



ITUWRC

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Radiocommunication Bureau (BR)

Administrative Circular
CACE/1085

26 October 2023

**To Administrations of Member States of the ITU, Radiocommunication Sector Members,
ITU-R Associates participating in the work of the Radiocommunication Study Group 7
and ITU Academia**

Subject: **Radiocommunication Study Group 7 (Science services)**

- **Proposed approval of 2 draft revised ITU-R Questions**
- **Proposed suppression of 4 ITU-R Questions**

At the meeting of Radiocommunication Study Group 7 held on 12 October 2023, 2 draft revised ITU-R Questions were adopted according to Resolution ITU-R 1-8 (§ A2.5.2.2) and it was agreed to apply the procedure of Resolution ITU-R 1-8 (see § A2.5.2.3) for approval of Questions in the interval between Radiocommunication Assemblies. The texts of the draft ITU-R Questions are attached for your reference in Annexes 1 and 2. Any Member State raising an objection to the approval of a draft Question is requested to inform the Director and the Chairman of the Study Group of the reasons for the objection.

Furthermore, the Study Group proposed the suppression of 4 ITU-R Questions in accordance with Resolution ITU-R 1-8 (§ A2.5.3). The ITU-R Questions proposed for suppression are indicated in Annex 3. Any Member State who objects to the suppression of an ITU-R Question is requested to inform the Director and the Chairman of the Study Group of the reasons for the objection.

Having regard to the provisions of § A2.5.2.3 of Resolution ITU-R 1-8, Member States are requested to inform the Secretariat (brsgd@itu.int) by 26 December 2023, whether they approve or do not approve the proposals above.

After the above-mentioned deadline, the results of this consultation will be announced in an Administrative Circular and the approved Questions will be published as soon as practicable (see: <http://www.itu.int/ITU-R/go/que-rsg7/en>).

Mario Maniewicz
Director

Annexes: 3

- 2 draft revised ITU-R Questions
- Proposed suppression of 4 ITU-R Questions

Annex 1

(Document 7/79(Rev.1))

DRAFT REVISED QUESTION ITU-R 236-2/7*

The future of the UTC time scale

(2001-2014-2017-2023)

The ITU Radiocommunication Assembly,

considering

a) that the ITU Radiocommunication Sector (ITU-R) is responsible for defining the standard frequency and time signal service (SFTS) and the standard frequency and time signal-satellite service (SFTSS) for the dissemination of time signals via radiocommunication;

b) that the International Bureau of Weights and Measures (BIPM) is responsible for establishing and maintaining the second of the International System of Units (SI) and the reference time scale UTC with the SI second as its scale unit;

a)c) that Resolution 655 (WRC-15) invites the ITU Radiocommunication Sector and BIPM, along with other organizations, to cooperate in studies, dialogue, and reports to address issues identified in that Resolution concerning the definition of time scales and the dissemination of time signals via telecommunication systems;

~~b) that UTC is the legal basis for time-keeping for most countries in the world, and *de facto* is the time scale used in most others;~~

d) that Resolution 2 (2018) of the 26th General Conference on Weights and Measures (CGPM) provides the definition of UTC and confirms that UTC, produced by the BIPM, is the only recommended time scale for international reference and the basis of civil time in most countries (<https://www.bipm.org/en/committees/cg/cgpm/26-2018/resolution-2>);

ee) that Recommendation ITU-R TF.460-6 states that all standard-frequency and time-signal emissions should conform as closely as possible to UTC and;

~~d) that Recommendation ITU-R TF.460-6 describes the procedure for the occasional insertion of leap seconds into UTC to ensure that it does not differ by more than 0.9 seconds from the time determined from the rotation of the Earth (UT1);~~

* This Question should be brought to the attention of the Bureau international des ~~Poids-poids~~ et ~~Mesures-mesures~~ (BIPM), the International Earth Rotation and Reference Systems Service (IERS), the ITU-T Study Group 15 / Question 13 ~~3 of the Telecommunication Standardization Sector~~ and the ITU-R Radiocommunication Study Groups ~~5~~, and furthermore to the Institute of Electrical and Electronic Engineering (IEEE), and the Internet Engineering Task Force (IETF), both engaged in standardization of protocols for disseminating time information in wired systems.

~~e) that the occasional insertion of leap seconds into UTC creates serious operational difficulties for many navigation, industrial, financial, and telecommunication systems today,~~

noting

that signals carrying time information, used in practically all areas of human activities (i.e. telecommunications, industries, etc.), are disseminated both by wired communications, covered by Recommendations of the ITU Telecommunication Standardization Sector (ITU-T), and by systems of different radiocommunication services (space and terrestrial), including the standard frequency and time signal services for which ITU-R is responsible,

recognizing

a) that in 2020 a Memorandum of Understanding was signed between the BIPM and the ITU outlining the scope of mutual cooperation (<https://www.bipm.org/en/-/2020-bipm-itu-mou>);

b) that the CGPM adopted the Resolution 4 (2022) “On the use and future development of UTC” (<https://www.bipm.org/en/cgpm-2022/resolution-4>);

c) that the various aspects of current and potential future reference time scales, including their impacts and applications are covered by the Report ITU-R TF.2511 (2022),

decides that the following Questions should be studied

~~1 What are the various aspects of current and potential future reference time scales, including their impacts and applications in telecommunications, industry, and other areas of human activity?~~

21 What are the requirements accuracy and availability of the (UT1 – UTC) information in the time signals for the content and structure of time signals to be disseminated by radiocommunication systems and wired systems, in view of a future UTC with relaxed constraints on the magnitude of (UT1 – UTC)?

32 Which techniques and formats are most appropriate to disseminate the quantity (UT1 – UTC) with the required accuracy and availability? Does the current leap second procedure satisfy user needs or should an alternative procedure be adopted?

further decides

1 that the results of the above studies should be included in ITU-R Recommendations and/or Reports;

2 that the above studies should be completed before 2037.

Category: E2S1

Annex 2

(Document 7/90(Rev.1))

DRAFT REVISION OF QUESTION ITU-R 256/7*

Space weather observations

(2015-2023)

The ITU Radiocommunication Assembly,

considering

- a) that space weather observations are becoming increasingly important in detecting solar activity events that could impact services critical to the economy, safety and security of administrations;
- b) that these observations are made from platforms that may be ground based, airborne, or space-based;
- c) that some of the sensors operate by receiving low level natural emissions of the Sun or the Earth's atmosphere, and therefore may suffer interference at levels which could be permissible for other radio systems,

noting

- a) that currently there is no definition for Space Weather in the ITU terminology;
- b) that the definition of Space Weather given by the World Meteorological Organization is as follows: "Space Weather encompasses the conditions and processes occurring in space, including on the sun, in the magnetosphere, ionosphere and thermosphere, which have the potential to affect the near-Earth environment"¹;
- c) that the definition of space weather elaborated in Working Party (WP) 7C and agreed by ITU Coordination Committee for Terminology (ITU CCT), is as follows: "natural phenomena, mainly originating from solar activity and occurring beyond the major portion of Earth's atmosphere that impact Earth's environment and human activities";
- d) that considerations of possible radio communication service under which space weather observations could be performed were carried out in WP 7C, and, as a result of that, meteorological aids service was considered appropriate,
- e) that ITU-R performed technical and regulatory studies for space weather in Report ITU-R RS.2456-1,

decides that the following Questions should be studied

- 1 What is the radio service(s) applicable for space weather sensors?

* This Question should be brought to the attention of the World Meteorological Organization.

- 2 Which parts of the existing frequency allocations in RR Article 5 are suitable for use by space weather observations?
- 3 What are typical technical and operational characteristics of space weather sensors?
- 4 What protection would be necessary for the operation of these systems?

further decides

- 1 that the results of the above studies should be included in one or more ITU-R Recommendations and/or Reports as appropriate;
- 2 that the above studies should be completed by the year ~~2023~~2027.

Category: ~~S3~~S2

Annex 3

Proposed suppression of ITU-R Questions

(Source: Document 7/80)

Question ITU-R	Title
152-2/7	Standard frequencies and time signals from satellites
238/7	Trusted time source for time stamp authority
239/7	Instrumentation time code
253/7	Relativistic effects in the transfer of time and frequency in the vicinity of the Earth and in the solar system
