

Field Testing of HEVC based Terrestrial UHD 3D Broadcast in ATSC 3.0

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Abstract—ATSC 3.0 is the first Internet Protocol (IP) integrated standard with a flexible structure suitable for both broadcasting and broadband simultaneous transmission and reception for various formats of media. The user-selectable Ultra High Definition (UHD) stereoscopic 3D media system is the head-end system for selectively receiving immersive media, i.e., 3D media, virtual reality (VR) etc, without using more bandwidth while maintaining compatibility with 2D High Definition (HD) and fixed 2D UHD media transmission and reception services suitable for mobiles in ATSC 3.0. In this paper, we describe the field test results of High-Efficiency Video Coding (HEVC)-based media transmission and reception techniques developed for existing 2D media service compatible stereoscopic media service. ATSC 3.0 developed a technology for simultaneous transmission and reception of 2D and 3D videos based on HEVC encoding, which was performed as the world's first field test.

Keyword—ATSC 3.0, stereoscopic 3D video, UHD 3D TV, HEVC, 2D-3D simulcast, broadcasting field test



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