PRESS RELEASE

Mobile World Congress 2017: Fraunhofer IIS Shows EVS Communication Codec Used for Hi-Fi Mobile Telephony Worldwide

ERLANGEN, Germany/BARCELONA, Spain – At Mobile World Congress in Barcelona, Spain, taking place from February 27 to March 2, 2017, Fraunhofer IIS will demonstrate Enhanced Voice Services (EVS), the 3GPP communication codec designed specifically for Voice over LTE (VoLTE) services. Today, EVS is supported by selected phone models, for example, from Samsung, LG or Sony and in use worldwide by leading carriers: NTT DoCoMo Japan, T-Mobile USA and Vodafone Germany have already enabled EVS-based calls in their LTE networks. In addition, multiple carriers in Asia have also integrated EVS into their networks.

The technology, co-developed by Fraunhofer IIS, enables cellphone calls that create the feeling of being in the same room with the other participant in the conversation. In addition to measurably improved speech quality, EVS helps wireless providers to enhance network coverage, especially inside buildings. Cellphones that currently support EVS include the LG G5, Samsung Galaxy S7/S7 edge, Sony Xperia X Performance, Sharp AQUOS Zeta, and Sony Xperia XZ.

EVS enhances speech services by covering the entire frequency range audible to humans. While the bandwidth for today's cellphone calls amounts to a maximum of 7 kilohertz, and 3.5 kilohertz for the majority of the time, EVS enables transmissions up to 16 kilohertz and beyond; which is the reason Vodafone Germany called its EVS-based service "Vodafone Crystal Clear®".

EVS supports bit rates from 5.9 kbit/s up to 128 kbit/s, super wide band with Full HD Voice quality is supported starting at 9.6 kbit/s. At common mobile data rates of 13.2 and 24.4 kbit/s the new standard delivers unprecedented speech quality that is cleaner and clearer. This allows carriers to optimize the performance and sound quality of their networks as required by their service.

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In addition, unintelligible phone calls due to packet loss in poor reception are becoming less likely with EVS. Packet loss can occur in mobile network services such as VoLTE and VoWiFi due to difficult network conditions. EVS reduces their impact by using one-of-a-kind tools. Other content, such as music, is also transmitted in Hi-Fi quality. Furthermore, EVS is backwards compatible with AMR-WB, allowing the audio signal to switch seamlessly between VoLTE (4G) and circuit switched networks (3G) when network conditions warrant a transition.

Visitors at Mobile World Congress in Barcelona from February 27 to March 2, 2017 will be able to experience the advantages of EVS with a demonstration of Vodafone Germany's "Vodafone Crystal Clear®" service, as well as an EVS offline demo at booth 7G31.

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 Media Technologies 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.

Today, technologies such as Fraunhofer Cingo for virtual surround sound, Fraunhofer Symphoria for automotive 3D audio, AAC-ELD and EVS for telephone calls with CD-like audio quality, and MPEG-H Audio 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 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 24,000 employees worldwide, Fraunhofer-Gesellschaft is comprised of 67 institutes and research units making it Europe's largest application-oriented research organization.

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