

TELEFÓNICA O2 (UK) LIMITED RESPONSE TO:

“DIGITAL DIVIDEND : GEOLOCATION FOR COGNITIVE ACCESS”

2 FEBRUARY 2010

1. In April 2009 Telefónica O2 UK Limited (O2) responded to Ofcom's consultation on "Digital Dividend: Cognitive Access". Since then, Telefónica has responded to the Radio Spectrum Policy Group (RSPG) final draft Report on Cognitive Technologies (CT) in December 2009. The following comments are based on these responses.

I. GENERAL COMMENTS

2. O2 considers Cognitive Access to be an important long term issue and we responded positively to the prospect of its introduction in interleaved DTT spectrum that was proposed in Ofcom's consultation on "Digital Dividend: Cognitive Access" in 2009.
3. At that time O2 was unable to comment in detail on the conclusions or methodology used to calculate the parameters proposed for licence-exempt cognitive devices using interleaved spectrum. However, we supported Ofcom's proposal to seek to align the parameters used for cognitive devices using interleaved spectrum with parameters in use outside of the UK, where possible, in order to promote international economies of scale. As we also have stated on many other past occasions, alignment of the UK's spectrum plans with the international community is important to O2.
4. We note that work in Europe on Cognitive Access is continuing, and Telefónica Group has responded to the Radio Spectrum Policy Group (RSPG) final draft Report on Cognitive Technologies (CT) in December 2009 and to the previous RSPG Opinion on aspects of a European approach to the collective use of spectrum. O2 continues to agree that cognitive technologies have the *potential* to play an important role in enhancing spectrum management by increasing the efficiency of spectrum usage, and to increase the opportunity for innovation in spectrum using industries. Indeed, we believe that one of the most important considerations when assessing the potential of Cognitive Radios (CR) is the need for a global perspective. Not only are there significant economies of scale to be reached when technologies with global applicability are developed, but there are important lessons to be learnt for the business and regulatory environments in Europe from the experiences gained in other regions. O2 therefore welcomes Ofcom's proposals (§9.8) to continue to work not only with the CEPT and EU in Europe but also in the United States, including with the FCC and the White Spaces Coalition.

II. RESPONSES TO QUESTIONS

5. The development and implementation of CR/CT is still at a nascent stage. O2 considers that a gradual and evolutionary approach to its introduction should be adopted in the UK, through close international cooperation between industry stakeholders, regulators and other relevant institutions. In particular, we consider that Ofcom should not proceed with the necessary steps to introduce licence-exempt cognitive access until appropriate international harmonisation has been ensured.

6. O2 therefore supports (Q1) an approach that will lead Ofcom to conclude with initial views on high level parameters only, to enable them to discuss and refine these views through discussion and consultation with international stakeholders, and to leave the detailed specification of parameter values to the appropriate international standardization bodies (such as ETSI or the IEEE) and any national regulation to further consultation.
7. We also agree (Q2) that there appears to be no reason for restricting databases at this stage to be either “open” or “closed”. Further work is needed in this area, and in many of the other areas considered by Ofcom in the consultation (database ownership, cost and maintenance – Q12, 13 & 14; database contents including transmitter location vs frequency availability and form of information – Q3, 4 & 5; and geolocation updates – Qs 6, 7 & 8).

III. CONCLUSIONS

8. O2 believes there is a need for further study, debate and engagement among spectrum stakeholders, including industry and regulators, before the widespread introduction of CR/CT. We support the ongoing international studies and initiatives regarding CR/CT, in particular within the ITU, CEPT, ETSI and IEEE. Further R&D should also be considered in order to address the challenges foreseen.
9. A harmonised approach, both at an international as well as at EU level, towards CR/CT is considered by O2 as the right way to move gradually forward in the implementation phase. Stakeholders need to consider technological, business and regulatory issues; in particular, business models are critical for success.
10. Experiences with pre-cognitive technologies need to be taken into account. Opportunities for experience/trials in certain specific bands and applications (with lower demand) would seem to be appropriate. In particular, we support the focus being put through consultations such as the present one on the use of white spaces in the UHF band for CR.
11. The widespread use of CR/CT is seen by O2 to be a medium-to-long term issue. Any steps taken should consider current spectrum users and uses, in order to avoid any potential disruption to their ongoing operations. There is a need for confidence to be maintained in the regulatory approach to spectrum management.