Document WRC-19-IRWSP-19/13-E
3 September 2019
English only

ITUEvents

3rd ITU Inter-regional Workshop on WRC-19 Preparation

4-6 September 2019
Geneva, Switzerland

www.itu.int/go/ITU-R/wrc-19-irwsp-19

Organized by:

3rd ITU INTER-REGIONAL WORKSHOP ON WRC-19 PREPARATION (Geneva, 4-6 September 2019)

Status of RCC's proposals to WRC-19 and RA-19

Status of RCC's proposals to WRC-19 and RA-19

Content:

C1 - RCC preparatory process for WRC-19 and RA-19.

C2 - Draft RCC Common Proposals.

C3 - Proposals under consideration.

C4 - RCC Position on Agenda Items for the WRC-19.

Preparatory process for WRC-19 and RA-19

- WG WRC/RA was established by **RCC Radio Frequency and Satellite Commission** and is responsible for WRC-19 and RA-19 preparation:

Chairman : *Albert Nalbandian, (abo441@mail.ru)*

V-Chairman : *Sergey Pastukh, (sup@niir.ru)*

Coordinators : *for each AI one Coordinator and group of specialists from RCC countries*

- WG WRC/RA was tasked to develop **RCC Position** to WRC&RA, **RCC Common Proposals** (already agreed for 15 AIs and for 12 AIs are under preparation) for the work of the Conference and **Coordinator's Papers** (currently 29 papers) on AIs of WRC-19.

- Since 2015 WG WRC/RA had **8** meetings:

1st meeting: *02.2016, Astana, KAZ*
2d meeting: *09.2016, Minsk, BLR*
3th meeting: *04.2017, Bishkek, KGZ*
4th meeting: *09.2017, Samarkand, UZB*
5th meeting: *03.2018, video conference*
6th meeting: *10.2018 Moscow, RUS*
7th meeting: *01.2019, Yerevan, ARM*
8th meeting: *05.2019, Tashkent, UZB*

9th meeting: *09.2019, Alma-Ata, KAZ*

RCC common proposals to WRC-19 agreed at May 2019 meeting

RCC Common Proposals considered and agreed at the WG WRC/RA meeting in Tashkent (May, 2019):

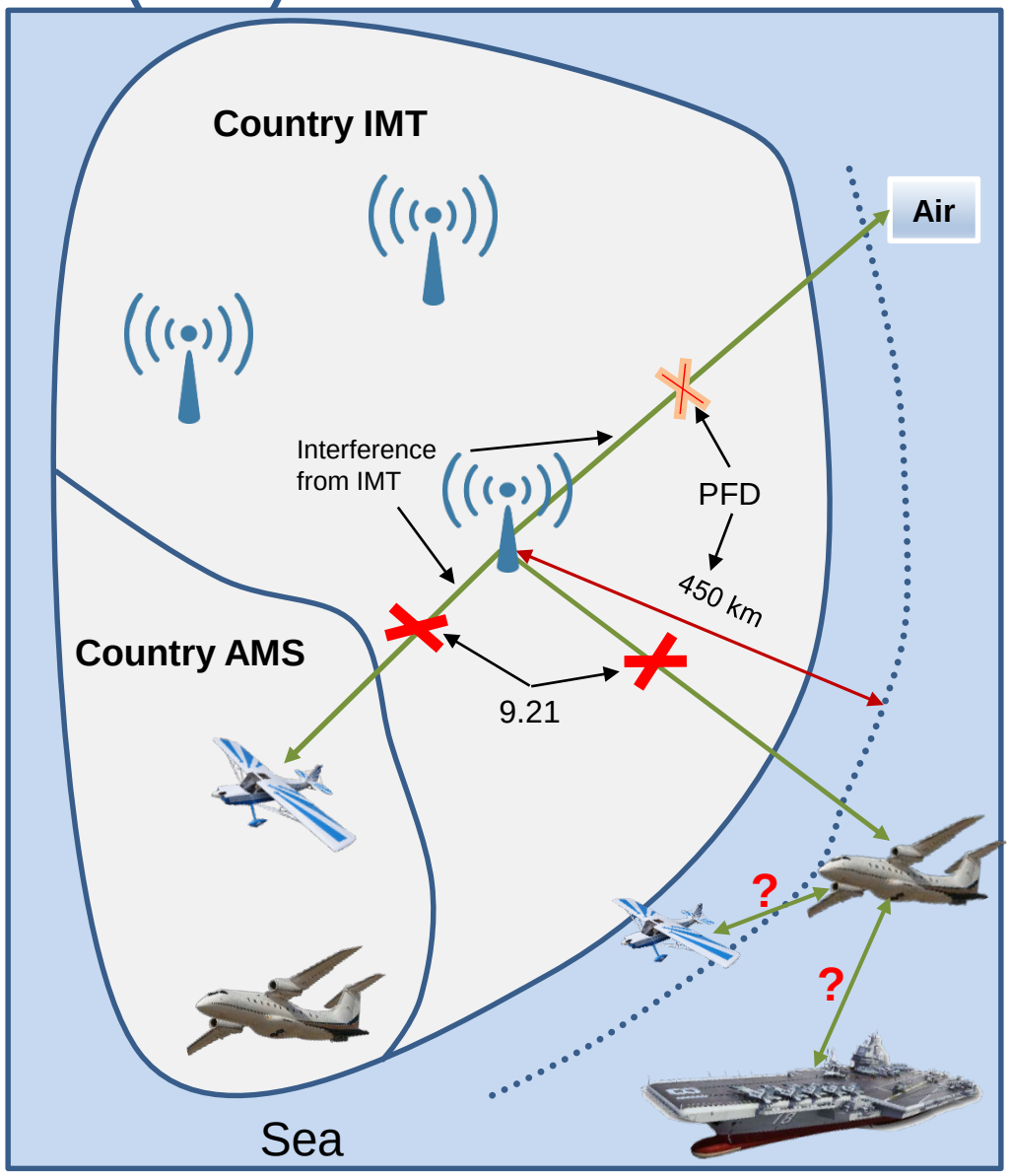
1.1	**Amateur service in 50 MHz**	
	50-54 MHz	Method B1
1.2	**MSS/EESS/MetSat in 400 MHz**	
	399.9-400.05 MHz	Method C
	401-403 МГц	Method E
1.3	**EESS/MetSat in 460 MHz**	
	460-470 MHz	Modified Method C
1.10	**GADSS**	
	Mod Art 30 RR, Add Art 34A, Res [RCC/A110-GADSS] (WRC-19)	Method B
1.11	**Train Comm – NOC (**Method A)	
1.12	**ITS NOC (**Method A)	
1.15	**MS&FS above 275 GHz**	
	MOD 5.565 ADD 5.E115	Method E
9.1.6	**WPT - NOC**	
9.1.8	**M2M - NOC**	

1.16	**RLAN@5GHz**	
	5150-5250 MHz	Method A1
	5250-5350 MHz	Method B
	5350-5470 MHz	Method C
	5725-5850 MHz	Method D1
	5850-5925 MHz	Method E
7	**Sat procedures**	
	Issue B	Method CPM
	Issue D	Method D1
	Issue G	Method G1
	Issue H	Method CPM
	Issue K	Method CPM
9.1.2	**BSS in 1452-1492 – NOC**	
9.1.4	**Sub-orbital - NOC**	
9.1.5	**MOD 5.447F and 5.450A -** Approach A	
9.1.7	**Unauthorized operation**	
	Issue 2a	Res [A917] (WRC-19)
	Issue 2b	NOC

RR 5.441B – Condition for IMT in the band 4800-4900 MHz

- Some RCC countries consider 4800-4990 MHz as the only alternative to 3400-3600 MHz for early 5G deployment in C-band as there is a need for spectrum redeployment / refarming in the band 3400-3600 MHz before 5G could roll out;
- Some RCC countries consider 4800-4990 MHz as an additional resource to the band 3400-3600 MHz which will be needed after early 5G development due to the lack of capacity in the band 3400-3600 MHz;
- Due to the fact that most RCC administrations have 3 or more operators and that for one 5G network at least 80-100 MHz is required the estimated market demand for spectrum in C-band in RCC is from 240 MHz up to 400 MHz.
- 5GNR equipment in 4800-4990 is expected on the market as ITU-R frequency arrangement for IMT (draft revision of Rec. ITU-R M.1036-5) as well as 3GPP specification for 5GNR (band plan n79) were developed;

RR 5.441B – Condition for IMT in the band 4800-4900 MHz (cont.)



RCC developed draft Common Proposal to WRC-19 on the issue as follows:

- Remove hard PFD limit from the footnote RR 5.441B;
- Add country names to the updated footnote 5.441B in order to meet market demand of spectrum in C-band for 5G in RCC countries.

Submitted draft RCC common proposals to WRC-19 to the September 2019 meeting

Received contributions on RCC Common Proposals for consideration by the final WG WRC/RA meeting (Kazakhstan, Almaty, 9-11 Sept. 2019):

1.5	**ESIMs in Ka-band**	
	17.7-19.7 GHz / 27.5-29.5 GHz	Method B + draft Res [RCC-A15] (WRC-19)
1.7	**NGSO Short Duration Sats**	
	137-138 MHz, 148-149 MHz	Method C + keeping 9.21 in 5.218 RR
1.8	**GMDSS**	
	Issue A:	Method A3
	Issue B:	Method B4
1.9.1	**AMRD**	
	Group A:	Method A
	Group B:	Method B3
1.9.2	**VDES**	
	NOC	Method A

1.13	**IMT-2020**	
	A (24.25-27.5 GHz):	Method A2 (Alt 1) Condition A2a (Opt 1), A2b (Opt 1), A2c (Opt 2), A2d (Opt 1), A2e (Opt 1&7), A2f (Opt 1), A2g (Opt 5)
	B (31.8-33.4 GHz):	Method B1 (NOC)
	C (37-40.5 GHz):	Method C1 for Region 1 Method C2 (Cond 2a Opt1) for Regions 2 and 3 (if applied)
	D (40.5-42.5 GHz):	Methos D2 (Alt1), Cond. D2a (Opt 1), D2b (Opt 1), D2c (Opt 3)
	E (42.5-43.5 GHz):	Method E1 (NOC)
	F (45.5-47 GHz):	Method F1 (NOC)
	G (47-47.2 GHz):	Method G1 (NOC)
	H (47.2-50.2 GHz):	Method H1 (NOC)
	I (50.4-52.6 GHz):	Method I1 (NOC)
	J (66-71 GHz):	Method J1 (NOC)
	K (71-76 GHz):	Method K1 (NOC)
	L (81-86 GHz):	Method L1 (NOC)

Submitted draft RCC common proposals to WRC-19 to the September 2019 meeting

Received contributions on RCC Common Proposals for consideration by the last WG WRC/RA meeting (Kazakhstan, Almaty, 9-11 Sept. 2019):

1.14	**HAPS**	
	6440-6520 MHz	Method B1 (Opt 2)
	6560-6640 MHz	Method A
	21.4-22 GHz (Region 2 only)	Protection of space services (if applied)
	24.25-25.25 GHz (Region 2 only)	Protection of space services (if applied)
	25.25-27.5 GHz (Region 2 only)	Protection of space services (if applied)
	27.9-28.2 GHz	Method B1 (Opt 1 modified)
	31-31.3 GHz	Method B1 (Opt 1+ 2)
	38-39.5 GHz	Method B2
	47.2-47.5 GHz, 47.9-48.2 GHz	Method B1 (modified)
4	**WRC Res/Recomm**	
	Res. 18, 20, 205, 207, 217, 344, 354, 356, 417, 422, 424, 612, 749, 760	NOC
	Res. 641	SUP

7	**Sat procedures**	
	Issue A	Option A (from 1 Jan 2021)
	Issue E	Method CPM: Res [A7(E)-AP30B]
	Issue I	Method I2
	Issue J	Method J2
9.1.1	**IMT 1885-2200 MHz**	
	Scenario A1	Mod Res 212
	Scenario A2	NOC
	Scenario B1	Mod Appendix 7
	Scenario B2	Mod Appendix 5
9.1.3	**C-band NGSO**	
	3700-4200/5925-6425 MHz	MOD 5.484A
	4500-4800/6725-7025 MHz	NOC
10	**WRC-23**	
	IMT in 6525-7100 MHz	PROPOSED
	SRS in 14,8-15,35 GHz	PROPOSED
	MOD 5.441B RR	PROPOSED

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)

- ✓ The RCC Administrations consider that 200 kHz is sufficient to meet the spectrum needs for the amateur service in 50 MHz.
- ✓ The RCC Administrations support allocation of the band 50.080-50.280 MHz to the amateur service on a secondary basis provided that additional measures will be introduced to protect broadcasting service on the border of an administration using broadcasting service.
- ✓ The RCC Administrations oppose allocation of the bands 50.00-50.080 MHz and 50.280-54.00 MHz to the amateur service.
- ✓ The RCC Administrations consider that, when identifying technical and regulatory conditions for such allocation, protection shall be ensured to the broadcasting service to which this frequency band is allocated on a primary basis, including stations of the broadcasting service in the frequency band 50-54 MHz, regulated by Stockholm-61 and Geneva-89.

RCC Coordinator: Filkova E.V., e.filkova@grfc.ru

1.2. To consider in-band power limits for ES operating in the MSS, MetSat and EESS in the 401-403 MHz and 399.9-400.05 MHz

- ✓ The RCC Administrations support establishing equivalent isotropic radiated power (EIRP) limit in any reference band of 4 kHz as well as the limit for cumulative EIRP throughout the allocated band for a notified earth station to avoid potential power aggregation of closely spaced carriers for earth stations in the MSS in the frequency band 399.9−400.05 MHz, as well as for earth stations in the MetSat and the EESS in the frequency band 401−403 MHz, to avoid interference to data collection systems based on the results of studies provided in the Report ITU-R SA 2430.
- ✓ The RCC Administrations consider that specified limits shall not cover the frequency assignments to satellite systems registered in MIFR before 22 November 2019 in frequency bands 399.9-400.05 MHz and 401-403 MHz during the transition period spanning not less than 5 years following WRC-19. At the same time, equivalent isotropically radiated power limit for earth stations of the existing satellite data collection systems operating in the frequency band 401.898 – 402.522 MHz, for which complete notification information has been received by the Radiocommunication Bureau by 28 April 2007, can be increased to 12 dBW.

RCC Coordinator: Sorokin B.S., sorokin.bs@spacecorp.ru

1.3. To consider possible upgrading of MetSat (s-E) to primary status and possible primary allocation to the EESS (s-E) in the band 460-470 MHz

- ✓ The RCC Administrations support upgrading the secondary allocation to the meteorological-satellite service (space-to-Earth) to a primary status as well as a primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460-470 MHz under the following conditions:
  - upgrading the status of allocations of the frequency bands to the meteorological-satellite service and the Earth exploration-satellite service shall be applied both for future systems as well as existing systems of these radio services;

RCC Coordinator: Sorokin B.S., sorokin.bs@spacecorp.ru

1.3. To consider possible upgrading of MetSat (s-E) to primary status and possible primary allocation to the EESS (s-E) in the band 460-470 MHz

- for the protection of the terrestrial services to which the frequency band 460-470 MHz is allocated on a primary basis, which ensure acceptable interference level, pfd limits for the specified satellite services shall be established to ensure acceptable interference level. In case of non-compliance with these limits, existing satellite systems of specified services can be used on the primary basis provided that no interference is caused to stations in terrestrial services, and they do not claim protection from stations in terrestrial services;
- maintaining priority of the meteorological-satellite service over the Earth exploration-satellite service should be ensured.

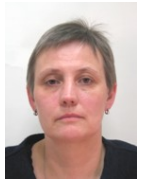
✓ The RCC Administrations do not support segmentation of the frequency band 460-470 MHz for geostationary and non-geostationary satellite systems.

RCC Coordinator: Sorokin B.S., sorokin.bs@spacecorp.ru

1.4. To consider limitations mentioned in Annex 7 to Appendix 30

- ✓ The RCC Administrations do not oppose the deletion of the following limitations (Atlantic Region):
  - Limitation A1a (No assignments in the Region 1 List in the frequency band 11.7-12.2 GHz further west than 37.2°W); and
  - Limitation A2a (No modification in the Region 2 Plan in the frequency band 12.5-12.7 GHz further east than 54°W), accompanied by the use of the new Resolution, and
  - Limitation A2b (No modification in the Region 2 Plan in the frequency band 12.2-12.5 GHz further east than 44°W).

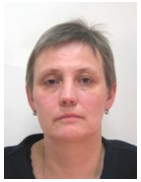
- ✓ The RCC Administrations do not oppose maintaining the following limitation (Pacific Region):
  - Limitation A1b (No assignments in the Region 1 List in the frequency band 11.7-12.2 GHz further east than 146°E).



RCC Coordinator: Smirnova T.V., t.smirnova@niir.ru

1.4. To consider limitations mentioned in Annex 7 to Appendix 30

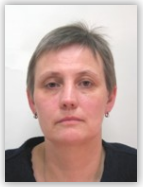
- ✓ The RCC Administrations support the deletion of the following limitations:
  - Limitation A3a (No assignments in the Regions 1 & 3 List outside specific allowable portions of the orbital arc between 37.2°W and 10°E) provided the existing protection criteria from Annex 1 to RR Appendix 30 are maintained for implemented frequency assignments with an antenna diameter of 40 and 45 cm, accompanied by the use of the new Resolution;
  - Limitation A3b (Max. e.i.r.p. of 56 dBW for assignments in the Regions 1 & 3 List at specific allowable portions of the orbital arc between 37.2°W and 10°E),
  - Limitation A3c (Max. power flux density of -138 dB(W/(m2·27 MHz)) at any point in Region 2 by assignments in List located at 4°W and 9°E),
- ✓ The RCC Administrations support maintaining the following limitation (Pacific Region):
  - Limitation A2c (No modification in the Region 2 Plan in the frequency band 12.2-12.7 GHz further west than 175.2°W).



RCC Coordinator: Smirnova T.V., t.smirnova@niir.ru

1.4. To consider limitations mentioned in Annex 7 to Appendix 30

- ✓ The RCC Administrations do not oppose maintaining the limitation B associated with the concept of the space stations grouping which the Region 2 Plan is based on.
- ✓ In case of deletion of appropriate limitations, the RCC Administrations support the application of the specific procedure during a limited period of time within which the priority right to submit applications for new orbital positions is provided to the administrations of Regions 1 & 3, national assignments of which have a negative equivalent protection margin on the downlink.
- ✓ The RCC Administrations consider that the proposals on revisions of criteria and provisions of Appendix 30 (Rev. WRC-15), other than of Annex 7, are beyond the scope of the studies in accordance with Resolution 557 (WRC-15).



RCC Coordinator: Smirnova T.V., t.smirnova@niir.ru

1.5. To consider the use of the frequency bands 17.7-19.7 GHz (s-E) and 27.5-29.5 GHz (E-s) by ESIM in GSO FSS

- ✓ The RCC Administrations support a draft new Resolution [A15] (WRC-19) which, as a method of addressing WRC-19 agenda item 1.5, shall contain technical conditions and regulatory provisions with regard to operation of earth stations in motion (ESIM) communicating with geostationary space stations in the fixed-satellite service in frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space), to provide protection, based on existing criteria, of services having allocations in these (and adjacent) frequency bands, including EESS (passive) in the frequency band 18.6-18.8 GHz and future use of EESS (Earth-to-space) in the frequency band 28.5-29.5 GHz and also use of terrestrial services in the frequency bands 25.25-27.5 GHz and 27.5-29.5 GHz (Method B).

RCC Coordinator: Simonov M.M., mms@niir.ru

1.5. To consider the use of the frequency bands 17.7-19.7 GHz (s-E) and 27.5-29.5 GHz (E-s) by ESIM in GSO FSS

- ✓ The RCC Administrations consider that with regard to satellite networks or systems in space services of other administrations in frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz ESIM shall comply with the following conditions:

  a) using ESIM within earlier-registered frequency assignment to typical earth station of GSO FSS satellite network, the appropriate information on such a use shall be recorded in MIFR. If frequency assignment to a typical earth station was recorded under No. 11.38, ESIM can use this frequency assignment provided that ESIM shall not cause more interference, nor claim more protection than registered frequency assignment to the typical earth station. If frequency assignment to a typical earth station was made under RR No. 11.41, ESIM shall not cause unacceptable interference, nor claim protection from interference, with regard to recorded frequency assignment which was the basis for the registration of the frequency assignment to a typical earth station under No 11.41;

RCC Coordinator: Simonov M.M., mms@niir.ru

1.5. To consider the use of the frequency bands 17.7-19.7 GHz (s-E) and 27.5-29.5 GHz (E-s) by ESIM in GSO FSS

b) using ESIM within a new frequency assignment to GSO FSS satellite network requires notifying administration to provide information to the Bureau, according to RR Appendix 4, on the characteristics of ESIM, intended to communicate with the space station of this GSO FSS network, in order to be verified by the Bureau and to publish the results in specific section of BR IFIC. In this case such a frequency assignment to ESIM needs to be coordinated and registered, according to procedures of RR Articles 9 and 11 in the relevant GSO FSS satellite network before using ESIM;

c) the administration authorizing the use of ESIM on the territory under its jurisdiction has the right to require that ESIM only use those frequency assignments to GSO FSS network which have been successfully coordinated, notified, brought into use and recorded in the MIFR with a favourable finding under RR Article 11;

RCC Coordinator: Simonov M.M., mms@niir.ru

1.5. To consider the use of the frequency bands 17.7-19.7 GHz (s-E) and 27.5-29.5 GHz (E-s) by ESIM in GSO FSS

- ✓ The RCC Administrations consider that, with respect to terrestrial services operating in the frequency bands 17.7−19.7 GHz and 27.5−29.5 GHz, ESIM shall comply with the following conditions:
  - a) transmitting ESIMs in the frequency band 27.5−29.5 GHz shall not cause unacceptable interference to stations of terrestrial services in this band, operating in accordance with the Radio Regulations, or impose constraints on future development of these services;
  - b) receiving ESIMs in the frequency band 17.7−19.7 GHz shall not claim protection from stations of terrestrial services in this band, operating in accordance with the Radio Regulations, or impose constraints on future development of these services;
  - c) the notifying administration responsible for the GSO FSS satellite network with which ESIMs communicate shall submit to the Bureau a commitment that, in case of unacceptable interference, upon receipt of a report of such an interference, will take appropriate action to immediately cease or reduce the interference to the acceptable level.

RCC Coordinator: Simonov M.M., mms@niir.ru

1.5. To consider the use of the frequency bands 17.7-19.7 GHz (s-E) and 27.5-29.5 GHz (E-s) by ESIM in GSO FSS

- ✓ The RCC Administrations consider that in the draft new Resolution [A15] (WRC-19) special measures shall be envisaged to exclude unauthorized use of ESIM on the territory of States that have not granted relevant authorizations (licenses).
- ✓ Regulations applicable to ESIM, which would be defined under the issue 9.1.7 of WRC-19 agenda item 9.1, shall be taken into account when developing regulations within the frameworks of WRC-19 agenda item 1.5.

RCC Coordinator: Simonov M.M., mms@niir.ru

1.6. To consider the development of a regulatory framework for NGSO FSS in the 37.5-42.5 GHz (s-E), 47.2-50.2 GHz (E-s) and 50.4-51.4 GHz (E-s)

- ✓ The RCC Administrations support the introduction of regulatory provisions to ensure operation of non-GSO FSS satellite systems in the frequency bands 37.5-42.5 GHz (space-to-Earth), 47.2-48.9 GHz (limited to feeder links), 48.9-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) ensuring protection for GSO satellite networks in FSS, MSS and BSS, and also for stations of other existing services in the same and adjacent frequency bands (Method A).
- ✓ The RCC Administrations consider that technical conditions and regulatory provisions shall be adopted to ensure sharing of the considered frequency bands between different non-GSO FSS systems.

RCC Coordinator: Kostin A.N., kostin@g-tl.ru

1.6. To consider the development of a regulatory framework for NGSO FSS in the 37.5-42.5 GHz (s-E), 47.2-50.2 GHz (E-s) and 50.4-51.4 GHz (E-s)

- ✓ The RCC Administrations support the revision of Resolution 750 (WRC-15) and establishment of appropriate unwanted emission limits for non-GSO FSS ES in the frequency bands 49.7-50.2 GHz and 50.4-50.9 GHz to protect EESS (passive) in the frequency band 50.2-50.4 GHz taking into account aggregate interference effect caused by existing radio services' systems in adjacent bands.
- ✓ The RCC Administrations consider it appropriate to review Resolution 750 (Rev.WRC-15) in terms of mandatory limits for unwanted emissions in the band 50.2-50.4 GHz for earth stations in GSO FSS networks notified after WRC-19 in the frequency bands 49.7-50.2 GHz and 50.4-50.9 GHz.
- ✓ The RCC Administrations consider that Article 22 of the RR shall establish the limitations for non-GSO FSS systems in order to ensure proper protection of GSO FSS and BSS systems in the frequency bands concerned. The RCC Administrations support the development of new Recommendation ITU-R S.[Methodology in the 50/40 GHz] for establishment of the appropriate protection criteria and maximum permissible levels of interferences from non-GSO FSS systems to GSO FSS networks in 40/50 GHz bands as well as new Recommendation ITU-R on characteristics of GSO FSS and BSS reference links in 50/40 GHz.

RCC Coordinator: Kostin A.N., kostin@g-tl.ru

1.7. To study the spectrum needs for TT&C in SOS for NGSO satellites with short duration missions, and, if necessary, to consider new allocations

- ✓ The RCC Administrations consider that when using existing or new frequency allocations to the space operation service below 1 GHz for telemetry links, tracking and command non-GSO satellites with short duration missions, the protection shall be ensured to the incumbent services in the same and adjacent frequency bands.
- ✓ The RCC Administrations oppose using the frequency bands 148-174.0 MHz and 405.9-410 MHz for telemetry links, tracking and command non-GSO satellites with short duration missions, since:
  - separate parts of the frequency band 148-174.0 MHz are actively used within the territory of RCC Administrations for fixed and mobile services;
  - frequency band 154-156 MHz is used for the radiolocation service on a primary basis according to No. 5.225A in some countries of Region 1;

RCC Coordinator: Zheltonogov I.V., zheltonogov@g-tl.ru

1.7. To study the spectrum needs for TT&C in SOS for NGSO satellites with short duration missions, and, if necessary, to consider new allocations

- separate parts of the frequency band 156-162.05 MHz, as well as frequency band 405.9-406.2 MHz, are used by GMDSS
- frequency bands 150.05-153.0 MHz and 406.1-410.0 MHz are allocated to the radio astronomy service on a primary basis, and the conducted ITU-R studies have shown the difficulties of sharing between the space operation service and the above mentioned radio services.

✓ The RCC Administrations do not oppose using existing allocations to SOS in the frequency band 137−138 MHz (space-to-Earth) for telemetry links of non-GSO satellites with short duration missions without application of RR No. 9.11A subject to the application for SOS the pfd limit specified for MSS in this band in RR Appendix 5. In case of implementation of the said limit application of RR No. 9.11A for SOS is not required.

RCC Coordinator: Zheltonogov I.V., zheltonogov@g-tl.ru

1.8. To consider possible actions to support GMDSS modernization and the introduction of additional satellite systems into the GMDSS

The RCC Administrations consider that the IMO position should be taken into account in regard to the GMDSS modernization, including the introduction of the IMO-recognized additional satellite systems, when developing relevant regulatory actions to support such modernization considering protection of existing services and systems.

Issue A (GMDSS modernization)

- ✓ The RCC Administrations do not oppose using the frequency band 495-505 kHz for digital broadcasting of maritime safety and security related information (NAVDAT LF system).
- ✓ The RCC Administrations do not oppose using the frequency bands: 4221–4231 kHz, 6332.5–6342.5 kHz, 8438–8448 kHz, 12658.5–12668.5 kHz, 16904.5–16914.5 kHz, 22445.5–22455.5 kHz to digital broadcasting of maritime safety and security related information (NAVDAT HF system) provided that the existing conditions for their allocation to radio services are maintained.

RCC Coordinator: Kushev A.I., kushev@marsat.ru

1.8. To consider possible actions to support GMDSS modernization and the introduction of additional satellite systems into the GMDSS

- ✓ The RCC Administrations are in favour of retaining RR Nos. 5.128 and 5.137.
- ✓ The RCC Administrations oppose including the frequency bands mentioned above into RR Appendix 15, seeing as NAVDAT system is not approved by IMO as a part of GMDSS.
- ✓ The RCC Administrations support Method A3 for the solution of Issue A.

Issue B (Introduction of additional satellite systems in GMDSS)

- ✓ The RCC Administrations support introducing additional non-geostationary MSS satellite networks in GMDSS, subject to their approval by IMO.

RCC Coordinator: Kushev A.I., kushev@marsat.ru

1.9.1. Regulatory actions within the frequency band 156-162.05 MHz for autonomous maritime radio devices to protect the GMDSS and AIS

- ✓ The RCC Administrations consider it reasonable to identify categories (types), technical and operational characteristics of autonomous maritime radio devices in order to develop regulatory actions in the frequency band 156−162.05 MHz for the autonomous maritime radio devices to protect GMDSS and AIS. At the same time, results of studies on the compatibility between autonomous maritime radio devices and existing radio systems having allocations in the concerned frequency bands shall be taken into account.
- ✓ The RCC Administrations do not oppose using frequency bands of RR Appendix 18 for Group A autonomous maritime radio devices intended for maritime safety (frequency bands: 156.5125-156.5375 (channel 70 for DSC), 161.9625-161.9875 (AIS1 channel), 162.0125-162.0375 (AIS2 channel)). Such use should comply with the latest version of Recommendation ITU-R M.[AMRD] (Method A).

RCC Coordinator: Kushev A.I., kushev@marsat.ru

1.9.1. Regulatory actions within the frequency band 156-162.05 MHz for autonomous maritime radio devices to protect the GMDSS and AIS

- ✓ The RCC Administrations do not oppose using frequency bands of RR Appendix 18 for Group B autonomous maritime radio devices not intended for maritime safety (frequency band 160.8875-160.9125 MHz for AIS technology (channel 2006)) subject to limitation of e.i.r.p. of autonomous maritime radio devices' transmitters by 100 mW. Such use should comply with the latest version of Recommendation ITU-R M.[AMRD].
- ✓ The RCC Administrations do not oppose using frequency bands of RR Appendix 18 for Group B autonomous maritime radio devices not intended for maritime safety (frequency bands 161.5125-161.5375 MHz (channel 2078), 161.5375-161.5625 MHz (channel 2019), 161.5625-161.5875 MHz (channel 2079) for technologies other than AIS) subject to limitation of e.i.r.p. of autonomous maritime radio devices' transmitters by 100 mW. Such use should comply with the latest version of Recommendation ITU-R M.[AMRD] (Method B3).

RCC Coordinator: Kushev A.I., kushev@marsat.ru

1.9.2. MMSS within the frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz, to enable VDES satellite component

- ✓ The RCC Administrations consider that introduction of the VDES satellite component shall not result in imposing constraints on existing and planned systems of services which have allocations in the common and adjacent frequency bands.
- ✓ The RCC Administrations oppose new allocations to the maritime mobile-satellite service (MMSS) on a primary basis for VDES satellite component in the frequency bands within 156-162 MHz, since the studies conducted on the basis of Recommendations ITU-R M.1808 and M.2092 have shown that VDES space stations are not compatible with stations of fixed and mobile services to which these frequency bands are allocated on a primary basis.
- ✓ The RCC Administrations consider it possible to allocate to MMSS the frequency band 156−162 MHz only on the secondary basis subject to the agreement under RR No. 9.21 to ensure compatibility of the new allocations to MMSS (space-to-Earth) and MMSS (Earth-to-space) with existing services and provided that such an allocation is limited by the use of VDES satellite component (that corresponds to Method E in CPM Report).

RCC Coordinator: Sorokin S.N., sorokin@g-tl.ru

1.10. To consider spectrum needs and regulatory provisions for the introduction and use of the GADSS, in accordance with Resolution 426

- ✓ The RCC Administrations support the need in the development of the Global Aeronautical Distress and Safety System (GADSS).
- ✓ The RCC Administrations support the identification of frequency bands and aircraft on-board systems to implement GADSS system, as well as developing the proposals for modifying RR Articles of Chapter VII - Distress and safety communications and Chapter VIII – Aeronautical services.

RCC Coordinator : Starchenko S.I., starchenko@g-tl.ru

1.10. To consider spectrum needs and regulatory provisions for the introduction and use of the GADSS, in accordance with Resolution 426

- ✓ The RCC Administrations consider that if the existing frequency allocations to aeronautical services are intended to be used for GADSS system, in this case the list of aircraft systems in GADSS, technical characteristics and protection criteria as well as frequency bands they use, should be included in relevant ITU-R Recommendations. Such use of frequency bands for GADSS should be restricted to the systems which operate in accordance with recognized international aeronautical standards, and should not preclude the use of these frequency bands by any applications of the services to which they are allocated and should not establish priority for GADSS in the Radio Regulations, that corresponds to Method B in CPM Report.
- ✓ The RCC Administrations consider that if the system elements of the GADSS, including their operating frequency bands, are not specified, then Method C in CPM Report "No change to the Radio Regulations" should apply to satisfy WRC-19 agenda item 1.10.

RCC Coordinator : Starchenko S.I., starchenko@g-tl.ru

1.11. To take necessary actions for harmonization of frequency bands for communication between train and trackside within existing MS allocations

- ✓ The RCC Administrations consider that no changes to the Radio Regulations are necessary under WRC-19 agenda item 1.11 (Method A).
- ✓ The RCC Administrations consider it reasonable to harmonize frequency bands within existing mobile service allocations at global or regional level through the development of ITU-R Recommendations and Reports.
- ✓ The RCC Administrations are of the view that harmonized use of frequency bands by railway transportation systems shall not impose additional constraints on services to which these frequency bands are already allocated, and provided interference to systems for government communication is avoided.

RCC Coordinator : Shurakhov A.A., shurakhov@niir.ru

1.12. To consider possible global or regional harmonized frequency bands for the implementation of ITS under existing MS allocations

- ✓ The RCC Administrations consider that there is no need to modify RR within this Agenda Item (Method A).
- ✓ The RCC Administrations support harmonization of frequency bands for evolving Intelligent Transport Systems (ITS) at global and regional levels within existing mobile service allocations through the development of ITU-R Recommendations and Reports
- ✓ The RCC Administrations are of the view that harmonizing the use of frequency bands for evolving ITS shall not impose additional constraints on services to which these frequency bands are allocated.

RCC Coordinator : Shurakhov A.A., shurakhov@niir.ru

1.13. To consider identification of bands for future development of IMT, including possible additional allocations to the MS on a primary basis

- ✓ The RCC Administrations consider that when developing technical conditions and regulatory provisions for the allocation of frequency bands to the MS and their identification for IMT it is necessary to ensure protection of other services having allocation in the considered and adjacent frequency bands taking into account the need in their development, first of all for existing systems or those planned to be used by RCC Administrations.
- ✓ The RCC Administrations do not oppose the allocation of the frequency band 24.25-25.25 GHz to mobile, excluding aeronautical mobile, service on a primary global basis, as well as the identification of the frequency band 24.25-27.5 GHz for IMT within land mobile service subject to incorporating the conditions in the Radio Regulations for IMT stations to protect:

RCC Coordinator : Pastukh S.U., sup@niir.ru

1.13. To consider identification of bands for future development of IMT, including possible additional allocations to the MS on a primary basis

- space stations in the Earth exploration-satellite service (EESS) (passive) in the frequency bands 23.6-24 GHz, 50.2-50.4 GHz and 52.6-54.25 GHz from unwanted emissions of IMT stations;

- space stations in the fixed-satellite service and inter-satellite service.

- ✓ In order to ensure this protection it is necessary to limit the emission from IMT base stations in upper hemisphere, as well as to limit unwanted emissions of IMT stations in frequency bands 23.6−24.0 GHz, 50.2−50.4 GHz and 52.6−54.25 GHz allocated to EESS (passive).
- ✓ The RCC Administrations do not oppose allocation of the frequency band 40.5-42.5 GHz to mobile service on the primary basis and its identification for IMT provided that the IMT operation in the frequency band 40.5−42.5 GHz shall ensure protection for:

- existing and future receiving stations in FSS at unspecified points as well as those used for gateways;
- existing and future RAS in the frequency band 42.5−43.5 GHz based on coordination measures for RAS stations in the frequency band 42.5−43.5 GHz.

RCC Coordinator: Pastukh S.U., sup@niir.ru

1.13. To consider identification of bands for future development of IMT, including possible additional allocations to the MS on a primary basis

- ✓ The RCC Administrations do not support identification for IMT systems and modification of the conditions of the use of the frequency band 37.0−40.5 GHz in Region 1 since this band is actively used and will continue to be used by systems in the fixed service. In case of identification of this frequency band for IMT in Region 2 or 3, it is necessary to adopt regulatory provisions ensuring protection in Region 1 of EESS/SRS (passive) in the band below 37 GHz and EESS/SRS in the band 40-40.5 GHz.
- ✓ The RCC Administrations do not support the identification of the frequency bands 45.5−47.0 GHz, 47.02-47.2 GHz and 66−71 GHz for IMT systems until ITU-R concludes the compatibility studies with existing primary radio services.
- ✓ The RCC Administrations do not support the identification of the frequency bands 47.2−50.2 GHz and 50.4−52.6 GHz for IMT taking into account difficulties in ensuring compatibility of IMT stations with passive services in adjacent frequency band 50.2-50.4 GHz.

RCC Coordinator: Pastukh S.U., sup@niir.ru

1.13. To consider identification of bands for future development of IMT, including possible additional allocations to the MS on a primary basis

- ✓ The RCC Administrations oppose allocation of the frequency band 31.8-33.4 GHz to mobile service on a primary basis and identification of the frequency bands 31.8-33.4 GHz and 42.5-43.5 GHz, 71−76 GHz and 81−86 GHz for IMT systems, as the results of ITU-R studies in these bands have concluded that IMT systems are incompatible with the stations of the incumbent services.
- ✓ The RCC Administrations oppose the consideration of frequency bands not specified in Resolution 238 (WRC-19) for IMT systems in this WRC-19 agenda item.

RCC Coordinator: Pastukh S.U., sup@niir.ru

1.14. To consider appropriate regulatory actions for HAPS, within existing FS allocations

- ✓ The RCC Administrations support necessary modifications to existing RR Article 5 footnotes and related WRC Resolutions as well as the development of the new Radio Regulations Article 5 footnotes and related WRC Resolutions to ensure the protection and the possibility of further development for existing services, including other applications of fixed service, having allocations in these and adjacent frequency bands, as well as to facilitate HAPS development.
- ✓ The RCC Administrations consider that HAPS should not claim more protection from other stations of existing services than that provided in the Radio Regulations for the terrestrial stations in the fixed service, while not exceeding the interference level to stations of the existing services as the stations on the Earth's surface in the fixed service provide.

RCC Coordinator : Yastrebtsova O.I., yastrebtsova@niir.ru

1.15. To consider identification of frequency bands for LMS and FS applications operating in the frequency band 275−450 GHz

- ✓ The RCC Administrations consider it reasonable that identification of frequency bands for land-mobile and fixed service applications in 275-450 GHz band in the RR No. 5.565 will facilitate global harmonization of radio frequencies for development and introduction of land mobile and fixed service applications above 275 GHz.
- ✓ The RCC Administrations consider that when identifying frequency bands for active services in 275-450 GHz range, a balance of interests has to be observed in the use of this frequency range by both active and passive services, ensuring possibility for future development of new active service applications while excluding interferences to the passive services in the frequency bands already identified in No. 5.565 of the Radio Regulations.
- ✓ The RCC Administrations support inclusion in the new RR footnote of the frequency bands 275−296 GHz, 306−313 GHz, 318−333 GHz and 356−450 GHz to be used by applications in the land mobile and fixed services and the related modifications to RR No. 5.565. This corresponds to Method E in CPM Report.

RCC Coordinator : Yastrebtsova O.I., yastrebtsova@niir.ru

1.16. To consider WAS/RLAN in the bands between 5150 MHz and 5925 MHz, and take regulatory actions, including spectrum allocations to MS

- ✓ The RCC Administrations are in favour of necessary protection from potential WAS/RLAN interference for all the services having allocations in the considered frequency bands, first of all for systems in radiolocation and aeronautical radionavigation services used for the safety of flights.
- ✓ The RCC Administrations oppose reduction of restrictions for the use of WAS/RLAN in the frequency bands 5150-5250 MHz and 5250-5350 MHz , since the conducted ITU-R studies did not reveal mitigation methods ensuring sharing between outdoor WAS/RLAN and the systems in existing services in the considered frequency bands.

RCC Coordinator : Sorokin S.N., sorokin@g-tl.ru

1.16. To consider WAS/RLAN in the bands between 5150 MHz and 5925 MHz, and take regulatory actions, including spectrum allocations to MS

- ✓ The RCC Administrations oppose the use of WAS/RLAN in the frequency bands 5350−5470 MHz, 5725−5850 MHz and 5850−5925 MHz, since the studies conducted by ITU-R , showed that sharing between WAS/RLAN and the systems in existing services in the considered frequency bands is not ensured.
- ✓ The RCC Administrations are in favour of the application of the following solution Methods in the frequency bands considered according to WRC-19 agenda item 1.16:

- in the frequency band 5150-5250 MHz – Method A1;
- in the frequency band 5250-5350 MHz – Method B1;
- in the frequency band 5350-5470 MHz – Method C1;
- in the frequency band 5725-5850 MHz – Method D1;
- in the frequency band 5850-5925 MHz – Method E1.

RCC Coordinator : Sorokin S.N., sorokin@g-tl.ru

2. To examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations

- ✓ The RCC Administrations support the principles of incorporation of texts in the Radio Regulations and propose updating the versions of Recommendations ITU-R P.525-2, P.526-13 and RS.1260-1 incorporated by reference in the Radio Regulations.
- ✓ The RCC Administrations consider that the updating the reference to Recommendation ITU-R M.1638-0 "Characteristics of and protection criteria for sharing studies for radiolocation, aeronautical radionavigation and meteorological radars operating in the frequency bands between 5 250 and 5 850 MHz" in Nos. 5.447F, 5.450A RR shall be considered within WRC-19 issue 9.1.5.

RCC Coordinator : Ikramov E.S., i.ikramov@mitc.uz

4. To review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement and abrogation

- ✓ The RCC Administrations are of the view that this agenda item shall not address Resolutions and Recommendations that are addressed within other WRC-19 agenda items.
- ✓ The RCC Administrations are in favour of maintaining the following WRC Resolutions unchanged: 18, 20, 205, 207, 217, 344, 354, 356, 417, 422, 424, 612, 749, 760.
- ✓ The RCC Administrations are in favour of suppressing Resolution 641 (Rev. HFBC-87).

RCC Coordinator : Shurakhov A.A., shurakhov@niir.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

The RCC Administrations consider it necessary further improvements in the notification, coordination and recording procedures for frequency assignments to satellite networks in different services in order to ensure equitable access of ITU Member States to orbital and frequency resource.

Issue A – Bringing into use of frequency assignments to all non-GSO systems, and consideration of a milestone-based deployment approach for non-GSO satellite systems in specific bands and services

- *Bringing into use*
- *The procedure of the milestone-based deployment approach*

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Bringing into use

With regard to bringing into use of non-GSO systems, the RCC Administrations support that frequency assignment to space station of non-GSO satellite systems shall be considered as having been brought into use, when notifying administration informed the Bureau that at least one space station with the confirmed capability of transmitting or receiving, has been deployed on one of the notified orbital planes of the non-GSO satellite system, irrespective of the notified number of orbital planes and satellites per orbital plane in the system. The RCC Administrations do not support identification in the Radio Regulations a continuous period of 90 or less days of deployment of a satellite, when bringing into use frequency assignments to non-GSO system.

Orbital tolerance elements shall take into account different types of orbits for non-GSO-systems and application of these systems.

RCC Coordinator : Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

The procedure of the milestone-based deployment approach

With regard to milestone-based approach to the deployment of multi-satellite non-GSO system, the RCC Administrations support adoption of new WRC-19 Resolution only in specific frequency bands (Ku-, Ka-, Q/V-bands) for fixed-satellite service (FSS) and mobile-satellite service (MSS), and broadcasting satellite service (BSS). This Resolution shall identify the requirements applied to systems failed to meet the milestone (appropriate reduction in number of system satellites notified in the MIFR).

RCC Coordinator : Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

The procedure of the milestone-based deployment approach

The RCC Administrations support the following requirements for the implementation of each milestone of deployment (time period and per cent of satellites deployed):

1 milestone – 2 years since the introduction of the system with the deployment of no less than 10% of the satellites notified,

2 milestone – 4 years since the introduction of the system with the deployment of no less than 30% of the satellites notified,

3 milestone – 7 years since the introduction of the system.

After the conclusion of the third milestone, the number of satellites deployed in the grouping shall be no less than 90% of the number of the satellites notified.

RCC Administrations consider that the procedure for the milestone-based approach f or the deployment shall not be applied to frequency assignments of non-GSO satellite systems/networks used for safety of human life.

Transitional measures

The RCC Administrations support the first option in CPM Report (section 3/7/1.3.2.2), related to transitional measures with a starting date of 1 January 2021.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

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

- ✓ The RCC Administrations support introducing the coordination arc mechanism in Ka-band to identify the need in the coordination between MSS and FSS geostationary satellite networks, as well as between MSS geostationary satellite networks, while maintaining the possibility of applying RR No. 9.41, according to the only Method in CPM Report

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue C – Issues for which consensus was achieved in ITU-R and a single method has been identified

Issue C1 - Discrepancy and/or inconsistency between the regulatory provisions dealing with any changes to the characteristics of an assignment

✓ The RCC Administrations consider that the existing discrepancy between provisions of Articles in RR Appendices 30, 30A and 30B and the terminology of RR Article 11 provisions do not lead to complications when applying the relevant provisions of the Radio Regulations.

Issue C2 - Using a part of the Appendix 30B frequency band

✓ The RCC Administrations support the proposal on possible notification of frequency assignments blocks with bandwidth of 250 MHz each for additional systems in Ku-band within Appendix 30B.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue C3 - Modification of Article 6 §§ 6.13 and 6.15 of Appendix 30B

✓The RCC Administrations do not oppose the modification of RR Article 6 §§ 6.13 and 6.15 of Appendix 30B taking into account the Rules of Procedure under RR § 6.6 of Appendix 30B.

Issue C4 - Submission of a single notice for inclusion into the List and Notification under Appendices 30/30A

✓The RCC Administrations support the proposal on submitting and processing a single notice for a new assignment to be included into the List under § 4.1.12 and recorded under §§ 5.1.1 and 5.1.2 for the networks in the RR Appendices 30/30A in Regions 1 and 3.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue C5 - Timely notification of an administration that the 6-month period under RR No. 11.46 has expired

- ✓The RCC Administrations support the proposal that the Bureau should timely notify the administration on expiration of the 6-month deadline after the unfavorable finding was sent under RR No. 11.37 or No. 11.38.

Issue C6 - Submission of a single notice for an assignment to be included into the List and recorded under Appendix 30B

- ✓The RCC Administrations support the proposal that for satellite networks in the RR Appendix 30B administrations would submit a single notice for a new assignment to be included into the List and recorded.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue C7 - The agreements concluded within the Appendix 30B for a specific period of time

- ✓The RCC Administrations support proposal on the modification of RR Appendix 30B, allowing administrations to conclude agreements among themselves for a specific period of time.

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

- ✓The RCC Administrations support the identification of specific GSO or non-GSO satellite networks which need coordination only according to RR Nos. 9.12, 9.12A or 9.13 as well as modification of relevant RR provisions (Method D1).

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue E - Resolution related to RR Appendix 30B

✓The RCC Administrations support the draft Resolution [AP30B] (WRC-19) with the most favourable procedure for converting the national allotments into assignment with modified characteristics within national borders of the notifying administration or for entering additional system to the List of frequency assignments, with a service area limited to a national territory, for administrations without any assignments in the List.

Issue F - Measures to facilitate inclusion of new frequency assignments into the RR Appendix 30B List

✓The RCC Administrations support modifications of existing criteria of Annex 4 to RR Appendix 30B for determining affected allotments or assignments, provided the level of protection for allotments of the Plan and for assignments of RR Appendix 30B List of RR Appendix 30B (Methods F2 and F3) is maintained.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue G - Updating the reference situation for Regions 1 and 3 networks under RR Appendices 30 and 30A when provisionally recorded assignments are converted into definitive recorded assignments

- ✓ The RCC Administrations consider it unreasonable to modify§ 4.1.18 of RR Appendices 30 and 30A, where the reference situation of the victim satellite network would be updated only after the agreement is reached between the administration notifying the network and the Administration notifying interfering new network. (Method G3).

Issue H - Modifications to RR Appendix 4 items to be provided for non-geostationary satellite systems (non-GSO)

- ✓ The RCC Administrations support modification of data of the RR Appendix 4 submitted for new non-GSO systems.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue I – Modified regulatory procedure for satellite systems with short-duration missions

- ✓ The RCC Administrations consider that the simplified procedure of submitting data to the Bureau concerning non-GSO systems with short-duration missions (less than 3 years), not subject to the coordination procedure under Section II of RR Article 9 shall contain possible measures to prevent possible interference to existing and planned assignments. Such systems shall be operated in accordance with the allocation conditions of those satellite services they are notified for.
- ✓ The RCC Administrations are in favour of maintaining 4-month period for comments by administrations after publishing API for simplified regulatory regime for non-GSO systems.
- ✓ An advance public notice (API) related to the limited number of small satellites (no more than 10) shall be unique, not subject to duplication or reuse, and the maximum duration of operation determined to be a three-year period shall be prohibited to extend.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

7. To consider advance publication, coordination, notification and recording procedures for satellite networks

Issue J – Pfd limit in Section 1, Annex 1 of RR Appendix

The RCC Administrations do not support modification of a hard pfd limit (−103.6 dB(W/(m2· 27 MHz), identified in Annex 1 to RR Appendix 30, and consider that to ensure protection of assignments to systems in the BSS from interference caused by networks in the BSS located outside of the coordination arc, hard pfd limit identified in Section 1, Annex 1 to RR Appendix 30 shall be observed, even if a test point is located in the territory of a notifying administration (Method J2).

Issue K – Difficulties for Part B examinations under § 4.1.12 or 4.2.16 of RR Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B

The RCC Administrations support re-examination of notices under §§ 4.1.12 or 4.2.16 of Appendices 30 and 30A and § 6.21 c) of RR Appendix 30B at the stage of publication relating to IFIC Part B in the case when networks which were the basis for the unfavourable finding were included in the List with decreased by results of coordination characteristics.

RCC Coordinator: Stepanova N.A., natals08@mail.ru

8. Country footnotes in Article 5 of Radio regulation

- ✓ The RCC Administrations support the ITU-R activity towards global harmonization of radio spectrum use through the deletion of country footnotes or country names from footnotes in the RR Article 5.
- ✓ The RCC Administrations consider that this agenda item is not intended for addition of country names into footnotes as well as for creating new footnotes.
- ✓ The RCC Administrations do not see any need for the modification of Resolution 26 (Rev. WRC-07) and wording of the relevant WRC agenda item.

RCC Coordinator : Dusmanov D. H., d.dusmatov@unicon.uz

9.1.1. Implementation of IMT in the bands 1885-2025 MHz and 2110-2200 MHz

- To facilitate compatibility between IMT terrestrial component (in mobile service) and IMT satellite component (in mobile-satellite service) in the frequency bands 1980-2010 MHz and 2170-2200 MHz, the RCC Administrations support adoption of relevant ITU-R Recommendations and Reports and also relevant RR provisions facilitating such compatibility.
- The RCC Administrations are of view that compatibility between IMT terrestrial component (in mobile service) and IMT satellite component (in mobile-satellite service) may be achieved through application of existing provisions of RR Article 9 and introduction of appropriate modifications to RR Appendices 5 and 70 to identify coordination thresholds between stations in mobile and mobile-satellite services in the frequency bands under consideration.
- The RCC Administrations support adoption of relevant modifications of RR Appendices 5 and 7, based on the materials of Report ITU-R M.2292.

RCC Coordinator : Aronov D.A., aronov@g-tl.ru

9.1.2. Compatibility of IMT and BSS (sound) in the band 1452-1492 MHz in Regions 1 and 3

- ✓ The RCC Administrations consider that the existing RR provisions are sufficient for ensuring compatibility between IMT and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3, therefore they require no modification.

RCC Coordinator : Uvarov S.S., uva2010@mail.ru

9.1.3. Operational issues and regulatory provisions for new NGSO-satellite orbit systems in C-band

- ✓ The RCC Administrations oppose modifications to provisions of the RR Articles 21 and 22 for new non-geostationary-satellite orbit systems in the 3700−4200 MHz, 4500−4800 MHz, 5925−6425 MHz and 6725−7025 MHz frequency bands allocated to the fixed-satellite service, as the studies carried out by ITU-R have concluded that the compatibility of these systems with stations of the incumbent services is unachievable.
- ✓ The RCC Administrations are in favour of adopting the conditions ensuring the compatibility for new non-geostationary-satellite orbit systems in 3700−4200 MHz and 5925−6425 MHz frequency bands by applying the coordination procedure under No. 9.12 RR between non-GSO FSS systems in the specified frequency bands.

RCC Coordinator : Uvarov S.S., uva2010@mail.ru

9.1.4. Stations on board sub-orbital vehicles

- The RCC Administrations consider that stations ensuring sub-orbital flights shall be operated within the frameworks of existing radio services and these stations shall be subject to regulatory, technical and procedural provisions currently in force for these radio services.
- The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using stations on board sub-orbital vehicles at this stage are not necessary.
- The RCC Administrations also consider it necessary to develop additional technical and operational measures which would help to avoid harmful interference to radiocommunication services from stations ensuring sub-orbital flights when existing measures will be insufficient. The developed technical and operational measures shall be specified in the new ITU-R Recommendation and shall not impose additional constraints on the operation of stations used during spacecraft launch and delivery in orbit.

RCC Coordinator : Starchenko S.I., starchenko@g-tl.ru

9.1.5. Referencing Recommendations ITU R M.1638-1 and ITU-R M.1849-1 in Nos. 5.447F and 5.450A

- ✓ The RCC Administrations are in favour of maintaining the conditions for the allocation of the frequency bands 5250–5350 MHz and 5470–5725 MHz by radiodetermination services.
- ✓ The RCC Administrations oppose reference to Recommendation ITU-R M.1849-1 in No. 5.447F as this would result in changing conditions for systems of the mobile (excluding the aeronautical mobile) service in the frequency band 5250-5350 MHz.
- ✓ The RCC Administrations are in favour of maintaining reference to Recommendation ITU-R M.1638-0 in Nos. 5.450A and 5.447F or replacing the reference by a reference to Resolution 229 (Rev. WRC-12).
- ✓ The RCC Administrations are in favour of the application of Approach A stipulated in the CPM Report to WRC-19 Agenda item 9.1., issue 9.1.5.

RCC Coordinator : Sorokin S.N., sorokin@g-tl.ru

9.1.6. Studies concerning Wireless Power Transmission for electric vehicles

- ✓ The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using wireless power transmission devices are not necessary.
- ✓ The RCC Administrations are in favour of harmonizing frequency bands to be used for Wireless Power Transmission (WPT) for electric vehicles, which could be implemented by the development of relevant Recommendation ITU-R.
- ✓ The RCC Administrations support the development of conditions for use of the frequency band 79-90 kHz by WPT devices, which would provide protection to stations of radiocommunication services from possible interference, and which have relevant allocations in the Radio Regulations on a primary or secondary basis.

RCC Coordinator : Pastukh S.U., sup@niir.ru

9.1.7. Managing the unauthorized operation of earth station terminals

- The RCC Administrations support the development and inclusion into the Radio Regulations additional provisions binding the administrations to ensure during licensing the implementation of appropriate technical measures in the satellite networks, such as measures that are specified in Resolution 156 (WRC-15) (Earth stations in motion (ESIMs) shall be subject to permanent monitoring and control by the Network Control and Monitoring Centre (NCMC), be capable of receiving and acting upon at least “enable transmission” and “disable transmission” commands from the NCMC depending on their geographical position) which would facilitate elimination of unauthorized operation of earth station terminals in global/regional satellite networks, when these terminals are outside the territory of States which administrations granted the appropriate authorization (the license).

RCC Coordinator : Pastukh S.U., sup@niir.ru

9.1.7. Managing the unauthorized operation of earth station terminals

- The RCC Administrations consider that no one transmitting mobile earth station or ESIM shall be operated in the territory of any state without the appropriate license (authorization) from the state, issued by the government of that State or on behalf of that government in appropriate form and according with the provisions of the Radio Regulations.
- The RCC Administrations consider that the issue of preventing the unauthorized operation of earth stations terminals is considered both under the WRC-19 Agenda item 9.1, issue 9.1.7 which covers all frequency bands and all types of ubiquitous FSS earth stations, and WRC-19 Agenda item 1.5 relating to operations of ESIM in the frequency band 27.5–29.5 GHz (Earth-to-space).

RCC Coordinator : Pastukh S.U., sup@niir.ru

9.1.8. Possible harmonized use of spectrum to support narrowband and broadband machine-type communication infrastructures

- ✓ The RCC Administrations consider that any modifications to the Radio Regulations provisions related to regulation of using narrowband and broadband machine-type communication applications are not necessary.
- ✓ The RCC Administrations support the development of ITU-R Recommendations, Reports and/or Handbooks on technical and operational aspects of using different radio systems and technologies, as well as on spectrum needed and experience in spectrum use, to support the implementation of narrowband and broadband machine-type communication infrastructures.

RCC Coordinator: Tonkikh et@niir.ru

9.1.9. Studies relating to spectrum needs and possible allocation of the band 51.4-52.4 GHz to the FSS (E-s)

- ✓ The RCC Administrations pursuant to the results of studies of additional spectrum needs for the development of the fixed-satellite service and the sharing and compatibility studies carried out by ITU-R under Resolution 162 (WRC-15) do not oppose the new allocation of the frequency band 51.4-52.4 GHz on the primary basis to the GSO FSS (Earth-to-space), limited to gateway earth stations using a minimum antenna diameter of 4.5 m, provided the mandatory protection is granted to EESS (passive) – Example 1 in the CPM Report.

RCC Coordinator : Simomov M.M., mms@niir.ru

9.1.9. Studies relating to spectrum needs and possible allocation of the band 51.4-52.4 GHz to the FSS (E-s)

- ✓ The RCC Administrations consider that the technical conditions and regulatory provisions for use of the new allocation to the FSS (Earth-to-space) in the frequency band 51.4-52.4 GHz, limited to communication links for gateway earth stations in GSO FSS satellite networks, shall ensure protection of existing services and systems in the considered and adjacent frequency bands and development of possible related regulatory measures, including revision of Resolution 750 (Rev. WRC-15), based on the relevant EESS (passive) protection criteria in the frequency band 52.6-54.25 GHz.
- ✓ The RCC Administrations consider that the permissible aggregate out-of-band interference level from all active services, stated in Recommendation ITU-R RS. 2017, should be distributed between the active services which could be the potential interferers to EESS (passive) sensors in the frequency band 52.6-54.25 GHz, including taking into account the potential impact of IMT systems' second harmonic, considered under WRC-19 agenda item 1.13

RCC Coordinator: Simomov M.M., mms@niir.ru

Issue: No 5.441B Revision of RR Article 5 footnote No. 5.441B

- ✓ The RCC Administrations propose to revise RR Article 5 footnote No. 5.441B at WRC-19 in order to improve conditions of IMT system application in the frequency band 4800-4990 MHz, while ensuring due protection to applications in the aeronautical mobile service (AMS).
- ✓ The RCC Administrations consider that the application of pfd level in addition to RR No 9.21. for the protection of the aeronautical mobile service (AMS) is redundant, and is not in accordance with the basic provisions stipulated in RR Article 8 defining the need for protection of registered AMS stations and regulatory practice of protection for the same AMS stations, inter alia, from IMT interference in other frequency bands. Therefore, it is proposed to exclude the pfd level from RR footnote No 5.441B.

RCC Coordinator: Sorokin V.S., v.s@inbox.ru

Issue: No 5.441B Revision of RR Article 5 footnote No. 5.441B

- The RCC Administrations also consider that RR footnote No 5.441B shall be corrected in order to take into account the status of allocation and conditions of application of the frequency band 4800-4990 MHz for AMS applications under RR footnote No 5.442.
- The RCC Administrations consider that during IMT station implementation, protection of primary services in the frequency band 4800-4990 shall be ensured, provided agreement of the concerned administrations has been obtained. However, taking into account No 5.440A and Resolution 416 (WRC-07), to protect AMS, the agreement for application of IMT stations under No 9.21. shall be obtained only from those countries that use aeronautical stations for aeronautical data links (ADLs) in the frequency bands under No 5.442.

RCC Coordinator: Sorokin V.S., v.s@inbox.ru

9.2 On any 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.
- ✓ In order to improve preparation to WRC-19, the RCC Administrations propose early mandatory consideration by Radio Regulations Board, the Radiocommunication Advisory Group , as well as the relevant ITU-R Working parties of the information submitted to Radiocommunication Bureau on difficulties or inconsistencies encountered in the application of the Radio Regulations.
- ✓ The RCC Administrations review issues included in the Report of the Director of the Radiocommunication Bureau, which positions are to be defined in a relevant annex to the current position. The RCC Administrations do not exclude the possibility of preparing common proposals on the issues included into the Report of the Director of the Radiocommunication Bureau, if required.

RCC Coordinator: Sorokin V.S., v.s@inbox.ru

9.3 On actions in response to Resolution 80 (Rev.WRC-07)

Section in the RRB Report	Section description in the RRB Report	Preliminary proposals to the position
4.1	Suspending the use of a recorded assignment to a space station (RR No.11.49)	Support existing regulatory procedures under RR No.11.49.
4.2	Linkage between bringing into use and notification for recording in the MIFR	TBD
4.3	Issues related to the extension of time-limits for bringing into use or bringing back into use a frequency assignment.	TDB
4.3.1	Situations of force majeure.	Consider that the Board efficiently executes its authority when addressing requests from administrations in force majeure situations, in this connection no decisions is required from WRC-19 on this issue.
4.3.2	Consideration of a satellite failure during the ninety-day bringing into use period.	Support existing practice of addressing satellite failure issues during ninety-day bringing into use period on the basis of their compliance with the procedure criteria in the case of force majeure.

RCC Coordinator: Kim T.G., t_kim@sts.kz

9.3 On actions in response to Resolution 80 (Rev.WRC-07)

Section in the RRB Report	Section description in the RRB Report	Preliminary proposals to the position
4.3.3	Extension of the regulatory time limit to bring back into use suspended frequency assignments in the case of force majeure	Support the recommendation of the Board not to modify the suspension period in No. 11.49 to address unexpected satellite failure cases, taking into account that it can consider a request to extend this period if the case satisfies all the conditions for force majeure.
4.3.4	Situations of co-passenger delay	Support the Board's recommendation to provide sufficient detail to justify the length of the requested extension period in order to avoid a request for further clarifications and delaying the treatment of the case.
4.3.5	Compliance with the regulatory time limits for space stations using electric propulsion	Support the Board's recommendations and considered it necessary to comply with the regulatory deadlines for bringing into use independently of the type of propulsion systems until the conclusion of the relevant studies by ITU-R.
4.4	Requests for a transfer or change of the "notifying administration" from one to the other	1. Support an approach so far used by the Board in addressing the change of notifying administration acting on behalf of an intergovernmental satellite telecommunication organization for a satellite network of that intergovernmental organization, to an administration acting on its own behalf. 2. Deemed it unacceptable to change the notifying administration, acting on its own behalf, of a satellite network or system to another notifying administration acting on its own behalf. 3. Are of the view that when changing the notifying administration acting on behalf of a group of named administrations which are not members of an intergovernmental satellite telecommunication organization to another administration of that group, risk arises to transfer satellite network from an administration to another one, in the event of subsequent exclusion of administrations from the group of named administrations. In this connection the RCC Administrations oppose to this practice.

RCC Coordinator: Kim T.G., t_kim@sts.kz

9.3 On actions in response to Resolution 80 (Rev.WRC-07)

Section in the RRB Report	Section description in the RRB Report	Preliminary proposals to the position
4.5	Receivability of requests for coordination or notification of satellite networks prior to the entry into force of WRC decisions	Support elimination of inconsistencies in interpretation of the definition of “satellite network”.
4.6	Receivability of requests for coordination or notification of satellite networks prior to the entry into force of WRC decisions	Support existing procedures.
4.7	The Application of RR No. 13.6	The RCC Administrations are of the view the limitation is necessary for how far back in time the RR No. 13.6 should be applied following the request of an administration by the period during which administrations may not notify the Bureau on the suspension of the use of the frequency assignments according to the six-month period, specified in RR No. 11.49. Provided that the majority of systems have already been verified by the Bureau in bringing them into use.
4.8	Application of CS Article 48	The RCC Administrations are of the view that with regard to the issue of application of CS Article 48 provisions the Board should be guided by the specifically indicated article of the Constitution.

RCC Coordinator: Kim T.G., t_kim@sts.kz

10. To recommend items for inclusion in the agenda for the next WRC

- ✓ The RCC Administrations are in favour of including the agenda item on upgrading the allocation of the frequency band 14.8-15.35 GHz for the SRS into the WRC-23 agenda.
- ✓ The RCC Administrations are in favour of improving WRC-23 standing agenda items 7, 9.1 and 9.2 activities according to principles and proposals of the document entitled "Proposals towards drawing up issues under some World Radiocommunication Conferences agenda items" and in document RAG18/7 "Proposals towards drawing up issues under individual World Radiocommunication Conferences agenda items".
- ✓ The RCC Administrations do not oppose including into WRC-23 agenda items indicated in the *resolves* 2.2, 2,3 and 2.5 of Resolution 810 (WRC-15).

RCC Coordinator : Shurakhov A.A., shurakhov@niir.ru

Thank you very much for your attention!