Orange response to the Public consultation on the draft RSPG Opinion on spectrum related aspects for next-generation wireless systems (5G)

Orange welcomes the opportunity to provide comments on the draft RSPG Opinion on spectrum related aspects for next-generation wireless systems (5G). Establishing a clear roadmap on spectrum aspects is an essential step towards the timely development of the 5G ecosystem in the beginning of the next decade.

This work is equally important in global context. Japan, China and Korea already announced trials and pre-commercial deployments in the next 2 years, while the US regulator FCC recently published a set of rules for wireless broadband operations in frequencies above 24GHz for the next mobile generation.

We believe that in order to deliver ubiquitous 5G services the mobile operators will need to able to access spectrum resources with different characteristics:

Spectrum below 6GHz

The low frequency bands will prove crucial for the first waves of 5G deployment, as they represent the main tool for covering large areas and improve the indoor penetration.

We agree with the view shared in this document that bands below 1GHz (in particular the 700MHz band) as well as the 3.4-3.8GHz band can become the 5G pioneer bands. In this regard, we consider that making both bands available across the whole Europe by 2020 will prove critical for the early adoption of 5G.

The current efforts from the EC for implementing a common roadmap for all Member States in relationship with the 700MHz band represent an important step towards the homogenous connected continent. We are welcoming the plan to set the 2020 as a deadline for making the band available, as it is compatible with the 5G roadmap. However, we consider that by introducing a two years derogation, Europe will risk repeating the mistakes associated with the award of the first Digital Dividend for which eleven administrations requested derogations that spanned up to three years.

The IMT identification of the 600MHz band in Northern America and parts of Asia, as well as the interest expressed by several European administrations during WRC-15, reveal a potential for harmonization for this band, or part of it. WRC-23 will prove as an opportunity for ITU-R to decide on

the most efficient usage and to identify part of the band for IMT in Region 1. Therefore, Europe should consider a review of the sub-700 MHz band ahead of WRC-23.

The 3.8-4.2GHz band also raised a particular interest during the previous preparatory cycle and conference from some European and Asian administration. The large quantity of available spectrum as well as the proximity with the 3.4-3.8GHz range will make this band very interesting for 5G in the next decade.

In conclusion, we believe that the sub-700MHz and the 3.8-4.2GHz bands have also potential of becoming 5G bands and therefore should be studied.

Spectrum above 6GHz

Large bandwidth spectrum above 6GHz will be necessary to support very high data rates and short-range mobile connectivity. We believe that during the preparatory work for WRC-19 the priority should be given to maximize the amount of spectrum allocated to IMT in these bands [under A.I. 1.13] and at this point it is premature to exclude any of the bands.

Outside the WRC-19 preparatory process, USA, Korea and Japan are studying the 28GHz band for 5G/IMT-2020. In this regard we believe that special attention should be given to the study of the 24.25-27.GHz and 31.8-33.4GHz bands as it could lead to synergies with the 28GHz band, by a potential tuning range mechanism.

It should be noted that other bands, below 24 GHz, not listed under AI 1.13 are of interest for mobile industry and some Administrations. The bands such as 5.925-8.5 GHz, 10-10.6 GHz and 21.4-22 GHz present a strong potential for IMT, in particular for propagation reasons should also be studied as part of regional harmonization.