

ITU-R

Radiocommunication Sector of ITU

Recommendation ITU-R BT.2073-0
(02/2015)

Use of the high efficiency video coding (HEVC) standard for UHD TV and HDTV broadcasting

BT Series
Broadcasting service
(television)



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Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Annex 1 of Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at <http://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

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RECOMMENDATION ITU-R BT.2073-0

**Use of the high efficiency video coding (HEVC) standard
for UHDTV and HDTV broadcasting**

(Question ITU-R 12-3/6)

(2015)

Scope

This Recommendation specifies the use of the High Efficiency Video Coding (HEVC) standard as per Recommendation ITU-T H.265 | ISO/IEC 23008-2 for ultra-high definition television (UHDTV) and high definition television (HDTV) broadcasting.

Keywords

UHDTV, HDTV, Sub layered coding, parallel coding sub bit stream

The ITU Radiocommunication Assembly,

considering

- a) that there are applications where UHDTV and HDTV programme material is desired to be transported at a highly reduced bit rates with minimal visible degradation in quality;
- b) that Recommendation ITU-R BT.2020 specifies the parameters for a family of UHDTV video systems;
- c) that Recommendation ITU-R BT.709 specifies the parameters for a family of HDTV video systems;
- d) that Recommendation ITU-T H.265 | ISO/IEC 23008-2 specifies the High Efficiency Video Coding (HEVC) standard that enables significantly improved compression performance relative to former standards;
- e) that HEVC is increasingly adopted for various applications including broadcasting,

recommends

that when it is necessary to transport UHDTV and HDTV programme material at a highly reduced bit rate for broadcasting, the High Efficiency Video Coding (HEVC) standard specified in Recommendation ITU-T H.265 | ISO/IEC 23008-2 should be used.

Note 1 – Annex 1 shows basic parameters for UHDTV and HDTV broadcasting using the HEVC standard.

Note 2 – Annex 2 shows a preferred coding scheme for temporal sub-layer coding of UHDTV at 120 or 100 Hz frame frequency using the HEVC standard.

Note 3 – Annex 3 shows a preferred coding scheme for interlaced video using the HEVC standard.

Note 4 – Annex 4 shows a preferred parallel coding scheme for the 7 680 × 4 320 format of UHDTV using the HEVC standard.