UK Spectrum Policy Forum Plenary (17 October 2024)

Update on ECC PT1

Michael Kraemer
Director Communications Policy EMEA

Topics

- Low/Medium Power Wireless Broadband in 3.8-4.2 GHz
- Base Stations in 3.4-4.2 GHz vs. Radio Altimeters in 4.2-4.4 GHz
- Shared Use of 6425-7125 MHz between IMT and RLAN
- CEPT Roadmap on 6G

Low/Medium Power Wireless Broadband in 3.8-4.2 GHz

- Draft ECC Decision (24)01 „Harmonized technical conditions for the shared use of the 3800-4200 MHz frequency band by low/medium power terrestrial wireless broadband systems (WBB LMP) providing local-area network connectivity“
  - *„ WBB LMP networks in a defined limited geographical area (no nationwide network)“*
  - *„ensure protection of 5G below 3.8 GHz, incumbents in 3.8-4.2 GHz (FSS and FS) and radio altimeters in 4.2-4.4 GHz, …“*
- EIRP levels:

Low power base station	≤ 24 dBm/channel for BW ≤ 20 MHz ≤ 18 dBm/5MHz for BW > 20 MHz
Medium power base station	≤ 44 dBm/channel for BW ≤ 20 MHz ≤ 38 dBm/5MHz for BW > 20 MHz

- Decision being finalized in WGFM this week. Final approval by ECC in November.
- Discussion: National flexibility for higher powers; Developing an ECC Recommendation with mechanisms to address coexistence at national level (e.g. Rad Alt coord. zones)

Base Stations in 3.4-4.2 GHz vs. Radio Altimeters in 4.2-4.4 GHz

3.4-3.8 GHz	3.8-4.2 GHz

• No issues for unwanted emissions for any scenario in all studies performed
• For blocking:
  • No issue for all studies considering variety of Rad Alt models and agreed 5G paras.
  • No issue for all studies considering the worst performing Rad Alt and agreed 5G params. at altitudes where Rad Alt perf. is measured (200/1000 ft)
  • One study considered worst performing Rad Alt at non-measured altitudes and with modified 5G params. and found some locations where interference could occur. => Seen as a sensitivity analysis and will most likely not affect the harmonized 5G usage conditions.
	• No issues for blocking for any scenario in all studies performed
	• For unwanted emissions:
	  • No issue for 3.8-4.1 GHz for all studies
	  • For 4.1-4.2 GHz no issue for non-AAS
	  • For AAS base stations:
	  • No issue for all studies with a variety of Rad Alts and agreed 5G params. at 200/1000 ft.
	  • One study with worst performing Rad Alt at non-measured altitudes and modified 5G params. found a need to keep 1200m distance to runway (for specific AAS configs. not on vendor roadmaps) => No impact expected on harmonized WBB LMP conditions

Draft ECC Report 362 to be approved by ECC in November. Follow-up work in 2025 re. possible national measures in 2025. An EC-Roadmap is also being developed …

Shared Use of 6425-7125 MHz between IMT and RLAN

- „Study possible technical conditions for the potential shared use of the band 6425-7125 MHz between MFCN and Wireless Access Systems including Radio Local Area Networks (WAS/RLAN). This would include investigation on sharing mechanisms/rules, and a range of sharing scenarios based on various deployment assumptions. “

- Working document contains various approaches to facilitate shared use that broadly fall in two groups: regular power 5G (up to 83dBm and more) and reduced power 5G (in the range 50-60 dBm), with some options in-between as well. The options consider if/how the band could be used by 5G and RLAN in various scenarios (e.g. Indoor/Outdoor), incl. technical measures like cross-technology sensing, etc.

- Work was intended to be finalized at the PT1 meeting in September 2024 but will now be delayed until January 2025 (multiple Correspondence Group meetings until then).

- A new EC Mandate is being prepared (expected to be sent to ECC in November) with further work tasks to develop harmonized conditions for the use of the band by 5G and RLAN (likely timeline until mid-2027).

CEPT Roadmap on 6G

- CEPT held an initial 6G Workshop back in June 2023 to explore the current status of work on 6G, the key drivers, technology and applications, the possible usage scenarios and the resulting spectrum requirements. (https://www.cept.org/ecc/tools-and-services/cept-workshops/cept-workshop-on-6g)

- ECC PT1 has now started to develop a 6G Roadmap for CEPT (as was done in the past for the 5G Roadmap).

- Main Phases:
  - European Research and Innovation Projects
  - Standardization
  - Consideration of Frequency Bands for initial 6G launch
  - WRC-27
  - Harmonized technical conditons
  - National authorizations

- Roadmap will be presented to ECC for feedback and then further developed in ECC PT1.


intel