



Recommendation ITU-R BT.2123-0
(01/2019)

**Video parameter values for advanced
immersive audio-visual systems
for production and international
programme exchange in broadcasting**

BT Series
Broadcasting service
(television)



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Foreword

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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.2123-0

Video parameter values for advanced immersive¹ audio-visual systems for production and international programme exchange in broadcasting

(2019)

Scope

Advanced immersive audio-visual (AIAV) systems will provide viewers with immersive experiences with an unprecedented degree of presence by enabling a wide field of view of their desired direction. In order to produce high-quality comfortable images, AIAV systems require video system parameters that go beyond the levels of UHDTV as well as additional system parameters to support omnidirectional image representation. This Recommendation specifies AIAV system parameters for production and international programme exchange.

Keywords

Immersive media, virtual reality, 360° video, system parameters, projection mapping

The ITU Radiocommunication Assembly,

considering

- a) that virtual reality, 360° video, and other immersive media technologies have caught the attention of the content providers, audiences, and the associated consumer technology vendors;
- b) that television and radio programme makers and others are exploring advanced immersive systems to enhance the audiences' experience of their content;
- c) that currently immersive media content is usually acquired and produced to the requirements of specific delivery or distribution technologies;
- d) that currently no worldwide standards or recommended practices exist for production, mastering, and exchange of virtual reality, 360° video, and other immersive programmes in broadcast;
- e) that broadcasters are distributing a wide variety of content to audiences via an increasing number of interactive delivery platforms;
- f) that making virtual reality 360° images high quality and comfortable requires having a significantly high spatial resolution;
- g) that specifying parameter values of audio-visual components for advanced immersive audio-visual (AIAV) systems for production of professional linear content facilitates producing a variety of AIAV content,

recommends

that for production and international exchange of AIAV content, the specifications described in this Recommendation should be used.

¹ The term “Immersive” in the context of this Recommendation is deemed to include any format or medium or platform that offers or engages an audience in a way that enables any form of interaction or control of the content's presentation.