

Preparing WRC-19 - Discussion on millimeter bands -

5G Conference 12 – 13 February 2018, Brussels Alexander Kühn Chairman CEPT CPG-19



Europe's Strategic Vision





WRC-19 Agenda Item 1.13 - The CEPT Position

CEPT supports the results of the ITU-R studies on IMT spectrum needs in the range 24.25-86 GHz.

CEPT supports sharing and compatibility studies for the bands listed in Resolves 2 of Resolution 238 (24.25-27.5 GHz, 31.8-33.4 GHz, 37-43.5 GHz, 45.5-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz), with the focus on the frequency bands 24.25-27.5 GHz, 40.5-43.5 GHz and 66-71 GHz.

CEPT supports the **identification of global bands for IMT** among the bands listed in resolves to invite ITU-R 2 of Resolution 238, [...]. Bands outside those listed in [...] Resolution 238 are not supported for consideration under this Agenda item.

CEPT intends to harmonise the 24.25-27.5 GHz band for Europe for 5G before WRC-19 through the adoption of a harmonisation decision and to promote it for worldwide harmonisation by an IMT identification. Hence the 24.25-27.5 GHz is a clear priority for immediate study within CEPT and these studies are assuming an individual authorisation regime.

Studies need to take into account the compatibility with and protection of all existing services, including their future deployments, in the same and adjacent frequency bands; in particular the protection of current and future EESS/SRS earth stations should be addressed.

Note: CEPT has developed a <u>Roadmap on 5G</u> [...]. In this respect it is noted that "Europe has harmonised **the 27.5-29.5 GHz band** for broadband satellite and is supportive of the worldwide use of this band for ESIM. This band is therefore **not available for 5G**".



Current status

24.25 - 27.5 GHz (26 GHz-Band)

- New allocation needed in 24.25 25.25 GHz in R1 and R2
- Stringent unwanted emissions in 23.6-24 GHz (passive)
- Compatible with satellite reception FSS and ISS
- In-Band EESS/SRS and FSS earth stations / FS to be managed locally
- Upcoming new ECC Decision
- Good Option for global harmonisation

31.8 – 33.4 GHz

- New allocation needed
- Less contiguous bandwidth
- Compatibility with passive services below 31.8 GHz ?
- Not compatible with Radionavigation (airborne)
- Limited interest

37.5 - 40.5 - 43.5 GHz (40 GHz-Band)

- New allocation needed in 40.5 42.5 GHz
- Compatibility FS / FSS earth stations to be managed locally
- 6 GHz bandwidth enables balance at national/regional between 5G-FSS, coordinated/uncoordinated earth stations

66 – 71 GHz

- Compatibility with Radioclocation, MSS and Inter-SAT
- Opportunity for a very large band for small cells; up to 14 GHz of unlicensed band (56-71) – WiGig and 5G

45.5 – 52.6 GHz, 71-76,

- 81 86 GHz
 - Limited to no interest



Before and Beyond

- **Parallel development** of regulation and technology.
- 11,25 GHz are envisaged for global harmonisation of 5G.
 - Today: >1500 MHz are already available on a technology neutral basis
- All are seeking for **certainty** and **reliability** for futureprove investments.
 - Global solutions are essential to satisfy this requirement
- Expectation on WRC-19: Consensus seeking!
- Whats next?
 - "Leftovers"?; "6G"?; "Backhaul"?

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Thank you !



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