

PRESS RELEASE

PRESS RELEASEAugust 27, 2019 || Page 1 | 3

MPEG-H Audio selected to enhance Brazilian digital television with immersive and personalized sound

ERLANGEN, Germany/SÃO PAULO, Brazil: The SBTVD (Sistema Brasileiro de Televisão Digital / Brazilian Digital Television System) Forum has selected MPEG-H Audio for inclusion as an additional audio system in the ISDB-Tb specifications. This allows broadcasters to deliver immersive and personalized sound to Brazilian viewers over the existing SBTVD/ISDB-Tb system by simulcasting MPEG-H Audio alongside the existing AAC audio. Fraunhofer IIS and its technology partners EiTV and ATEME will showcase live ISDB-Tb broadcasting using MPEG-H Audio for the first time at the 2019 SET Expo trade show, taking place from August 27 to 29 in São Paulo, Brazil.

For the live transmission at SET Expo, ATEME's TITAN encoder will be used to encode audio and video content. It generates a transport stream containing two audio streams using AAC and MPEG-H Audio according to the ISDB-Tb specifications, while an EiTV Playout Professional headend device produces the necessary PSI/SI tables required for ISDB-Tb transmission and the final multiplex compatible with the specifications of the Brazilian SBTVD/ISDB-Tb pattern. ISDB-Tb signal reception will be performed by an EiTV smartBox with full support for the Brazilian Digital TV System interactivity standard DTVi.

Multiple professional MPEG-H production solutions will be on display at the 2019 SET Expo trade show. The Fraunhofer booth (Expo Center Norte Red, Sala 01 Rua A - Pavilhão Vermelho) also includes a real-time encoding-decoding chain and tools to produce 3D sound and interactive audio with MPEG-H. At the Solid State Logic (SSL) booth #106, visitors can step inside an OB truck supplied by Epah Estudios to experience an immersive and interactive MPEG-H production with material captured at the 2019 Eurovision Song Contest using a mixing console by SSL and a Linear Acoustic AMS Authoring and Monitoring System.

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 and Media Technologies

Matthias Rose | Phone +49 9131 776-6175 | amm-info@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@dmf.fraunhofer.org | Fraunhofer USA, Inc. | Digital Media Technologies* | 100 Century Center Court | Suite 504 | San José, California 95112 | www.dmf.fraunhofer.org

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

In addition, the Fraunhofer booth will be offering consumer demos such as the MPEG-H enabled Sennheiser AMBEO Soundbar as well as MPEG-H enabled TV sets from Samsung and LG that are already in use in South Korea.

PRESS RELEASEAugust 27, 2019 || Page 2 | 3

“We are excited that MPEG-H Audio has been selected for the Brazilian Digital Television System. This major enhancement will bring the most advanced audio experiences into Brazilian viewers’ homes. The maturity of the MPEG-H Audio system, its availability in professional broadcast equipment, and its advanced personalization features are key factors for fast adoption in the Brazilian market. We will continue to work closely with Brazilian broadcasters on enabling them to produce more and more MPEG-H content, as well as with local professional equipment manufacturers on updating their products with MPEG-H support,” says Adrian Murtaza, Senior Manager, Technology and Standards at Fraunhofer IIS.

Fraunhofer IIS experts will also participate in talks and panels at SET Expo:

- Adrian Murtaza will give a talk on “Broadcast Experience with MPEG-H Immersive and Personalized Audio” during the panel “TV 2.5: DTVPLAY, HDR and Immersive Audio,” taking place on Tuesday, August 27, 14:00–15:20.
- Yannik Grewe will give a presentation on “Broadcast experiences using the next-generation audio system MPEG-H 3D Audio” during the panel “Immersive Audio: From the Future to the Present,” taking place on Thursday, August 29, 9:20–10:40.

Visit Fraunhofer IIS and its technology partners at SET Expo: Sala 01 Rua A - Pavilhão Vermelho; EITV: Rua D, 109; ATEME: Rua E, 41; SSL: Rua E, 106.

About MPEG-H Audio

MPEG-H Audio provides immersive sound and enables the viewer to personalize a program’s audio mix, for instance by switching between different languages, adjusting the volume of a sports commentator, enhancing the dialogue, or choosing from various audio description options. Personalization features like the latter enable broadcasters or providers of video streaming services to offer more advanced accessibility services. In terms of content delivery and playback, MPEG-H Audio’s universal delivery concept ensures the best sound regardless of the consumer device or listening environment.

About Fraunhofer IIS

The Audio and Media Technologies division of Fraunhofer IIS has been an authority in its field for more than 30 years, starting with the creation of mp3 and co-development of AAC and HE-AAC. Today, almost all consumer electronic devices, computers and mobile phones are equipped with Fraunhofer’s media technologies. The technologies from the fourth generation of Fraunhofer audio codecs, along with the latest signal processing solutions, stand for impressive audio experiences and are tailored to their specific fields of application.

With the test plan for the Digital Cinema Initiative and the recognized software suite easyDCP, Fraunhofer IIS significantly pushed the digitization of cinema. The most recent technological achievements for moving pictures are light-field data processing tools and new low complexity codec standards for professional video production.

Fraunhofer IIS, based in Erlangen, Germany, is one of 72 institutes and research units of Fraunhofer-Gesellschaft, Europe’s largest application-oriented research organization.

For more information, contact amm-info@iis.fraunhofer.de or visit <http://www.iis.fraunhofer.de/amm>

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

The first trial using MPEG-H Audio in Brazil was conducted during the 2019 Rio Carnival by Fraunhofer IIS and TV Globo: it focused on the evaluation of production tools necessary for enabling advanced personalization features such as enhancing the dialog or choosing a “Sambadrome” version of the content without any commentary. Later in the year, this most advanced audio system for broadcast and streaming services was selected for inclusion as an additional audio system in the specifications of the Brazilian Digital Television system ISDB-Tb.

Furthermore, MPEG-H Audio is standardized in ATSC 3.0 and DVB, as well as in 3GPP. In South Korea, terrestrial ATSC 3.0 broadcasting with MPEG-H Audio is already on air, making MPEG-H the world’s first commercialized next-generation TV audio technology.

Professional broadcast equipment, including encoders and monitoring solutions, as well as decoders and consumer products, such as TV sets and soundbars, have been announced and introduced with MPEG-H support.

To learn more about MPEG-H Audio, please visit www.iis.fraunhofer.de/mpeg-h and www.mpegh.com

PRESS RELEASEAugust 27, 2019 || Page 3 | 3
