QUESTION ITU-R 109-1/6[[1]](#footnote-1)\*

In-service monitoring of perceived audiovisual quality
for broadcasting and distribution networks

(2003-2023)

The ITU Radiocommunication Assembly,

considering

*a)* that digital audiovisual services continue to develop rapidly due to advances in digital signal compression and communication technologies;

*b)* that the digital services are characterized by a multiplicity of signals including video signals, audio signals and programme‑related data and metadata streams;

*c)* that the synchronicity of all components of an audiovisual programme is an important issue;

*d)* that broadcasting distribution and networks for digital systems are composed of a multiplicity of cascaded links such as satellites, terrestrial radio links, computer networks and wireless broadcasting or cable distribution to the end-user;

*e)* that the end-to-end broadcasting supply chain is composed of a multiplicity of cascaded processing systems employing a mixture of hardware, software and virtual cloud-based processing such as converters, encoders, switches, multiplexers, modulators, receivers, etc;

*f)* that different components of an audiovisual programme might be transported over different paths;

*g)* that analogue and digital disturbances or errors on the delivery chain introduce different types of impairments;

*h)* that some of these disturbances are unperceivable because of error concealment strategies built into the network and do not influence the perceived audiovisual quality;

*i)* that Recommendation ITU-R BT.1790 describes broadcasters’ requirements for operational monitoring in digital broadcasting chains;

*j)* that Recommendation ITU-R BS.1387 offers ways to evaluate the perceived audio quality of mono and stereo signals in the presence of a full-bandwidth unimpaired reference signal;

*k)* that complex digital broadcasting supply chains include processing by multiple organizations who may use different proprietary quality monitoring solutions that also report any issues in a variety of different ways

*l)* that quality evaluation in general has been recognized both by ITU-R and ITU-T and they both have set up Questions on studies related to this topic;

*m)* that none of these Questions is related to in-service quality monitoring of perceived quality,

decides that the following Question should be studied

1 What are the appropriate methods and techniques for in-service monitoring of the perceived audio visual quality for broadcasting and distribution networks?

2 What common descriptors, programme-related data and metadata formats and information exchange mechanisms are appropriate for the exchange of the perceived quality data?

further decides

1 that cooperation with other the ITU-T and other relevant bodies is required to allow the selection of the appropriate methods and techniques;

2 that the studies above should result in ITU-R Recommendations;

3 that the studies should be completed by 2027

Category: S2

1. \* This Question should be brought to the attention of Telecommunication Standardization Study Group 9. [↑](#footnote-ref-1)