



**2<sup>nd</sup> ITU INTER-REGIONAL WORKSHOP  
ON WRC-15 PREPARATION  
(Geneva, 12 – 13 November 2014)**

**RCC Preparation for  
the World  
Radiocommunication  
Conference 2015**

**2<sup>nd</sup> ITU INTER-REGIONAL  
WORKSHOP ON WRC-15  
PREPARATION**

**GENEVA, SWITZERLAND  
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[www.itu.int/go/ITU-R/WRC-15-irwsp-14/](http://www.itu.int/go/ITU-R/WRC-15-irwsp-14/)



**Regional Commonwealth in  
the field of Communications**





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## **RCC Preparation for the World Radiocommunication Conference 2015**

# Main Tasks of the WRC: Review of the Radio Regulations

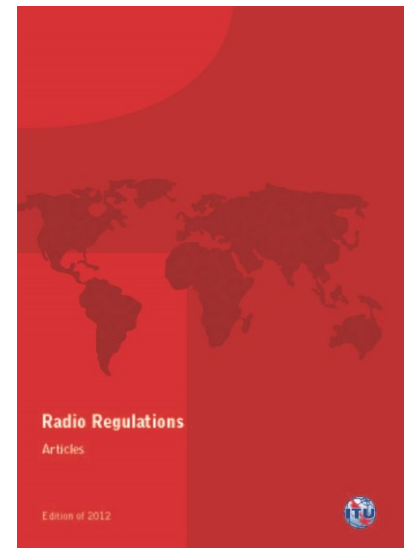
**Contributions from  
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**Contributions from Group  
of Member States**

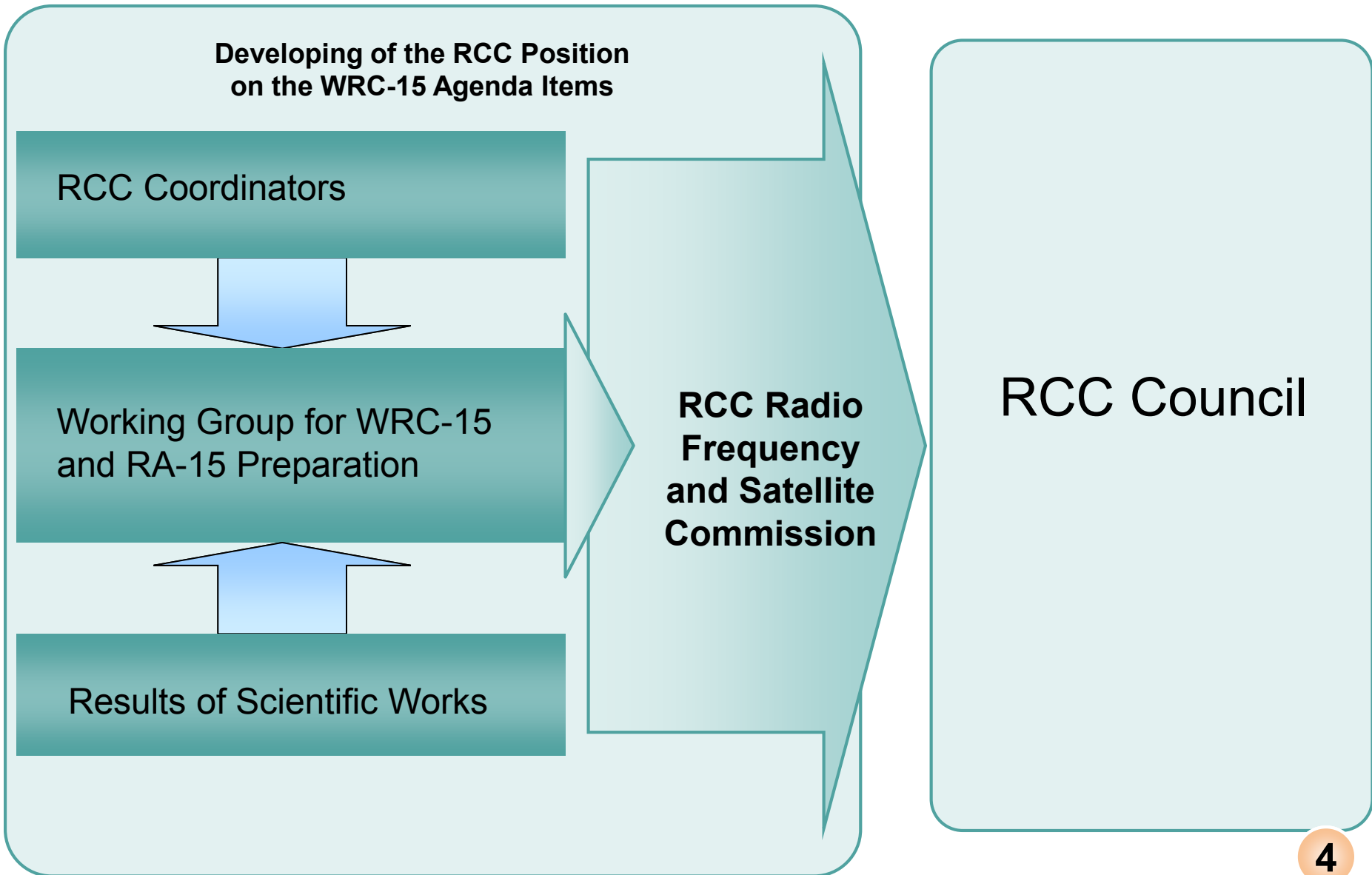
**Contributions from  
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**World Radio-  
communication  
Conference**

**New Edition of  
Radio Regulations**



# Preparation of the RCC Administrations for the WRC-15



# Working Group for WRC and RA preparation

WG WRC/RA was established by RCC Radio Frequency and Satellite Commission and responsible for WRC-15 and RA-15 preparation

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WG WRC/RA develops draft Briefs and RCC Common Proposals for the work of the Conference (for actual WG WRC/RA documents see <http://www.en.rcc.org.ru> ).

Since 2012 WG WRC/RA had 4 meetings.

1<sup>st</sup> meeting: May 2012

2<sup>nd</sup> meeting: December 2012

3<sup>d</sup> meeting: November 2013

4<sup>th</sup> meeting: April 2014

**Next meeting: November 2014**

# Basic Principles of the Developing of the RCC Position on the WRC-15 Agenda Items

## RCC Position

1

**Equitable Access to Radio  
Frequencies and  
any Associated Orbits**

2

**Compatibility Between  
Radioservices**

3

**Providing Regulatory and Technical  
Provisions for Development of New  
Technologies**



**PRELIMINARY POSITION OF THE RCC  
ADMINISTRATIONS ON AGENDA ITEMS OF THE  
WORLD RADIOCOMMUNICATION CONFERENCE 2015  
(18 April, 2014 version)**

**Available on the RCC Web site:**

**<http://www.en.rcc.org.ru>**

Direct link:

[http://www.en.rcc.org.ru/index.php?option=com\\_content&view=article&id=593:preparations-for-wrc-12-and-ra-12&catid=102:radiocommunication&Itemid=379](http://www.en.rcc.org.ru/index.php?option=com_content&view=article&id=593:preparations-for-wrc-12-and-ra-12&catid=102:radiocommunication&Itemid=379)



# Agenda Item 1.1

**1.1 To consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution 233 (WRC-12)**



## Agenda Item 1.1 (1/3) Spectrum allocations to the MS and identification of frequency bands for IMT

The RCC Administrations support allocation of additional frequency bands on a primary basis to the mobile service and identification for International Mobile Telecommunications (IMT) on the condition of optimizing the use of already identified frequency bands.

The RCC Administrations consider that by 2020 the overall spectrum requirements for IMT systems could be fulfilled for the RCC countries by using 1 065 MHz of spectrum including the bands already identified for the IMT. However the spectrum requirements for IMT systems for provision of coverage don't exceed 220-260 MHz in the bands below 1.5 GHz including the bands already identified for the IMT.

The RCC Administrations consider that the protection of other services that have allocations within the subject bands and adjacent bands should be ensured and the necessity of their development be taken into account when determining possibilities and conditions for allocation of frequency bands to the MS and their identification for IMT.

## Agenda Item 1.1 (2/3) Spectrum allocations to the MS and identification of frequency bands for IMT

The RCC Administrations consider that allocation to the MS on a primary basis and identification for IMT as well as identification for IMT of the bands which were already allocated to the MS on a primary basis should not pose any additional constraints to existing services in these bands.

The RCC Administrations object to the primary allocation to the MS and identification for IMT systems, as well as identification for IMT in the following bands already allocated to the MS on a primary basis, due to their intense use by the incumbent services and possible unacceptable interference to the stations of these services:

- 410-430 MHz used by MS applications other than IMT;
- 470-694 MHz used by BS;
- 1 300-1 350 MHz and 1 350-1 375 MHz used by ARNS under RR No. **5.337**, RLS and RNSS under RR No. **5.337A**;
- 1 375-1 400 MHz used by RNS under RR No. **5.338**;
- 1 427-1 525 MHz used by aeronautical telemetry operating under RR Nos. **5.342** and **4.10**;

## Agenda Item 1.1 (3/3) Spectrum allocations to the MS and identification of frequency bands for IMT

- 1 525-1 559 MHz and 1 626.5-1 660.5 MHz used by MSS;
- 1 695-1 710 MHz used by meteorological-satellite service (space-to-Earth);
- 2 025-2 110 MHz and 2 200-2 290 MHz used by EESS, SRS and SOS;
- 2 700-2 900 MHz, 2 900-3 100 MHz and 3 300-3 400 MHz used by RLS;
- 3 600-3 800 MHz, 3 800-4 200 MHz and 4 500-4 800 MHz used by FSS (space-to-Earth);
- 4 400-4 500 MHz and 4 800-5 000 MHz used by FS.

The RCC Administrations oppose global allocation of the band 3 400-3 600 MHz to the MS on a primary basis and modification of the allocation conditions for this frequency band, established by RR No. **5.430A**.

The RCC Administrations also oppose the primary MS allocation for use by terrestrial broadband systems (e.g. RLAN) in the following frequency bands due to their intense use by existing services and possible unacceptable interference to stations of these services:

- 5 350-5 470 MHz used by RLS and EESS;
- 5 725-5 850 MHz used by RLS.

The RCC Administrations support identification of the band 5 925-6 425 MHz for IMT considering results of compatibility studies.



# Agenda Item 1.2

**1.2 To examine the results of ITU R studies, in accordance with Resolution 232 (WRC-12), on the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service in Region 1 and take the appropriate measures**

## Agenda Item 1.2 (1/5) The use of the frequency band 694-790 MHz by the mobile service in Region 1

### ***BS and MS spectrum requirements in the band 694-790 MHz***

The RCC Administrations are of the view that the BS spectrum requirements (taking into account the development of new technologies in broadcasting including HDTV) are 8 multiplexes for digital broadcasting in the band 470-790 MHz. These requirements can be met if the frequency band 694-790 MHz is further used for broadcasting.

The MS spectrum requirements for IMT implementation are determined in the position of the RCC administrations towards WRC-15 Agenda item 1.1. The RCC Administrations are of the view that the use of the MS shall be decided by the administrations depending on their spectrum requirements for the BS.

# Agenda Item 1.2 (2/5) The use of the frequency band 694-790 MHz by the mobile service in Region 1

## ***Compatibility studies***

The RCC Administrations support the requirement to define technical and regulatory conditions for the mobile service in the considered frequency band for the protection of other services, based on the characteristics and protection criteria of these services developed by the responsible ITU-R Working Parties.

The RCC Administrations are of the opinion that the MS operating conditions in the considered frequency band shall be based on the technically justified criteria and compatibility estimation methods.

In the compatibility studies between the MS and broadcasting service, the minimum coupling losses (MCL) method and Monte-Carlo method are supported to be used in the frequency band 694-790 MHz and in the adjacent frequency bands.

## Agenda Item 1.2 (3/5) The use of the frequency band 694-790 MHz by the mobile service in Region 1

### ***Refinement of lower edge of allocation to the mobile service (Issue A)***

The RCC Administrations consider that the lower edge of allocation to the mobile service (including guard band) shall not be lower than 694 MHz. The IMT frequency arrangement shall be chosen taking into account the compatibility with the ARNS and with the terrestrial TV broadcasting systems.

The RCC Administrations consider the frequency arrangement based on the existing A5 arrangement in accordance with Recommendation ITU-R M.1036-4 (703-733 MHz for uplink, 758-788 for downlink) as a preferable one.

The potential frequency arrangements for IMT systems shall be taken into account while defining the protection conditions of the terrestrial TV broadcasting and ARNS systems.

While choosing the frequency arrangement the usage of the frequency band 694-790 MHz by the ancillary broadcasting applications shall also be taken into account.

## Agenda Item 1.2 (4/5) The use of the frequency band 694-790 MHz by the mobile service in Region 1

### ***Protection of the broadcasting service (Issue B)***

The RCC Administrations consider that the allocation conditions to the MS in the frequency band 694-790 MHz shall include the required technical and regulatory limitations of MS for providing protection for the BS. Imposing restrictions or application of additional requirements for the BS shall not be allowed.

The RCC Administrations support the method under which the regulatory and technical conditions for the MS are defined directly in the Radio Regulations, including WRC Resolution, to provide protection of the BS. To protect the BS from the MS interference the provisions of GE-06 Agreement shall be applied as well as additional regulatory and technical conditions taking into account the aggregate interference effect from the MS stations in the main and adjacent frequency bands.



## Agenda Item 1.2 (5/5) The use of the frequency band 694-790 MHz by the mobile service in Region 1

### ***Protection of ARNS (Issue C)***

The RCC Administrations consider that the allocation conditions for the MS in the frequency band 694-790 MHz shall include the required technical and regulatory limitations of the MS to provide protection for the ARNS. Imposing restrictions or application of additional requirements to the ARNS shall not be allowed.

The protection of the ARNS applied in RCC countries under RR No. **5.312** shall be ensured by application of coordination procedures under RR No. **9.21** for the MS in relation to the ARNS using the coordination thresholds based on the ITU-R study results taking into account the aggregate interference.

### ***SAB/SAP applications (Issue D)***

The draft position is under development.



## Agenda Item 1.3

**1.3 To review and revise Resolution 646 (Rev.WRC-12) Broadband public protection and disaster relief (PPDR), in accordance with Resolution 648 (WRC-12)**

## Agenda Item 1.3 (1/1)

### Broadband public protection and disaster relief (PPDR)

The RCC Administrations support the use of IMT family standards for the purpose of building public protection and disaster relief networks in the frequency bands earlier identified for PPDR, but allocation of certain new frequency bands to the MS to provide operation of these systems is not supported.

The RCC Administrations consider that spectrum requirements for wideband PPDR applications should be identified taking into account the intended use of the IMT family standards.

The RCC Administrations recognize that requirements for PPDR systems such as the volume of available and used spectrum, applicable scenarios of PPDR use, could substantially vary depending on the country's national interests.



# Agenda Item 1.4

**1.4 To consider possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz in accordance with Resolution 649 (WRC-12)**

## Agenda Item 1.4 (1/1) New allocation to the amateur service within the band 5 250-5 450 kHz

The RCC Administrations oppose to allocation of the frequency band 5 250–5 450 kHz or part of this band to the amateur service on the secondary basis, due to its intense use by fixed / land mobile services and oceanographic radars, as well as unacceptable interference from amateur stations to the existing systems that is confirmed by the studies.

The RCC Administrations consider that during studies of possible additional allocations to the amateur service in the frequency band 5 250-5 450 kHz it is necessary to take into account the need for protection of the FS and MS systems in the frequency band 5 250 – 5 450 kHz, oceanographic radars in the frequency band 5 250-5 275 kHz and for protection of systems, which operate in adjacent frequency bands.



# Agenda Item 1.5

**1.5 To consider the use of frequency bands allocated to the fixed-satellite service not subject to Appendices 30, 30A and 30B for the control and non-payload communications of unmanned aircraft systems (UAS) in non-segregated airspaces, in accordance with Resolution 153 (WRC-12)**

## Agenda Item 1.5 (1/1)

### Unmanned aircraft systems (UAS)

The RCC Administrations consider that the use of unplanned FSS bands by UAS CNPC links (space-to-Earth) is possible under the following conditions: such use shall not impose additional constraints on incumbent radio services; compatibility between UAS CNPC links and radio services which already have allocations in these bands shall be provided; necessary conditions ensuring availability and protection margins for UAS CNPC links shall be ensured.

The RCC Administrations consider that the use of unplanned FSS bands by UAS CNPC links (Earth-to-space) could not be supported, since such use would significantly change conditions of FSS system operation, would not be in compliance with existing conditions of their coordination with terrestrial and satellite radio services and could lead to unacceptable interference to these radio services.



# Agenda Item 1.6

**1.6 To consider possible additional primary allocations:**

**1.6.1 to the FSS (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10-17 GHz in Region 1;**

**1.6.2 to the FSS (Earth-to-space) of 250 MHz in Region 2 and 300 MHz in Region 3 within the range 13-17 GHz;**

**and review the regulatory provisions on the current allocations to the FSS within each range, taking into account the results of ITU-R studies, in accordance with Resolutions 151 (WRC-12) and 152 (WRC-12), respectively**



## Agenda Item 1.6 (1/3)

### Additional primary allocations to the FSS

#### ***Agenda item 1.6.1 - FSS in Region 1***

The RCC Administrations support the additional primary allocation of 250 MHz to the FSS (Earth-to-space and space-to-Earth) in frequency bands between 10 and 17 GHz in Region 1 subject to protection of incumbent services in these and the adjacent frequency bands.

The RCC Administrations support the following frequency bands for a new primary allocation in Region 1:

- 13.4-13.75 GHz to FSS (space-to-Earth);
- 14.5-14.8 GHz or 14.8-15.35 GHz to FSS (Earth-to-space / space-to-Earth).

## Agenda Item 1.6 (2/3)

### Additional primary allocations to the FSS

#### ***Agenda item 1.6.2 - FSS in Regions 2 and 3***

The RCC Administrations consider that with additional allocation of 250 MHz to FSS “Earth-to-space” in Region 2 and 300 MHz in Region 3 in frequency bands between 13 and 17 GHz protection shall be ensured for incumbent services in these bands in Region 1.

## Agenda Item 1.6 (3/3)

### Additional primary allocations to the FSS

#### ***Agenda items 1.6.1 and 1.6.2***

New FSS allocations are preferable in frequency bands which are contiguous with the existing FSS allocations, and also in bands, where the allocation is possible on the worldwide basis.

The RCC Administrations consider that allocation of additional spectrum for the FSS on the worldwide basis (in the three Regions) has advantage over regional allocation (in one Region) when planning satellite communication networks and providing efficient territory coverage.

The RCC Administrations consider it necessary to study protection methods for SRS and RAS systems having allocations on a secondary basis, in the considered frequency bands and in the adjacent frequency bands, maintaining existing protection criteria for SRS and RAS against the impact of FSS systems. Should the compatibility studies between FSS and SRS show the need to restrict technical characteristics of FSS systems, the relevant constraints should be included in the Radio Regulations.

The RCC Administrations do not support additional allocation of bands 10.6-10.68 GHz and 15.35-15.4 GHz to FSS due to the complicated sharing with stations of passive services operating in these frequency bands.



# Agenda Item 1.7

**1.7 To review the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in accordance with Resolution 114 (Rev.WRC-12)**

## Agenda Item 1.7 (1/1)

### The use of the band 5 091-5 150 MHz by the FSS

The RCC Administrations support the need for updating conditions of using frequency band 5 091-5 150 MHz by NGSO MSS feeder links and ARNS stations. The conditions should be taken into account when developing proposals for future usage of this frequency band by new systems in aeronautical services and FSS systems supporting NGSO MSS feeder links (Earth-to-space).



# Agenda Item 1.8

**1.8 To review the provisions relating to earth stations located on board vessels (ESVs), based on studies conducted in accordance with Resolution 909 (WRC-12)**

## Agenda Item 1.8 (1/1)

### Earth stations located on board vessels (ESVs)

The RCC Administrations consider that possible modifications to Resolution **902 (WRC-03)** with the purpose to reflect existing technologies and technical characteristics of earth stations located on board vessels (ESV) should be made only ensuring protection to the existing radio services and not limiting their further development.

The RCC Administrations consider it reasonable to keep using the protective distance criterion in order to ensure sharing between ESV stations and stations of other services in the frequency bands specified in Resolution **902 (WRC-03)**.

The RCC Administrations do not object to modify protective distances from ESV to a coast line, subject to ensuring protection of stations in other services having allocations in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz.

The RCC Administrations consider that exact protective distances from a vessel to a coast line shall be determined for different ESVs in the frequency bands 5 925-6 425 MHz and 14-14.5 GHz taking into account the maximum e.i.r.p. spectral density towards the horizon. These distances should be determined according to levels of protection from interference specified in Resolution **902 (WRC-03)**.



# Agenda Item 1.9

**1.9 To consider, in accordance with Resolution 758 (WRC-12):**

**1.9.1 possible new allocations to the fixed-satellite service in the frequency bands 7 150-7 250 MHz (space-to-Earth) and 8 400-8 500 MHz (Earth-to-space), subject to appropriate sharing conditions;**

**1.9.2 the possibility of allocating the bands 7 375-7 750 MHz and 8 025-8 400 MHz to the maritime mobile-satellite service and additional regulatory measures, depending on the results of appropriate studies.**



## Agenda Item 1.9 (1/1)

### *Allocation to FSS and MSS in the 7/8 GHz range*

#### **1.9.1 Allocation to FSS in the frequency bands 7 150-7 250 MHz (space-to-Earth) and 8 400-8 500 MHz (Earth-to-space)**

The RCC Administrations do not object to new FSS allocation of the bands 7 150-7 250 MHz (space-to-Earth) and 8 400-8 500 MHz (Earth-to-space) subject to compatibility with existing terrestrial and satellite services without imposing additional constraints on these services.

#### **1.9.2 Allocation to MMSS in the bands 7 375-7 750 MHz and 8 025-8 400 MHz**

The RCC Administrations do not object to the allocation of the frequency bands 7 375-7 750 MHz and 8 025-8 400 MHz to the maritime mobile-satellite service subject to compatibility with existing terrestrial and space services without imposing additional constraints on these services taking into account the development of appropriate regulatory provisions.



# Agenda Item 1.10

**1.10 To consider spectrum requirements and possible additional spectrum allocations for the mobile-satellite service in the Earth-to-space and space-to-Earth directions, including the satellite component for broadband applications, including International Mobile Telecommunications (IMT), within the frequency range from 22 GHz to 26 GHz, in accordance with Resolution 234 (WRC-12)**

## Agenda Item 1.10 (1/1)

### Allocation to MSS in the frequency range 22-26 GHz

1. The RCC Administrations consider that an additional spectrum allocation to the mobile-satellite service in the Earth-to-space and space-to-Earth directions, including the satellite component for broadband applications including IMT, within the frequency range from 22 GHz to 26 GHz is possible only if the sharing with the existing terrestrial and space services is ensured in the same and adjacent frequency bands (taking into account RR Nos. **5.149** and **5.340**), and if such allocations to MSS do not impose additional constraints on the existing services. However, the level of unwanted emissions from earth and space stations in the MSS networks in the frequency bands 22.01-22.21 GHz; 22.21-22.5 GHz; 22.81-22.86 GHz and 23.07-23.12 GHz shall be limited to ensure the protection of systems in the EESS (passive), SRS (passive) and radio astronomy services.

2. The RCC Administrations consider that when determining additional spectrum requirements for the MSS, it is necessary to take into account already existing allocations to the MSS in the Ka-band as well as the fact that a part of possible MSS spectrum requirements could be met due to specialized applications within the FSS.



# Agenda Item 1.11

**1.11 To consider a primary allocation for the Earth exploration-satellite service (Earth-to-space) in the 7-8 GHz range, in accordance with Resolution 650 (WRC-12)**

## Agenda Item 1.11 (1/1)

Primary allocation for the EESS (Earth-to-space) in the 7-8 GHz range

The RCC administrations do not object to allocation of frequency band 7 190-7 250 MHz on a primary basis to the Earth exploration-satellite service (Earth-to-space) provided the compatibility with systems of SOS, SRS, FS and MS is ensured.

Compatibility conditions between EESS (Earth-to-space) and other existing services in the 7-8 GHz range shall be incorporated in the Radio Regulations.



## Agenda Item 1.12

**1.12 To consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz, in accordance with Resolution 651 (WRC-12)**

## Agenda Item 1.12 (1/1)

### Extension of the allocation to the EESS (active)

The RCC Administrations consider that worldwide extension of the available allocation to the EESS (active) in the frequency band 9 300-9 900 MHz up to 600 MHz would be more preferable within the frequency band 9 900-10 500 MHz, and the extension would be possible only subject to defining the conditions of providing protection for systems in other services operating in this and adjacent frequency bands.

The RCC Administrations consider that in case of additional allocation of up to 600 MHz to the EESS (active), this frequency band shall be used only by the EESS systems with the pfd limits derived from the ITU-R studies and subject to not claiming protection from the services having allocations in this frequency band.

The RCC Administrations consider that protection shall be ensured for systems in other services, specifically RLS in the frequency band 9 900-10 500 MHz as well as for radiolocation systems in the frequency band 9 200-9 300 MHz.



## Agenda Item 1.13

**1.13 To review No. 5.268 with a view to examining the possibility for increasing the 5 km distance limitation and allowing space research service (space-to-space) use for proximity operations by space vehicles communicating with an orbiting manned space vehicle, in accordance with Resolution 652 (WRC-12)**



The RCC Administrations support the removal of 5 km distance limitation from RR No. **5.268** and the extension of use for the SRS (space-to-space) for proximity operations by space vehicles while maintaining the power flux density limit at the Earth's surface in the frequency band 410-420 MHz, specified in RR No. **5.268**.



# Agenda Item 1.14

**1.14 To consider the feasibility of achieving a continuous reference time-scale, whether by the modification of coordinated universal time (UTC) or some other method, and take appropriate action, in accordance with Resolution 653 (WRC-12)**

## Agenda Item 1.14 (1/1)

### Future of the Coordinated Universal Time time-scale

The RCC Administrations support keeping unchanged the definition of the Coordinated Universal Time (UTC) in the Recommendation ITU-R TF.460-6.

The RCC Administrations are of the opinion that in the case of application of continuous reference time-scale a transition period would be needed for its implementation, and such implementation should have no negative implications towards existing telecommunication systems.



# Agenda Item 1.15

**1.15 To consider spectrum demands for on-board communication stations in the maritime mobile service in accordance with Resolution 358 (WRC-12)**

## Agenda Item 1.15 (1/1) *On-board communication stations in MMS in the UHF bands*

The RCC Administrations recognize the importance of on-board communications to the safe ship operations (alarm and fire warnings, mooring operations and passenger traffic control) and suppose the possible congestion of frequencies for on-board communications in some geographic areas of the world.

The RCC Administrations do not support the additional frequency allocation to meet on-board communications due to intensive usage of UHF band by the other services and applications and also since the demand in additional frequencies for on-board communication has not been proved by the study.

The RCC Administrations suppose that the more effective usage of the existing frequencies (channel spacing 12.5 kHz, use of up-to-date equipment) is sufficient to avoid possible congestion in the large ports.

The RCC Administrations support the incorporation to the Radio Regulations of the provisions which allow more effective usage of the existing allocation to on-board communications stations in the maritime mobile service without identification of new frequency bands.



# Agenda Item 1.16

**1.16 To consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution 360 (WRC-12)**

# Agenda Item 1.16 (1/1) *Automatic Identification System (AIS) and maritime Radiocommunication*

The RCC Administration consider that:

1. It is possible to identify frequency bands (channels) for implementation of enhanced AIS technology applications and new applications for enhanced maritime radiocommunication in accordance with Resolution **360 (WRC-12)**. Such identification should be conducted within existing allocations to MMS and MSS taking into account EMC with existing radio services;
2. For terrestrial component of VHF Data Exchange System (VDES) it is feasible to use combination of VHF channels 24, 25, 26, 84, 85, 86 identified by WRC-12 for digital technologies in MMS;
3. It is feasible to identify new channels within MMS for AIS-ASM (AIS functions not related to distress). Currently two options are available for consideration: channels 87 (157.375 MHz) and 88 (157.425 MHz) (option 1); channels 2027 (161.950 MHz) and 2028 (162.000 MHz) (option 2);
4. New allocation of the band 161.7875 – 161.9375 MHz or its part to MSS in order to use it for the satellite component of VDES (space-to-Earth) on secondary basis is possible subject to established power flux density (pfd) limit to provide the protection of fixed and mobile services which have allocations in this band on a primary basis;
5. Allocation of new frequency bands to the MSS to be used by VDES satellite component is possible subject to compatibility with existing radio services.



# Agenda Item 1.17

**1.17 To consider possible spectrum requirements and regulatory actions, including appropriate aeronautical allocations, to support Wireless Avionics Intra-Communications (WAIC), in accordance with Resolution 423 (WRC-12)**



## Agenda Item 1.17 (1/1)

### Wireless Avionics Intra-Communications (WAIC)

The RCC Administrations consider that:

- ✓ WAIC systems shall operate in the frequency bands allocated to aeronautical services;
- ✓ frequency bands used by WAIC shall be harmonized in all three Regions;
- ✓ implementation of WAIC shall not impose constraints on other systems operating in the common frequency bands.



# Agenda Item 1.18

**1.18 To consider a primary allocation to the radiolocation service for automotive applications in the 77.5-78.0 GHz frequency band in accordance with Resolution 654 (WRC-12)**

## Agenda Item 1.18 (1/1)

### Automotive short-range high-resolution radar

The RCC administrations have no objections to primary allocation of the 77.5-78.0 GHz frequency band to the radiolocation service under conditions defined by compatibility studies and providing the protection of existing services in the band 77.5-78.0 GHz and in the adjacent bands 76-77.5 GHz and 78-81 GHz.



# Agenda Item 4

**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**

## Agenda Item 4 (1/1)

### Revision of the resolutions and recommendations

RCC administrations support the review of the Resolutions and Recommendations of previous conferences with a view of their revision, replacements and (or) abrogation according to Resolution **95 (Rev. WRC-07)**.



## Agenda Item 7

**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**

## Agenda Item 7 (1/3)

### Regulatory provisions for Satellite Networks

The RCC Administrations consider as necessary further improvements in the notification, coordination and recording procedures for space services, that is;

#### **Issue A. Informing the BR of a suspension under RR No. 11.49 beyond six months**

The RCC Administrations consider that after informing the Bureau on suspending frequency assignment after six-month period specified in the RR No. **11.49**, the total suspension time shall be reduced by a delay period of such a message (based on Method A2).

#### **Issue B. Publication of information on bringing into use of satellite networks at the ITU website**

The RCC Administrations consider it necessary to modify Article **11** RR in order to clarify procedure for publication by Bureau of information related to bringing into use satellite networks and suspension of frequency assignments (RR No. **11.44B** and No. **11.49**).

## Agenda Item 7 (2/3)

### Regulatory provisions for Satellite Networks

#### **Issue C. Possible cancellation of advance publication mechanism**

The RCC Administrations support abrogation of advance publication procedure subject to maintaining time-limit of 7 years for submission of the notice for recording of the assignment to satellite networks and bringing them into use.

#### **Issue [C]. Modifications to RR Appendix 30B in relation to the suspension of use of a frequency assignment**

The RCC Administrations support modification of the RR Appendix 30B with a purpose to align it with No. **11.49** of the RR Article **11** and lengthen the suspension of frequency assignments up to three years.



## Agenda Item 7 (3/3)

### Regulatory provisions for Satellite Networks

#### **Issue F. Using one space station to bring frequency assignments at different orbital locations into use within a short period of time**

The RCC Administrations do not support methods proposing additional limitations to the procedure of frequency assignment suspension.

#### **Other issues**

The RCC Administrations do not support substantial modifications to the Resolution **49 (Rev. WRC-12)** and extension of the provisions in the Resolution **552 (WRC-12)** to other frequency bands pending the outcome of their practical application by administrations and the Radiocommunication Bureau.

The RCC Administrations do not support comprehensive revision of RR Article **9** and Article **11**; and consideration of proposals from administrations on modification of certain RR provisions relating to notification procedures for satellite networks should be performed according to the established order for preparation to the next WRC.



# Agenda Item 8

**8.2 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)**

## Agenda Item 8 (1/1) Footnotes to the Table of Frequency Allocations in RR Article 5

The RCC Administrations support the ITU-R activity towards global harmonization of radio spectrum use through reasonable reduction of countries' footnotes to Article **5** of the Radio Regulations.

The RCC Administrations consider that this agenda item is not intended for addition of country names into the footnotes to Article **5** of the Radio Regulations.



# Agenda Item 9

**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-12;**

**9.2 On any difficulties or inconsistencies encountered in the application of the Radio Regulations**

# Agenda Item 9.1 (1/8)

## Activities of the ITU-R since WRC-12

<b>Issue 9.1.1</b>	Resolution <b>205 (Rev.WRC-12)</b>
<b>Issue 9.1.2</b>	Resolution <b>756 (WRC-12)</b>
<b>Issue 9.1.3</b>	Resolution <b>11 (WRC-12)</b>
<b>Issue 9.1.4</b>	Resolution <b>67 (WRC-12)</b>
<b>Issue 9.1.5</b>	Resolution <b>154 (WRC-12)</b>
<b>Issue 9.1.6</b>	Resolution <b>957 (WRC-12)</b>
<b>Issue 9.1.7</b>	Resolution <b>647 (Rev. WRC-12)</b>
<b>Issue 9.1.8</b>	Resolution <b>757 (WRC-12)</b>

## Agenda Item 9.1 (2/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.1 Resolution 205 (Rev.WRC-12)** Protection of the systems operating in the mobile-satellite service in the band 406-406.1 MHz

The RCC Administrations recognize the importance of COSPAS-SARSAT system used for search and rescue operations.

The RCC Administrations support activities ensuring appropriate protection of the COSPAS-SARSAT system in the frequency band 406-406.1 MHz from emissions which could cause harmful interference to the authorized uses in this frequency band (RR No. **5.267** and No. **5.266**), taking into account existing and future deployment of services in adjacent (390-406 MHz and 406.1-420 MHz) frequency bands.

Aggregate effect of emissions from stations operating in the adjacent frequency bands should be taken into consideration when conducting the relevant studies.

## Agenda Item 9.1 (3/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.2 Resolution 756 (WRC-12)** Studies on possible reduction of the coordination arc and technical criteria used in application of **No. 9.41** in respect of coordination under **No. 9.7**.

***Application of C/I criterion to geostationary networks:***

The RCC Administrations support the use of C/I criterion instead of the  $\Delta T/T$  criterion when justifying the inclusion of networks outside the coordination arc in the list of affected administrations when applying RR No. **9.41** and in application of RR No. **9.7** in cases when the criterion of coordination arc is not used.

***Modification of the  $\Delta T/T$  criterion and corresponding modification of the C/I criterion:***

The RCC Administrations propose to determine the value of C/I single entry interference criterion taking into account the value  $\Delta T/T$  increased up to [20%]. The new value of the C/I criterion is proposed to be applied with respect to networks notified after the end of WRC-15:

- when applying RR No. **9.41**;
- when BR identifies affected administrations according to RR No. **9.7** and in cases when the coordination arc criterion is not used;
- when applying RR No. **11.32A**.

Possibility to apply the new value of the C/I criterion with respect to assignments of all networks bar none is being studied.

## Agenda Item 9.1 (4/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.2** (Cont.) Resolution **756 (WRC-12)** Studies on possible reduction of the coordination arc and technical criteria used in application of No. **9.41** in respect of coordination under No. **9.7**.

#### ***Application of permissible pfd mask***

The RCC Administrations object to application of the pfd mask-based method since the proposed pfd mask does not protect networks that are more sensitive to interference, than typical ones, and does not exclude specific calculations in respect to the affected networks.

#### ***Reduction of the coordination arc size***

The RCC Administrations consider it necessary to continue to study a reasonability of the further reduction of the coordination arc (for frequency bands 4/6 GHz from  $\pm 8$  to  $\pm 6$  degrees, 11/12/13/14 GHz from  $\pm 7$  to  $\pm 5$  degrees and 20/30/40 GHz from  $\pm 8$  to  $\pm 7$  degrees) and proposals from other countries concerning the reduction of the coordination arc. Any way the position is in favour of retaining RR No. **9.41** as it is.



## Agenda Item 9.1 (5/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.3 Resolution 11 (WRC-12)** Use of satellite orbital positions and associated frequency spectrum to deliver international public telecommunication services in developing countries.

Draft position is being developed.

**Issue 9.1.4 Resolution 67 (WRC-12)** Updating and rearrangement of the RR.

The RCC Administrations recognize the need to examine the Radio Regulations in order to remove redundant information, outdated and other provisions which are not used.

The RCC Administrations consider that the update, review and rearrangement of the Radio Regulations does not complicate the text or change the meaning of the provisions of the Radio Regulations under review.

## Agenda Item 9.1 (6/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.5 Resolution 154 (WRC-12)** Consideration of technical and regulatory actions in order to support existing and future operation of FSS earth stations within the band 3 400-4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1.

The RCC Administrations support the development of possible technical and regulatory measures in some countries in Region 1 (on a national basis) in order to ensure the operation of existing and future FSS earth stations within the band 3 400-4 200 MHz used for satellite communications related to safe operation of aircraft and reliable distribution of meteorological information.

In order to protect FSS earth stations from IMT networks in the band 3 400-3 600 MHz on a national basis it is possible to use technical conditions of RR No. **5.340A**.

The conditions for protection of FSS earth stations in the band 3 400-3 600 MHz from new networks of fixed and mobile services including wireless access systems must be determined on the basis of ITU-R studies on compatibility between these systems and FSS earth stations, carried out in the framework of this issue.

The RCC Administrations consider that technical and regulatory measures under Resolution **154 (WRC-12)** should not limit the use of the band 3 400-4 200 MHz by other existing and planned systems and services in other countries, including SOS for the purpose of spacecraft control.

## Agenda Item 9.1 (7/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.6 Resolution 957 (WRC-12)** Studies towards review of the definitions of fixed service, fixed station and mobile station.

The RCC Administrations consider that current definitions in the Radio Regulations do not prevent from using the existing applications in the fixed and mobile services.

The RCC Administrations consider that any revision of definitions (fixed service, fixed station, mobile station) should not degrade existing conditions for sharing between radio services.

**Issue 9.1.7 Resolution 647 (Rev. WRC-12)** Spectrum management guidelines for emergency and disaster relief radiocommunication.

The RCC Administrations support the development of spectrum management guidelines applicable in emergency and disaster relief operations.

## Agenda Item 9.1 (8/8)

### Activities of the ITU-R since WRC-12

**Issue 9.1.8 Resolution 757 (WRC-12)** Regulatory aspects for nano- and picosatellites.

The RCC Administrations consider that necessity to develop special regulatory measures for coordination and notification of nanosatellites and picosatellites can be defined after collecting and generalizing technical and operational parameters of nanosatellites and picosatellites, as well as the possibility of their use in the interests of particular radio services, and also based on analysis of current practices for notification of nanosatellites and picosatellites, and also considering that any changes in the notification procedures of satellite networks operating nano-and picosatellites should not lead to complications in the use of other satellite networks.

## Agenda Item 9.2 (1/1)

Difficulties or inconsistencies encountered in the application of the Radio Regulations

The RCC administrations support measures to eliminate any difficulties or inconsistencies encountered in the application of the Radio Regulations.



# 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**

Draft position is being developed.



## Regional Commonwealth in the field of Communications

Thank you for your attention!