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| –A close up of a sign  Description automatically generated | **World Radiocommunication Conference (WRC-23) Dubai, 20 November - 15 December 2023** | |  |
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| PLENARY MEETING | | **Addendum 5 to Document 44(Add.27)-E** | |
|  | | **13 October 2023** | |
|  | | **Original: English** | |
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| Member States of the Inter-American Telecommunication Commission (CITEL) | | | |
| PROPOSALS FOR THE WORK OF THE CONFERENCE | | | |
|  | | | |
| Agenda item 10 | | | |

10to recommend to the ITU Council items for inclusion in the agenda for the next world radiocommunication conference, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the ITU Convention and Resolution **804 (Rev.WRC‑19)**,

Part 5

Background

The frequency band 12.75-13.25 GHz is assigned, on a primary basis, to the fixed service (FS), the fixed-satellite service (FSS) (Earth-to-space), and the mobile service (MS) and, on a secondary basis, to the deep-space research service (space-to-Earth) (SRS) in the three ITU-R Regions. In the FSS, geostationary systems operate in accordance with the provisions of Appendix **30B** of the Radio Regulations (RR), as do non-geostationary systems that protect the geostationary systems in accordance with the provisions of RR Article **22**.

The growing demand for Internet-based applications for the aeronautical and maritime industries requires additional satellite capacity for these services. In view of the global character of these services, harmonization of conditions in the Radio Regulations would be beneficial both for the administrations and for the aeronautical, maritime, and satellite industries.

The frequency band 12.75-13.25 GHz has been examined for use by aeronautical earth stations in motion (ESIM-A) and maritime earth stations in motion (ESIM-M) communicating with GSO space stations in the FSS in the framework of WRC-23 agenda item 1.15, in conformity with Resolution **172 (WRC-19)**. These studies indicate that it is possible to determine a set of technical, operational, and regulatory conditions that would make it possible for the ESIMs communicating with GSO in the band to operate, while protecting existing services. In addition, studies conducted in the framework of WRC-23 agenda item 1.16 in accordance with Resolution **173 (WRC-19)** indicate that the same frequency band can be used by both GSO and non-GSO systems to provide ESIMs with connectivity.

Proposals

CITEL proposes including a new WRC-27 agenda item described as follows: examine the possible use of the frequency band 12.75-13.25 GHz by aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service (Earth-to-space).

ADD IAP/44A27A5/1

Draft New Resolution [IAP-2] (WRC-23)

Agenda of the 2027 World Radiocommunication Conference

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that, according to No. 118 of the ITU Convention, the general scope of the agenda of a world radiocommunication conference (WRC) should be established four to six years in advance and that the Council must set the final agenda two years before the conference;

*b)* Article 13 of the ITU Constitution on the competence and calendar of WRCs and Article **7** of the ITU Convention on their agendas;

*c)* relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and WRCs,

recognizing

*a)* that this Conference has identified various subjects that require continued study at WRC‑27;

*b)* that, when drawing up the present agenda, many of the items proposed by the administrations could not be included and had to be deferred to the agendas of future conferences,

resolves

to recommend to the Council a four-week WRC in 2027 on the basis of the following agenda:

1 on the basis of the proposals made by the administrations, taking into account the results of WRC‑23 and the Report on the Conference Preparatory Meeting, and with due consideration given to the needs of existing and future services in the frequency bands, to consider and take adequate measures in regard to the following subjects:

…

1.X to consider the use of aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service (Earth-to-space) in the frequency band 12.75-13.25 GHz in conformity with Resolution **[AI-10-13 GHz non-GSO ESIM-A and ESIM-M] (WRC‑23)**;

…

invites the ITU Council

to finalize the agenda and take the measures needed to convene WRC‑27 and to begin as quickly as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

1 to take the necessary measures to convene the sessions of the Conference Preparatory Meeting (CPM) and draw up a report to the WRC‑27;

2 to submit to the second session of the CPM a draft report on the difficulties or inconsistencies observed in the application of the Radio Regulations in regard to agenda item 9.2 and to submit the final report at least five months before the next WRC,

instructs the Secretary-General

to forward the present Resolution to interested international and regional organizations.

ADD IAP/44A27A5/2

Draft New Resolution [AI-10-13 GHz non-GSO ESIM-A and ESIM-M] (WRC-23)

Study the possible use of the frequency band 12.75-13.25 GHz by aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service (Earth-to-space)

The World Radiocommunication Conference (Dubai, 2023),

considering

*a)* that the frequency band 12.75-13.25 GHz is currently allocated, on a primary basis, to fixed service, mobile service, and fixed-satellite service (FSS) (Earth-to-space) and, on a secondary basis, to the deep-space research service (space-to-Earth) worldwide;

*b)* that the frequency band 12.75-13.25 GHz is used in the FSS with geostationary-satellite orbit (GSO) space stations in conformity with the provisions of Appendix **30B** (No. **5.441**) and that there are many GSO space station networks in the FSS that are operating in this frequency band;

*c)* that the frequency band 12.75-13.25 GHz is used in the FSS with non-GSO systems in conformity with No. **5.441**;

*d)* that the growing need for aeronautical and maritime connectivity could be partially met by allowing aeronautical earth stations in motion (ESIM‑A) and maritime earth stations in motion (ESIM‑M) to communicate with non-GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space);

*e)* that technology breakthroughs, including the use of tracking techniques, allow ESIM‑A and ESIM‑M to operate within the characteristics of fixed earth stations in the FSS;

*f)* that the use of the frequency band 12.75-13.25 GHz for linkages of ESIM‑A to ESIM‑M operating with non-GSO FSS could contribute, as an additional use of the spectrum, to improving broadband communications for passengers;

*g)* that ESIM‑A and ESIM‑M referred to in the present Resolution must not be used for safety-of-life applications,

observing

*a)* that Resolution **169 (WRC‑19)** addresses the use of ESIM communicating with GSO space stations in the FSS in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz under the conditions contained in said Resolution;

*b)* that Resolution **173 (WRC‑19)** is aimed at broadening the framework of Resolution **169 (WRC‑19)** by studying the use of ESIM communicating with non-geostationary space stations in the FSS in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth), and the frequency bands 27.5-29.1 and 29.5-30.0 GHz (Earth-to-space);

*c)* that Resolution **172 (WRC‑19)** invites studies to be conducted for the use of ESIM‑A and ESIM‑M communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz,

recognizing

*a)* that, in conformity with No. **5.441**, non-GSO systems cannot call for protection against GSO networks operating in conformity with the Radio Regulations and must operate in such a way as to quickly eliminate any unacceptable interference that might occur when operating;

*b)* that, in conformity with No. **5.441**, the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by a non-GSO satellite system in the FSS is subject to the application of the provisions of No. **9.12** for coordination with other non-GSO satellite systems in the FSS;

*c)* that, in conformity with the relevant provisions of Article **9** and **11**, the non-GSO FSS networks that intend to operate in the frequency band 12.75-13.25 GHz (Earth-to-space) must coordinate and notify each other;

*d)* that Article **21** determines the limits of the equivalent isotropic radiated power (e.i.r.p.) applicable to the non-GSO FSS systems to protect fixed and mobile earth stations;

*e)* that Article **22** contains the limits of the epfd for non-GSO FSS systems in the frequency band 12.75-13.25 GHz (Earth-to-space) that guarantee the protection of GSO networks;

*f)* that the current use and future development of existing services in the frequency band must be protected without imposing additional restrictions because of the operation of ESIM‑A and ESIM‑M in the band,

resolves to invite the ITU Radiocommunication Sector

1 to study the technical and operational characteristics and user requirements of the ESIM‑A and ESIM‑M communicating with or intending to communicate with the non-GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space);

2 to study sharing and compatibility between ESIM‑A and ESIM‑M communicating with non-GSO space stations in the FSS and the current and planned stations of existing services with allocations in the frequency band 12.75-13.25 GHz;

3 to draw up the criteria for ensuring that ESIMs will not be calling for further protection or causing more interference than existing typical earth stations;

4 to develop the technical conditions and regulatory provisions for the operation of ESIM‑A and ESIM‑M communicating with non-GSO space stations in the FSS that operate in the frequency band 12.75-13.25 GHz (Earth-to-space), taking into account the results of the studies outlined in *resolves to invite the ITU Radiocommunication Sector* 1 and 2, while ensuring the protection of incumbent services,

invites the 2027 World Radiocommunication Conference

to consider the results of the above-mentioned studies and to adopt the necessary measures accordingly,

invites the administrations

to participate actively in the studies by sending their contributions to ITU‑R.

SUP IAP/44A27A5/3

RESOLUTION 812 (WRC-19)

Preliminary agenda for the 2027 World Radiocommunication Conference[[1]](#footnote-1)\*

**Reasons:** This resolution should be eliminated because WRC‑23 shall be drawing up a new resolution that will incorporate the WRC‑27 agenda.

ATTACHMENT

Proposal for an additional agenda item for the use of the frequency band 12.75-13.25 GHz by aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service (Earth-to-space)

|  |  |
| --- | --- |
| **Subject:**Proposed future WRC‑27 agenda item to facilitate the use of the frequency band 12.75-13.25 GHz by aeronautical and maritime earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service (Earth-to-space) | |
| **Origin:** CITEL | |
| ***Proposal*:**  to study the technical and operational characteristics and user requirements of the ESIM-A and ESIM-M communicating with or intending to communicate with the non-GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space); to study sharing and compatibility between ESIM-A and ESIM-M communicating with non-GSO spaces in the FSS and the current and planned stations of existing services with allocations in the frequency band 12.75-13.25 GHz; to develop the technical conditions and regulatory provisions for the operation of ESIM-A and ESIM-M communicating with non-GSO space stations in the FSS that operate in the frequency band 12.75-13.25 GHz (Earth-to-space), taking into account the results of the studies outlined in *resolves to invite the ITU Radiocommunication Sector* 1 and 2, while ensuring the protection of incumbent services, | |
| ***Background/reason:***  The frequency band 12.75-13.25 GHz is assigned, on a primary basis, to the fixed service (FS), the fixed-satellite service (FSS) (Earth-to-space), and the mobile service (MS) and, on a secondary basis, to the deep-space research service (space-to-Earth) (SRS) in the three ITU‑R Regions. In the FSS, geostationary systems operate in accordance with the provisions of RR Appendix **30B**, as do non-geostationary systems that protect the geostationary systems in accordance with the provisions of RR Article **22**.  The growing demand for Internet-based applications for the aeronautical and maritime industries requires additional satellite capacity for these services. In view of the global character of these services, harmonization of conditions in the Radio Regulations would be beneficial both for the administrations and for the aeronautical, maritime, and satellite industries.  The frequency band 12.75-13.25 GHz has been examined for use by aeronautical earth stations in motion (ESIM-A) and maritime earth stations in motion (ESIM-M) communicating with GSO space stations in the FSS in the framework of WRC‑23 agenda item 1.15, in conformity with Resolution **172 (WRC-19)**. These studies indicate that it is possible to determine a set of technical, operational, and regulatory conditions that would make it possible for the ESIMs communicating with GSO in the band to operate, while protecting existing services. In addition, studies conducted in the framework of WRC‑23 agenda item 1.16 in accordance with Resolution **173 (WRC-19)** indicate that the same frequency band can be used by both GSO and non-GSO systems to provide ESIMs with connectivity. | |
| ***Radiocommunication services concerned*:** fixed,fixed-satellite service, mobile, space research | |
| ***Indication of possible difficulties*:**  [ ] | |
| ***Previous/ongoing studies on the issue*:**  [ ] | |
| ***Studies to be carried out by*:**  ITU‑R Working Party 4A | ***with the participation of*:**  administrations and Sector Members of the ITU‑R |
| ***ITU‑R study groups concerned*:**  ITU‑R Study Group 4 | |
| ***ITU resource implications, including financial implications (refer to CV126)*:**  This proposed agenda item will be studied within the normal ITU‑R procedures and planned budget. | |
| ***Common regional proposal*:**  Yes/No | ***Multicountry proposal*:**  Yes/No  ***Number of countries*:** |
| ***Remarks*** | |

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1. \* The appearance of square brackets around certain frequency bands in this Resolution is understood to mean that WRC‑23 will consider and review the inclusion of these frequency bands with square brackets and decide, as appropriate. [↑](#footnote-ref-1)