

**ATTACHMENT B**  
**to FCC Public Notice DA 18-423**

**Draft Proposals formulated and approved within the National Telecommunications and  
Information Administration:**

**DOCUMENT WAC/050 (23.04.18)**

Mr. Tom Sullivan  
Chief of the International Bureau  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington, DC 20554

Dear Mr. Sullivan:

The National Telecommunications and Information Administration (NTIA), on behalf of the Executive Branch agencies, approves the release of the draft Executive Branch proposals for the 2019 World Radiocommunication Conference (WRC-19) which address:

Agenda Item 1.1 - Amateur Service Allocation in 50-54 MHz for Region 1  
Agenda Item 1.3 - MetSat upgrade / EESS allocation (space-to-Earth) at 460-470 MHz  
Agenda Item 1.7 - Space Operations Service for non-GSO satellites with short duration below 1 GHz  
Agenda Item 1.10 - Global Aeronautical Distress and Safety System (GADSS)  
Agenda Item 1.15 – Land Mobile and Fixed services footnote between 275-450 GHz  
Agenda Item 7 (Issue B) – Coordination Criteria between FSS and MSS systems and between MSS systems in the frequency bands 29.5-30 GHz (Earth-to-space) / 19.7-20.2 GHz (space-to-Earth)  
Agenda Item 7 (Issue C5) – Bureau reminder to notifying administrations per **footnote 11.46**  
Agenda Item 7 (Issue D) Satellite network notification under **footnotes 9.12, 9.12A and 9.13**

NTIA considered the federal agencies' input toward the development of U.S. proposals for WRC-19. NTIA forwards this package for your consideration and review. Mr. Charles Glass is the primary contact from my staff.

Sincerely,

Paige R. Atkins  
Associate Administrator  
Office of Spectrum Management

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 1.1:** *to consider an allocation of the frequency band 50-54 MHz to the amateur service in Region 1, in accordance with **Resolution 658 (WRC-15)***

**Background**

The WRC-19 agenda item 1.1 proposes studies to explore the possibility of global harmonization of the 50-54 MHz frequency band for the amateur service.

The ITU currently allocates the 50 – 54 MHz frequency band to the amateur service on a primary basis in Regions 2 and 3. In Region 1, the band is currently allocated to only the broadcasting service on a primary basis. However, No. 5.169 of the Radio Regulations provides for an alternate allocation to the amateur service on a primary basis to a number of countries in Region 1, and No. 5.165 provides an alternate fixed and mobile, except aeronautical mobile, allocation on a primary basis to a number of countries in Region 1.

WRC-15 decided to study the sharing between the amateur service and incumbent services in Region 1 towards an allocation that would facilitate further worldwide harmonization and international operability. The frequency range 30 - 80 MHz marks the transition area between ionospheric and non-ionospheric propagation modes, which makes it particularly interesting for experimentation and study within the amateur service. Radio amateurs utilize allocations to the amateur service to engage in scientific and technical investigation and experimentation, provide communication in the wake of natural disasters, provide non-commercial public service communications, and conduct other activities to advance technical education, develop radio operating technique, and enhance international goodwill.

These characteristics and the use of the band fulfill the objective of the service as defined in article 1.56 of the Radio Regulations and engage the practitioners in scientific and technical investigations, as well as helping to develop radio-operating techniques also useful for emergency communications.

**Proposal:**

**NOC**

**USA/1.1/1**

**47-75.2 MHz**

<b>Allocation to services</b>
<b>Region 2</b>
<b>50-54</b>
AMATEUR 5.162A 5.167 5.167A 5.168 5.170

**Reasons:** No change is proposed for Region 2. Any changes made to the Radio Regulations under WRC-19 agenda item 1.1 must not impact the existing allocation to the amateur service in 50-54 MHz in Region 2, nor subject Region 2 to any changed procedural or regulatory provisions.

\_\_\_\_\_

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 1.3:** *to consider possible upgrading of the secondary allocation to the meteorological-satellite service (space-to-Earth) to primary status and a possible primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460-470 MHz, in accordance with Resolution 766 (WRC-15)*

**BACKGROUND:** The 460-470 MHz frequency band is allocated on a primary basis to the fixed and mobile services. The meteorological-satellite service currently has a secondary allocation in this band. Under No. **5.289**, “Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table”.

Within this frequency band the Argos Data Collection System (ADCS) monitors more than 21,000 active Argos platforms collecting data for over 2,000 distinct projects in 100+ countries. The administration of the Argos program is under a joint agreement between the National Oceanic and Atmospheric Administration (NOAA) within the United States and the French Space Agency, Centre National d’Etudes Spatiales (CNES). Additional partners include the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), and the Indian Space Research Organization (ISRO).

Critical applications of the ADCS include atmospheric and ocean monitoring/research, tropical cyclone forecasting, fishery management, oil spill tracking, fishing vessel tracking, search and rescue modeling (at sea), anti-piracy alerting, import/export and hazardous materials tracking, endangered species studies, migration mapping, and wildlife tracking and management.

The meteorological-satellite (space-to-Earth) service operates on a secondary basis relative to the fixed and mobile services and thus it must not interfere with these services. To protect the fixed and land mobile services within the United States, a power flux density (pfd) of -152 dB(W/(m<sup>2</sup>·4kHz)) has been imposed on the meteorological-satellite (space-to-Earth) service.

In accordance with Resolution **766 (WRC-15)**, the ITU-R is conducting sharing studies to ensure the protection of incumbent services and to develop a pfd limit that will protect incumbent services globally from potential interference in the frequency band 460 – 470 MHz.

Studies have demonstrated that sharing is possible between meteorological-satellite (space-to-Earth)/earth-exploration-satellite (space-to-Earth) services and the incumbent services in the 460 – 470 MHz frequency band if the new pfd limits are applied. Based on the results of sharing studies,

this proposal supports an allocation upgrade from secondary to a primary for the meteorological-satellite service (space-to-Earth) and a new primary allocation to the earth-exploration-satellite (space-to-Earth) service in the frequency band 460 – 470 MHz band. This proposal applies the new pfd limits to the meteorological-satellite and earth exploration-satellite services in order to protect the incumbent services globally.

Proposal:

**ARTICLE 5**  
**Frequency allocations**

**Section IV – Table of Frequency Allocations**  
(See No. 2.1)

**MOD** USA/AI 1.3/1

460-470 MHz

Allocation to services		
Region 1	Region 2	Region 3
460-470	FIXED MOBILE 5.286AA METEOROLOGICAL-SATELLITE (space-to-Earth) EARTH-EXPLORATION-SATELLITE (space-to-Earth)  5.287 5.288 MOD 5.289 5.290 ADD 5.A103 ADD 5.B103 ADD 5.C103	

**Reason:** The upgrade from the secondary MetSat and EESS allocations to primary will bring regulatory stability and certainty to decades of investments for the space agencies involved in Satellite Data Collection Programs. Also, this upgraded allocation will ease coordination effort for Administrations.

**MOD USA/AI 1.3/2**

**5.289** Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the band 1 690-1 710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table of Frequency Allocations.

**ADD USA/AI 1.3/4**

**5.A103** In the frequency band 460-470 MHz, earth stations in the meteorological-satellite (space-to-Earth) and earth-exploration-satellite (space-to-Earth) services shall not claim protection from, stations of the fixed and mobile services.

**Reasons:** The incumbent fixed and mobile allocations maintain a higher regulatory status over the primary meteorological-satellite (space-to-Earth) and earth exploration-satellite (space-to-Earth) services by not being required to protect the metrological-satellite and earth-exploration satellite services.

**ADD USA/AI 1.3/5**

**5.B103** In the frequency band 460-470 MHz, in order to protect systems of the fixed and mobile services, stations in the meteorological-satellite (space-to-Earth) and earth exploration-satellite (space-to-Earth) services shall comply with the power flux density limits listed below.

1) For the non-GSO spacecraft is:

$$pfd \text{ (dB(W)/(m}^2 \cdot \text{4kHz))} = \begin{cases} -157 & 0^\circ \leq \alpha < 5^\circ \\ -157 + 0.5(\alpha - 5) & 5^\circ \leq \alpha < 15^\circ \\ -152 & 15^\circ \leq \alpha \leq 90^\circ \end{cases}$$

2) For the GSO spacecraft is:

$$pfd \text{ (dB(W)/(m}^2 \cdot \text{4kHz))} = -156 + 3/90 \times \alpha \quad 0^\circ < \alpha < 90^\circ$$

where  $\alpha$  is the angle of arrival above the horizontal plane, in degrees. (WRC-19)

**Reasons:** The meteorological-satellite (space-to-Earth) and earth exploration-satellite (space-to-Earth) services shall protect the incumbent fixed and mobile services by restricting their operations according to these pfd limits.

**ADD USA/AI 1.3/6**

**5.C103** In the frequency band 460-470 MHz, stations in the earth exploration-satellite service (space-to-Earth) shall not cause harmful interference to stations in the meteorological-satellite service (space-to-Earth). (WRC-19)

**Reasons:** Maintain the current priority that the meteorological-satellite service (space-to-Earth) has relative to the earth exploration-satellite (space-to-Earth) service.

**APPENDIX 7 (REV.WRC-15)**

**Methods for the determination of the coordination area around an earth station in frequency bands between 100 MHz and 105 GHz**

ANNEX 7

**System parameters and predetermined coordination distances for determination of the coordination area around an earth station**

**3 Horizon antenna gain for a receiving earth station with respect to a transmitting earth station**



TABLE 8A (REV.WRC-19)

**Parameters required for the determination of coordination distance for a receiving earth station**

Receiving space radiocommunication service designation		Space operation, space research	Meteorological-satellite, mobile-satellite	Space research	Space research, space operation	Space operation	Mobile-satellite	Meteorological-satellite	Mobile-satellite	Space research	Space operation		Broad-casting-satellite	Mobile-satellite	Broadcasting-satellite (DAB)	Mobile-satellite, land-mobile satellite, maritime mobile-satellite	
Frequency bands (MHz)		137-138	137-138	143.6-143.65	174-184	163-167 272-273 <sup>5</sup>	335.4-399.9	400.15-401	400.15-401	400.15-401	401-402		620-790	856-890	1 452-1 492	1 518-1 530 1 555-1 559 2 160-2 200 <sup>1</sup>	
Transmitting service designations		terrestrial Fixed, mobile	Fixed, mobile	Fixed, mobile, radio-location	Fixed, mobile, broadcasting	Fixed, mobile	Fixed, mobile	Meteorological aids	Meteorological aids	Meteorological aids	Meteorological aids, fixed, mobile		Fixed, mobile, broadcasting	Fixed, mobile, broadcasting	Fixed, mobile, broadcasting	Fixed, mobile	
Method to be used		§ 2.1	§ 2.1	§ 2.1	§ 2.1	§ 2.1	§ 1.4.6	§ 1.4.6	§ 1.4.6	–	§ 2.1		§ 1.4.5	§ 1.4.6	§ 1.4.5	§ 1.4.6	
Modulation at earth station <sup>2</sup>		N		N		N				N	N				N	N	
Earth station interference parameters and criteria	$p_0$ (%)	0.1		0.1		1.0		0.012		0.1	0.1					10	
	$n$	2		2		1		1		2	2					1	
	$p$ (%)	0.05		0.05		1.0		0.012		0.05	0.05					10	
	$N_L$ (dB)	0		0		0		0		0	0					0	
	$M_S$ (dB)	1		1		1		4.3		1	1					1	
	$W$ (dB)	0		0		0		0		0	0					0	
Terrestrial station parameters	$E$ (dBW) in $B$ <sup>3</sup>	A	–	–	–	15				–	–				38	37 <sup>4</sup>	
		N	–	–	–	15				–	–				38	37	
	$P_f$ (dBW) in $B$	A	–	–	–	–1					–	–				3	0
		N	–	–	–	–1					–	–				3	0
	$G_x$ (dBi)		–	–	–	16					–	–				35	37
Reference bandwidth	$B$ (Hz)	1		1		$10^3$		$177.5 \times 10^3$		1	1				$25 \times 10^3$	$4 \times 10^3$	
Permissible interference power	$P_f(p)$ (dBW) in $B$	–199		–199		–173		–148		–208	–208					–176	

- <sup>1</sup> In the band 2 160-2 200 MHz, the terrestrial station parameters of line-of-sight radio-relay systems have been used. If an administration believes that, in this band transhorizon systems need to be considered, the parameters associated with the frequency band 2 500-2 690 MHz may be used to determine the coordination area.
- <sup>2</sup> A: analogue modulation; N: digital modulation.
- <sup>3</sup> *E* is defined as the equivalent isotropically radiated power of the interfering terrestrial station in the reference bandwidth.
- <sup>4</sup> This value is reduced from the nominal value of 50 dBW for the purposes of determination of coordination area, recognizing the low probability of high power emissions falling fully within the relatively narrow bandwidth of the earth station.
- <sup>5</sup> The fixed-service parameters provided in the column for 163-167 MHz and 272-273 MHz are only applicable to the band 163-167 MHz.

**Reason:** Consequential changes to AP 7 to remove the Meteorological Satellite Service given the proposed 5.A103.

SUP USA/AI 1.3/8

RESOLUTION 766 (WRC-15)

**Consideration of possible upgrading of the secondary allocation to the meteorological-satellite service (space-to-Earth) to primary status and a primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460-470 MHz**

Reasons: Sharing studies have shown that an upgrade to a primary allocation for meteorological-satellite service (space-to-Earth) and earth-exploration satellite service (space-to-Earth) are compatible with the incumbent services and there is no further need for this resolution.

---

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 1.7:** *to study the spectrum needs for telemetry, tracking and command (TT&C) in the space operation service for non-geostationary (NGSO) satellites with short duration missions, to assess the suitability of existing allocations to the space operation service and, if necessary, to consider new allocations, in accordance with Resolution 659 (WRC-15)*

**BACKGROUND:**

The demand for suitable spectrum for NGSO satellites with short duration missions is growing due to the increasing number of these types of satellite missions. The mass and dimensions of these satellites contribute to their success and their use will likely grow. These types of missions provide an affordable means for scientific and commercial space purposes and are increasingly used by new entrants in space. Nevertheless, it is important to ensure that these missions do not cause harmful interference to existing systems and incumbent services. WRC-19 Agenda Item 1.7 invites studies to accommodate spectrum requirements for TT&C in the space operation service, below 1 GHz, for NGSO satellites with short duration missions in existing bands or identify new spectrum supported by sharing studies. The term “short duration mission” used in Resolution 659 (WRC-15) refers to a mission having a limited period of validity of typically not more than 3 years, where the operator does not launch replenishment or replacement spacecraft.

The frequency ranges described under invites ITU-R 3 overlap with allocations critical to global maritime distress and safety service (GMDSS) frequencies, identified in RR Appendix 15, and centered at 156.3 MHz, 156.525 MHz, 156.65 MHz, 156.8 MHz, 161.975 MHz, and 162.025 MHz, as well as frequencies used for the safety of life COSPAS/SARSAT system in the band 406-406.1 MHz.

**Proposal**

**NOC** USA/AI 1.7/1

ARTICLE 5

**Frequency allocations**

**Section IV – Table of Frequency Allocations (See No. 2.1)**

**Reason:** ITU-R sharing and compatibility studies between NGSO satellites with short duration missions and the incumbent services, with respect to invites ITU-R 2 and 3 of Resolution 659 (WRC-15), demonstrated that sharing is not feasible.

SUP USA/AI 1.7/2

RESOLUTION 659 (WRC-15)

**Studies to accommodate requirements in the space operation service for non-geostationary satellites with short duration missions**

**Reasons:** ITU-R studies showed that sharing between incumbent services and short duration non-geostationary satellites with short duration missions is not feasible in frequency bands considered under this resolution. The work is complete; therefore, the resolution is no longer needed.

---

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 1.10:** *to consider spectrum needs and regulatory provisions for the introduction and use of the Global Aeronautical Distress and Safety System (GADSS), in accordance with Resolution 426 (WRC-15);*

**Background Information:** The International Civil Aviation Organization (ICAO) has developed a concept of operations (ConOps) to support future development of a Global Aeronautical Distress and Safety System (GADSS).

That ConOps describes in particular the following functions:

- Aircraft tracking: Typically leverages existing technologies to assist in the timely identification and location of aircraft. Provides an automated reporting function every 15 minutes or less. Aircraft tracking may be accomplished by multiple different systems over the duration of a flight.
- Autonomous distress tracking: An automated method of position reporting at intervals of one minute or less to support search and rescue (SAR), triggered by indications that an aircraft is in distress which may result in an accident. Distress tracking aims to establish the location of a potential accident site within a 6 nautical mile (11.11 km) radius.
- Post flight localization and recovery: A combination of both the immediate need to locate and rescue possible survivors after an air accident using emergency location beacons and other methods to an accuracy of less than 1 nautical mile (<1.85 km), and the timely collection of aircraft components and data that will assist in the accident investigation.
- Procedures and information management: The method of data collection and notification of flight tracking data to the relevant search and rescue coordination centres.

The ConOps is the guidelines for the development of ICAO performance-based standards, outlining specific technical and operational requirements that an aircraft must meet. It does not identify specific systems proposed to contribute to GADSS; rather ICAO intends to use systems operating under appropriate existing allocations in accordance with the provisions of the Radio Regulations.

In accordance with Resolution 426 (WRC-15), ITU-R considered spectrum needs and regulatory provisions for the introduction and use of (GADSS).

**Proposal:**

ARTICLE 5  
**Frequency allocations**

**NOC**      USA/1.10/1

**Reasons:** As ICAO has concluded that the GADSS requirements can be satisfied using systems operating within existing aeronautical frequency allocations or distress spectrum, and also that for WRC-19 no additional spectrum allocations are required, then no changes are required to the Radio Regulations Article 5.

**Distress and safety communications**

ARTICLE 30  
**General Provisions**

Section I – Introduction

**MOD**      USA/1.10/2

**30.1** § 1 Nos. 30.4-30.13 and Articles 31, 32, 33 and 34 of this Chapter contains the provisions for the operational use of the global maritime distress and safety system (GMDSS), whose functional requirements, system elements and equipment carriage requirements are set forth in the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended. These articles also contains provisions for initiating distress, urgency and safety communications by means of radiotelephony on the frequency 156.8 MHz (VHF channel 16). (WRC-0719)

**Reasons:** Distinguish which portions of Articles 30-34 deal with GMDSS and/or distress, urgency and safety communications by means of radiotelephony on the frequency 156.8 MHz (VHF channel 16)

**ADD**      USA/1.10/3

**30.1A** Article **34A** of this Chapter contains the provisions for the global aeronautical distress and safety system (GADSS), whose functional requirements are set forth in the Convention on International Civil Aviation, as amended. (WRC-19)

**Reasons:** Introduce provisions for GADSS as a Distress and Safety Communications system.

**ADD** USA/1.10/4

## ARTICLE 34A

### **Global Aeronautical Distress and Safety System**

**34A.1** The GADSS concept of operations determines performance requirements for the radiocommunication systems being used for conducting functions such as aircraft tracking, autonomous distress tracking, and post flight localization and recovery. (WRC-19)

**34A.2** The type of radiocommunication service to be used by systems contributing to the GADSS depends on the requirements of the specific GADSS function. Systems contributing to the GADSS shall not operate under the provisions of Article 4.4. (WRC-19)

**Reasons:** Introduce provisions for GADSS as a Distress and Safety Communications system.

**SUP** USA/1.10/5

## **RESOLUTION 426 (WRC-15)**

### **Studies on spectrum needs and regulatory provisions for the introduction and use of the Global Aeronautical Distress and Safety System**

**Reasons:** Required actions are completed.

---



**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 1.15:** To consider identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450 GHz, in accordance with Resolution 767 (WRC-15);

**Background Information:** RR No. **5.565** identifies frequency bands in the range 275-450 GHz for use by administrations for radio astronomy, Earth exploration-satellite (passive) and space research (passive) service applications. WRC-19 agenda item 1.15 seeks to identify spectrum for land mobile service (LMS) and fixed service (FS) applications in the 275-450 GHz band while maintaining protection of the existing Earth exploration-satellite service (EESS) (passive) and radio astronomy (RAS) applications identified in RR No. **5.565**.

The studies concerning the compatibility of EESS(passive)/RAS and LMS and FS applications concluded that the following bands can be identified for LMS/FS applications without the need for regulatory restrictions: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450GHz. However, in the case where LMS/FS applications will be deployed in the same geographical area as RAS sites, separation distances and/or avoidance angles may be needed (per national arrangements) to protect RAS sites.

**Proposal:** This document proposes modifications as shown:

ARTICLE 5

**Frequency allocations**

**MOD**      **USA/4586A15/1**

**Section IV – Table of Frequency Allocations**  
(See No. 2.1)

Allocation to services		
Region 1	Region 2	Region 3
275-3 000	(Not allocated) 5.565 ADD 5.A115	

**Reasons:** Frequency bands where land-mobile and fixed service applications are considered as potentially compatible with both EESS (passive) and RAS can be identified by a new footnote.

**NOC**      **USA/4586A15/2**

**5.565**

**Reasons:** Modifications to No. **5.565** are not necessary as the addition of fixed and land-mobile active services to the 275-450 GHz frequency range can be accomplished through the addition of a new footnote.

**ADD**      **USA/4586A15/3**

**5.A115** The following frequency ranges are identified for use by administrations for land-mobile and fixed service applications:

–                      275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz

Administrations wishing to make the above frequencies available for land-mobile and fixed service applications are urged to take all practicable steps to protect the frequency bands identified for passive services as provided in No. **5.565**.

**Reasons:** Studies that evaluated the entire 275-450 GHz range show sharing is possible between FS/LMS applications and the EESS (passive)/RAS in the 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450GHz frequency bands. Note that for frequencies in the range 275-450 GHz not identified for sharing, studies have shown that FS/LMS applications could cause harmful interference to existing passive applications making use of frequency bands identified in No. **5.565**.

**SUP**      **USA/4586A15/4**

## RESOLUTION 767 (WRC-15)

### **Studies towards an identification for use by administrations for land-mobile and fixed services applications operating in the frequency range 275-450 GHz**

The World Radiocommunication Conference (Geneva, 2015),

**Reasons:** Studies have been completed and frequency bands for FS/LMS applications have been identified.

---

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 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)**, in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

**Issue B** – Application of coordination arc in the Ka-band, to determine coordination requirements between the FSS and other satellite services

**Background Information:** WRC-19 agenda item 7, Issue B, proposes the introduction of the coordination arc with a value of 8 degrees as coordination criteria between fixed-satellite service (FSS) and mobile-satellite service (MSS) systems and between MSS systems, in the frequency bands 29.5-30 GHz (Earth-to-space)/19.7-20.2 GHz (space-to-Earth) in all 3 Regions. The introduction of an 8 degree coordination arc would serve as a substitution of the existing coordination trigger of  $\Delta T/T > 6\%$ . Currently, when determining whether coordination under RR No. **9.7** is required between FSS vs FSS satellite networks, a coordination arc of  $8^\circ$  is the coordination criteria applied in the frequency bands 29.5-30 GHz (Earth-to-space)/19.7-20.2 GHz (space-to-Earth). Results of ITU-R studies show that earth station terminals used in the MSS and FSS for these frequency bands are quite similar. Therefore, it could be considered that the coordination arc that currently triggers coordination between FSS systems could be applied to trigger coordination between MSS and FSS systems and between MSS systems.

Introduction of the coordination arc of 8 degrees would reduce the number of Administrations identified for coordination, thereby reducing the number of coordination processes and resulting in a reduction of required resources in Administrations, operators, and Bureau. Administrations will continue to have the possibility to request application of RR No. **9.41** for inclusion of additional affected satellite networks, taking into account the  $\Delta T/T > 6\%$  criteria. In this proposal, it is proposed to implement the modifications to the Radio Regulations in accordance with Method B.

Proposal:

APPENDIX 5 (Rev.WRC-15)

**Identification of administrations with which coordination is to be effected or agreement sought under the provisions of Article 9**

MOD USA/AI7/1

TABLE 5-1 (Rev.WRC-19)

**Technical conditions for coordination**

(see Article 9)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO	A station in a satellite network using the geostationary-satellite orbit (GSO), in any space radiocommunication service, in a frequency band and in a Region where this service is not subject to a Plan, in respect of any other satellite network using that orbit, in any space radiocommunication service in a frequency band and in a Region where this service is not subject to a Plan, with the exception of the coordination	1) 3 400-4 200 MHz 5 725-5 850 MHz (Region 1) and 5 850-6 725 MHz 7 025-7 075 MHz	i) Bandwidth overlap, and ii) any network in the fixed-satellite service (FSS) and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 7^\circ$ of the nominal orbital position of a proposed network in the FSS		With respect to the space services listed in the threshold/condition column in the frequency bands in 1), 2), 2 <i>bis</i> ), 3), 3 <i>bis</i> ), 4), 5), 6), 7) and 8), an administration may request, pursuant to No. 9.41, to be included in requests for coordination, indicating the networks for which the value of $\Delta T/T$ calculated by the method in § 2.2.1.2 and 3.2 of Appendix 8 exceeds 6%. When the Bureau, on request by an affected administration,
		2) 10.95-11.2 GHz 11.45-11.7 GHz 11.7-12.2 GHz (Region 2) 12.2-12.5 GHz (Region 3) 12.5-12.75 GHz (Regions 1 and 3)	i) Bandwidth overlap, and ii) any network in the FSS or broadcasting-satellite service (BSS), not subject to a Plan, and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of $\pm 6^\circ$ of the nominal orbital position of a		

	between earth stations operating in the opposite direction of transmission	12.7-12.75 GHz (Region 2) and 13.75-14.8 GHz	proposed network in the FSS or BSS, not subject to a Plan  iii) in the band 14.5-14.8 GHz any network in the space research service (SRS) or FSS not subject to a Plan and any associated space operation functions (see No. <b>1.23</b> ) with a space station within an orbital arc of $\pm 6^\circ$ of the nominal orbital position of a proposed network in the SRS or FSS not subject to a Plan		studies this information pursuant to No. <b>9.42</b> , the calculation method given in § 2.2.1.2 and 3.2 of Appendix <b>8</b> shall be used
--	--	--	--	--	---

TABLE 5-1 (continued) (Rev.WRC-19)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. <b>9.7</b> GSO/GSO (cont.)		2bis) 13.4-13.65 GHz (Region 1)  3) 17.7-19.7 GHz, (Regions 2 and 3), 17.3-19.7 GHz (Region 1) and 27.5-29.5 GHz	i) Bandwidth overlap, and ii) any network in the space research service (SRS) or any network in the FSS and any associated space operation functions (see No. <b>1.23</b> ) with a space station within an orbital arc of $\pm 6^\circ$ of the nominal orbital position of a proposed network in the FSS or SRS  i) Bandwidth overlap, and ii) any network in the FSS and any associated space operation functions (see No. <b>1.23</b> ) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS		

		<p>3bis) 19.7-20.2 GHz and 29.5-30 GHz</p> <p>4) 17.3-17.7 GHz (Regions 1 and 2)</p>	<p>i) Bandwidth overlap, and</p> <p>ii) any network in the FSS or in the MSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the nominal orbital position of a proposed network in the FSS or in the MSS.</p> <p>i) Bandwidth overlap, and</p> <p>ii) a) any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the nominal orbital position of a proposed network in the BSS,</p> <p>or</p> <p>b) any network in the BSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the nominal orbital position of a proposed network in the FSS</p>		
--	--	--	---	--	--

TABLE 5-1 (continued) (Rev.WRC-19)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO (cont.)		5) 17.7-17.8 GHz	<p>i) Bandwidth overlap, and</p> <p>ii) a) any network in the FSS and any associated space operation functions (see No. 1.23) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the</p>		

			<p>nominal orbital position of a proposed network in the BSS,</p> <p>or</p> <p>b) any network in the BSS and any associated space operation functions (see No. <b>1.23</b>) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the nominal orbital position of a proposed network in the FSS</p> <p>NOTE – No. <b>5.517</b> applies in Region 2.</p>		
		6) 18.0-18.3 GHz (Region 2) 18.1-18.4 GHz (Regions 1 and 3)	<p>i) Bandwidth overlap, and</p> <p>ii) any network in the FSS or meteorological-satellite service and any associated space operation functions (see No. <b>1.23</b>) with a space station within an orbital arc of <math>\pm 8^\circ</math> of the nominal orbital position of a proposed network in the FSS or the meteorological-satellite service</p>		

TABLE 5-1 (continued) (Rev.WRC-19)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. <b>9.7</b> GSO/GSO ( <i>cont.</i> )		6 <i>bis</i> ) 21.4-22 GHz (Regions 1 and 3)	<p>i) Bandwidth overlap; and</p> <p>ii) any network in the BSS and any associated space operation functions (see No. <b>1.23</b>) with a space station within an orbital arc of <math>\pm 12^\circ</math> of the nominal orbital position of a proposed network in the BSS (see also</p>		No. <b>9.41</b> does not apply.

			Resolutions <b>554 (WRC-12)</b> and <b>553 (WRC-12)</b> .		
		7) Bands above 17.3 GHz, except those defined in § 3), <i>3bis</i> ) and 6)	i) Bandwidth overlap, and ii) any network in the FSS and any associated space operation functions (see No. <b>1.23</b> ) with a space station within an orbital arc of $\pm 8^\circ$ of the nominal orbital position of a proposed network in the FSS (see also Resolution <b>901 (Rev.WRC-07)</b> )		
		8) Bands above 17.3 GHz except those defined in § 4), 5) and <i>6bis</i> )	i) Bandwidth overlap, and ii) any network in the FSS or BSS, not subject to a Plan, and any associated space operation functions (see No. <b>1.23</b> ) with a space station within an orbital arc of $\pm 16^\circ$ of the nominal orbital position of a proposed network in the FSS or BSS, not subject to a Plan, except in the case of a network in the FSS with respect to a network in the FSS (see also Resolution <b>901 (Rev.WRC-07)</b> )		



TABLE 5-1 (continued) (Rev.WRC-19)

Reference of Article 9	Case	Frequency bands (and Region) of the service for which coordination is sought	Threshold/condition	Calculation method	Remarks
No. 9.7 GSO/GSO (cont.)		9) All frequency bands, other than those in 1), 2), 2 <i>bis</i> ), 3), 3 <i>bis</i> ), 4), 5), 6), 6 <i>bis</i> ), 7) and 8), allocated to a space service, and the bands in 1), 2), 2 <i>bis</i> ), 3), 3 <i>bis</i> ), 4), 5), 6), 6 <i>bis</i> ), 7) and 8) where the radio service of the proposed network or affected networks is other than the space services listed in the threshold/ condition column, or in the case of coordination of space stations operating in the opposite direction of transmission	i) Bandwidth overlap, and  ii) Value of $\Delta T/T$ exceeds 6%	Appendix 8	In application of Article 2A of Appendix 30 for the space operation functions using the guardbands defined in § 3.9 of Annex 5 of Appendix 30, the threshold/condition specified for the FSS in the bands in 2) applies.  In application of Article 2A of Appendix 30A for the space operation functions using the guardbands defined in § 3.1 and 4.1 of Annex 3 of Appendix 30A, the threshold/condition specified for the FSS in the bands in 7) applies

**Reasons:** Extend the coordination arc to consider MSS in the frequency bands 29.5-30 GHz and 19.7-20.2 GHz.

---

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 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)**, in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

**Issue C5** – Issues for which consensus was achieved in ITU-R

**Background Information:** Issue C is a collection of several different topics that are viewed as being straightforward and for which consensus was readily achieved within ITU-R. The issues address such things as resolving inconsistencies in regulatory provisions, clarifying certain existing practices, or increasing transparency in the regulatory process.

Pursuant to RR No. **11.46**, the Bureau allows Notifying Administrations six months to resubmit their notified frequency assignments, which were returned due to an unfavorable finding with respect to RR Nos. **11.32**, **11.32A** or **11.33**. Any notification resubmitted beyond six months is considered as a new notification with a new date of receipt and would be subject to cost recovery fees. However, neither RR No. **11.46** nor any other provision in the Radio Regulations requires the Bureau to send a reminder to the Notifying Administration at any point during the six-month period. If the Notifying administration resubmits the notice to the Bureau beyond the required six-month period, the Bureau assigns a new date of receipt and reviews whether the notice complies with the period in RR No. **11.44.1** or RR No. **11.43A** and takes the appropriate action. In the case that a notice resubmitted beyond the six-month deadline is receivable, cost recovery fees would be required for the resubmitted assignments. Addressing this lack of a reminder would be beneficial to Administrations who may have experienced difficulties receiving or addressing the Bureau's return of notice and the need to ensure that frequency assignments that are in use are properly recorded in the Master Register.

A single method has been identified to address this issue. It would be considered advantageous to Notifying Administrations if the Bureau sends a reminder of the option to resubmit returned frequency assignments under RR No. **11.37** or **11.38**. Modification of RR No. **11.46** requiring the Bureau to remind the Notifying Administration of the six-month deadline would aid Administrations who may have had difficulties in receiving the communication of returned frequency assignments.

**Proposal:**

## ARTICLE 11

### **Notification and recording of frequency assignments<sup>1, 2, 3, 4, 5, 6, 7, 8</sup> (WRC-15)**

**MOD** USA/AI7(C5)/1

**11.46** In applying the provisions of this Article, any resubmitted notice which is received by the Bureau more than six months after the date on which the original notice was returned by the Bureau shall be considered to be a new notification with a new date of receipt<sup>x</sup>. For frequency assignments to a space station, should the new date of receipt of such a notice not comply with the period specified in No. **11.44.1** or No. **11.43A**, as appropriate, the notice shall be returned to the notifying administration in the case of No. **11.44.1**, and the notice shall be examined as a new notice of a change in the characteristics of an assignment already recorded with a new date of receipt in the case of No. **11.43A**. (WRC-19)

**Reasons:** To include a reference to a footnote provision requiring the Bureau to send a reminder 2 months prior to the end of the six-month period referred to in No. **11.46**.

**ADD** USA/AI7(C5)/2

---

<sup>x</sup>**11.46.1** If the notifying administration does not resubmit its notice within four months from the date on which the original notice was returned by the Bureau, the Bureau shall issue a reminder.

**Reasons:** To implement the requirement for reminders during the six-month period and reduce the risk of a resubmission beyond the end six-month period referred to in No. **11.46**.

---

**UNITED STATES OF AMERICA**  
**DRAFT PROPOSAL FOR WRC-19**

**Agenda Item 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)**, in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;

**Issue D** – Identification of those specific satellite networks and systems with which coordination needs to be effected under RR Nos. 9.12, 9.12A and 9.13

**Background Information:** At the 2012 World Radiocommunication Conference (WRC-12) modifications to RR No. **9.36.2** to Article **9** of the Radio Regulations were adopted to decrease the administrative workload related to the identification of the satellite networks, systems and earth stations, as applicable, with which coordination needs to be effected under RR Nos. **9.7, 9.7A and 9.7B**. The Bureau now publishes a “definitive list” of those networks, systems and earth stations with which coordination under RR Nos. **9.7, 9.7A and 9.7B** needs to be effected once a coordination request (a new one or a modification to an existing one, as appropriate) for a satellite network or system is processed. Such a list is published in the relevant Special Section of the BR International Frequency Information Circular (BR IFIC). However, in the cases of coordination under RR Nos. **9.12, 9.12A and 9.13**, the Bureau does not publish a list of the satellite networks or systems potentially affected to complement the list of administrations potentially affected by incoming satellite networks or systems that they do provide.

Bearing in mind that, according to RR No. **9.36.1**, the list of administrations identified for coordination under RR Nos. **9.12, 9.12A and 9.13** is only for information purposes, each of those potentially affected administrations needs to carry out the following tasks:

- 1 Identify, together with each of its operators, those GSO networks and non-GSO systems that may be affected by the new satellite system requesting coordination;
- 2 Compile, in case the administration is responsible for more than one operator, a comprehensive list covering all the GSO networks and non-GSO systems with which coordination is required;
- 3 Transmit to the administration having filed a CR/C (a new one or a modification to an existing one, as appropriate) and to the Bureau its comments on or disagreement to the request for coordination pursuant to RR No. **9.52**.

The above process could be simplified if a pre-compiled list of satellite networks or systems considered as potentially affected would be available, for information purposes only, in the cases of coordination under RR Nos. **9.12, 9.12A and 9.13** as it is currently for the cases of RR Nos. **9.7, 9.7A and 9.7B** in the CR/C Special Section. In this proposal, it is proposed to implement the modifications to the Radio Regulations in accordance with Method D2.

**Proposal:**

## ARTICLE 9

### **Procedure for effecting coordination with or obtaining agreement of other administrations**<sup>1, 2, 3, 4, 5, 6, 7, 8, 9</sup> (WRC-15)

#### **Section II – Procedure for effecting coordination**<sup>12, 13</sup>

##### **Sub-Section IIA – Requirement and request for coordination**

**MOD** USA/AI7(D)/1

<sup>20</sup> **9.36.1** In the case of coordination under Nos. **9.12**, **9.12A** and **9.13**, as appropriate, the Bureau shall also identify the satellite networks or systems with which coordination may need to be effected. The list of administrations identified by the Bureau under Nos. **9.11** to **9.14** and **9.21** and the list of satellite networks or systems identified by the Bureau under Nos. **9.12**, **9.12A** and **9.13** are only for information purposes, to help administrations comply with this procedure. (WRC-19)

**Reasons:** This modification is required in order to have the list of potentially affected satellite networks or systems published in addition to the list of administrations.

##### **Sub-Section IIC – Action upon a request for coordination**

**MOD** USA/AI7(B)/2

**9.52C** For coordination requests under Nos. **9.11** to **9.14** and **9.21**, an administration not responding under No. **9.52** within the same four-month period shall be regarded as unaffected and, in the cases of Nos. **9.11** to **9.14**, the provisions of Nos. **9.48** and **9.49** shall apply. Furthermore, for coordination under Nos. **9.12**, **9.12A** and **9.13**, any satellite network or system identified under No. **9.36.1** but not confirmed in the response provided by administrations under No. **9.52** within the same four-month period shall be regarded as unaffected and the provisions of Nos. **9.48** and **9.49** shall also apply. (WRC-19)

**Reasons:** This modification is required to indicate the consequence for not identifying satellite networks or systems in the response provided under No. **9.52**.

**MOD** USA/AI7(D)/3

**9.53A** Upon expiry of the deadline for comments in respect of a coordination request under Nos. **9.11** to **9.14** and **9.21**, the Bureau shall, according to its records, publish a Special Section, indicating the list of administrations having submitted their disagreement and the list of satellite networks or systems upon which their disagreement is based, as appropriate, or other comments within the regulatory deadline. (WRC-19)

**Reasons:** This modification is required in order to have the definitive list of affected satellite networks or systems published in addition to the list of administrations.

---