PRESS RELEASE

Amazon Music and Fraunhofer are "driving immersive sound" with 360 Reality Audio in-car streaming at CES

Erlangen, Germany/Las Vegas, USA: Fraunhofer IIS, primary developer of the MPEG-H 3D Audio standard, and Amazon Music, the premium audio entertainment service, will demonstrate together at CES 2023 how immersive and authentic 360 Reality Audio music can sound in a vehicle<

Streaming services are the preferred way for consumers to enjoy audio content today. Several well-established services including Amazon Music offer an immersive audio experience powered by 360 Reality Audio, which is based on the MPEG-H Audio standard, to mobile and living room devices already. In-car entertainment makes for another perfect listening environment for immersive audio content including music, audio books and podcasts that can unlock the sound system's full potential.

During the live demo in an Audi e-tron that's equipped with a production 3D sound system, CES visitors will be able for the first time to experience Amazon Music's 360 Reality Audio immersive service streamed to an automotive environment.

Advanced in-car sound systems for premium, mid-range and even entry-level vehicles benefit from discrete spatial audio content that preserves the artist's intent and reproduce the best possible sound in the car. Rear-seat entertainment systems with installed screens can render immersive audio over headphones with headtracking and in addition make use of the interactivity, personalization and accessibility features of MPEG-H Audio that are already well-established in streaming and broadcast.
"Fraunhofer has a long and successful history of providing best-in-class automotive audio solutions to the industry," says Marc Gayer, Head of Business Department & Deputy Division Director Audio and Media Technologies at Fraunhofer IIS. "The availability of 360 Reality Audio content from Amazon Music in cars is the perfect match to the advancements in audio rendering capabilities that we've been striving for."

MPEG-H Audio also enables advanced warning sounds with spatially rendered signaling. Audio objects can be positioned freely within an MPEG-H Audio mix. Only one warning sound item needs to be produced across all car models and the warning sound will be rendered at the correct position according to the available playback system.

MPEG-H 3D Audio is the leading Next Generation Audio system used for immersive music streaming and TV broadcast. The 360 Reality Audio music format based on MPEG-H 3D Audio offers a new music ecosystem utilizing Sony's object-based 360 Spatial Sound technology. Now, artists and music creators can bring a spatial musical experience to their audience. When listeners hear content produced in the new format for 360 Reality Audio, they can be immersed in a field of sound exactly as intended by artists and creators. 360 Reality Audio music services are available from multiple streaming service providers worldwide, including Amazon Music.

To learn more, please visit https://mpegh.com/automotive/

The **Fraunhofer-Gesellschaft**, headquartered in Germany, is the world's leading applied research organization. Its research activities are conducted by 76 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of more than 30,000, who work with an annual research budget totaling more than 2.9 billion euros.

The **Fraunhofer Institute for Integrated Circuits IIS,** headquartered in Erlangen, Germany, conducts world-class research on microelectronic and IT system solutions and services. Today, it is the largest institute of the Fraunhofer-Gesellschaft. Research at Fraunhofer IIS revolves around two guiding topics:

For over 30 years, the institute's **Audio and Media Technologies division** has been shaping the globally deployed standards and technologies in the fields of audio and moving picture production. Starting with the creation of mp3 and continuing with the co-development of AAC and the Digital Cinema Initiative test plan, almost all consumer electronic devices, computers and mobile phones are equipped with systems and technologies from Erlangen today. Meanwhile, a new generation of best-in-class media technologies – such as MPEG-H Audio, xHE-AAC, EVS, LC3/LC3plus, Symphoria, Sonamic and upHear – is elevating the user experience to new heights. Always taking into account the demands of the market, Fraunhofer IIS develops technology that makes memorable moments.

More than 1100 employees conduct contract research for industry, the service sector and public authorities. Founded in 1985 in Erlangen, Fraunhofer IIS has now 14 locations in 10 cities: Erlangen (headquarters), Nuremberg, Fürth, Dresden, further in Ilmenau, Bamberg, Waischenfeld, Würzburg, Deggendorf and Passau. 75 percent of the budget of 191 million euros a year is financed by contract research projects. Approximately 25 percent is subsidized by federal and state funds as well as internal projects of the Fraunhofer-Gesellschaft. Detailed information on: www.iis.fraunhofer.de/en