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RADIO SPECTRUM COMMITTEE

Working Document

Subject: Harmonisation framework for the 24.25 – 27.5 GHz frequency band in the Union and outcome of the World Radiocommunication Conference 2019

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1. INTRODUCTION

The ITU-R World Radiocommunication Conference in 2019 (WRC-19) identified on a global basis the 24.25-27.5 GHz ('26 GHz') frequency band for IMT, with focus on 5G. This is in line with the Union's strategy to harmonise globally this 5G pioneer band.

The ITU-R Radio Regulations, as amended by WRC-19, introduced technical conditions for use of the 26 GHz frequency band, which are less stringent than the EU-harmonised technical conditions. Therefore, the former do not legally oblige a change to the Union's framework for wireless broadband use of this band established by the Commission Implementing Decision (EU) 2019/784, which also contains provisions for the protection of satellite services.

Besides the legal perspective, the technical and economic perspectives should also be taken into account.

At the WRC-19, all Member States and the Commission services jointly considered that the outcome of WRC-19 does not create any obligation to revise this Decision, but EU may consider to take into account the results of WRC-19 for adapting the conditions in this Decision.

2. PRELIMINARY ANALYSIS AND POTENTIAL FOLLOW-UP

The European Electronic Communications Code has established a regulatory framework for promoting investment in high-capacity (5G) networks. In particular, it has set a the deadline of end-2020 for the authorisation of at least 1 GHz of the 26 GHz pioneer band based on the technical conditions set in the Commission Decision.

Pursuant to studies conducted in the context of the underlying CEPT Report 68, the Commission Decision has set adequate out-of-band emission limits for wireless broadband equipment to protect the EESS (passive) operating in the band 23.6-24 GHz. Those limits are more stringent than the global limits agreed at WRC-19 and now contained in the revised Radio Regulations. The latter represent a risk of harmful interference to global passive satellite services, in particular, if mass market deployment takes off before 2027.

Based on the two-phase approach to setting protection limits in the Radio Regulations as revised by WRC-19 (Resolution 750)¹, two major factors are likely to determine the aggregate effect of 5G deployment on passive satellite services during the first phase running until 1.09.2027 and thus the risk of harmful interference:

- the pace of progressive take-up of the 26 GHz band for 5G – studies and stakeholder consultations have so far shown that the effective deployment of 5G in this band would begin only as of 2022, and on a limited geographical (urban) scale; such deployment will generate higher interference in the passive band;
- the investment strategy of operators and vendors as to the time point of deploying the more stringent 2nd-phase limit – this may start well before 2027 alongside with the expected mass deployment of 5G around 2025.

This outcome of WRC-19 calls for a swift assessment of any need to adapt the Union's harmonised technical framework for the 26 GHz frequency band. This is necessary to

¹ Out of-band emission limits for 5G base stations in the 23.6-24 GHz band: -33 dBW/200MHz until 1.09.2027 (first phase), after this date -39 dBW/200MHz (compared to the current more stringent binding Union limit of -42 dBW/200MHz)

provide certainty and predictability to manufacturers and operators. Furthermore, Member States are obliged by the Electronic Communications Code to award the 26 GHz band (at least 1 GHz) in line with EU-harmonised technical conditions by the end of 2020, subject to market demand.

The continued application of more stringent limits in the Union compared to large parts of the rest world is possible with a likely twofold effect. Firstly, it would ensure higher protection of the passive services on the Union's territory in line with the Union policy to ensure the development of satellite systems for Earth surface and weather monitoring (Art. 8(1) RSPP). However, this will not prevent the risk of interference to these passive services (including the Copernicus system) when operating outside of the EU. Secondly, it would imply that 5G equipment for the 26 GHz band for the Union's single market would not benefit from the same economies of scale for 5G equipment using 26 GHz, which are likely to develop world-wide based on the parameters in the Radio Regulations. In this context, the technical implementation of stricter limits in the Union (such as filters for 5G equipment) as well as the degree of equipment choice may have negative consequences on equipment cost as well as on investments in high-capacity networks in the single market.

Recital (24) of the Commission Decision sets out that Member States should report on its implementation of this Decision to help assess its impact at Union level as well as its timely review. Such a review can also address the suitability of the technical conditions taking into account the global situation following WRC-19.

Our objective of protecting passive services, in particular Copernicus and meteorological services, shall remain. At the same time 5G awards in the 26 GHz band, as foreseen by the Code, shall not be delayed.

Taking into account the above considerations, the Commission invites Member States to provide their views on the need to amend the Commission Implementing Decision (EU) 2019/784 in order to re-establish regulatory certainty in the wake of WRC-19.