



Radiocommunication Bureau (BR)

Circular Letter
CR/461

17 June 2020

To the Administrations of ITU Member States

Subject: **Implementation of Resolution 169 [COM5/6] (WRC-19) - Use of the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz by earth stations in motion communicating with geostationary space stations in the fixed-satellite service**

The World Radiocommunication Conference, Sharm el-Sheikh, 2019 (**WRC-19**) adopted provisions governing the use of the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) by earth stations in motion (ESIM) communicating with geostationary space stations in the fixed-satellite service (FSS), in accordance with RR No. **5.517A [5.A15]**, which will enter into force on 1 July 2020. Such use is subject to the application of Resolution **169 [COM5/6] (WRC-19)**.

The purpose of this Circular Letter is to provide information and guidance to administrations on the submission and examination of ESIM associated with geostationary FSS space stations in the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) as from **1 July 2020**.

Considerations related to the submission of ESIM characteristics:

In order to be able to carry out the appropriate examination with respect to the Table of Frequency Allocations and the conditions contained in Resolution **169 [COM5/6] (WRC-19)** and its annexes, the Bureau has defined the following new classes of station in Table 3 of the Preface to the BR IFIC (Space Services):

- UU – Land earth station in motion communicating with a geostationary satellite orbit station in the fixed-satellite service in the frequency bands referred to under No. **5.517A [5.A15]**;
- UO – Aeronautical earth station in motion communicating with a geostationary satellite orbit station in the fixed-satellite service in the frequency bands referred to under No. **5.517A [5.A15]**;
- US – Maritime earth station in motion communicating with a geostationary satellite orbit station in the fixed-satellite service in the frequency bands referred to under No. **5.517A [5.A15]**.

Please note that the class of station symbol “**UF**” for an earth station in motion associated with a space station in the FSS in the frequency bands listed under No. **5.527A** (see Circular Letter **CR/393** of 18 March 2016) cannot be used for frequency assignments to be notified under Resolution **169 [COM5/6] (WRC-19)**.

Annex 2 of Appendix **4** has also been revised by WRC-19, with the following additional commitments required for the ESIMs operating in the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space):

- **A.20.a** – A commitment that the ESIM operation would be in conformity with the Radio Regulations and Resolution **169 [COM5/6] (WRC-19)**;
- **A.21.a** – A commitment that, upon receiving a report of unacceptable interference, the notifying administration for the GSO FSS network with which the ESIM communicate shall follow the procedures in *resolves* 5 of Resolution **169 [COM5/6] (WRC-19)**;
- **A.22.a** – A commitment that aeronautical ESIM would be in conformity with the pfd limits on the Earth’s surface specified in Part II of Annex 2 of Resolution **169 [COM5/6] (WRC-19)**.

Kindly note that the above commitments, as needed, are to be provided together with the submission of the notification of the ESIMs. The Bureau will be adding data fields in the SNS database format, such that it will be possible for these commitments to be captured with SpaceCap. The availability of the database format and corresponding software will be announced by the Bureau in a separate circular letter. In the event that administrations are unable to capture these commitments in SpaceCap, the statements of commitments should be provided in an attachment to the notification.

Characteristics of ESIMs in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz may be considered receivable by the Bureau only if they are submitted in a submission of a modification to a previously submitted notification notice. Any Advance Publication or coordination request related to the referred ESIM submitted to the Bureau shall be deemed non-receivable and returned to the notifying administration.

Noting the provisional date of entry into force of No. **5.517A [5.A15]** stated in Resolution **99 (Rev.WRC-19)**, notification information containing ESIMs characteristics in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz shall be not receivable by the Bureau before 1 July 2020. Any notification information received before this date shall be returned to the notifying administration.

Prior to the submission of notification information of the ESIM characteristics, the notifying administration should have sent to the Bureau a notification containing the characteristics of typical earth stations associated with the satellite network with which these ESIM communicate.

Considerations concerning the examination of ESIM characteristics:

In application of *resolves* 1.1.4bis and 1.1.1 of Resolution **169 [COM5/6] (WRC-19)**, upon receipt of the notification information referred to above, the Bureau shall examine it by ensuring that the ESIM characteristics are within the envelope characteristics of typical earth stations associated with the satellite network with which these ESIM communicate and publish the result of such examination in the BR IFIC. An identification of whether ESIM characteristics are within the envelope characteristics of typical earth stations associated with the satellite network with which these ESIM communicate will be carried out by the Bureau in accordance with the paragraph 2.3 of the Rule of Procedure on RR No. **9.27**. In case such examination indicates that coordination requirements of the frequency

assignments of ESIM involve any additional network, the ESIM frequency assignments will be returned to the notifying administration together with an unfavorable finding under No. **11.32**.

In addition, with respect to aeronautical ESIM, the Bureau shall examine the characteristics of aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface specified in Part II of Annex 2 of Resolution **169 [COM5/6] (WRC-19)**.

As the Bureau is currently unable to examine aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface specified above, the notifying administration shall send to the Bureau a commitment that the aeronautical ESIM comply with those limits (see *resolves* 7 of Resolution **169 [COM5/6] (WRC-19)**).

Upon receipt of this commitment, the Bureau shall formulate a qualified favourable finding under No. **11.31** with respect to the pfd limits, otherwise it shall formulate an unfavourable finding (see *resolves* 8 of Resolution **169 [COM5/6] (WRC-19)**).

The ITU Radiocommunication Sector (ITU-R) will be conducting, as a matter of urgency, relevant studies to determine a methodology with respect to the examination of the characteristics of aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface contained in Part II of Annex 2 of Resolution **169 [COM5/6] (WRC-19)**. Once the software implementing the methodology to examine the characteristics of aeronautical ESIM with respect to the conformity with the pfd limits on the Earth's surface is available and administrations are informed accordingly through a separate Circular Letter, the Bureau will review its findings made in accordance with No. **11.31**.

Administrations are encouraged to take note of all the above information when submitting notices to the Bureau for ESIM communicating with GSO FSS space stations in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz.

The updated **Table 3** of the Preface will be available for online consultation at <http://www.itu.int/ITU-R/space/preface/index.html> and also on BR IFIC (Space Services) 2923/23.06.2020 and subsequent publications.

The updated BR software package for electronic notification, validation and query of satellite networks (SpaceCap and BR-SIS) with the new symbols "**UU**", "**UO**" and "**US**" will be available for download at <http://www.itu.int/ITU-R/go/space-software/en> and also on BR IFIC (Space Services) 2923/23.06.2020 and subsequent publications.

The Bureau remains at the disposal of your Administration via the brmail@itu.int e-mail address for any clarifications you may require with respect to the subject covered in this circular letter.

Mario Maniewicz
Director

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