PRESS RELEASE

INNOPIA Technologies Inc. Adds Fraunhofer's MPEG-H TV Audio System To World's First Universal ATSC 3.0 Set-Top Box

Erlangen, Germany and Las Vegas, Nevada – Any TV in the Republic of Korea will be able to tune into ATSC 3.0 over-the-air broadcasts when connected to INNOPIA Technologies' IMT-M6400, a set-top box (STB) that incorporates an ATSC 3.0 tuner, accesses broadcasters' interactive Internet-delivered content, and features Fraunhofer IIS's MPEG-H 3D Audio technology.

The MPEG-H TV Audio System, developed primarily by Fraunhofer's audio experts, enhances the listening experience by offering personalization features, immersive sound, and optimization of sound to the type and configuration of the receiving device. For broadcasters and streaming services, the MPEG-H TV Audio System enables the cost-effective delivery of multichannel audio combined with a new user experience. Broadcasters and service providers can implement the MPEG-H TV Audio System without changing their internal plant infrastructure.

INNOPIA's IMT-M6400, unveiled at the NAB Show in Las Vegas, Nev., will be available in Korea in the fourth quarter of 2018.

Until now, add-on ATSC 3.0 tuners in Korea have worked only with select brands and models of 4K Ultra HD (UHD) TVs, but INNOPIA's universal model connects to any TV with HDMI inputs to receive terrestrial UHD TV broadcasts with MPEG-H 3D Audio.

Another key differentiator is the STB's ability to combine terrestrial broadcast- and broadband-delivered content. With the STB's remote control, the terrestrial UHD hybrid STB lets TV viewers, at any time, select broadband-delivered interactive content related to the over-the-air terrestrial TV broadcast that they are watching, including sports statistics, additional video on demand (VOD) based on curation services, and even multi-user quizzes in which remote viewers play against one another. Interactive

content could also include a choice of different viewing angles at sports events, a program guide with the option to switch channels, and interactive ads.

INNOPIA's IMT-M6400 is the first STB to incorporate TIVIVA, a broadband service launched by Korean broadcasters KBS, MBC and SBS. TIVIVA is based on IBBTV, the Korean version of Hybrid broadcast broadband TV (HbbTV) technology, which represents a global initiative aimed at harmonizing the broadcast and broadband delivery of entertainment services to consumers through connected smart TVs and connected STBs.

In addition to ATSC 3.0 broadcast service, the INNOPIA STB also features web-based OTT video services, including YouTube, as well as video streaming to a TV screen from connected mobile devices or computers based on Miracast and DLNA networking technologies.

With the integration of the MPEG-H TV Audio System into the STB, all the aforementioned services can benefit from the innovative, interactive object-based audio features. For example, listeners could raise the level of dialog so that on-screen conversations are audible during soft passages in noisy listening environments. Viewers could also raise the loudness level of sports commentary above the roar of the stadium crowd, choose to listen to the home-team or visiting-team announcer, or select individual car-to-pit-crew radio conversations during an auto race, depending on whether the broadcaster provides these options.

For more information, visit www.iis.fraunhofer.de/tvaudio and www.innopiatech.com.

About INNOPIA Technologies Inc.
INNOPIA Technologies Inc. of Seongnam-si, Republic of Korea, offers the most optimized and well-developed convergence products with all-IP technology to provide future-proof services in the multimedia and IoT businesses, including IP set-top boxes, smart home IoT gateways, and voice-controlled AI solutions. Based on its highly skilled engineering resources and experience in working with a number of global companies, INNOPIA delivers the right solution for international telecom companies' and pay-TV service providers' future-driven requirements.

About Fraunhofer IIS

The Audio and Media Technologies division of Fraunhofer IIS has been an authority in its field for more than 25 years, starting with the creation of mp3 and co-development of AAC formats. Today, almost all consumer electronic devices, computers and mobile phones are equipped with Fraunhofer's media technologies, and over one billion new products are added every year. Besides the global successes mp3 and AAC, the Fraunhofer technologies that improve consumers' audio experiences include Cingo® (spatial VR audio), Symphoria® (automotive 3D audio), xHE-AAC (adaptive streaming and digital radio), the 3GPP EVS VoLTE codec (crystal clear telephone calls), and the interactive and immersive MPEG-H TV Audio System.

With the test plan for the Digital Cinema Initiative and the recognized software suite easyDCP, Fraunhofer IIS significantly pushed the digitization of cinema. The most recent technological achievement for moving pictures is Realception®, a tool for light-field data processing.

Fraunhofer IIS, based in Erlangen, Germany, is one of 72 institutes and research units of Fraunhofer-Gesellschaft, Europe's largest application-oriented research organization.

For more information, contact amm-info@iis.fraunhofer.de, or visit http://www.iis.fraunhofer.de/amm.

INNOPIA Technologies IMT-M6400 set-top box.
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