World Radiocommunication Conference 2019 (WRC-19)

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International Telecommunication Union
ITU instruments

Constitution (CS) and Convention (CV)
- Establishes the legal basis for the Union
- Defines: purpose, structure, rights and obligations of Member States

Radio Regulations (RR) and Rules of Procedures (RoP)
- Binding international treaty that governs the use of the spectrum and the orbits in an international level
- Administrations adapt their national legislation accordingly

Regional Agreements, Special Agreements, ITU-R Recommendations, Reports and Handbooks
- Complement the basic instruments
Radio Regulations (RR)

RR two main concepts:

- Frequency allocations: Article 5 of the RR contains the Table of Frequency Allocations and Footnotes
- Regulatory procedures: coordination, notification and recording

RR are revised and updated during the World Radiocommunication Conference (WRC) every 3-4 years.

The WRC-19 will be held in Sharm el-Sheikh, Egypt 28 October to 22 November 2019.
WRC-19 Cycle

- **WRC-15**
  - Defined the agenda for WRC-19
  - Resolution 809 (WRC-15)

- **CPM19-1**
  - Allocates the work of the agenda items to relevant study groups, defines chapter rapporteur and the structure of the CPM report
  - CA/226

- **ITU-R Study Groups**
  - Conducts studies for 4 years and prepares draft CPM text

  **ITU-R Study Groups:**
  - SG-1: Spectrum management
  - SG-3: Radiowave propagation
  - SG-4: Satellite services
  - SG-5: Terrestrial services
  - SG-6: Broadcasting service
  - SG-7: Science services

- **CPM19-2**
  - Consolida tes the CPM text that includes the methods to solve each agenda item

- **RA-19**
  - Appoints the chairmans (and vice) of the study groups, revises the structure of the study groups, approves or revises ITU-R resolutions

- **WRC-19**
  - Modifies the Radio Regulations (e.g. allocation/identification of frequency bands)
  - Oct/Nov 2019

- **Regional Groups / Multicountries**
  - Consolidates Regional and multi-country proposals
  - Feb 2019
  - Oct 2019
Aug/2018

- Chapter Rapporteurs will deliver the Draft CPM texts/chapters.

Sept/2018

- CPM 19 Management Team will consolidate them into the draft CPM Report to WRC-19 (input to CPM19-2)
- 3 months prior to the CPM 19-2 the Draft CPM Report will be available in six official ITU languages

Feb/2019

- CPM 19-2 will consider contributions from ITU Member States & ITU-R Sector Members and the preliminary draft version of the BR Director’s Report to WRC-19 to finalize the CPM Report to WRC-19 (incl. draft solutions (methods) to satisfy the agenda items)
ITU-R Study Groups - Responsible for Agenda Items/Issues


CA/226:
Results of the first session of the Conference Preparatory Meeting for WRC-19 (CPM19-1)
http://www.itu.int/md/R00-CA-CIR-0226/en

E.g.
Agenda Item 1.5 – ESIM
Agenda Item 1.6 – non-GSO
Agenda Item 1.13 – IMT
Agenda Item 1.14 – HAPS
Agenda Item 1.16 – RLAN
### Overlapping frequency bands

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* E-s: Earth-to-space; s-E: space-to-Earth  
** Frequency in GHz

Studies will be done to address mutual compatibility & sharing feasibility among the services/applications for which allocation/identification is envisaged.
WRC-23 Preliminary Agenda Items

Res. 361 (WRC-15) – Spectrum for GMDSS modernization & implementation of e-navigation

Res. 656 (WRC-15) – Possible new allocations for EESS (active) for spaceborne radar sounders @ 45 MHz

Res. 657 (WRC-15) – Spectrum needs & designation of radio services for space weather sensors

Res. 161 (WRC-15) – Possible new allocations for FSS @ 37.5-39.5 GHz

Res. 235 (WRC-15) – Spectrum use and needs of existing services @ 470-960 MHz in Region 1 and possible regulatory actions @ 470-694 MHz in Region 1

Res. 810 (WRC-15)
ITU WRC-19 Regional Workshop for Region 2 - La Havana, Cuba 21-23 March 2018

- Sponsored by: Ministry of Communications of Cuba (MINCOM), the International Telecommunication Union (ITU)

- The Workshop will cover topics related to ITU’s purpose and mission in radiocommunications, ITU-R’s process for managing spectrum worldwide, the Radio Regulations, its objectives, concepts, structure and tools, the WRC process, the ITU-R Study Groups, the WRC-19, its agenda, preparatory process and submission of contributions.

- The Workshop will also enable participants to learn about other Regional and Sub-Regional Organizations, their structure and positions for WRC-19. Participants will have the opportunity to debate and exchange views on WRC-19 Agenda items, including IMT, space services and other services.

- Website: https://www.itu.int/en/ITU-R/conferences/wrc/2019/workshops/r2/Pages/default.aspx
Thank you for your attention!

Mario Maniewicz
ITU/BR
Feb/2018
Backup Slides
Agenda Item 1.5 – ESIM

1.5 to consider the use of the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) by earth stations in motion communicating with geostationary space stations in the fixed-satellite service and take appropriate action, in accordance with Resolution 158 [COM6/17] (WRC-15);

Res. 158 (WRC-15)

Responsible Group: WP 4A
Agenda Item 1.6 – non-GSO FSS

1.6 to consider the development of a regulatory framework for non-GSO FSS satellite systems that may operate in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space), in accordance with Resolution 159 [COM6/18] (WRC-15);

Res. 159 (WRC-15)

Responsible Group: WP 4A
Agenda Item 1.13 – IMT

1.13 to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 238 [COM6/20] (WRC-15)

Bands which have allocations to the mobile service on a primary basis:
- 24.25-27.5 GHz
- 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4-52.6 GHz,
- 66-76 GHz, 81-86 GHz

Bands that may require additional allocations to the mobile service on a primary basis:
- 31.8-33.4 GHz
- 40.5-42.5 GHz, 47-47.2 GHz

 ► Res. 238 (WRC-15)
1. Frequency arrangements: continuation of work due to new IMT identifications in WRC-15
2. 5G spectrum aspects: preparation for WRC-19 (characteristics, spectrum needs and modelling of IMT systems)
### ITU-R Task Group (TG)

#### Groups
- **WG 1** – CPM
- **WG 2** – 30 GHz
- **WG 3** – 40/50 GHz
- **WG 4** – 70/80 GHz

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<tr>
<th>Meeting Date</th>
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| **1st Meeting**    | • Structure of TG 5/1  
                    | • Work plan for RAl 1.13                                                    |
| (May 2016)         |                                                                             |
| **2nd – 5th Meeting** | • Drafting of CPM Text  
                        | • Sharing and compatibility studies                                         |
| (2017 – 2018)      |                                                                             |
| **6th Meeting**    | • Completion of draft CPM Text                                              |
| (TBD 2018)         |                                                                             |
5G Spectrum Bands

Bands Below 1 GHz
- E.g. 700 MHz

Bands Between 1 and 6 GHz
- E.g. 3.4 - 3.8 GHz

Bands Above 6 GHz - new spectrum bands under study (AI 1.13)
- 24.25-27.5 GHz, 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz; and 31.8-33.4 GHz, 40.5-42.5 GHz and 47-47.2 GHz. See next slides.

## Bands above 6 GHz (WRC-19)

### Frequency bands (GHz) mentioned in Resolution 238 (WRC-15) in which studies are supported

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<th>Bands</th>
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- Some APT Members support studies in the bands indicated
- ATU has conducted a questionnaire to compile the information of Members
- Some CITEL Members are of the view that all bands should be studied

Reference docs:
- APG19-2/OUT-23(Rev.1)
- CEPT presentation APG19-2 Denpasar Jul17
- CCP.II-RADIO/doc. 4236-1-13/17
- APG19-2/INF-05 (version of 14 April, 2017)
- CCP.II-RADIO/doc. 4356-1-13/17
Agenda Item 1.14 – HAPS

1.14 to consider, on the basis of ITU R studies in accordance with Resolution 160 [COM6/21] (WRC-15), appropriate regulatory actions for high-altitude platform stations (HAPS), within existing fixed-service allocations.

Existing HAPS identifications:
- on a global level: 47.2-47.5, 47.9-48.2 GHz
- on a regional level, outside Region 2: 27.9-28.2 GHz and 31.0-31.3 GHz
- and in 5 countries (Footnote 5.457): 6 440-6 520 MHz and 6 560-6 640 MHz

Study new frequency bands:
- on a global level: 38-39.5 GHz,
- on a regional level, in Region 2: 21.4-22 GHz and 24.25-27.5 GHz

Res. 160 (WRC-15) Responsible Group: WP 5C
1.16 to consider issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5 150 MHz and 5 925 MHz, and take the appropriate regulatory actions, including additional spectrum allocations to the mobile service, in accordance with Resolution 239 [COM6/22] (WRC-15)

Res. 239 (WRC-15)

Responsible Group: WP 5A