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| **42 MEETING OF PERMANENT****CONSULTATIVE COMMITTEE II:****RADIOCOMMUNICATIONS****August 28 to September 01, 2023****Ottawa, Canada** | **OEA/Ser.L/XVII.4.2.42****CCP.II-RADIO /doc. 5904/23****06 August 2023****Original: English** |
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|  | **PROPOSALS FOR THE WORK OF THE CONFERENCE AGENDA ITEM 10 – PAI 2.4 & 2.5 70/80 GHZ** |  |
|  | **(Item on the Agenda: 3.1 (SGT-5))** |  |
|  | **(Document submitted by the delegation of United States of America)** |  |

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| **Impact on the sector:** |
| This document supports the work of CITEL’s PCC.II Working Group for WRC under 3.1 of the agenda. |

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| **Executive Summary:** |
| The United States submits an agenda item 10 proposal for WRC-27 to to consider the introduction of limits on satellite services in Article **21**, and conditions to ensure compatibility with passive services, for the use of the frequency bands 71-76 GHz and 81-86 GHz in accordance with a revision of Resolution **775 (REV. WRC‑23).** This proposal is based on agenda items 2.4 and 2.5 on the preliminary agenda for WRC-27. |

**UNITED STATES OF AMERICA**

**PROPOSALS FOR THE WORK OF THE CONFERENCE**

Agenda Item 10

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

**Preliminary WRC-27 agenda items 2.4 and 2.5**

**Background:**

The preliminary agenda for WRC-27 contains two preliminary agenda items (2.4 and 2.5) that propose to study the conditions of the use of the 71-76 GHz and 81-86 GHz bands by satellite services, and how to ensure the protection of incumbent in-band terrestrial service operations and in-band/adjacent band passive services. This proposal combines the elements of Resolution **775** (**WRC-19**) and Resolution **776** (**WRC-19**) into a single future agenda item. The proposed single future agenda item is based on the following edits to the existing preliminary agenda items 2.4 and 2.5:

2.4 to consider the introduction of limits on the fixed-satellite, mobile-satellite and broadcasting-satellite services in Article **21**, and conditions to ensure compatibility with in-band and adjacent band passive services, for the use of the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775 (WRC‑19)**;

The resulting proposed future agenda item, based on the changes shown above, is shown below in the Proposals section as 1.x.

**Proposals:**

SUP USA/10 (FSS 70/80 GHz))/1

RESOLUTION 812 (WRC-19)

Preliminary agenda for the 2027 World Radiocommunication Conference

**Reasons:** This Resolution must be suppressed, as WRC-23 will create a new Resolution that will include the agenda for WRC-27.

ADD USA/10 (FSS 70/80 GHz)/2

DRAFT NEW RESOLUTION [AI 10] (WRC‑23)

Agenda for the 2027 world radiocommunication conference

The World Radiocommunication Conference (Dubai, 2023),

considering

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

*b)* Article 13 of the ITU Constitution relating to the competence and scheduling of WRCs and Article 7 of the Convention relating to their agendas;

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

recognizing

*a)* that this conference has identified a number of urgent issues requiring further examination by WRC‑27;

*b)* that, in preparing this agenda, some items proposed by administrations could not be included and have had to be deferred to future conference agendas,

resolves

to recommend to the Council that a WRC be held in 2027 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‑23 and the Report of the Conference Preparatory Meeting, and with due regard to the requirements of existing and future services in the frequency bands under consideration, to consider and take appropriate action in respect of the following items:

1.x to consider the introduction of limits on the fixed-satellite, mobile-satellite and broadcasting-satellite services in Article **21**, and conditions to ensure compatibility with in-band and adjacent band passive services, for the use of the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775 (REV. WRC‑23)**;

 *resolves further*

to activate the Conference Preparatory Meeting,

*invites the ITU Council*

to finalize the agenda and arrange for the convening of WRC‑27, 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‑27,

*instructs the Secretary-General*

to communicate this Resolution to international and regional organizations concerned.

**Reasons**:An agenda item is required to study the compatibility conditions between satellite services in the frequency bands 71‑76 GHz and 81-86 GHz, and terrestrial and passive services in the frequency bands and in adjacent frequency;  and to consider the introduction of limits on satellite services in Article **21**,

**MOD USA/10 (FSS 70/80 GHz)/3**

RESOLUTION 775 (Rev. WRC‑23)

**Sharing and compatibility between satellite services and other incumbent services operating
in, and adjacent to, the frequency bands 71-76 GHz and 81-86 GHz**

The World Radiocommunication Conference (Dubai, 2023),

*considering*

*a)* that WRC‑2000 made a number of different allocation changes to the frequency bands 71-76 GHz and 81-86 GHz based on the requirements known at the time;

*b)* that the frequency bands 71-76 GHz and 81-86 GHz are allocated on a primary basis, among other services, to the fixed and mobile services globally;

*c)* that the frequency band 71-76 GHz is also allocated to the fixed-satellite service (FSS) (space-to-Earth) and the mobile-satellite service (MSS) (space-to-Earth) and the frequency band 74-76 GHz is allocated to the broadcasting-satellite service;

*d)* that the frequency band 81-86 GHz is also allocated to the FSS and MSS (Earth-to-space);

*e)* that the frequency bands 76-77.5 GHz, 79-81 GHz and 81-86 GHz are allocated to the radio astronomy service (RAS) on a primary basis;

*f)* that the frequency band 86-92 GHz is allocated to the Earth exploration-satellite service (EESS) (passive), the space research service (SRS) (passive) and the RAS, and that No. **5.340** applies in this frequency band;

*g)* that sharing conditions between the terrestrial services and satellite services in the frequency bands 71-76 GHz and 81-86 GHz could not be fully developed at WRC‑2000 due to lack of available information on these services at the time;

*h)* that now, nearly 20 years on, there have been a number of significant technology advances and changes in network requirements in the fixed and mobile services, and the frequency bands 71-76 GHz and 81-86 GHz have become strategically important frequency bands for high-capacity fixed-service links, including backhaul for future mobile networks;

*i)* that compatibility conditions between satellite services in the frequency bands 71‑76 GHz and 81-86 GHz and passive services in the frequency bands and in adjacent frequency bands could not be fully developed at WRC‑2000 due to lack of available information on satellite services at the time;

*j)* that WRC‑12 already addressed sharing and compatibility issues between the fixed service and passive services in the frequency bands 71-76 GHz and 81-86 GHz and relevant adjacent frequency bands,

*k)* that Resolution **750 (Rev.WRC‑19)** contains no provisions to protect the EESS (passive) in the frequency band 86-92 GHz from emissions of the satellite services operating in the frequency band 81-86 GHz;

*l)* that Resolution **739** **(Rev.WRC‑19)** contains no provisions to protect the RAS operating in adjacent frequency bands from emissions of the space services in the frequency bands 71‑76 GHz and 81-86 GHz,

*recognizing*

*a)* that there are an increasing number of satellite filings in the frequency bands 71-76 GHz and 81-86 GHz;

*b)* that Article **21** and other provisions of the Radio Regulations currently do not contain the necessary technical and regulatory provisions to protect the terrestrial service use in the frequency bands 71-76 GHz and 81-86 GHz;

*c)* that Resolution **750 (Rev.WRC‑19)** already contains necessary provisions to protect passive services in the frequency bands and adjacent frequency bands from emissions of the fixed service in the frequency bands 71-76 GHz and 81-86 GHz, and there is no intention to change these provisions;

*d)* that there is no intention to remove the existing allocations or change the primary status of those allocations in Article **5** of the Radio Regulations for the frequency bands 71-76 GHz and 81-86 GHz,

*e)* hat the use of mitigation techniques could be studied as a possible solution for satellite services in the frequency band 81-86 GHz to meet the protection requirements of EESS (passive) and the SRS (passive) services in the frequency band 86-92 GHz;

*e)* that Recommendations ITU-R RS.2017 and RS.1861 provide the interference criteria and typical technical parameters, respectively, for EESS (passive) operating in the band 86-92 GHz;

*resolves to invite the ITU Radiocommunication Sector*

1. to conduct, as a matter of urgency and in time for WRC‑27, the appropriate studies to determine limits to be placed in Article **21** for satellite services to protect the current and planned terrestrial services in the frequency bands 71-76 GHz and 81-86 GHz,

2 to conduct the appropriate studies to determine the technical conditions for satellite services operating in the frequency band 81-86 GHz in order to protect the EESS (passive) and the SRS (passive) operating in the frequency band 86-92 GHz and the RAS in the frequency bands mentioned in considering e) and f).

*invites the 2027 World Radiocommunication Conference*

to consider the results of studies and take necessary action,

*invites administrations*

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

Reason: Modifications are proposed to combine the studies called for in Resolutions 775 and 776, as well as recognition of other incumbent services.

**SUP (FSS 70/80 GHz)/4**

RESOLUTION 776 (WRC‑19)

Conditions for the use of the frequency bands 71-76 GHz and 81-86 GHz
by stations in the satellite services to ensure compatibility with passive services

Reason: Consequential action. The studies called for under Resolution 776 are now included in Resolution 775, as modified.

**ATTACHMENT**

**PROPOSAL FOR FUTURE AGENDA ITEM FOR [XXX]**

**Subject:** to consider the introduction of limits on satellite services in Article **21**, and conditions to ensure compatibility with passive services, for the use of the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775 (REV. WRC‑23)**;

**Origin**: Preliminary WRC-27 agenda items 2.4 and 2.5, as revised by the United States of America.

*Proposal:* to consider the introduction of limits on satellite services in Article **21**, and conditions to ensure compatibility with passive services, for the use of the frequency bands 71-76 GHz and 81-86 GHz in accordance with Resolution **775 (REV. WRC‑23)**;

***Background/reason:***

As interest in using the 70/80 GHz bands grows, it is necessary to establish the appropriate provisions to ensure the protection of terrestrial operations, as well as adjacent band passive services.

***Radiocommunication services concerned:***

Fixed-satellite service, Fixed Service, Mobile Service, Mobile-satellite Service, Broadcasting Service, Broadcasting-Satellite Service, Radio Astronomy, Earth-Exploration Satellite Service (passive), Space Research Service (passive).

***Indication of possible difficulties:***  None foreseen

***Previous/ongoing studies on the issue:***

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| ***Studies to be carried out by:*** ITU-R ITU-R WP 4A as responsible group | *with the participation of:* Other concerned WPs, Administrations, Sector Members |

***ITU-R Study Groups concerned:*** SG 3, SG4, SG 5, SG 6and SG 7

***ITU resource implications, including financial implications (refer to CV126):*** Minimal

***Common regional proposal:*** Yes/No ***Multicountry proposal:*** Yes/No

***Remarks***

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