasts with object-based 3D audio across all devices, providing viewers the ability to tailor the audio to suit their personal listening preferences.

With the MPEG-H standard now completed, Fraunhofer is taking industry-leading steps in preparing for field tests and eventual deployment of the technology. Based on the AAC codec family and new technologies, this system will enable broadcasters to upgrade their existing system when adopting MPEG-H without having to go through major equipment changes.

"Our work with the new MPEG-H TV audio system so far has been done by capturing audio from a live event, and then encoding it with software on a computer. At IBC we are showing the next step for live broadcast use - the world's first real-time encoder for interactive and immersive TV audio. With this prototype hardware, we will be able to demonstrate how we can integrate MPEG-H into a broadcaster's plant for live trials and tests," said Robert Bleidt, General Manager, Audio and Multimedia Division, Fraunhofer USA Digital Media Technologies. "The system will encode elements of the audio as interactive objects so viewers at home may adjust the sound to their preference. This new hardware will give broadcasters the ability to encode true 3D sound, enhancing today's surround sound broadcasts to create a truly realistic audio experience," he added.

Head of Corporate Communications
Thoralf Dietz | Phone +49 9131 776-1630 | thoralf.dietz@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | Am Wolfsmantel 33 | 91058 Erlangen, Germany | www.iis.fraunhofer.de |

Head of Marketing Communications Audio & Multimedia
Matthias Rose | Phone +49 9131 776-6175 | matthias.rose@iis.fraunhofer.de | Fraunhofer Institute for Integrated Circuits IIS | www.iis.fraunhofer.de

US Contact
Jan Nordmann | Phone +1 408 573 9900 | Cell +1 408 390 6698 | press@dmt.fraunhofer.org | Fraunhofer USA, Inc. | Digital Media Technologies* | 100 Century Center Court | Suite 504 | San José, California 95112 | www.dmt.fraunhofer.org

At IBC (booth B80 in Hall 8), Fraunhofer IIS will feature a real-time hardware prototype with the ability to encode audio for live broadcasts from stereo up to 3D sound in 7.1+4 H format with additional tracks for interactive objects including commentary in several languages, ambient sound or sound effects.

Fraunhofer's real-time system is comprised of:

- real-time encoder for contribution from outside broadcasts to the studio, where a professional decoder recovers the uncompressed audio for further editing and mixing;
- real-time encoder for emission to consumers - over the Internet for new media use or for trials of upcoming over-the-air broadcast systems such as ATSC 3.0;
- professional decoder used to monitor the emission encoder's output.

At IBC Fraunhofer will be hosting a joint demo of MPEG-H for TV broadcasting in collaboration with Qualcomm, the primary supplier of mobile chipsets and software, and Technicolor, the leading provider of production services for content creators and distributors all over the world. Fraunhofer invites IBC attendees to visit Hall 8 and 8.B80 to hear the equipment on air. This demonstration builds upon Fraunhofer's pioneering work with the BBC on Dialogue Enhancement and 2014 field tests with major US broadcasters.

About Fraunhofer

When it comes to innovative audio technologies for the rapidly evolving media world, Fraunhofer IIS stands alone. For more than 25 years, digital audio technology has been the principal focus of the Audio and Multimedia division of the Fraunhofer Institute for Integrated Circuits IIS. From the creation of mp3 and the co-development of the AAC to the future of audio entertainment for broadcast, Fraunhofer IIS brings innovations in sound to reality.

Today, technologies such as Fraunhofer Cingo for virtual surround sound, Fraunhofer Symphoria for automotive 3D audio, AAC-ELD for telephone calls with CD-like audio quality, and Dialogue Enhancement that allows television viewers to adjust dialogue volume to suit their personal preferences are among the division's most compelling new developments.

Fraunhofer IIS technologies enable more than 7 billion devices worldwide. The audio codec software and application-specific customizations are licensed to more than 1,000 companies. The division's mp3 and AAC audio codecs are now ubiquitous in mobile multimedia systems.

Fraunhofer IIS is based in Erlangen, Germany and is a division of Fraunhofer-Gesellschaft. With more than 23,000 employees worldwide, Fraunhofer-Gesellschaft is comprised of 67 institutes and research units making it Europe's largest application-oriented research organization.

For more information, contact Matthias Rose, matthias.rose@iis.fraunhofer.de, or visit www.iis.fraunhofer.de/amm.