



Recommendation ITU-R BT.1790-1
(06/2022)

**Requirements for monitoring of
broadcasting chains during operation**

BT Series
Broadcasting service
(television)



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Foreword

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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	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.1790-1

Requirements for monitoring of broadcasting chains during operation

(Questions ITU-R 44/6 and ITU-R 109/6)

(2007-2022)

Scope

This Recommendation describes broadcasters' requirements for operational monitoring in digital broadcasting chains. Monitoring issues are first categorized into status monitoring and quality monitoring, and the requirements are itemized in each category.

Keywords

Broadcast chains, quality monitoring, status monitoring

The ITU Radiocommunication Assembly,

considering

- a) that broadcasting chains consist of contribution and distribution networks which include production, post-production, satellite, terrestrial emissions, internet and other hybrid distribution processing;
- b) that the whole delivery chain is composed of a multiplicity of cascaded processing devices such as converters, encoders, switches, gateways, multiplexers, modulators and receivers among others;
- c) that digital audio-visual and audio services have rapidly developed based on advances in digital signal processing, compression and communication technologies;
- d) that digital compression coding technologies have enabled the widespread growth of high-quality multichannel audio-visual services;
- e) that digital broadcasting technologies are becoming more complex including not only purely broadcast technologies but also multipoint and point-to-point technologies;
- f) that monitoring approaches and technologies are in continuous development due to appearance of new software and hardware elements with high speed processing;
- g) that due to some unification of transmission protocols and widespread use of telecommunication network infrastructure the delivery of monitoring information via non-broadcast networks is possible;
- h) that a unified approach for monitoring for every step in a broadcasting chain would facilitate the development of reliable, efficient and cost-effective monitoring systems for broadcasting chains;
- i) that broadcasters are seeking to provide guidance to equipment manufacturers on the operational monitoring requirements in broadcasting chains,

recommends

that the broadcaster's requirements for operational monitoring described in Annex 1 should be taken into account for the development of monitoring systems in broadcasting chains.