
PLENARY MEETING

**Addendum 8 to
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Member States of the Inter-American Telecommunication Commission (CITEL)
PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda item 10

{Temporary information note to be deleted before the submission via CPI of this document to the WRC-19 Secretariat: In accordance with Resolution 804 (Rev. WRC-12), Administrations are invited to use the template provided in Annex 2 to that Resolution (TIES-protected) when proposing agenda items for WRCs. This template may be filled out for each of the proposed WRC agenda item and annexed to this document.}

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention.

BACKGROUND:

The operation of earth stations in motion (ESIM) that communicate with non-geostationary space stations in the fixed-satellite service is not new to the international regulatory framework.

Footnote **5.527A** allows the operation of earth stations in motion (ESIM) communicating with geostationary FSS networks, subject to compliance with Resolution **156 (WRC-15)** in the frequency bands 19.7-20.2 GHz and 29.5-30.0 GHz.

On the other hand, within the framework of Agenda Item 1.5, WRC-19 is expected to allow ESIM communicating with geostationary FSS networks to operate in all or parts of the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz

CITEL proposes to carry out technical sharing studies between ESIM communicating with non-geostationary space stations in the fixed-satellite service and systems of other primary services in the frequency bands 17.7-20.2 GHz, 27.5-29.1 GHz, and 29.5-30.0 GHz and to develop the appropriate technical and regulatory provisions to facilitate operation of such earth stations, while ensuring harmful interference is not caused to stations of the FSS, FS and other primary services.

ADD IAP/6415A24A8/1

DRAFT NEW RESOLUTION [IAP/10(H)-2023] (WRC-19)

Agenda for the 2023 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

considering

- a) that, in accordance with No. 118 of the ITU Convention, the general scope of the agenda for a world radiocommunication conference should be established four to six years in advance and that a final agenda shall be established by the Council two years before the conference;
- b) Article 13 of the ITU Constitution relating to the competence and scheduling of world radiocommunication conferences and Article 7 of the Convention relating to their agendas;
- c) the relevant resolutions and recommendations of previous world administrative radio conferences (WARCs) and world radiocommunication conferences (WRCs),

resolves

to recommend to the Council that a world radiocommunication conference be held in 2023 for a maximum period of four weeks, with the following agenda:

1 on the basis of proposals from administrations, taking account of the results of WRC-19 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the bands under consideration, to consider and take appropriate action in respect of the following items:

1.[NGSO-ESIM] to consider, on the basis of ITU-R studies in accordance with Resolution **[IAP/10(H)/NGSO ESIM] (WRC-19)**, appropriate regulatory actions, for the use of the frequency bands within the bands 17.7-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth), 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space), by [aeronautical and maritime] earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service;

resolves further

to activate the Conference Preparatory Meeting,

invites the Council

to finalize the agenda and arrange for the convening of WRC-23, and to initiate as soon as possible the necessary consultations with Member States,

instructs the Director of the Radiocommunication Bureau

to make the necessary arrangements to convene meetings of the Conference Preparatory Meeting and to prepare a report to WRC-23,

instructs the Secretary-General

to communicate this Resolution to international and regional organizations concerned.

Reasons: To fulfil the growing need for connectivity ‘in motion’ by allowing operation of ESIM with NGSO in additional frequency bands while preventing harmful interference to other services.

ADD IAP/6415A24A8/2

DRAFT NEW RESOLUTION [IAP/10(H)/NGSO ESIM] (WRC-19)

Use of the frequency bands 17.7-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth), 28.6-29.1 GHz and 29.5-30 GHz (Earth-to-space) by earth stations in motion communicating with non-geostationary space stations in the fixed-satellite service

The World Radiocommunication Conference (Sharm el-Sheik Egypt, 2019),

Considering

- a) that the frequency bands 17.7-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth), 27.5-29.1 GHz and 29.5-30 GHz (Earth-space) are globally allocated on a co-primary basis to the fixed-satellite service (FSS), and that there are a number of non-geostationary satellite systems operating or planned to operate in these frequency bands;
- b) that there are existing NGSO satellite constellations in the 17.7-20.2 GHz (space-to-Earth) and 27.5-30 GHz (Earth-to-space) and that these constellations are designed to serve the growing need for access to broadband connectivity, regardless of location;
- c) existing regulatory and technical procedures apply in the segments of the frequency bands listed in *considering a)* between FSS geostationary networks and FSS non-geostationary systems;
- d) that there is a need for mobile satellite communications, including global satellite broadband, and that part of this need can be met by allowing earth stations in motion to communicate with space stations of the fixed-satellite service operating in the frequency bands detailed in *considering a)*;
- e) that, in accordance with the relevant provisions of Articles 9 and 11 of the Radio Regulations, non-geostationary FSS networks intending to operate in the frequency bands detailed in *considering a)* should be coordinated and notified;
- f) that the referenced frequency bands are also allocated on a co-primary basis to various radiocommunication services, whose operation and further development should be protected;
- g) that, currently, there is no specific regulatory procedure for the coordination of earth stations in motion relative to terrestrial stations for these services.

recognizing

- a) that technical and operational requirements for ESIM (which were referred to as earth stations on mobile platforms (“ESOMPs”) prior to WRC-15) operating with NGSO in the fixed-satellite service systems in the frequency bands 17.3-19.3, 19.7-20.2, 27.-29.1 GHz and 29.5-30.0 GHz have been discussed in the ITU-R and are reflected in the Report ITU-R S.2261;
- b) that Article 22 of the Radio Regulations set *epfd* limits for non-geostationary-satellite systems in the fixed-satellite service system to protect geostationary-satellite systems in the fixed-

satellite service in the 17.8-18.6 GHz, 19.7-20.2 GHz (space-to-Earth) / 27.5-28.6 GHz, 29.5-30 GHz (Earth-to-space) and 17.8-18.4 GHz (inter-satellite) frequency bands;

c) that Article 21 of the RR determines flux density limits applicable to power systems of the non-geostationary fixed-satellite service to protect fixed and mobile land stations;

d) that WRC-15 adopted footnote No. **5.527A** and Resolution **156 (WRC-15)** related to earth stations in motion that communicate with geostationary satellites;

e) that advances in technology, including the use of tracing techniques, allow earth stations in motion to operate according to the characteristics of typical FSS earth stations;

f) that these earth stations not be used or relied upon for safety-of-life applications,
recognizes further

a) that segments of the frequency band 17.7-18.1 GHz are used by feeder links for the broadcasting-satellite service, subject to Appendix **30A** (No. **5.516**);

b) that frequency bands 18.3-19.3 GHz (Region 2), 19.7-20.2 (all regions), 27.5-27.82 GHz (Region 1), 28.35-28.45 GHz (Region 2), 28.45-28.94 GHz (all regions), 28.94 -29.1 GHz (Regions 2 and 3), 29.25-29.46 GHz (Region 2), 29.465-30.0 GHz (all regions), 39.5-40 GHz (Region 1), 40-40.5 GHz (all regions), 40.5-42 GHz (Region 2), and 48.2-50.2 GHz (Region 2), have been identified for use in high-density applications in the fixed-satellite service (No. 5.516B);

c) that the use of the frequency band 18.1-18.4 GHz by the fixed-satellite service (Earth-space) is limited to the feeder links of geostationary satellite systems in the broadcasting-satellite service (No. 5.520);

d) that the use of the frequency bands 17.8-18.6 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz, and 29.5-30.0 GHz for non-geostationary fixed-satellite service systems is subject to the applicable provisions of numbers RR 5.484A, 22.5C and 22.5I;

e) that the use of the frequency bands 18.8-19.3 GHz and 28.6-29.1 GHz by geostationary and non-geostationary fixed-satellite service networks is subject to the applicable provisions of No. 9.11A, while No. 22.2 does not apply (No. 5.523A);

f) that the use of the frequency band 19.3-19.7 GHz by geostationary fixed-satellite service systems and feeder links of non-geostationary satellite systems in the mobile-satellite service is subject to the applicable provisions of No. 9.11A, but not to the provisions of No. 22.2. In addition, the use of this frequency band by other non-geostationary fixed-satellite service systems or for the cases indicated in numbers 5.523C and 5.523E is not subject to the provisions of No. 9.11A, and shall continue to be subject to the procedures of Article 9 (except No. 9.11A) and Article 11 of the RR, and to the provisions of No. 22.2 (No. 5.523D);

g) that the frequency band 27.5-29.1 GHz, and 29.5-30.0 GHz may be used by the fixed-satellite service (Earth-space) to provide feeder links in the broadcasting-satellite service (No. 5.539);

h) that parts of the frequency bands 27.5-29.5 GHz, 37.5-42.5 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz are globally allocated on a primary basis to the fixed and mobile services;

i) that the frequency band 18.6-18.8 GHz is used by the Earth exploration-satellite service (passive) and its protection should be ensured,

resolves to invite ITU-R

1. to study the technical and operational characteristics and user requirements of the different types of earth stations in motion that operate or plan to operate in the frequency bands allocated to the non-GSO FSS, in the bands 17.7-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth), 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space); or parts thereof;
2. to perform sharing and compatibility studies between earth stations in motion communicating with non-geostationary FSS systems with other primary services in the frequency bands 17.7-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth), 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space); or parts thereof;
3. to develop the technical and operational conditions to facilitate those administrations wishing to authorize and coordinate the operation of land earth stations in motion operation with affected neighboring countries taking into account the results of studies under resolves 1;
4. to develop the technical and regulatory provisions for the operation of aeronautical and maritime earth stations in motion operation with non-geostationary FSS systems taking into account the results of studies under resolves 1 and 2;
5. to complete studies in time for WRC-23,

further resolves to invite WRC-23

to review the results of these studies and take appropriate action.

Reasons:

SUP IAP/6415A24A8/3

RESOLUTION 810 (WRC-15)

Preliminary agenda for the 2023 World Radiocommunication Conference

The World Radiocommunication Conference (Geneva, 2015),

Reasons: This Resolution must be suppressed, as WRC-19 will create a new Resolution that will include the agenda for WRC-23.