

WRC-19 status

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WRC-19

- **World Radiocommunication Conference (WRC)**

- held every three to four years,
- **review and revise the ITU Radio Regulations**
 - the international treaty which are binding ITU member states
 - define the use of the radio-frequency spectrum, technical & regulatory conditions for use of spectrum



- **WRC-19 will take place this year**

- 28 October – 22 November 2019
- Sharm El Sheikh, Egypt



Agenda item 1.13

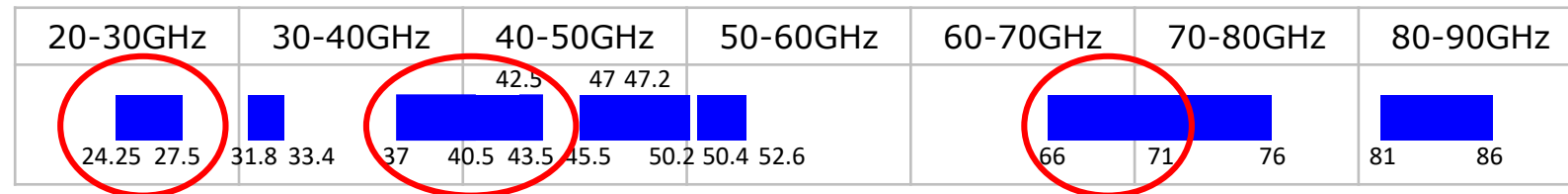
to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 238 (WRC 15)

WRC-19 agenda item 1.13

- In order to address needs of upcoming evolutions of IMT/5G, **WRC-19 agenda item 1.13 is to consider spectrum between 24.25 and 86 GHz.**
 - To identify the frequency bands for IMT in ITU Radio Regulations
- **Outcome of WRC-19 is important to provide new widely harmonized mmWave frequency bands for IMT, which will further accelerate worldwide 5G developments.**
 - Regulatory certainty on these frequency bands for IMT creates a platform for the necessary investment of 5G to bring innovative, affordable new products and services in the world.

WRC-19 agenda item 1.13

- **Twelve frequency bands under WRC-19 agenda item 1.13**



- **24.25-27.5 GHz**

- Already have a lot of support for the entire band

- **37-43.5 GHz:**

- Already have a lot of support for the entire band or parts thereof

- **66-71 GHz**

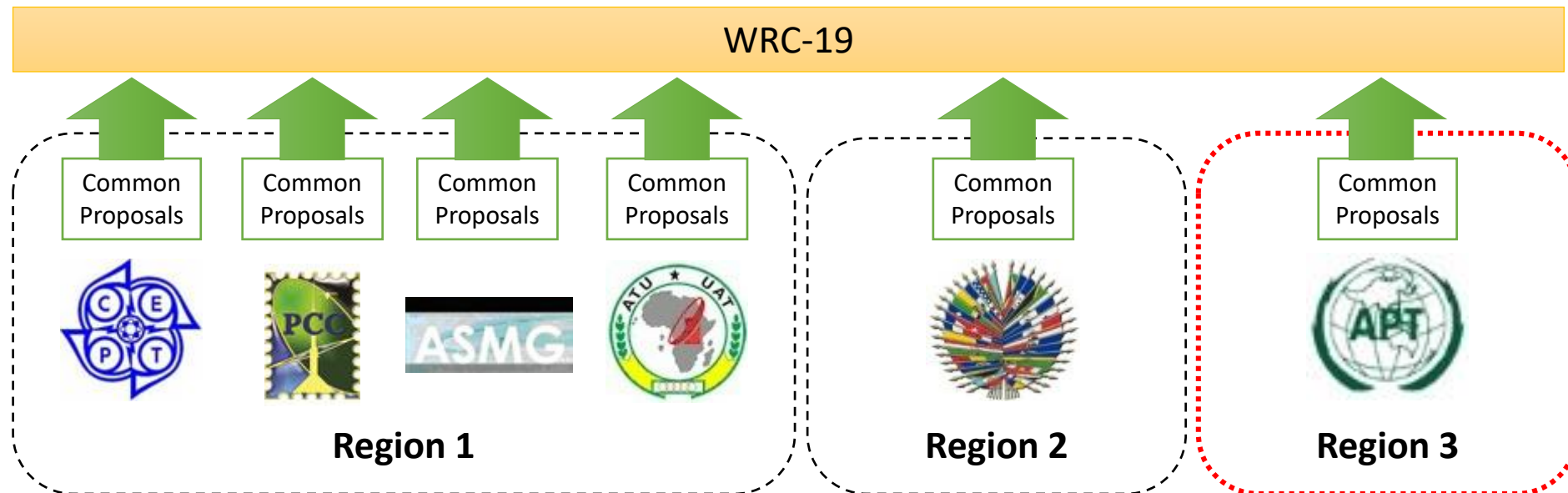
- strong interests for mobile use including 5G

WRC-19 agenda item 1.13

- It is also important that **the identification of frequency bands for IMT should be made with optimal regulatory conditions.**
 - These conditions are to be established to protect the incumbent services.
 - Without optimal conditions, use of the frequency bands by IMT/5G will be severely restricted.
- **WRC-19 will discuss and decide these conditions as well.**

Regional preparations for WRC-19

- Regional preparations for WRC are now finalizing in six groups.
- In the Asia-Pacific region, **APT is responsible for preparing common proposals to WRC.**
 - APT Conference Preparatory Group for WRC-19 (APG-19)



The 5th meeting of APG-19 (APG19-5)

- **APG19-5 is the final meeting before WRC-19.**
 - 31 July - 6 August 2019
 - Tokyo, Japan
- **APT Members (administrations) will develop common proposals for WRC-19 from APT based on their input contributions and discussion at the meeting.**
- **This APG19-5 meeting is very important to decide directions of APT towards WRC-19.**

APT Preliminary Views (as of APG19-4)

APT Members support the consideration of additional frequency bands for International Mobile Telecommunications (IMT), including possible additional mobile allocations on a primary basis, in accordance with Resolution **238 (WRC-15)**.

APT Members also support ITU-R studies on spectrum needs for the terrestrial component of IMT and sharing and compatibility studies in accordance with Resolution **238 (WRC-15)**.

Regarding the overlapping issue of the frequency bands within the scope of agenda item 1.13 associated with Resolution **238 (WRC-15)** and those within the scope of agenda items 1.6, 1.14 and 9.1 (issue 9.1.9), APT Members are of the view that this issue would be handled by WRC-19 based on proposals submitted to the conference, discussion on these agenda items and WRC-19's decision on use of each frequency band mentioned in the corresponding Resolutions.

APT Members have the following preliminary views for the frequency bands listed below.

24.25-27.5 GHz

APT Members support identification of the frequency band 24.25-27.5 GHz, which will provide administrations the flexibility to implement IMT in the entire band or portions thereof, through Method A2 in the draft CPM Report taking into account that protection of the incumbent services in this and adjacent frequency bands should be ensured by selecting an appropriate Option for each Condition under Method A2 in the draft CPM Report.

APT Preliminary Views (as of APG19-4)

Under Condition A2a (Protection measures for the EESS (passive) in the 23.6-24 GHz frequency band), APT Members support Option 1 in the Draft CPM Report (to revise Table 1-1 of Resolution 750 (Rev.WRC-15)). APT Members are encouraged to study and to provide unwanted emission limits to be included in this revision based on the range of unwanted emission levels applicable to different active service bands as indicated in Section 6.

31.8-33.4 GHz

APT Members support Method B1 (NOC), which is the only Method in the draft CPM Report for the frequency band 31.8-33.4 GHz due to difficulty of sharing and compatibility between IMT and the incumbent services.

37-40.5 GHz, 40.5-42.5 GHz and 42.5-43.5 GHz

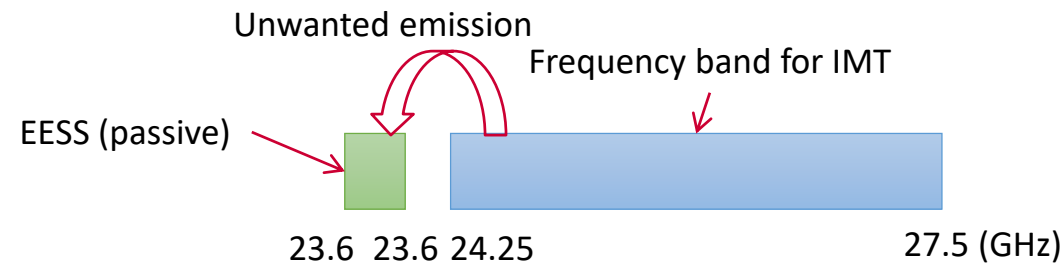
APT Members support identification of the frequency bands 37-40.5 GHz, 40.5-42.5 GHz and 42.5-43.5 GHz, or portions thereof, for IMT, through Methods C2/D2/E2 in the draft CPM Report taking into account that protection of the incumbent services in these and adjacent frequency bands should be ensured by selecting an appropriate Option for each Condition under Methods C2/D2/E2 in the draft CPM Report.

APT Members recognize that different administrations would implement IMT in different portions of the 37-43.5 GHz frequency range for IMT, and a global identification for IMT in the 37-43.5 GHz band, or portions thereof, would allow each country/region to implement IMT in different portions of the band in accordance with their national/regional considerations, while still facilitating the benefits of economies of scale.

Major issues to protect incumbent services

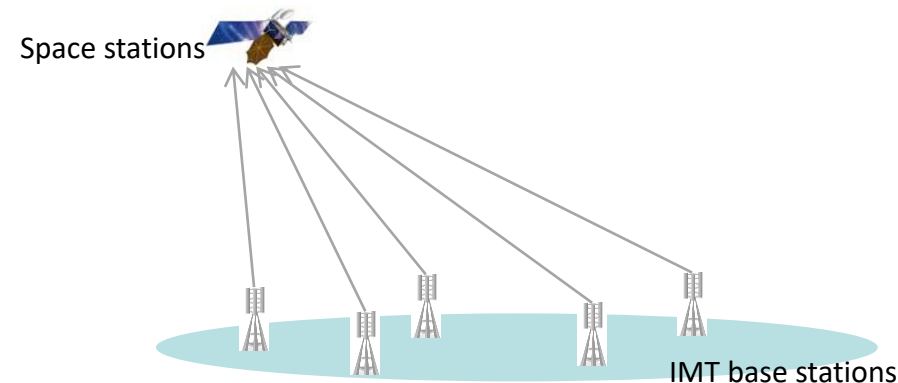
- **Protection of EESS (passive) sensors in the space**

- What are the required unwanted emission levels of IMT stations?



- **Protection of FSS/ISS space stations**

- Any conditions are required to protect space stations?



GSMA's positions for agenda item 1.13

- **A successful identification of spectrum for IMT under Agenda Item 1.13 is vital to realize the full potential of 5G networks**
- **The GSMA supports the 26 GHz and 40 GHz bands**
- **The GSMA also supports 66-71 GHz**
- **Due to the large amount of spectrum needed for 5G services, the range 45.5-52.6 GHz also needs to be considered**
- **Technical studies show that coexistence between IMT and other services is possible**

Agenda item 10

to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention

WRC-23 agenda items related to IMT

- **WRC-23 preliminary agenda item 2.5**

- *to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider **possible regulatory actions in the frequency band 470-694 MHz in Region 1** on the basis of the review in accordance with Resolution **235 (WRC-15)***

- This item together with Resolution 235 (WRC-15) was adopted to respond to some proposals at WRC 15 under agenda item 1.1 in relation to IMT use of the frequency band 470-694 MHz in Region 1.

WRC-23 agenda items related to IMT

- **Any other potential WRC-23 agenda item(s) related to IMT?**
 - *Agenda item “to seek additional identification of frequency bands for IMT”*
 - Some regional/sub-regional groups are discussing WRC-23 agenda item for IMT identification of certain frequency bands.
 - *Agenda item “to consider identification of certain frequency bands below 2.7 GHz identified for IMT for use by high altitude platform station as IMT base stations (HIBS), and whether changes are needed to the set of existing bands identified for use by HIBS”*
 - This agenda item was proposed from Japan and is being discussed in APT.

Final remarks

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- **WRC-19 is now just four months away.**
- **WRC-19 will make decisions about harmonized mmWave spectrum for IMT, which will further accelerate worldwide 5G developments.**
 - Identification of the targeted frequency bands with optimal regulatory conditions is required to achieve this goal.
- **Mobile industry is seeking visible supports from administrations.**
 - In APAC, the coming APG19-5 meeting is important to develop common proposals.

For further information

- **Further information can be found in the following GSMA's WRC series web-site.**
 - <https://www.gsma.com/spectrum/wrc-series/>



- Several useful reports/papers are presented in this web-site.