



Recommendation ITU-R BT.2020-2
(10/2015)

**Parameter values for ultra-high definition
television systems for production
and international programme exchange**

BT Series
Broadcasting service
(television)



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.2020-2

Parameter values for ultra-high definition television systems for production and international programme exchange

(2012-2014-2015)

Scope

Ultra-high definition television (UHDTV) will provide viewers with an enhanced visual experience primarily by having a wide field of view both horizontally and vertically with appropriate screen sizes relevant to usage at home and in public places. UHDTV applications require system parameters that go beyond the levels of HDTV. This Recommendation specifies UHDTV image system parameters for production and international programme exchange.

Keywords

UHDTV, image system parameters, wide field of view, television system, international programme exchange

The ITU Radiocommunication Assembly,

considering

- a) that digital terrestrial television broadcasting (DTTB) service has been introduced by some administrations since 1997 and can provide high quality television programmes through HDTV systems;
- b) that viewers expect future TV systems beyond HDTV to provide improved characteristics compared with the current HDTV systems in terms of a more realistic sensation, greater transparency to the real world, and more accurate visual information;
- c) that ultra-high definition television (UHDTV) is expected to become available in the near future with, *inter alia*, larger screens, higher spatial/temporal resolution, wider colour gamut, wider dynamic range, etc. taking into account developments of display technology;
- d) that ITU-R has been studying extremely high-resolution imagery (EHRI) and an expanded hierarchy of large screen digital imagery (LSDI) image formats and has established ITU-R Recommendations: Recommendation ITU-R BT.1201-1 providing the guidelines of image characteristics for extremely high-resolution imagery, and Recommendation ITU-R BT.1769 offering the parameter values for an expanded hierarchy of LSDI image formats;
- e) that LSDI is a system providing a display on a very large screen, typically for public viewing. This can be used in a wide variety of applications including programme presentations such as dramas, plays, sporting events, concerts, etc.;
- f) that EHRI is a system offering higher resolution than HDTV and can be used for both broadcasting and non-broadcasting applications (e.g. computer graphics, printing and medical applications);
- g) that UHDTV provides viewers with an enhanced visual experience primarily by a wider field of view that covers a considerable part of the human natural visual field with appropriate screen sizes relevant to usage at home and in public places;
- h) that signal formats contributing to increasing the compression efficiency are desirable for UHDTV systems since they have a larger number of pixels than HDTV systems,