

INTERNATIONAL TELECOMMUNICATION UNION



Radiocommunication Bureau

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Administrative Circular CACE/589

30 October 2012

**To Administrations of Member States of the ITU, Radiocommunication Sector Members,
ITU-R Associates participating in the work of the Radiocommunication
Study Group 6 and ITU-R Academia**

Subject: Radiocommunication Study Group 6 (Broadcasting service)

- **Approval of 1 new ITU-R Question and 2 revised ITU-R Questions**
- **Suppression of 1 ITU-R Question**

By Administrative Circular CACE/580 of 17 August 2012, 1 draft new ITU-R Question and 2 draft revised ITU-R Questions were submitted for approval by correspondence in accordance with Resolution ITU-R 1-6 (§ 3.1.2).). In addition, Question ITU-R 125/6 was proposed for suppression following the approval of Question ITU-R 128-2/6.

The conditions governing this procedure were met on 17 October 2012.

The texts of the approved Questions are attached for your reference (Annexes 1 to 3) and will be published in Revision 1 to [Document 6/1](#) which contains the ITU-R Questions approved by the 2012 Radiocommunication Assembly and assigned to Radiocommunication Study Group 6. The suppressed ITU-R Question is indicated in Annex 4.

François Rancy
Director, Radiocommunication Bureau

Annexes: 4

Distribution:

- Administrations of Member States and Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 6
- ITU-R Associates participating in the work of Radiocommunication Study Group 6
- ITU-R Academia
- Chairmen and Vice-Chairmen of Radiocommunication Study Groups and Special Committee on Regulatory/Procedural Matters
- Chairman and Vice-Chairmen of the Conference Preparatory Meeting
- Members of the Radio Regulations Board
- Secretary-General of the ITU, Director of the Telecommunication Standardization Bureau, Director of the Telecommunication Development Bureau

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Annex 1

QUESTION ITU-R 137/6

Internet Protocol (IP) interfaces for the transport of broadcast programmes

(2012)

The ITU Radiocommunication Assembly,

considering

- a) that many broadcasting organizations have implemented file based storage and file transfer systems;
- b) that streaming interfaces (SDI) have limited bandwidth and limited operational flexibility concerning non real time transfers;
- c) that IP protocols have been developed for real time applications;
- d) that high-speed IP transmission over wide area telecommunication networks is becoming a reality;
- e) that as bandwidth requirements increase telecommunication network design can be adjusted;
- f) that IP networks are image and sound format agnostic,

recognizing

- a) that ITU-R has established Recommendation ITU-R BT.656 as the interface for digital component video signals operating at the 4:2:2 level of Recommendation ITU-R BT.601;
- b) that ITU-R has established Recommendation ITU-R BT.1120 as the digital interfaces for HDTV studio signals for international exchange;
- c) that ITU-R has established Recommendation ITU-R BT.1720 which specifies quality of service ranking and measurement methods for digital video broadcasting services,

decides that the following Questions should be studied

- 1 What IP protocol parameters should be chosen for transporting broadcasting programmes?
- 2 What are the performance requirements (e.g. network latency and transmission errors) for the IP network used in transporting broadcast programmes to ensure both real-time and non-real-time transfers of programme material as data?
- 3 What provision should be taken to ensure security in the transport of broadcast programme signals?
- 4 What system monitoring and network control should be employed?

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

6 Which provision should be taken to maintain synchronisation among various program component such as video, audio and closed caption signals when carried as data across IP based networks?

further decides

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

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

3 that the above studies should be completed by 2015.

Category: S3

Annex 2

QUESTION ITU-R 40-3/6*

Extremely high-resolution imagery

(1993-2002-2010-2011-2012)

The ITU Radiocommunication Assembly,

considering

- a) that TV technology at a number of levels of quality may find applications in both broadcast and non-broadcast services;
- b) that the Radiocommunication Sector is studying a range of TV systems for broadcast uses;
- c) that ITU-R has been studying extremely high-resolution imagery and expanded hierarchy of large screen digital imagery, and has established Recommendations ITU-R BT.1201-1 that provides the guideline of image characteristics for extremely high-resolution imagery and ITU-R BT.1769 that provides the parameter values for expanded hierarchy of image formats for LSDI applications;
- d) that HDTV technology along with large screen displays has become the norm in homes, where audiences enjoy high-quality programme content;
- e) that progress in display technologies will permit the use of large-screen and extremely high resolution television displays for home viewing;
- f) that additional visual experiences beyond HDTV can be offered by presenting higher resolution images, which can give a stronger sensation of reality and a heightened feeling of presence to viewers;
- g) that broadcast applications with such a feature, called ultra-high definition television (UHDTV) can be considered as one of the forms of extremely high-resolution imagery;
- h) that some administrations consider introducing broadcasting of UHDTV to the home associated with improved efficient coding and transmission technologies;
- j) that in some broadcast-related applications (for example: computer graphics, printing, motion pictures, digital multimedia video information systems) an extremely high resolution is expected;
- k) that studies on higher resolution digital image architecture are being conducted in some organizations,

* This Question should be brought to the attention of the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the Telecommunication Standardization Sector.

decides that the following Questions should be studied

- 1 What kind of approach should be taken to realize such an extremely high-resolution imagery system for broadcasting and non-broadcasting applications?
- 2 What features such a system should have to allow for broadcasting applications and to assure harmonization between different applications, including digital multimedia video information system for collective, indoor and outdoor viewing?
- 3 What are the various technical characteristics that, in combination, contribute to the sense of presence experienced by viewers and what are the methods for its assessment?
- 4 What kind of parameters should be determined for these systems in programme origination and exchange?
- 5 What characteristics should be recommended in every part of the TV broadcasting chain using extremely high-resolution imagery, namely acquisition, recording, contribution, distribution, emission and display?

NOTE – See Reports ITU-R BT.2042-3 and ITU-R BT.2053-2; see also Question ITU-R 15-2/6.

further decides

- 1 that the results of the above studies should be included in (a) Report(s) and/or (a) Recommendation(s);
- 2 that the above studies should be completed by 2015.

Category: S2

Annex 3

QUESTION ITU-R 128-2/6

Digital 3DTV systems for broadcasting*

(2008-2011-2012)

The ITU Radiocommunication Assembly,

considering

- a) that existing TV broadcasting systems do not provide complete perception of reproduced pictures as natural three-dimensional scenes;
- b) that viewers' experience of presence in reproduced pictures is enhanced by 3DTV, which is anticipated to be an important future application of digital TV broadcasting for both conventional indoor viewing conditions and outdoor viewing conditions;
- c) that 3DTV programmes are being produced for broadcasting purposes, and broadcasters are delivering those programmes to their audiences;
- d) that research into various applications of new technologies that could be used in 3DTV broadcasting is taking place in some countries;
- e) that the development of uniform world standards for 3DTV systems, covering various aspects of digital TV broadcasting, would encourage adoption across the digital divide and prevent a multiplicity of incompatible standards,

decides that the following Questions should be studied

- 1 What are the user requirements for digital 3DTV broadcasting systems for both indoor viewing conditions and outdoor viewing conditions?
- 2 What are the requirements for image viewing and sound listening conditions that 3DTV should meet?
- 3 What are the psychophysical effects of viewing 3DTV images?
- 4 What are the various technical characteristics that combine to contribute to the sense of presence experienced by viewers and what are the methods for its assessment?
- 5 What common video and audio systems should be used for 3DTV programme production and international exchange to maximize interoperability?
- 6 What are appropriate picture and sound quality levels and quality of experience for various broadcast applications of 3DTV?

* This Question should be brought to the attention of ITU-T SG 9.

7 What methodologies of subjective and objective assessment of picture and sound quality and quality of experience may be used in 3DTV broadcasting?

also decides

1 that results of the above-mentioned studies should be analysed for the purpose of preparing new Reports and Recommendation(s);

2 that the above-mentioned studies should be completed by 2015.

Category: S3

Annex 4

Suppressed ITU-R Question

Question ITU-R	Title
125/6	Stereoscopic television
