

PRESS RELEASE

PRESS RELEASEJuly 14, 2015 || Page 1 | 3

Jünger Audio Provides Level Magic™ Selective Loudness Processing For MPEG-H TV Audio System

Atlanta, GA (July 13, 2015) - Jünger Audio, the market leader in loudness control and audio processing for television broadcasting, and Fraunhofer IIS are presenting a prototype multi channel monitoring, authoring and loudness processor for the new MPEG-H TV audio system. The Jünger Audio technology allows broadcasters using the MPEG-H system to maintain compliance with loudness regulations while avoiding the processing artifacts of traditional loudness control approaches.

Since U.S. broadcasters became subject to sanctions for loud advertisements under the federal CALM Act, many TV networks, local stations, and cable or satellite operators adopted loudness processing as a precautionary measure. The available technologies required re-processing the broadcast programming at each point in the signal chain leading to a loss of dynamic range not only in commercials but also in programming. As a result, the overall quality of the broadcast audio can be diminished.

In the new MPEG-H system, content may be tagged to indicate it already has been processed or leveled for proper loudness control. This allows for managed loudness processing where loudness control is only engaged on unprocessed content, avoiding the degradation of multiple leveling passes. This happens in real time as the content is broadcast.

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@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

This automatic selective loudness control feature is integrated into the MPEG-H Audio Monitoring and Authoring Unit produced by Jünger Audio in collaboration with Fraunhofer IIS. It is scheduled to be showcased at the upcoming ATSC 3.0 audio demonstration event held in Atlanta July 12-16.

PRESS RELEASEJuly 14, 2015 || Page 2 | 3

“We are excited to work with Jünger Audio on this product as it will enable broadcasters to offer better audio quality while satisfying their viewer’s desire for consistent loudness. It is an example of how working with an open standard such as MPEG-H allows rapid innovation,” said Robert Bleidt, Division General Manager at Fraunhofer USA. “One application we see for this is control of loudness at network affiliates. The network signal may be leveled prior to distribution, and not touched by the Jünger Audio processing. Only the local ads and programming inserted by the affiliate will be processed, preventing double compression of the audio,” he added.

“When we started to develop our multi channel monitoring and authoring unit for use with the proposed new immersive audio formats, we knew that effective loudness control was going to be a vital requirement right from the beginning to ensure maximum audio quality and loudness that is consistent and compliant with existing regulations and recommendations,” explained Peter Poers, Managing Director of Jünger Audio GmbH. “Our years of experience in developing the Level Magic™ loudness management algorithm meant that we were perfectly placed to provide high performance technology allowing broadcasters to transition to the new emerging audio formats with confidence and minimal workflow changes, whilst ensuring that end users benefit from the enhanced listening experience with predictable and reliable results”.

Jünger Audio Level Magic™ loudness processing is the industry standard with more than 23,000 channels deployed worldwide. Designed to be audibly transparent, the algorithm is highly adaptive to the structure of the incoming audio and requires only a small number of parameters to be set by the user. The result is audio compliant with the selected standard but free of any unwanted artifacts such as pumping, breathing or distortion.

More information on the event can be obtained by mailing info@mpeghaa.com.

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS



PRESS RELEASE

July 14, 2015 || Page 3 | 3

The Jünger Audio MPEG-H Audio Monitoring and Authoring Units adapts today's 5.1 consoles for immersive audio production and allows operations to audition MPEG-H Audio in the plant as it will be reproduced on viewer's devices. © Fraunhofer IIS/Matthias Rose | Picture in color and print quality: www.iis.fraunhofer.de/en/pr

IN COOPERATION WITH

jünger

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 AAC to the future of audio entertainment for broadcast, Fraunhofer IIS brings innovations in sound to reality.

Fraunhofer IIS technologies enable more than 8 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 nearly 24,000 employees worldwide, Fraunhofer-Gesellschaft is comprised of 66 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.

About Jünger Audio

Established in Berlin in 1990, Jünger Audio specialises in the design and manufacture of high-quality digital audio dynamics processors. It has developed a unique range of digital processors that are designed to meet the demands of the professional audio market. All of its products are easy to operate and are developed and manufactured in-house, ensuring that the highest standards are maintained throughout. Its customers include many of the world's top radio and TV broadcasters, IPTV providers, music recording studios and audio post production facilities.

For more information, contact Anthony Wilkins, Anthony.wilkins@jungeraudio.com, or visit www.jungeraudio.com