



Radiocommunication Bureau

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Administrative Circular
CAR/183

17 December 2004

To Administrations of Member States of the ITU

Subject: Proposed approval of 2 draft new Questions and 2 draft revised Questions adopted by Radiocommunication Study Group 6 at its meeting held on 4 November 2004

At the meeting of Radiocommunication Study Group 6 held on 4 November 2004, 2 draft new Questions and 2 draft revised Questions were adopted, and it was agreed to apply the procedure of Resolution ITU-R 1-4 (see § 3) for approval of Questions in the interval between Radiocommunication Assemblies.

Moreover, in response to *resolves* 2 of Resolution ITU-R 5-4, those draft new or revised Questions for which draft Recommendations resulting from studies of these Questions could be subject to the alternative approval procedure according to Resolution ITU-R 45 are identified as “/AP”.

With regards to the provisions of § 3 of Resolution ITU-R 1-4, I should be grateful if you would inform me by 17 March 2005 whether your Administration approves or does not approve these Questions.

After the above-mentioned deadline, the Director of the Radiocommunication Bureau will notify the results of this consultation by Administrative Circular. If the Questions are approved, they will have the same status as Questions approved at a Radiocommunication Assembly and will become official texts attributed to Radiocommunication Study Group 6 (see <http://www.itu.int/ITU-R/publications/download.asp?product=que06&lang=e>).

Valery Timofeev
Director, Radiocommunication Bureau

Annexes: 4

- 4 draft new and revised ITU-R Questions

Distribution:

- Administrations of Member States of the ITU
- Radiocommunication Sector Members participating in the work of Radiocommunication Study Group 6
- ITU-R Associates participating in the work of Radiocommunication Study Group 6

ANNEX 1

(Source: Document 6/116)

Evaluation of draft new Question in accordance with Resolution ITU-R 51

This draft new Question is intended to initiate studies related to registration between source and processed video sequences, which is required for video quality assessment. Video quality assessment is important for evaluation of overall quality of service of radio systems. Moreover, work on the aspects of this Question is not being conducted elsewhere. Therefore, this draft new Question complies with *resolves* 1a) and 1b) of Resolution ITU-R 51.

DRAFT NEW QUESTION ITU-R [REGISTRATION] [Doc. 6/116]

“Registration”¹ methods for television and multimedia images

The ITU Radiocommunication Assembly,

considering

- a) that considerable effort and progress has been made in developing objective methods for video quality measurement (Question ITU-R 44/6, Recommendation ITU-R BT.1683);
- b) that the Radiocommunication Study Group is responsible for setting the overall quality performance of broadcasting chains;
- c) that video quality measurements are typically required for processed video sequences which are obtained by applying hypothetical reference circuits (HRC) to source video sequences;
- d) that quite often spatial and temporal shifts exist between source video sequences and processed video sequences;
- e) that video “registration” is required to compensate these spatial and temporal shifts between source video sequences and processed video sequences in most objective models for video quality measurements;
- f) that video “registration” can be treated separately from objective methods for video quality measurement;
- g) that video registration is also required in a test environment to ensure that processed video sequences meet the HRC requirement (e.g. maximum spatial and temporal shifts);
- h) that reliable and fast video registration is required in many other television applications,

¹ The terminology, “registration,” means compensation of spatial and temporal shifts between source and processed video sequences.

decides that the following Question should be studied

- 1 What are the efficient parameters for reliable and fast video registration?
- 2 What are the necessary test materials and test signals required for the video registration of these applications and standards?
- 3 What methods should be used for measuring and monitoring the parameters defined in § 1 and 2?
- 4 What characteristics should be recommended for video registration which provides efficient and reliable registration?
- 5 What are the effects and limitations when limited samples are available for video registration?
- 6 What is the minimum number of samples for reliable and robust video registration?
- 7 What are the effects and limitations that impaired images have on the performance of video registration methods,

further decides

- 1 that the results of the above studies should be included in (a) Recommendation(s);
- 2 that the above studies should be completed by 2006.

Category: S1

ANNEX 2

(Source: Document 6/133)

Evaluation of the draft new Question in accordance with Resolution ITU-R 51

The purpose of the draft new Question is to ensure common quality parameters and tolerance limits for audio signals used in international contribution circuits for television programme exchanges and the development of further Recommendations which would relate to the draft new Question. Moreover, work on the subject matter of this draft new Question is not being conducted elsewhere. Therefore, this draft new Question complies with *resolves* 1a) and 1b) of Resolution ITU-R 51.

DRAFT NEW QUESTION ITU-R [Doc. 6/133]

Parameters and tolerance limits for the technical quality of audio signals intended for international exchange

The ITU Radiocommunication Assembly,

considering

- a) that Recommendation ITU-R BS.644 specifies the audio-quality parameters for the performance of a high-quality sound-programme transmission chain;
- b) that Recommendation ITU-R BS.645 specifies the test signals and metering to be used on international sound programme connections;
- c) that further work is necessary to determine the subjective limits and the attainable and/or desirable objective global value at the end of the transmission chain;
- d) that by means of addition laws, the limits for the different transmission links can be derived from such global values;
- e) that it is necessary to standardize measuring methods for special parameters,

decides that the following question should be studied

- 1** What are the parameters and tolerances to characterize high-quality sound programmes for international exchange, for both analogue and digital techniques?
- 2** What are the test signals and metering to be used on international sound programme connections?
- 3** What are the attainable and/or desirable values of programme loudness for the whole transmission chain, especially with regard to the relationship between objective and subjective values?
- 4** What are the measuring methods, additional to those given by IEC and ISO that are especially appropriate to broadcasting use?

further decides

- 1** that the results of the above studies should be addressed to:
 - update and complement Recommendation ITU-R BS.644;
 - update and complement Recommendation ITU-R BS.645;
 - prepare new Recommendation(s);
- 2** that the above studies should be completed by 2006 at the latest.

Category: S1

ANNEX 3

(Source: Document 6/129)

DRAFT REVISION OF QUESTION ITU-R 31/6

Digital terrestrial television broadcasting

(1992-1993-2002)

The ITU Radiocommunication Assembly,

considering

- a) the rapid progress being made in techniques for bit-rate reduction and for digital modulation;
- b) that digital emission systems may offer advantages in terms of quality and of spectrum efficiency and that some administrations were planning their introduction in 1995;
- c) that bit-rate reduction coding of digital TV signals will find wide application for emission by terrestrial and satellite means, for secondary distribution by cable and optical fibre and for pre-recorded delivery media;
- d) that there are advantages in having a maximum of common elements for the bit-rate reduction codings in the various applications;
- e) that a number of Radiocommunication Groups are studying or are considering the use of bit-rate reduction techniques, including Study Group 6, Working Party 6S, Working Party 6R for a variety of related applications;
- f) that commonality with the bit-rate reduction techniques used in related applications (such as equipment for home use) considered by the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the ITU-T may offer further advantages;
- g) that various kinds of ~~services applications~~, for example multi-channel TV, multi-channel sound ~~services applications~~, ancillary data ~~services applications~~, indoor/outdoor portable and mobile reception of TV programs, etc., will be introduced as new attractive ~~services applications~~ with high flexible and efficiency in multiplex operation;
- h) that high performance error protection methods will be introduced from the point of view of transmission efficiency and easy implementation in home, portable and mobile receivers;
- j) that digital modulation methods suitable for the terrestrial transmission paths will be used;
- k) that strategies of harmonization with existing terrestrial broadcasting will be adopted,

decides that the following Question should be studied

- 1 What are the appropriate methods to multiplex the required signals into the channel (including vision, sound, data, etc.)?
- 2 What are the appropriate methods for error protection?
- 3 What are the appropriate modulation and emission methods and their relevant parameters, for the broadcasting of digitally encoded TV signals in terrestrial channels?
- 4 What are the appropriate strategies to introduce and implement digital terrestrial TV broadcast services, taking account of existing terrestrial broadcast services?
- 5 What are other applications that could be provided by digital terrestrial TV systems?

NOTE 1 – See also Questions ITU-R 12/6, ITU-R 80/6 and ITU-R 4/6,

further decides

- 1 that the results of the above studies should be included in (a) Recommendation(s);
- 2 that the above studies should be completed by 2005~~6~~.

Category: S1

ANNEX 4

(Source: Document 6/143)

DRAFT REVISION OF QUESTION ITU-R 77/6

Small Methods and practices for digital ENG format recording of television programmes material intended on magnetic tape for international exchange

(1990-1993)

The ITU Radiocommunication Assembly,

considering

- a) that the use of digital techniques for the production and recording of television programmes is growing in importance has pervaded television operations;
- b) — that Recommendation ITU-R BT.657 already defines the format for high-quality digital tape recordings of 4:2:2 signal sources;
- eb) that digital ENG magnetic recording techniques are continuing to improve in respect of recording density, digital compression methods and recording supports infrastructure, which range from videotape cassettes to magnetic hard discs, optical discs and solid-state memories;
- ec) that while the number of ENG recording formats for programme material intended for international exchange of programmes should desirably be kept to a minimum, it should cover the most widespread television recording technologies and supports infrastructure;
- ed) that some ENG applications, such as hard news coverage of news events in isolated locations where it is only practical to take lightweight and compact equipment, require a camcorders format allowing more economic implementation in a small, lightweight and disposable packageer size,

decides that the following Question should be studied

- 1 What small format(s) specifications for digital television tape recording (on magnetic tape cassettes, hard discs, optical discs or solid state memories), can be recommended for programme exchange and/or for electronic news gathering programme material intended for international exchange?
- 2 What operating practices can be recommended for these at applications of television recording those programme exchanges?

further decides

- 1 that the results of the above studies should be included in (a) Recommendation(s);
- 2 that the above studies should be completed by 2007~~2006~~.

Category: S2/AP