Addendum 1 to Document WRC-23-IRW-22/7-E
23 November 2022
English only

ITUEvents

2nd ITU Inter-regional Workshop on WRC-23 Preparation

29 November – 1 December 2022
Geneva, Switzerland

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#ITUWRC

Status of RCC preparation to the WRC-23

Status of RCC preparation to the WRC-23

Structure of RCC preparatory process to WRC-23

Chair: Sherzod Shermatov

Board of RCC CAs Heads

- Approve RCC Position
- Approve RCC CP

Chair: Valery Butenko

Commission on Spectrum & Orbit

- Approve RCC Position on behalf of the RCC Board
- Approve RCC CP on behalf of the RCC Board

RCC CP - support at least 50% of the RCC members and oppose less than 50% of the number of supporting

Chair: Albert Nalbandian

Coordinator's team

Working Group RA/WRC

- Draft RCC Position
- Draft RCC CP

Coordinators on WRC AI

- RCC AIs Brief
- Propose Position&CP

RCC Members

- Propose - RCC Position
- Propose - RCC CP

Basic principles for RCC position to WRC-23

Principles
for position
to WRC

Equitable access
to spectrum and satellite orbits

Compatibility
between radioservices

Efficiency & innovation
on use of spectrum and satellite orbits

Preparatory process for WRC-23

WG RA/WRC – group of RCC Commission on Spectum & Orbit responsible for WRC & RA preparation.

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

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

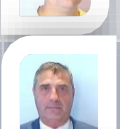
Coordinator : for every AI Coordinator(s) and Group of specialists from RCC countries

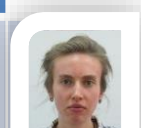
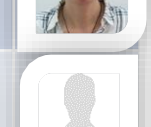
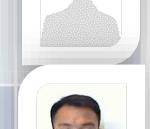
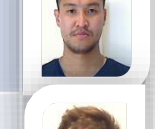
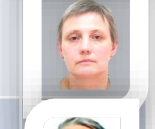
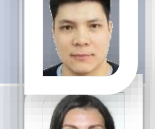
WG RA/WRC – develops RCC Position, RCC Common Proposals and Coordinator's Paper (Brief) on AIs for the work of WRC-23.

WG RA/WRC – had **5** meetings out of **9** planed meetings:

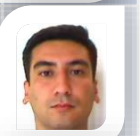
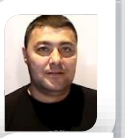
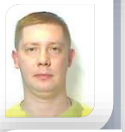
1st meeting: *02.2020, Minsk, BLR*
2d meeting: *08.2020, video conference*
3th meeting: *04.2021, video conference*
4th meeting: *12.2021, Minsk, BLR*
5th meeting: *06.2022, Bishkek, KGZ*
6th meeting: *12.2022, video conference*
7th meeting: *02.2023, TBD*
8th meeting: *05.2023, TBD*
9th meeting: *09.2023, TBD*

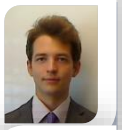
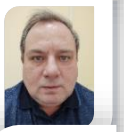
RCC coordinators for WRC-23 Agenda Items (1)

WRC-23 AI	RCC Coordinator	
1.1 IMT@4.9 GHz	Mr. Alexander PASTUKH (RUS) a.pastukh@niir.ru	
1.2 IMT 3.3-10.5 GHz	Dr. Sergey PASTUKH (RUS) sup@niir.ru;	
1.3 MS@3.8 GHz	Mr. Sergey RUDKO (RUS) – space rudko@g-tl.ru;	
	Ms. Alina TEMIRBAEVA (KAZ) – terrestrial a.temirbayeva@rfs.gov.kz	
1.4 HIBS	Dr. Dmitry ARONOV (RUS) aronov@g-tl.ru;	
1.5 UHF band	Mr. Andrey LASHKEVICH (RUS) a.lashkevich@niir.ru	
1.6 Sub-orbital vehicles	Mr. Sergey STARCHENKO (RUS) starchenko@g-tl.ru;	
1.7 AMS(R)S 137 MHz	Mr. Igor ZHELTONOGOV (RUS) sorokin@g-tl.ru;	
1.8 FSS for UAV	Mr. Sergey SOROKIN (RUS) sorokin@g-tl.ru;	
1.9 App. 27		

WRC-23 AI	RCC Coordinator	
1.10 AMS non-safety	Ms. Olga IASTREBTSOVA (RUS) yastrebtsova@niir.ru;	
1.11 GMDSS	Mr. Oleg ZAKHARCHENKO (RUS) zakharchenko@marsat.ru	
1.12 EESS radar sounders	Mr. Anuar MAGZUMOV (KAZ) a.magzumov@rfs.gov.kz;	
1.13 SRS@15 GHz	Mr. Anton STEPANOV (RUS) a.stepanov.rfc@gmail.com;	
1.14 EESS@250 GHz		
1.15 GSO FSS ESIM Ku	Ms. Tatyana SMIRNOVA (RUS) t.smirnova@niir.ru;	
1.16 NGSO FSS ESIM Ka	Dr. Mikhail SIMONOV (RUS) mms@niir.ru;	
1.17 Inter-satellite links	Mr. Arman BITURGANOV (KAZ) biturganov_a@rfs.gov.kz;	
1.18 MSS data collection	Mr. Anuar AIDAROV (KAZ) a.abdiraman@rfs.gov.kz;	
1.19 FSS@17 GHz	Ms. Olga MIRONOVA (RUS) mironova@niir.ru	

RCC coordinators for WRC-23 Agenda Items (2)

WRC-23 AI	RCC Coordinator	
2 RR reference to Recommedations	Mr. U. AZIMOV (UZB) u.azimov@unicon.uz	
4 Review of Res/Rec		
7 Sat. procedures	Ms. Olga DASHKEVICH (BLR) dashkevich@belgie.by	
	Mr. Agzam TADZHIBAYEV (KAZ) a.tadzhibayev@rfs.gov.kz	
	Ms. Natalia STEPANOVA (RUS) natals08@mail.ru	
8 Article 5 Footnotes	Mr. Rustam XAMIDOV (UZB) r.xamidov@unicon.uz	
9.1a Space weather sensors	Mr. Nikolay KHOHLACHEV (RUS) hohlachev@niir.ru;	
9.1b ARS/ARSS 1.3 GHz	Mr. Dmitry ARONOV (RUS) aronov@g-tl.ru	
9.1c FWA	Ms. Zinaida PAHARZHELSKAYA (BLR) paharzelskaya@belgie.by	

WRC-23 AI	RCC Coordinator	
9.1d EESS@37 GHz	Mr. Aleksandr DOMAKHIN (RUS) alex.domakhin.rfc@gmail.com	
RR No 21.5 Table 21-2	Prof.Dr. Lyudmila ZINCHENKO (RUS) Zinchenko@niir.ru	
Resolution 427 (WRC-19)	Mr. Sergey STARCHENKO (RUS) starchenko@g-tl.ru	
Resolution 655 (WRC-15)	Mr. Victor KLIUEV (RUS) klyuev@vniiftri.ru	
9.2 RR inconsistencies	Mr. Vladislav SOROKIN (RUS) v.s@inbox.ru;	
9.3 Due diligence	Mr. Timofey KIM (KAZ) t.kim@rfs.gov.kz	
10 WRC-27 Agenda (space)	Ms. Olga MIRONOVA (RUS) mironove@niir.ru	
10 WRC-27 Agenda (terrestrial)	Ms. Olga IASTREBTSOVA (RUS) – yastrebtsova@niir.ru	

Key WRC-23 AIs for RCC

WRC – 23 Agenda

facilitate innovation, sharing, compatibility, harmonization and transparent regulation

Agenda Items identified as key items for RCC

IMT & Broadcast	Satellite & Science	Regulation
1.1 – IMT 4800 - 4990 MHz 1.2 – IMT 6 - 11 GHz 1.5 – UHF review	1.13 – SRS 15 GHz 1.15 – GSO ESIM Ku-band 1.16 – NGSO ESIM Ka-band 1.18 – MSS data collection 1.17 – Inter-satellite links	7 – Satellite procedures 9.1c – IMT & FWA RR 21.5 – Active antenna system

Other Agenda Items of the RCC interest

1.3 - MS 3 600-3 800 MHz,1.4 - HIBS,
1.6 - Sub-orbital vehicles, 1.7 - AMS(R)S 137 MHz, 1.8 - Resolution 155, 1.9 - Appendix 27,
1.10 - AMS non-safety, 1.11 - GMDSS, 1.12 - EESS(active) radar sounders,
1.14 - EESS(passive) 250 GHz, 1.19 - FSS 17 GHz (Region 2),
2 - Recs incorporated by reference, 4 - Review of Res/Recs, 8 - Review of footnotes,
9.1a - Space weather sensors, 9.1b - ARS/ARSS 1300 MHz, 9.1d - EESS(passive) 37 GHz,
9.3 – Report on Res.80, 10 – Future agenda

1.1 - IMT 4.9 GHz

Unlock and harmonize 190 MHz spectrum for IMT

Aleksander Pastukh

The RCC Administrations oppose applying the PFD limits to protect stations of the aeronautical and maritime mobile services located in international airspace and waters (i.e., outside national territories) since:

- this imposes restrictions on services within national territories;
- administrations do not hold exclusive spectrum rights in international airspace and waters and there is no notification and registration procedure in international airspace and waters for AMS and MMS in this band;
- AMS and MMS stations do not have priority over other applications of terrestrial services in international airspace and waters or within national territories of countries.

Protection of AMS and MMS stations' frequency assignments in international airspace and waters can be provided if agreed by concerned administration(s) since it can impose restrictions on their frequency assignments within national territories. Such agreement may be reached, for example, through developing the relevant harmonized spectrum utilization plans for AMS and MMS, based on the standards approved by ICAO and IMO.

Method F, G or H from the draft CPM Report

1.2 - IMT 6425-7125 MHz

Harmonize spectrum to enhance flexibility of IMT deployment

Sergey Pastukh

6425-6525 MHz (Region 1): No objection to the identification of the frequency band 6425-6525 MHz or parts of it for IMT. Protection of FSS (E-s) and FS should be ensured by regulatory and technical conditions developed based on the results of ITU-R studies.

6525-7025 MHz (Region 1) and 7025-7100 MHz (Global): Support identification of the frequency band 6525-7100 MHz for IMT systems under the following conditions:

- ✓ insure compatibility of IMT stations with non-GSO MSS (s-E) feeder links in the band 6700-7075 MHz;
- ✓ insure compatibility of IMT stations with FSS (E-s) stations on GSO and HEO in the band 6725-7025 MHz;
- ✓ insure protection of SOS / SRS stations in the band 7100-7250 MHz from unwanted emissions of IMT stations operating in the band 6525-7100 MHz,
- ✓ not imposing regulatory or technical constrains for SOS / SRS stations operating in the band 7100-7250 MHz and keep possibility for the further use of the EESS (passive) in the 7075-7250 MHz.

7100-7125 MHz (Global): Protect existing radio services from interference in coinsidered and adjacent bands (including space stations of SOS, SRS and EESS (passive)).

Methods 4D and 5D from the draft CPM Report

1.2 - IMT 3.3-3.4 GHz

Protect existing services and extend where possible IMT usage in this band

Sergey Pastukh

Region 1

No objection for the extension of country name list in the footnotes 5.429, 5.429A, 5.429B, 5.429C, 5.429D, 5.429E, 5.429F but advocate for the protection of the RLS in-band and FSS / EESS (active) in adjacent band (i.e. above 3400 MHz and below 3300 MHz).

Protection of RLS, FSS and EESS (active) should be based on ITU-R Reports ITU-R M.2481 and S.2368.

Region 2

No objection for identification of the band 3300-3400 MHz in Region 2 for IMT but advocate for the protection of RLS of Region 1 in-band, FSS/ EESS (active) of Region 1 taking into account ITU-R Reports ITU-R M.2481 and S.2368 and results of studies be carried out by ITU-R in preparation for WRC-23.

Method 1A or 1B from the draft CPM Report

1.2 - IMT 3.6-3.8 GHz & 10 GHz

Protect Region 1 services in case of identification of these bands for IMT in Region 2

Sergey Pastukh

3600-3800 MHz in Region 2: If this frequency band is identified for IMT in Region 2, it is necessary to adopt relevant provisions to the RR ensuring protection of FSS and FS of Region 1.

Protection should be provided based on the results of studies carried out in ITU-R in preparation for WRC- 07, WRC-12 and WRC-15 (i.e. ITU-R Report F.2328, M.2109, S.2199, S.2368 and M .2111).

Method 3A or 3D from the draft CPM Report

10.0-10.5 GHz in Region 2: If this band is allocated to the MS and identified for IMT in Region 2:

- protection of services for which the band 10-10.5 GHz is allocated in Region 1, as well as protection of EESS (passive) in the 10.6-10.7 GHz should be ensured.
- no additional regulatory and technical constrains should be imposed on radio services in Region 1 operating in accordance with the RR.

Method 6A or 6C from the draft CPM Report

1.3 – MS 3.6-3.8 GHz in R1

Protect FSS (s-E) and address spectrum need for mobile service in Region 1

Sergey Rudko

Alina Temirbaeva

- In favour of the protection of FSS (s-E), FS and other services operating in the frequency band 3.6-3.8 GHz and in adjacent frequency bands, without imposing undue constraints on these services and their further development.
- Taking into account the existing results of ITU-R studies - Reports ITU-R S.2368, ITU-R M.2109 and ITU-R M.2111, as well as the results of studies during the current ITU-R study cycle.
- For the land mobile service stations pfd limits shall be used at the border of neighboring states. The allowed pfd level shall not exceed the values adopted for the frequency band 3400-3600 MHz.
- Additional protection criterion for FSS ES to be considered, to take into account the short-term interferences.
- Object to the updating the status of the allocation of the 3.6-3.8 MHz frequency band to the primary in Region 1 to the maritime mobile service without conducting appropriate compatibility studies.

Method C1 and C5 from the draft CPM Report

1.4 – HIBS below 2.7 GHz

Improve IMT BS coverage and protect of existing services in and adjacent bands

Dmitry Aronov

Technical and regulatory conditions for the use of HIBS in the bands mentioned in Res. 247 (WRC-19) shall be based on the results of relevant ITU-R compatibility studies and should take into account the requirements for the protection of services with the primary allocation in these and adjacent frequency bands, including other uses of IMT systems.

- 694-960 MHz: shall not cause interference and impose additional restrictions on the use of the 645-862 MHz and 960-1164 MHz bands by aeronautical radio navigation service stations;
- 1710-1885 MHz, 1885-1980 MHz, 2010-2025 MHz and 2110-2170 MHz: should not cause interference and impose additional restrictions on the use:
  - of the band 1675-1710 MHz by Meteorological Satellite Service;
  - of the band 2025-2110 MHz by SOS, SRS, EESS;
  - of the bands 1980-2010 MHz, 2170-2200 MHz by MSS.

Methods A4, B3, C3 and D3 from the draft CPM Report

1.5 – UHF (470-960 MHz)

Long term balance between broadband and broadcast in the band 470-960 MHz

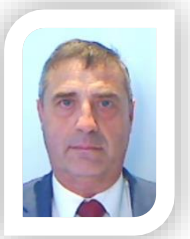
Alndrey Lashkevich

- The RCC Administrations oppose changing the regulatory conditions of using the frequency band 470-694 MHz in Region 1 within this WRC-23 agenda item due to the current and future intensive use of this band by incumbent services.
- The RCC Administrations believes that no regulatory actions are required in the 694-960 MHz band and no particular actions for study are defined by Resolution 235 (WRC-15).
- The RCC Administrations believes that when studying compatibility in the 470-694 MHz range, allocations of this frequency band to services on both a primary and secondary basis should be taken into account.

Method A, Alternative A1 or A2 from the draft CPM Report

1.6 – Suborbital vehicules

Measures to facilitate radiocommunications for suborbital vehicles



Sergey Starchenko

The RCC Administrations consider that, since the stations on board sub-orbital vehicles shall provide voice/data communications, navigation, surveillance, telemetry, tracking and command, they shall operate only within the current frequency allocations to:

- the aeronautical mobile (OR) service;
- mobile, except aeronautical mobile on route (R) service;
- aeronautical radionavigation service;
- mobile satellite, except for aeronautical mobile satellite on route (R);
- radionavigation satellite services;
- space operation service, depending on the transmitted information.

The RCC Administrations also consider that stations on board a sub-orbital vehicle shall ensure its safe flight in international airspace and its interoperability with civil aviation systems, moreover, these stations shall not cause unacceptable interference to the operation of stations on board launch vehicles.

Method A from the draft CPM Report is preferable

1.7 - AMS(R)S 117.975-137 MHz

New AMS(R)S allocation for aeronautical surveillance and communications over oceanic and remote areas

Igor Zheltonogov

Do not oppose the new allocation of the frequency band 117.975-137 MHz, or part thereof, to the AMS(R)S service on the primary basis to develop aeronautical VHF communications systems for E-s and s-E directions, subject to development and adoption at WRC-23 of:

- mechanism for ensuring compatibility in this and adjacent frequency bands between AMS(R)S systems of one Administration with AM(R)S, AM(OR)S, ARNS systems of another Administration, especially when such Administrations are located in different airspaces or different Regions;
- protective measures for the systems of SOS, SRS and MetSat in the frequency band
- 137-138 MHz;
- compatibility conditions between AMS(R)S systems of different administrations.

Standardization and frequency planning carried out within the ICAO for AM(R)S systems are insufficient to ensure the compatibility of AM(R)S of one Administration with the above-mentioned radio services of other Administrations.

Consider that the above conditions should be met without imposing regulatory or technical restrictions on the affected services within this band or adjacent bands.

Method B2 from the draft CPM Report is preferable

1.8 – FSS for UAS. Res. 155

Control and non-payload communication for UAS under fixed satellite service

Sergey Sorokin

The RCC Administrations are of the view that:

- for operation of UAS CNPC, only ITU registered frequency assignments to FSS satellite networks, for which the coordination has been successfully completed, shall be used;
- UAS CNPC links shall operate in accordance with ICAO SARPs, covering all aviation safety issues;
- the links of FSS networks which are not compliant with the ICAO SARPs requirements for UAS control and communications links, shall not be used for control and communications of UAS;
- revision of current Resolution 155 (Rev.WRC-19) or development of new Resolution shall be based on the results of the ITU-R compatibility studies for UAS CNPC links with the systems of existing services, operating within this band and if necessary in adjacent frequency bands;
- UAS CNPC links shall not cause more interference and shall not claim more protection than stations in FSS satellite networks which have been coordinated and registered in ITU;
- UAS CNPC links shall not restrict future development and impose additional restrictions on existing services, which have RR allocations within this band or adjacent frequency bands.

Method B from the draft CPM Report is preferable

1.9 – Appendix 27 of the RR

Implementation of digital technologies for aviation in high frequency bands

Sergey Sorokin

The RCC Administrations do not oppose modifications to RR Appendix 27, aimed at the use of digital technologies for commercial aviation AM(R)S safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service when ensuring coexistence of current HF systems alongside modernized HF systems

Method B from the draft CPM Report is preferable

1.10 - AMS non-safety

Address spectrum needs for broadband aeronautical mobile service applications

Olga Iastrebtsova

The RCC Administrations consider that, when identifying possible new allocations to aeronautical mobile service in the frequency band 15.4 – 15.7 GHz as well as when removing constraints on the use of the frequency band 22 – 22.21 GHz by aeronautical mobile service, it is necessary to provide protection of:

- radiolocation and aeronautical radionavigation services in the frequency band 15.4-15.7 GHz, of fixed satellite service in the frequency band 15.43-15.63 GHz, and of fixed service in the frequency band 22-22.21 GHz;
- radioastronomy service in the frequency bands 15.35-15.4 GHz and 22,21-22,5 GHz by means of unwanted emissions' limits of aeronautical mobile service stations in these frequency bands.

Method D from the draft CPM Report is preferable

1.11 - GMDSS

Address spectrum needs for GMDSS development

Oleg Zakharchenko

Topic A - Modernization of GMDSS

The RCC Administrations support a single **Method A**.

Topic B - Implementation of e-navigation

The RCC Administrations support the only **Method B** which provides no change to RR Article 5.

Topic C - Introduction of additional satellite systems into the GMDSS by IMO

IMO decisions on GMDSS, as well as the *realistic needs of frequency bands* for satellite systems in GMDSS, should be taken into account. GMDSS can be implemented based on the global and regional satellite systems that meet the requirements for GMDSS and use standardized and affordable shipboard equipment.

RCC is considering the use of specific frequencies for the new GMDSS satellite networks/systems in the 1610-1621.35 MHz band, which should be restricted by the MMSS (Earth-space) based on the results of the ITU-R studies. However, such use shall not impose any additional restrictions on the ARNSS and AM(R)S operating in accordance with 5.368 of RR. **No specific Method**

1.12 - EESS radar sounders

Spaceborne radar sounders within the range of frequencies around 45 MHz

Anuar Makzumov

The RCC Administrations ***do not oppose*** a new secondary allocation to the Earth exploration-satellite (active) service within the range of frequencies around 45 MHz ***provided protection*** of existing services in the 40-50 MHz band.

No specific Method from the draft CPM Report

1.13 - SRS 15 GHz

Broadband links in space research service to support of science applications

Anton Stepanov

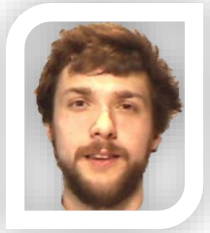
The RCC Administrations are in favor of upgrading the allocation of the frequency band 14.8-15.35 GHz to the space research service under the following conditions:

- protection of FS and MS in this frequency band, as well as passive services in the adjacent frequency band 15.35-15.4 GHz
- upgrading the SRS allocation should not impose constraints on the incumbent FS and MS systems in the frequency band 14.8-15.35 GHz.

No specific Method from the draft CPM Report

1.14 - EESS in 250 GHz

New primary frequency allocations to EESS (passive)



Anton Stepanov

The RCC Administrations consider the need to adjust and to allocate frequency band 231.5-252 GHz to EESS (passive).

No specific Method from the draft CPM Report

1.15 - GSO FSS ESIM Ku

Increase spectrum capacity for mobile platforms in GSO FSS

Tatiana Smirnova

Support development of regulatory provisions and technical requirements for ESIMs on aircraft and vessels in GSO FSS in the bands 13 GHz (E-to-s). Earth stations on aircraft and vessels communicating with a GSO FSS space station could be used only if the following conditions are met:

- ESIMs on aircraft and vessels in the frequency band 12.75-13.25 GHz (E-to-s) shall operate within the envelope of the ES's characteristics notified in the satellite network as well as comply with agreements reached under §§ 6.5, 6.6 and 6.16 of Article 6 RR Appendix **30B**.
- Use of ESIM on aircraft and vessels in the frequency band 12.75-13.25 GHz (E-to-s) shall be within the frequency assignments to satellite networks submitted and recorded in the MIFR in accordance with Articles 6 and 8 of RR Appendix **30B**.
- Administrations planning to use ESIMs on aircraft and vessels in the frequency band 12.75-13.25 GHz (E-to-s) in international waters or international airspace shall send to the Bureau information on such ESIMs. Such filings shall be considered as new submissions of frequency assignments to satellite networks with a new date of receipt and they are subject to examination by the BR for the protection of the RR Appendix **30B** Plan and List frequency allotments/assignments against interference, taking into consideration the worst-location of test points outside the land and space above it.

RCC administrations tend to Method B from the draft CPM Report

1.16 - NGSO FSS ESIM Ka

Increase spectrum capacity for mobile platforms in non-GSO FSS

Mikhail Simonov

Support development of regulatory provisions and technical requirements for aeronautical and maritime ESIMs in non-GSO FSS systems in the frequency bands 18/19/20 GHz (s-to-E) and 28/29/30 GHz (E-to-s).

Non-GSO ESIMs could be used only if the following conditions are met:

- Non-GSO ESIMs in the frequency bands 18/19/20 GHz (s-to-E) shall not claim protection from terrestrial services;
- Non-GSO ESIMs in the frequency band 27.5-29.1 GHz (E-to-s) shall not cause unacceptable interference to terrestrial services to which the frequency band is allocated and that operate in accordance with the Radio Regulations;
- Non-GSO ESIMs in the frequency band 29.5-30.0 GHz (E-to-s) shall not adversely affect the operations of terrestrial services to which this frequency band is allocated and that operate in accordance with the Radio Regulations;
- Maintain relevant RR provisions for the protection of GSO networks from non-GSO FSS systems;
- Non-GSO ESIMs are within the characteristics for typical ES of non-GSO FSS systems published in Part **II-S** of the BR IFIC, as well as comply with coordination agreements between administrations;
- Non-GSO ESIMs shall not be used or relied upon for safety-of-life applications;
- Non-GSO ESIM shall comply with the e.p.f.d. limits specified in RR Nos. **22.5C**, **22.5D** and **22.5F** ;
- In the frequency band 17.7-17.8 GHz (s-to-E) RR No. **22.2** applies;
- When operating ESIMs in non-GSO FSS systems, there shall be envisaged the measures, excluding unauthorized use of ESIMs in the territory of states that have not granted relevant authorization (licenses).

RCC administrations tend to Method B from the draft CPM Report

1.17 – Inter - satellite links

Facilitate innovation with inter-sat links and keep interference free environment

Arman Biturganov

- The use of inter-satellite links in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz in current concepts it does not meet the definition of the FSS and imposes additional constraints on the use of the existing and future systems/networks of FSS, inter alia, over the national territories.
- Spectrum requirements should be justified, conditions for the use of inter-satellite links in the above-mentioned frequency bands should ensure the protection of existing primary services that have allocations in the same or neighboring frequency bands and no additional constraints should be impose on the use of existing and future stations of these services.
- Supports the development of technical and operational conditions, as well as regulatory provisions, including new allocations to inter-satellite service, for the operation of inter-satellite links in the frequency bands 11.7−12.7 GHz, 18.1−18.6 GHz, 18.8−20.2 GHz and 27.5−30 GHz or parts thereof

RCC administrations tend to Method B5 from the draft CPM Report

1.18 - MSS data collection

Facilitate and support IoT satellite applications and keep compatibility in the frequency bands

Anuar Aidarov

The RCC Administrations consider that additional MSS allocation is permissible only if technical and operational characteristics of narrowband mobile satellite systems are justified, as well as regulatory conditions of their use, and allowing the exclusion of unacceptable interference towards existing and planned systems operated in the same and adjacent frequency bands in accordance with Article 5 RR.

RCC administrations does not support the Methods set out in the draft CPM Report under agenda item 1.18 of WRC-23

1.19 – FSS in 17 GHz

Harmonize allocation to FSS in all Regions while not affecting other services in Region 1

Olga Mironova

The RCC Administrations are of the view that, considering a new primary allocation of frequency band 17.3-17.7 GHz to the fixed-satellite service in the space-to-Earth direction in Region 2, the existing services in Region 1 within this and adjacent frequency bands shall be protected.

Method B from the draft CPM Report is preferable

2 – References to ITU-R Rec.

Review references to ITU-R Recommendations and update if necessary in the Radio Regulations

Ulugbek Azimov

The RCC Administrations support:

- the principles set out in Resolution 27 (Rev.WRC-19) and
- the revision of the ITU-R Recommendations incorporated by reference in the Radio Regulations with a view to updating them as necessary.

4 – WRCs Res / Rec

Review Resolutions and Recommendations with a view to revision, replacement or abrogation

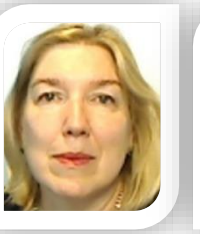
Ulugbek Azimov

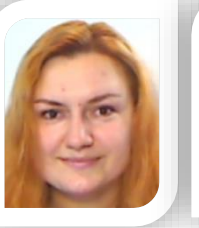
The RCC Administrations support:

- the principle of Resolution 95 (Rev.WRC-19) to ensure the relevance of Resolutions and Recommendations of previous WRCs.

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems


Natalia Stenanova


Olga Dashkevich


Agzam.Tajibayev

Topic A – Tolerances for non-GSO orbital characteristics

Only FSS, MSS or BSS. Only satellite systems with the altitude of the apogee below 15 000 km should be considered.

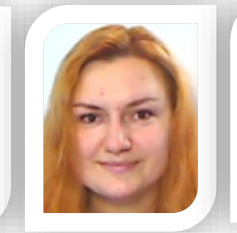
Tolerances for the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane shall depend on the type of orbit of the space station.

The regulatory mechanisms for temporarily excess of the established tolerances need to be developed in order to meet the operational requirements of non-GSO systems. **No specific Method**

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems


Natalia Stenanova


Olga Dashkevich


Agzam.Tajibayev

Topic B – Post-milestone procedure for non-GSO systems

The operational features of non-GSO systems with a small number of satellites need to be taken into account. The developed post-milestone procedure shall not impose additional restrictions on non-GSO satellite systems using highly elliptical orbit. **Method B2**

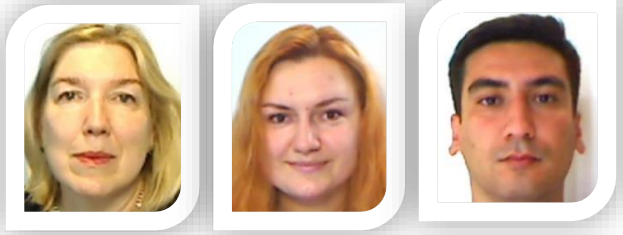
Topic C – Protection of GSO MSS networks in 7/8 and 20/30 GHz

Support the development of technical and regulatory mechanisms for protecting GSO networks in the mobile satellite service operating in 7/8 and 20/30 GHz from emissions of non-GSO satellite systems operating in the same frequency bands and same direction, without limiting the use of existing GSO and non-GSO satellite networks/systems in MSS.

No specific Method

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems



Natalia Stenanova Olga Dashkevich Agzam.Tajibayev

Topic D1 – MOD App 1 to Annex 4 of the RR App 30B

Support the value of the coordination arc in Appendix 1 to Annex 4 to the RR Appendix 30B to be aligned it with the WRC-19 decision and the Rules of Procedure approved. **Method D1**

Topic E – New Member States of the Union in the RR App 30B

Support granting to new Member States of the Union the same rights that are granted to other Member States in the RR Appendix 30B, based on the principles set out in Article 44 of the ITU Constitution.

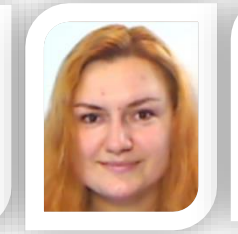
The procedure for the addition of a national allotment to the Plan of the RR Appendix 30B for a new Member State of the Union, can be improved, while ensuring the protection of national allotments and assignments in the RR Appendix 30B List, based on consultations with affected Administrations.

No specific Method

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems


Natalia Stenanova


Olga Dashkevich


Agzam.Tajibayev

Topic F – Territory exclusion from the service area and coverage area

Support further ITU-R studies on the impact of excluding feeder-link/up-link service and coverage areas in the bands subject to the RR Appendices 30A and 30B. **No specific Method**

Topic G – Revisions to Res. 770 (WRC-19) to allow its implementation

Support the revision of Resolution 770 (WRC-19) in accordance with the results of ITU-R studies in order to eliminate difficulties applying this resolution. **Method G2**

9.1a - Space weather sensors

To define service to which belongs space weather sensors applications and update Article 1 and 4 of Radio Regulations if needed

Nikolay Khohlachev

- The RCC Administrations are of the view that, the space weather sensors may be considered as application of the Meteorological aids service (MetAids).
- The RCC Administrations are of the view that, it is not allowed to use the space weather sensors without identification of the frequency bands within MetAids allocations for such applications in the Radio Regulations.
- The RCC Administrations are of the view that, changes to the RR Articles 1, 4 and 5 can be made only based on outcomes of ITU-R studies, carried out under agenda item of future WRC.

9.1b – ARS/ARSS in 1.3 GHz

Measures to ensure protection of the radionavigation-satellite service (s-E)

Dmitry Aronov

The RCC Administrations are of the view that, based on the results of ITU-R studies, the technical and operational measures to ensure the protection of RNSS receivers from the stations in the amateur and the amateur-satellite services in the frequency band 1 240 - 1 300 MHz need to be defined.

To address this topic new ITU-R Rec. M.[AS.GUIDANCE] could be developed

9.1c – FWA & IMT

How to address convergence of fixed and mobile technologies

Zinaida Paharzhelskaya

- The RCC Administrations oppose modifications of the Radio Regulations in response to WRC-23 agenda item 9.1 c) other than the suppression of Resolution 175 (WRC-19). (Alternative 2)
- IMT systems are designed to work in motion and do not meet the definitions of the FS. Studies on this topic should focus not on "IMT systems", but on "IMT technologies" used for FWA.
- FS stations using IMT technologies should be considered as fixed stations only and should not cause more interference and require more protection than existing FS stations.
- Aspects of the use of IMT technologies for FWA in the frequency bands allocated to the FS can be taken into account through the updating of existing ITU-R Recommendations/Reports/Handbooks, which is part of the routine activities of ITU-R WPs 5A and 5C. (Approach 2)

9.1d - EESS (passive) in 36 GHz

Protection of earth exploration satellite service from non-GSO FSS space stations in the 36-37 GHz

Alexandr Domakhin

The RCC Administrations **support to limit** maximum e.i.r.p. level of unwanted emissions of FSS space stations **in order to** ensure protection of EESS (passive) sensors operating in the frequency band 36-37 GHz (−34 dBW/100 MHz) from interference caused by non-GSO FSS space stations operating in the frequency band 37.5-38 GHz.

10 – WRC-27 agenda items

Address future development of services keeping principles of Resolution 804 (WRC-19)

Olga Iastrebtsova

Olga Mironova

The position is under development.

RR No 21.5, Table 21-2

Address IMT active antenna systems in the band shared with satellite

Ludmila Zinchenko

Issue A - Notification of IMT station with AAS

Temporarily, unless modified by WRC-23, Item 8AA in Table 1 of RR Appendix 4 "the power delivered to the antenna" for notification of the IMT stations with ASS shall be the value of the “total radiated power” (TRP), defined as in Resolution 243 (WRC-19) and Resolution 750 (Rev. WRC-19).

Issue B - Verification of notifying IMT station with AAS

Keep unchanged the limit of power level in RR Article 21 No. 21.5 with adjustment factor regarding the bandwidth of the IMT station with AAS.

Issue C - Table 21-2 of RR Article 21

Add frequency band 24.45-27.5 GHz allocated to the mobile service by WRC-19 to the Table 21-2 of RR Article 21 and consider the need to add the following bands: 40-40.5 GHz; 42.5-47 GHz; 47.2-50.2 GHz; 50.4-51.4 GHz; 66-71 GHz.

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Resolution 427 – RR and ICAO

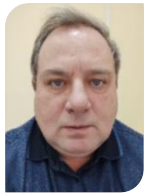
Update of provisions related to aeronautical services in the Radio Regulations

Sergey Starchenko

- The RCC Administrations are of the view that, updating of provisions of Radio Regulations related to aeronautical services shall ensure harmonization of these provisions with current and future applications of aeronautical systems.
- The RCC Administrations are also of the view that, updating of provisions of Radio Regulations related to aeronautical services in the ITU-R, shall not contradict to the RR existing provisions related to aeronautical services.

Resolution 655 - UTC

Definition of time scale and dissemination of time signals via radiocommunication systems



Viktor Klyuev

The RCC Administrations are of the view that, **changes of the UTC scale** may lead to the **need to modify on-board equipment** of GNSS, ground stations of the standard frequency and time signal service, transmitting reference signals of frequency and time, as well as navigation and frequency-time consumer equipment.

- **In the case to switch to a new time scale, it is necessary:**
  - to keep the UTC term, while it is proposed to revise the limits on the maximum discrepancy between UT1 and UTC times, to meet the needs of current and future user communities;
  - to determine the maximum value of the discrepancy between the UT1 and UTC times;
  - to establish a transition period, the duration of which should take into account the planned lifetime of the equipment, and ensure the principle of backward compatibility for consumers of all categories.
- **Transition period** to continuous time scale should be at least 15 years from the moment of taking decision in to force, but not early than in 2040.

Thank you very much for your attention !

Further information

RCC Position on ITU web-site (English language)

ttps://www.itu.int/oth/R0A0200000B/en