



Recommendation ITU-R BT.2095-1
(06/2017)

**Subjective assessment of video quality
using expert viewing protocol**

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.

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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.2095-1

Subjective assessment of video quality using expert viewing protocol

(2016-2017)

Scope

This Recommendation describes the method to subjectively assess video quality of moving images by means of the expert viewing protocol, with the participation of a reduced number of viewers, all selected among experts in the relevant video processing area.

Keywords

Television, video quality, subjective assessment, expert viewing

The ITU Radiocommunication Assembly,

considering

- a) that source coding technologies for digital television applications are continuously improving both in efficiency and in visual performance;
- b) that the continuous evolution of video coding technologies implies an ever increasing demand for evaluation methods to assess technical and visual performances;
- c) that the compression efficiency and visual performances of new video source coding technologies require new and more efficient visual assessment and ranking methods;
- d) that the evaluation methods specified in current ITU-R Recommendations is highly demanding in terms of time and human resources, and that they often do not take into account the technical evolution of the displays and of the final user fruition;
- e) that new approaches in expert viewing protocols have recently shown better efficiency and performance, in terms of time and overall cost, compared to those provided by methods based on the use of non-expert viewers;
- f) that if the results of expert viewing protocol cannot be considered as a replacement of the results provided by a formal subjective assessment protocol, the results of expert viewing protocol can be considered a valuable preliminary indication of the performances of the systems under test;
- g) that the growing technology evolution in the area of flat panel displays has drastically modified the viewing condition normally used by experts;
- h) that ISO/IEC have already successfully used new protocols based on expert viewing in the evaluation of new video source coding technologies,

recommends

- 1 that, in the assessment of new digital video coding technologies, consideration should be given to the use of the expert viewing protocol, described in Annex 1;
- 2 that the expert viewing protocol should be implemented using professional flat panel displays and the laboratory set-up described in Annex 1.

Note 1 – Annex 2 (informative) shows results of subjective experiment using the expert viewing protocol as mentioned in *considering h*).