QUESTION ITU-R 137-1/6

**Internet Protocol (IP) interfaces for programme production and exchange**

(2012-2019)

The ITU Radiocommunication Assembly,

*considering*

*a)* that a Serial Digital Interface (SDI) has constant but limited bandwidth and limited operational flexibility compared to IP over Ethernet;

*b)* that high-speed IP transmission over wide area telecommunication networks including wireless networks has become available;

*c)* that SDI signals including audio, video, and ancillary signals can be transported over IP networks;

*d)* that IP interfaces can transport various signals, including real-time uncompressed audio/video signals, real-time compressed audio/video signals and associated metadata in addition to non-real-time data;

*e)* that a precise synchronization mechanism between devices over IP has been developed and widely used;

*f)* that information technologies including IP have rapidly progressed and are being introduced in programme production and exchange,

*recognizing*

that ITU-R has established Recommendation ITU-R BT.1720 which specifies quality of service ranking and measurement methods for digital video broadcasting services over broadband IP networks,

*decides* that the following questions should be studied

1 What protocols and parameters over IP interfaces should be chosen for programme production and exchange?

2 What are the performance requirements (e.g. network latency and transmission errors) for the IP network used in programme production and exchange to ensure both real-time and non‑real-time transfers of programme material?

3 What device capabilities are required to utilize IP interfaces for programme production and exchange?

4 What system monitoring and network control should be employed?

5 What provisions should be taken to monitor the Quality of Service (QoS) to ensure required quality of transmitted signals?

6 What provisions should be taken to ensure security in the transport of broadcast programme signals and devices connected with IP interfaces?

7 What conversion latencies can be permitted at broadcast signal reconstruction points such as mixers and switchers?

*further decides*

1 that the results of the above studies should be included in (a) Report(s) and/or Recommendation(s);

2that the Question should be brought to the attention of ITU-T Study Groups 9, 12 and 17;

3that the above studies should be completed by 2023.

Category: S3