

## Telefónica UK Limited's response to:

“Consultation and information on technical licence conditions for 800MHz and 2.6GHz spectrum and related matters”

A consultation by Ofcom

1. Telefónica UK Limited<sup>1</sup> welcomes this opportunity to comment on the draft technical licence conditions for both the 800MHz/2600MHz licences to be auctioned in the Combined Award and potential revisions to the 900MHz, 1800MHz and 2100MHz to allow for liberalisation to LTE.
2. We note Ofcom's statement at §2.17 that this consultation does not constitute a notice to vary the 900MHz, 1800MHz and 2100MHz in accordance with schedule 1 of the Wireless Telegraphy Act 2006.

### **2600MHz technical licence conditions**

3. At §§5.4-5.10 Ofcom proposes an in-band (BTS) and out of band (OOB) coordination zone of 1km (§5.4 and §5.9 refer) where co-ordination with airports would be expected.
4. UK airports are likely to be attractive indoor coverage opportunities for LTE as they already are for GSM and UMTS, served primarily by in-building / small cell systems. The BTS and OOB emissions from such systems will benefit from containment within the airport buildings. Therefore, Telefónica has a strong preference for the previously proposed threshold based coordination approach.<sup>2</sup> In our view the 1km coordination/exclusion zone contained in this consultation is overly restrictive and would lead to an inefficient use of the spectrum in such situations.
5. For OOB emissions, the permanent coordination obligations proposed in §5.8, do not appear to have been set with reference to the propagation characteristics of the 2.6GHz band. Telefónica suggests that even with the "baseline configuration" of -45dBm/MHz EIRP OOB, a coordination distance of a few hundred of metres is sufficient, rather than the 10-15km proposed in the consultation.
6. At §5.11, Ofcom suggests that at some radar sites, where there is uncontrolled public access near the radar station, it may be necessary to ban the use of LTE2600 terminals. In reality, the only way of achieving this is to prohibit base stations from providing coverage in these locations, as there is no meaningful way of controlling the UEs of not transmitting on the 2.6GHz band if there is sufficient LTE coverage present. Such geographic restrictions will need to be clearly specified and limited. Once included in the licences, there would be no basis for future radar systems to benefit from such exclusion zones.

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<sup>1</sup> Telefónica UK Limited trades under the O2 brand in the United Kingdom.

<sup>2</sup> [http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-awards/awards-in-preparation/757738/587\\_Information\\_Update\\_Coex1.pdf](http://stakeholders.ofcom.org.uk/binaries/spectrum/spectrum-awards/awards-in-preparation/757738/587_Information_Update_Coex1.pdf)

**Low power 2600MHz uses**

7. In our response to Ofcom's consultation on the Combined Award we expressed a strong preference for low power systems to be confined to the TDD block.
8. Overlapping the standard power and low power carriers (so-called "hybrid low-power shared access") would lead to many "near-far" interference situations which would be problematic for operators to mitigate and provide a poor experience to customers. If there were to be a lower power licence in the FDD block, we would prefer to see dedicated licences.

**Proposed changes to the 900 MHz and 1800 MHz licences**

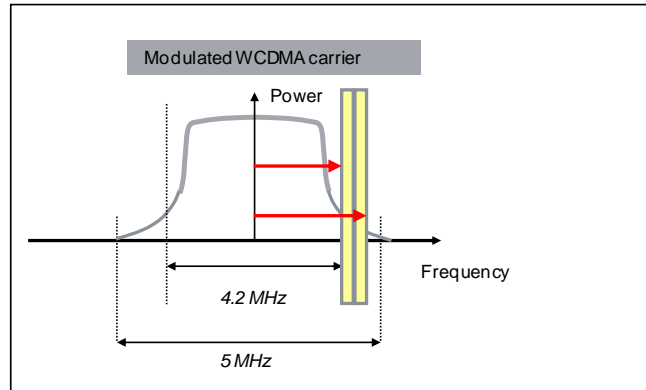
9. In the transition from the draft UMTS900/1800 technical licence conditions to the final versions issued in licences in January 2011, Ofcom changed the approach to the way of describing the location of UMTS blocks within the allocated band.
10. The relevant clause now reads:

*"the centre frequency of any of their UMTS carriers is 2.5 MHz or more inside any other edge of their permitted frequency bands.;"*
11. ✘.
12. ✘.
13. This means that specifying the centre frequency with respect to a 5MHz UMTS carrier is overly restrictive and would lead to regulation mandating an inefficient use of the spectrum, contrary to Ofcom's duties and the terms of the Authorisation Directive, which require technical restrictions to be proportionate<sup>3</sup>.

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<sup>3</sup> Authorisation Directive [2002/20/EC as amended by 2009/140/EC] Article 6(1).

Figure 1 : GSM900 carriers deployed in the same 5MHz spectrum block as a UMTS900 carrier



14. Overly restrictive technical licence conditions reduce the utility of a spectrum band and consequently will impair its “market value”. Something that is particularly important in the context of Annual Licence Fees.
15. Telefónica proposes the following change to the 900MHz and 1800MHz licences to allow full utilisation of all 3GPP UMTS900 and 1800 channels.

*“the centre frequency of any of their UMTS carriers is 2.3 MHz or more inside any other edge of their permitted frequency bands;”*