

**INTERNATIONAL TELECOMMUNICATION UNION**

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**PLENARY MEETING**

**Document XXXX-E**  
**31 July 2015**  
**Original: English**

**Member States of the Inter-American Telecommunication Commission (CITEL)**

**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 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**

Today satellite operators provide a wide range of broadband services to a rapidly growing customer base, with more systems to come before 2019. Advances in satellite technologies are allowing a variety of new services including innovative broadband, video and mobile services covering all corners of the globe and providing service to places and regions not covered by traditional terrestrial services and that, accordingly, are missing out on the benefits of new and innovative telecommunications services. The fixed-satellite service can support a number of important public interest initiatives including tele-health, tele-education and public protection and disaster relief. Just to name a few examples, high throughput satellites are bringing broadband connectivity to rural and remote areas, thereby advancing countries' broadband objectives. New state of the art satellites that provide next generation satellite broadband, high quality video programming (including 3D and 4K programming), or the mobile-satellite service using Ka-band frequencies have recently been launched or will be launched shortly.

This is not by chance; the technological progress in radio communication enables the satellite industry to offer much more capacity today with much less spectrum. This applies to the fixed-satellite service whether operating in the geostationary or non-geostationary orbits. The satellite industry takes this development into account by using the most spectrum efficient technologies, including advances in spot-beam technologies and frequency re-use. In addition, for some satellite applications, such as gateways, sharing with Radiocommunication services could be more easily accomplished. However, even with this efficiency, demand for fixed-satellite service outpaces the spectrum available for this service today.

Nonetheless, there is growing demand for fixed-satellite service, including broadband and data services which in many rural and remote locations are the only ways of receiving these important communication services,. Today, with C, Ku and Ka bands reaching capacity, satellite frequencies are heavily used and are nearing saturation for many applications. Therefore, Satellite operators are seeking access to additional fixed-satellite service spectrum to satisfy existing and anticipated requirements for existing and new services, including broadband services. In the North America, for instance, over one million and a half customers currently rely on satellite broadband services and that number is growing each day.

The United States proposes these bands for consideration for the fixed-satellite service in the 32.3-33 GHz frequency band, and for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band. Other services shall be taken into account and this analysis shall include the possibility of sharing with existing uses of the bands.

## **Proposals**

**SUP USA/10(FSS)/1**

## RESOLUTION 808 (WRC-12)

### **Preliminary agenda for the 2018 World Radiocommunication Conference**

The World Radiocommunication Conference (Geneva, 2012),

**Reasons:** This Resolution must be suppressed, as WRC-15 will create a new Resolution that will include the agenda for WRC-19.

**ADD USA/10(FSS)/2**

## DRAFT NEW RESOLUTION [USA-2019]

### **Agenda for the 2019 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),

*recognizing*

- a) that WRC-15 has identified a number of urgent issues requiring further examination by WRC-19;
- 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 world radiocommunication conference be held in 2019 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-15 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.[fss] To consider spectrum requirements for the development of the fixed-satellite service and possible regulatory actions, including possible additional spectrum allocations in these bands ( 32.3-33 GHz and 37.5-39.5 GHz) to the fixed-satellite service for both geostationary and non-geostationary orbit use, taking into account existing services and the results of ITU-R studies in accordance with Resolution [USA/10/FIXED SATELLITE SERVICE] (WRC-15).

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution **27 (Rev.WRC-12)**;

3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the Conference;

4 in accordance with Resolution **95 (Rev.WRC-07)**, to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;

6 to identify those items requiring urgent action by the Radiocommunication Study Groups in preparation for the next world radiocommunication conference;

7 to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)** to facilitate rational, efficient, and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-07)**;

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC-15;

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations; and

9.3 on action in response to Resolution **80 (Rev.WRC-07)**;

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,

*resolves further*

to activate the Conference Preparatory Meeting,

*invites the Council*

to finalize the agenda and arrange for the convening of WRC-15, 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-19,

*instructs the Secretary-General*

to communicate this Resolution to international and regional organizations concerned.

**Reasons:** To support the requirement for additional spectrum being allocated to the fixed-satellite service.

**ADD USA/10(FSS)/3**

DRAFT NEW RESOLUTION [USA/10/FIXED-SATELLITE SERVICE] (WRC-15)

**Studies relating to the spectrum requirements and the possible identification of frequency bands to be allocated to the fixed-satellite service**

The World Radiocommunication Conference (Geneva, 2015),

*considering*

- a) that satellite technology is increasingly being used to deliver broadband services and can help enable universal broadband access, essential to 21<sup>st</sup> century life;
- b) that fixed-satellite service contribute to the public in a number of areas including tele-health, tele-medicine, telework, and public protection and disaster response;
- c) that next-generation end-user satellite broadband will dramatically increase speeds as 45 mbps is already available, with significantly faster rates expected in the near future;
- d) that first responders and relief workers can coordinate response efforts domestically, regionally and globally through the use of satellites;
- e) that satellite connectivity is available quickly and only requires ground units for the connection of each site;
- f) that the frequency bands proposed herein are being utilized by a number of services and these uses must be taken into account;
- g) that satellite operators provide a wide range of broadband services to a growing customer base, with more systems to come before 2019;
- h) that technological developments such as advances in spot-beam technologies and frequency re-use are used by the fixed-satellite service in order to increase the efficient use of spectrum; and
- i) that certain satellite applications, such as gateways, are more conducive to sharing with other Radiocommunications services,

*noting*

a) that, by Resolution **71 (Rev. Guadalajara 2010)** of the Plenipotentiary Conference, ITU adopted its strategic plan for the period 2012-2015, which contains, as one of the strategic goals of ITU-R: “To seek ways and means to ensure rational, equitable, efficient and economical use of the radio-frequency spectrum and satellite-orbit resources and to promote flexibility for future expansion and new technological developments”;

b) that Space Research Service (deep space) in the space-to-earth direction is allocated on a primary basis in the 31.8-32.3 GHz frequency band,

*recognizing*

a) that satellites take years to design and construct;

b) the need for additional spectrum allocations in the fixed-satellite service;

c) the need for regulatory certainty regarding the available spectrum for satellite design and planning purposes; and

d) the need to protect existing services when considering frequency bands for possible additional allocations to any service,

*resolves to invite the ITU-R*

to conduct, and complete in time for WRC-19:

1 studies considering additional spectrum requirements for the development of fixed-satellite service taking into account the bands currently allocated to the fixed-satellite service, the technical conditions of their use, and the possibility of optimizing the use of these bands with a view to increasing spectrum efficiency;

2 sharing and compatibility studies with existing services including in adjacent bands as appropriate;

3 studies on possible regulatory actions, including additional allocations to the fixed-satellite service for both geostationary and non-geostationary orbit use with Earth-to-space and space-to-Earth transmissions in the 32.3-33 GHz frequency band, and for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band,

*further resolves*

to invite WRC-19 to consider the results of the above studies and take appropriate actions,

*invites administrations*

to participate actively in these studies by submitting contributions to ITU-R.

**Reasons:** To support the requirement for additional spectrum being allocated to the fixed-satellite service.

## ATTACHMENT

**PROPOSAL FOR ADDITIONAL PRELIMINARY AGENDA ITEM AIMING AT THE CONSIDERATION OF SPECTRUM REQUIREMENTS FOR THE DEVELOPMENT OF THE FIXED-SATELLITE SERVICE AND POSSIBLE REGULATORY ACTIONS, INCLUDING ADDITIONAL ALLOCATIONS TO THE FIXED-SATELLITE SERVICE FOR BOTH GEOSTATIONARY AND NON-GEOSTATIONARY ORBIT USE WITH EARTH-TO-SPACE AND SPACE-TO-EARTH TRANSMISSIONS IN THE 32.3-33 GHZ FREQUENCY BAND, AND FOR REVERSE DIRECTION OPERATIONS FOR GATEWAY EARTH STATIONS IN THE 37.5-39.5 GHZ FREQUENCY..**

**Subject:** Proposes the adoption of an Agenda item for WRC-19 aiming at the consideration of spectrum requirements for the development of the fixed-satellite service, and possible regulatory actions, including additional allocations to the fixed-satellite service for both geostationary and non-geostationary orbit use with Earth-to-space and space-to-Earth transmissions in the 32.3-33 GHz frequency band, and for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band.

**Origin:** United States of America

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*Proposal: To develop a preliminary Agenda item aiming at the consideration of spectrum requirements for the development of the fixed-satellite service and possible regulatory actions, including additional allocations to the fixed-satellite service for both geostationary and non-geostationary orbit use with Earth-to-space and space-to-Earth transmissions in the 32.3-33 GHz frequency band, and for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band.*

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**Background/reason:** Today satellite operators provide a wide range of broadband services to a rapidly growing customer base, with more systems to come before 2019. Advances in satellite technologies are allowing a variety of new services including innovative broadband, video and mobile services covering all corners of the globe and providing service to places and regions not covered by traditional terrestrial services and that, accordingly, are missing out on the benefits of new and innovative telecommunications services. The fixed-satellite service can support a number of important public interest initiatives including tele-health, tele-education and public protection and disaster relief. Just to name a few examples, high throughput satellites are bringing broadband connectivity to rural and remote areas, thereby advancing countries' broadband objectives.

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***Radiocommunication services concerned:*** FSS

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

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***Previous/ongoing studies on the issue:*** Previous WRCs addressed similar issues in the 11/12/13/14 and 20/30 GHz bands.

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<b><i>Studies to be carried out by:</i></b> SG4
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<b><i>with the participation of:</i></b> SG7
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***ITU-R Study Groups concerned:*** SG4, SG7

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

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

***Multicountry proposal:*** Yes/No

***Number of countries:***

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***Remarks***