

PRESS RELEASE

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Netflix Now Streaming xHE-AAC Audio on Android Mobile

Erlangen, January 12, 2021: Fraunhofer IIS, primary developer of the xHE-AAC audio codec, today announced that Netflix is now using the xHE-AAC audio codec. Netflix has licensed Fraunhofer's high-quality xHE-AAC software and is using it to encode its entire catalog of TV series, documentaries and feature films across a variety of genres and languages.

One of the key features of xHE-AAC for Netflix is the mandatory MPEG-D loudness and dynamic range control metadata. It allows service providers to embed content- and endpoint-specific metadata in the audio bit stream for transmission which can then be used on the playback side to achieve a consistent loudness level and optimal dynamic range for any playback device and environment. In a living room environment, a film can be enjoyed with the full dynamic range, the way that the mix was intended. The same film on a mobile device in a noisy environment might call for loudness management in order to be enjoyed with intelligible dialog. With MPEG-D metadata, a single stream meets the needs of both of these use cases -- and everything in between.

Also of interest is xHE-AAC's improved coding efficiency at low bit rates, its ability to scale up to perceptually-lossless quality at high bit rates, and the built-in seamless bit rate switching. This enables Netflix to always stream with an audio bit rate that matches the currently available Internet speed, achieving very high quality for high-bandwidth connections, and minimizing rebuffers during network congestion. "Our xHE-AAC audio codec has been designed from the ground up to improve the consumer experience for entertainment content especially in environments with limited Internet bandwidth," said Bernhard Grill, Director of Fraunhofer IIS. "With Netflix as

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the leader in video streaming worldwide, we couldn't have found a better launch partner for xHE-AAC in this market segment."

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About xHE-AAC

xHE-AAC is the latest member of the MPEG AAC audio codec family. Fraunhofer played a substantial role in the development of xHE-AAC and the MPEG-D DRC standard. xHE-AAC is natively supported in the latest Apple, Android and Amazon operating systems and products, and Fraunhofer's xHE-AAC implementation has recently been licensed to Microsoft. Professional xHE-AAC encoder software is available directly from Fraunhofer IIS or its streaming equipment partners. xHE-AAC and MPEG-D DRC patents are included in the AAC patent licensing program administered by VIA Licensing at no additional cost.

About Fraunhofer IIS

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.