Dear RSPG,

Herewith are the comments from NXP Semiconductor on the call for comments on the RSPG draft option on the ITU-R World Radio Conference 2023, specifically the opinion on section 4.1 WRC-23 Agenda Item 1.2 (IMT mid-band identifications).

Wi-Fi, UWB (below 15 GHz) and Cellular are crucial pillars for the future wireless society.
Wi-Fi brings local connectivity and provides the wireless last link to the fiber backbone of the IP network. UWB provides unique, precise and secure, unintrusive position awareness needed by many personal and IoT applications in the near future. Both technologies require access to mid-band spectrum.
Cellular brings ubiquitous wireless connectivity. NXP is aware of the need to allocate a new IMT band in the mid-band spectrum.

NXP suggests that RSPG recognize the complementary nature of the three technologies and adopt a more integral approach to the management and replanning of mid-band spectrum that includes Wi-Fi and UWB alongside IMT.

The requirements of IMT and Cellular applications for mid-band spectrum should be well understood. NXP would like to specifically highlight the requirements for UWB and Wi-Fi spectrum allocation below.

NXP suggests a constructive approach for 6.425 - 7.125 GHz band:

- To continue to permit UWB in accordance with the latest draft decision ECC (06)04 in the 6.425 - 7.125 GHz band. This band encompasses UWB channel 5, which is a fundamental pillar for UWB deployment.
- To consider practical coexistence options for Wi-Fi in the 6.425 - 7.125 GHz band.

With regard to new candidate IMT bands and mid-band spectrum management in future arising at WRC-23:

- To consider methods of coexistence of Wi-Fi and IMT in the same spectrum, e.g. where the technologies can provide different types of coverage (e.g. indoor versus outdoor, or privately managed local applications), and possibly using more active methods of coordination.
- To consider allocation of more spectrum for Wi-Fi that will not be encumbered by IMT, preferably aligned to other Wi-Fi (unlicensed band) allocation in other countries and ITU regions.
- To consider the coexistence of UWB in IMT and Wi-Fi spectrum, possibly adopting mitigation methods to avoid interference in specific cases.
- To consider the concept of a “safe harbor” band for UWB applications that would not be encumbered by IMT or Wi-Fi. Bands of interest may be bands that currently host incumbent applications that cannot tolerate interference from IMT or Wi-Fi, but which can coexist with UWB applications which typically have very low power, duty cycle and activity factors and so could not be considered a significant source of interference to incumbent applications.

With kind regards, Marnix Vlot, Director Standardization NXP.
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