



Spectrum Allocation and Regulatory Challenges in Europe

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Upper 6GHz





- EU Mandate to CEPT on upper 6 GHz
 - July 2027: draft harmonised technical conditions
 - CEPT shall take due account of the RSPG Opinion on the upper 6 GHz band
- Draft RSPG Opinion on upper 6 GHz
 - Public consultation in June, with a "slight" preference for:
 - Additional 160 MHz channel for RLAN
 - 6585-7125 MHz (540 MHz) for MFCN/IMT
 - Including possible guard band to protect RLAN, for study by CEPT
 - Consideration of "secondary" WAS/RLAN in the MFCN portion based on sensing/avoidance, if feasible, for study by CEPT
 - Final adoption in November : a single option will be decided
- Likely to be the primary band identified in the 6G spectrum roadmap for the introduction of 6G in Europe by 2030

Bands sub-6 GHz





- European spectrum regulation is technology neutral
 - All harmonised bands (700 MHz, 800 MHz, 900 MHz, 1.4 GHz, 1.8 GHz, 2 GHz, 2.6 GHz and 3.5 GHz) will be also available for 6G

5G widely deployed in 3.4-3.8 GHz (29000 sites) in France. Also use of 2.1 GHz (19000 sites) and 700 MHz (29000 sites) depending on the operator strategy.

- Current process for possible regulatory evolution in the UHF band >2030
 - Current EU framework gives priority to TV&PMSE until end 2030 but enables some flexibility for countries having reduced TV&PMSE spectrum needs
 - <u>Draft RSPG Report</u> to assess any evolving demand from EU MS
 - Future report from the Commission to the Council&EP

WRC-27 Agenda Item 1.7





- Frequency bands under consideration for IMT identification in Region 1 under WRC-27 agenda item 1.7:
 - 4400-4800 MHz,
 - 7125-7250 MHz
 - 7750-8400 MHz
 - 14.8-15.35 GHz
- Due to European strategic usages, CEPT opposed at WRC-23 to study all these frequency bands except 7125-7250 MHz. <u>This position and European strategic usages that remain valid will</u> <u>impact any future positions to be developed for WRC-27.</u>
- 7125-7250 MHz may provide further opportunities for 6G depending on WRC-27

5G/6G for verticals





3.8-4.2 GHz harmonisation for local connectivity

- <u>ECC Decision</u> to be followed in few months by an EC implementing Decision
- Limited to low-medium power (<51 dBm eirp)
- Ongoing CEPT work to address coordination with MNO <3.8 GHz, coordination among verticals deployment, with incumbents (FS, FSS earth stations) and protection of radioaltimeter from AAS in the 4.1-4.2 GHz
- Emerging demands for usage of aerial UE (still to be studied in CEPT)

Already about **120 local private 5G deployments authorized** in France in the band 3.8-4 GHz + use during Paris-24 Olympic game

Harmonised MFCN/IMT bands allowed for the usage of aerial UE (LTE/5G)

- <u>ECC Decision(22)07</u> and upcoming EC mandate
- UE on-board drones, helicopters ... but not aerial connectivity
- Assuming that aerial UEs require a specific aerial subscription
- Implementation challenges for mechanisms to ensure that aerial UE respect no-transmit zones (band dependent)
- Conditions for 3.4-3.8 GHz still to be investigated

European approach for D2D





RSPG opinion on EU approach for D2D, supporting innovation for

- D2D in IMT bands ("D2D-IMT"),
- D2D in MSS bands ("D2D-MES") and,
- D2D for IoT ("D2D-IoT")

D2D-IMT:

- Limited market in Europe due to good MNO coverage in Europe and small-area white zones However, D2D is an innovative service to offer basic connectivity in underserved areas: provisional EU harmonisation framework expected before WRC-27 in all EU harmonised bands to be reviewed with the outcome of WRC-27 Al 1.13
 - **EC Harmonisation Mandate to CEPT** in the next few months

D2D-MES:

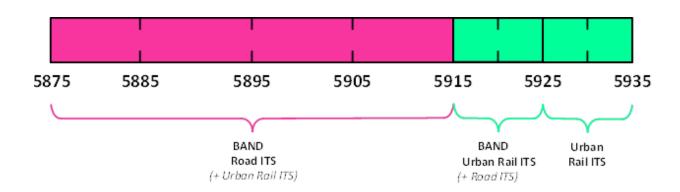
- **Existing operations** under current MSS authorization (Globalstar/Apple, Skylo ...) no need for specific authorizations <u>but specific terminals</u>
- ➤ MSS 2 GHz band (2x30 MHz) authorisations (EU selection) ending May 2027 / EU-wide availability / also terrestrial bands with many compatible terminals
 - RSPG opinion on MSS 2 GHz recommending scenarios for more operators and new usages (D2D and IoT)
 - EC consultation on the future use of this band

Spectrum for Road ITS (Intelligent Transport Systems)





- ITS in Europe encompasses road-ITS and urban rail ITS
- Based on 10 MHz Channeling: need to have for NR-V2X
- <u>EC Mandate to CEPT (January 2025)</u> Update the harmonized technical and operational conditions for the use of 20 MHz channels for safety-related road ITS in the 5875-5925 MHz band
 - Update the EU regulatory framework Commission Implementing Decision (EU)
 2020/1426
 - Draft CEPT Report in public consultation in June 2025, adoption in October 2025







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