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## 8K Super Hi-Vision Satellite Broadcasting System

Towards test broadcasting of 8K Super Hi-Vision in 2016

### Outline

We are researching efficient video coding technology and large-capacity satellite transmission technology in expectation of the launch of 8K Super Hi-Vision (8K SHV) test broadcasting in 2016. We are exhibiting a satellite broadcasting system that uses these two technologies.

### Features

#### System intended for test broadcasting in 2016

The test broadcasting starting in 2016 will efficiently compress 8K SHV video while maintaining high image quality by using the latest video coding scheme, MPEG-H HEVC/H.265<sup>\*1</sup>, and transmit it in compliance with the ARIB standard, "Transmission System for Advanced Wide Band Digital Satellite Broadcasting".

#### Satellite broadcasting transmission system enabling large-capacity transmission

By increasing the symbol rate and utilizing 16APSK (7/9)<sup>\*2</sup>, we can transmit a signal of approximately 100 Mbps using a single satellite transponder.<sup>\*3</sup>

#### Improvement of 8K SHV HEVC encoder

The exhibit features our 8K SHV real-time encoder with the latest video coding scheme, HEVC. We have improved the image quality by adjusting the rate control method and added a multiplexing function.

### Future plans

We are working on an 8K SHV codec system incorporating the HEVC scheme and MMT<sup>\*4</sup> and on 8K SHV satellite broadcasting using the 12-GHz band.

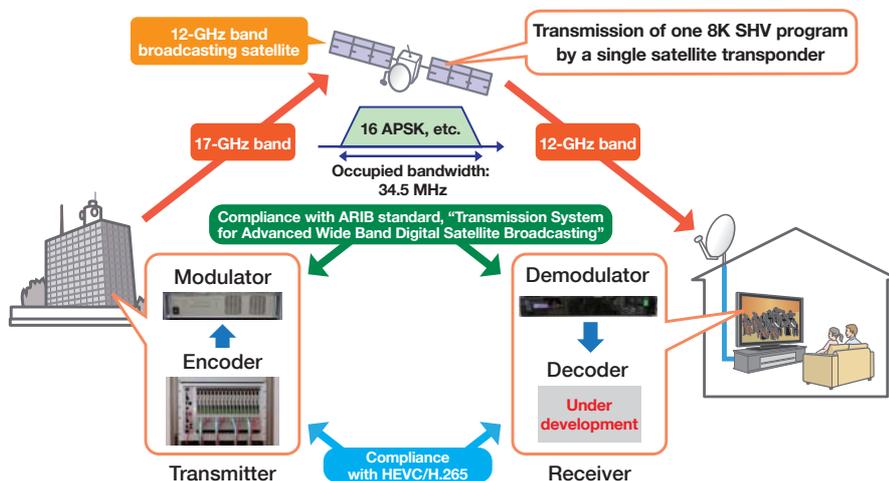
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\*1 MPEG-H HEVC (High Efficiency Video Coding)/H.265: A video coding scheme which was standardized internationally in a collaboration between ISO/IEC and ITU in 2013.

\*2 16APSK (7/9): One of transmission parameters in this system. Using a modulation method that transmits four bits of information simultaneously to make the carrier wave 16-ary amplitude and phase differences, we use 7/9 as the coding ratio of error correction. (APSK: Amplitude and Phase-Shift Keying)

\*3 The worst-month availability in the Radio Regulations is at least 99.7% at the upper limit (60 dBW) of output power.

\*4 MMT (MPEG Media Transport): International standard multiplexing method that supports delivery of multimedia content over heterogeneous networks.



Outline of 8K SHV test broadcasting