

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

PRESS RELEASE

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Fraunhofer and Sinclair to Collaborate Towards Integrating Digital Radio Mondiale Framework into the ATSC 3.0 Digital TV Platform

Erlangen, Germany: Fraunhofer IIS, primary developer of the xHE-AAC audio codec and long-time member of the ATSC as well as the DRM Consortium, and Sinclair Broadcast Group (Nasdaq: SBGI), a diversified media company and leading provider of local sports and news in the U.S., are joining forces to bring the best possible digital radio experience based on DRM to users of the ATSC 3.0 digital TV platform.

Digital Radio Mondiale (DRM) is the open ITU-endorsed radio standard and the digital successor to the classic analog AM and FM band broadcast services. It offers listeners an innovative next-generation radio experience, based on xHE-AAC – today's most efficient high-quality audio codec and the latest member of the successful AAC family – and Journaline, the on-demand information service with hybrid interactive functionality. While xHE-AAC's efficiency opens up the potential for additional specialized audience channels and pop-up stations, Journaline creates whole new feature applications and revenue potential for broadcasters apart from classic on-air advertisement.

The collaboration of Sinclair and Fraunhofer IIS aims at establishing the seamless transport of DRM based services with all their advanced digital radio features on the ATSC 3.0 TV platform. This allows established DRM broadcasters to create the DRM content once and then distribute it simultaneously via dedicated digital AM/FM transmissions and on the digital TV platform. Listeners can enjoy a seamless and full-featured digital radio experience across all broadcast platforms using any reception device – from stand-alone radio and TV sets to mobile phones and in-car receivers.

"Both the ATSC 3.0 digital TV and the DRM digital radio standards are really gaining momentum all over the world. On air in South Korea since 2017 and with the recently started rollout in the US, the ATSC 3.0 TV standard has proven to be a success. It also receives growing attention in more and more countries worldwide including India. The same holds true for DRM digital radio, which is adopted in a steadily growing number of countries all over the world. Bringing the rich digital radio experience of DRM to the innovative ATSC TV platform is a perfect win-win situation for users and broadcasters

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alike," says Alexander Zink, Senior Business Development Manager for Broadcast Applications at Fraunhofer IIS.

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Sinclair Broadcast Group and Fraunhofer IIS have identified immense potential and significant benefits for all stakeholders resulting from this tight technology integration, which deploys DRM as the common digital radio solution across multiple transmission platforms. A demonstration is currently in preparation to prove the easy transmission of existing DRM based digital radio services over ATSC 3.0, and to showcase the easy integration of DRM reception on ATSC 3.0 receivers, including mobile phones.

This joint project is expected to open the door to close collaboration between the respective standard bodies, the ultimate goal being the adoption of both standards worldwide for the benefit of broadcasters and listeners alike.

Mark Aitken, SVP of Sinclair Broadcast Group and President of ONE Media 3.0 LLC, stated: "Radio is in everyone's life on a daily basis. Bringing audio services to the ATSC 3.0 platform with its advanced interactive environment and to our 'MarkONE' mobile phone adds new life and opportunities to a timeless medium as well as addressing 'Direct to Mobile' market segments easily. With the efficiency of the DRM platform's xHE-AAC audio codec it is possible to offer hundreds of audio services to answer the needs of diverse audiences and cater for multilingual, multicultural or diverse tastes. And by combining these classic radio services with innovative radio applications such as Journaline, the needs of new market segments can be easily addressed."

About Fraunhofer IIS

The Audio and Media Technologies division of the Fraunhofer Institute for Integrated Circuits 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 fourth generation of Fraunhofer audio codecs, along with the latest signal processing solutions, stands for impressive audio experiences and is tailored to specific fields of application: xHE-AAC for DRM digital radio and Internet streaming with very low bitrates, dynamic bitrate adaptation and loudness support; MPEG-H for immersive and interactive sound in UHD TV; and EVS for Hi-Fi guality calls in LTE and 5G networks.

Fraunhofer IIS is also a leading supplier in the field of broadcast encoder and receiver components for the open digital radio standards DRM (Digital Radio Mondiale) and DAB, with Fraunhofer's ContentServer head-end technology in worldwide operation and empowering a wide range of transmission equipment.

Fraunhofer IIS, based in Erlangen, Germany, is one of 75 institutes and research units of Fraunhofer-Gesellschaft, Europe's largest application-oriented research organization.

For more information, contact <u>audio-info@iis.fraunhofer.de</u> or visit <u>www.iis.fraunhofer.de/broadcast</u>



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Sinclair's MarkONE mobile phone receiving an ATSC3.0 transmission with full-featured DRM radio services © Sinclair Broadcast Group

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