



20 April 2009

Ofcom
DDR Cleared-Award Project Team
Spectrum Policy Group
Riverside House
2a Southwark Bridge Road
London
SE1 9HA

Dear Sirs

Ofcom Consultation - Digital Dividend: clearing the 800MHz band

Introduction

1. Telefónica O2 UK Limited (O2) welcomes the opportunity to respond to Ofcom's consultation on clearing the 800MHz band (the Consultation).

Ofcom's proposal

2. We agree that clearing channels 61, 62 and 69 to align the upper band of cleared spectrum in the UK with the emerging digital dividend in other European Countries is the right course of action.
3. We also believe that Ofcom should pursue an approach which aligns with Europe. Indeed, alignment of the UK's upper digital dividend band at around 800MHz with CEPT and the announced plans of some of the major European economies (including most recently Germany), suggests to us that Ofcom's decision in this area may be pivotal in realising the full potential of the digital dividend across Europe.

A *Telefonica* company



4. We believe that Ofcom should now move forward to expedite the execution of its proposals in relation to 800MHz.

The Costs and Benefits of clearing the 800MHz Band

Ofcom's approach

5. We agree that in any clearance programme, it is important to identify the key risks and consider carefully how best to manage and mitigate them. We also agree with Ofcom that other key objectives should be to minimise disruption (to both existing and planned users after DSO) and ensuring the timely award of the spectrum so that the benefits of its clearance can be realised as soon as possible [§3.3].
6. Ofcom has provided an explanation of the economic modelling which underpins its impact assessment, and recently kindly released its model for the cost advantages of 800MHz over 1800MHz networks for LTE deployment¹. O2 does not agree with a number of the assumptions in that modelling (see Annex 1). We believe that when a more realistic set of assumptions are included in the analysis, the cost benefits of using 800MHz compared to 1800MHz for mobile broadband for each option are reduced, so that while option D remains positive for scenarios 1 and 2, the overall advantage over the do nothing case falls significantly. On this basis, whilst we remain supportive of Ofcom's proposed approach, we do not agree with the claimed level of cost benefit arising therefrom.

A complex and challenging task

7. We note that Ofcom explains [§1.12] that this is a “*complex and challenging task, but we believe it can be done*”. We agree that whilst the task may well be challenging and complex it can – and should – be done.

¹ <http://www.ofcom.org.uk/consult/condocs/800mhz/costmode.xls>



8. Ofcom also remarks that:

"We believe the costs of clearing channels, 61, 62 and 69 will be modest compared to the benefits. Our estimate is that these costs lie in the range of about £90-200m."

9. As we explained in our response to Ofcom's Consultation: Digital Dividend Review: 550-630MHz and 790-854MHz, 6 June 2008²:

"O2 believes that the potential costs and complexity of such change should not pose a barrier to the relocation. Elsewhere², Ofcom has stated that transition costs up to £800m are bearable by private companies in the regulator's pursuit of the efficient use of spectrum. Whilst we do not agree with Ofcom's stated position on this, if Ofcom wished to ensure consistency in the application of its duties, cost should not necessarily act as a barrier to changing the use of channels 61 and 62."³

Moving DTT from Channels 61 and 62

Migration Criteria

10. We believe Ofcom's proposed migration criteria for clearing DTT from channels 61 and 62 are generally sensible:

- *there should not be a material adverse effect on DSO;*
- *existing authorised and planned users of channels 61 and 62 should not bear extra costs that must reasonably be incurred in order to clear the spectrum; and*
- *any solution should be consistent with existing policy objectives for DTT coverage after DSO, and the process should aim to minimise the impact on viewers of broadcasts from the existing DTT multiplexes. [§4.11]*

² <http://www.ofcom.org.uk/consult/condocs/clearedaward/>

³ <http://www.ofcom.org.uk/consult/condocs/clearedaward/responses/o2.pdf>



DTT migration options

11. We note Ofcom's conclusion that, of the three options assessed, the hybrid option appears to be the option that minimises potential coverage losses and household aerial changes (although, the hybrid is also the most complex and requires a larger number of changes to network infrastructure than the other two options: one or two step approaches). We also note that some of the study results used in Ofcom's analysis include confidential and sensitive information and have not been published.
12. It is unclear from the information published in the Consultation how many households are equipped with group E aerials, or whether Ofcom has taken this number into account when assessing the migration options through use of the ITC methodology [§4.29].
13. Nonetheless, we would encourage Ofcom to move forward with an expedient execution programme for DTT migration in accordance with the proposed criteria.

Timings

14. We are generally supportive of Ofcom's conclusion that most or all of the realisable benefits of recasting DSO are also achievable by DSO-integrated implementation and, when assessed against the DTT migration criteria, with much less cost and risk. As Ofcom highlights, this option requires a solid administrative framework [§4.51]

Costs and funding

15. We note Ofcom's assessment of the implementation costs and works schedule [§§4.58-4.64] and look forward to the opportunity to review HM Government and Ofcom's proposed funding arrangements for the migration of DTT from channels 61 and 62 later in 2009.



Moving PMSE from channel 69

16. We are supportive of the use of channel 38 as the main alternative to channel 69 for PMSE but would encourage further assessment of the FDD duplex split (centred around 726MHz) once the technical work on the 800MHz band plan has been completed by CEPT in mid-2009. We also support the proposal to award channel 38 to a band manager on the same terms as previously proposed for channel 69.
17. We agree with the proposal to allow continued PMSE use of the cleared spectrum to support the 2012 Olympic Games and Paralympic Games, but we suggest that such access should cease immediately after these events, rather than after DSO is completed. Should PMSE users wish to continue to maintain access to cleared spectrum after the Games, they would be permitted to approach the new licensees to negotiate continued access on a commercial basis, since the cleared spectrum will be tradable.
18. Ofcom explains that it "*will seek to agree terms with the Government with a view to making funding available to those eligible as soon as possible*" [§ 5.76] to modify/ replace existing PMSE equipment. Do Ofcom's plans also include proactive measures to remove Channel 69 PMSE equipment from circulation?

Securing the UK's interests in international negotiations

19. We agree that Ofcom should commence the international negotiations forthwith to ensure that the most efficient transmission rights can be achieved for the UK in both the lower cleared spectrum and the 800MHz band.

Next Steps

20. We note Ofcom's conclusion in respect of channel 36 (awarding it with the rest of the lower band) and, more generally, Ofcom's timeline for progressing the cleared award.



Concluding Comments

21. We agree that clearing channels 61, 62 and 69 to align the upper band of cleared spectrum in the UK with the emerging digital dividend in other European Countries is the right course of action.

22. Whilst the task may be complex and challenging, we believe it can – and should – be done. Ofcom should move now to expedite its proposals.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Ian Roy', with a stylized, wavy line.

Ian Roy

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Telefónica O2 UK Limited

cc. Nick Blades – Business Manager, CEO Office & Head of Regulatory Affairs, O2



ANNEX 1

O2 comments on Ofcom's economic modelling

1. Ofcom has provided an explanation of the economic modelling which underpins its impact assessment, and recently kindly released its model for the cost advantages of 800MHz over 1800MHz networks for LTE deployment⁴. O2 has a number of comments on the inputs:
 - i) We note that the number of sites rolled out for 800MHz and 1800MHz networks within this model are assumed inputs for which no explanation has been provided save for the comments at paragraph A6.58 for the ratio of sites required at 1800MHz compared to 800MHz. A ratio of 2 has been used in the model. The evidence from GSM services within the UK today is that Mobile Network Operators (MNOs) with only 1800MHz spectrum are able to offer competitive services at sites counts multiples of less than 1.5 compared with MNOs with access to 900MHz.
 - ii) Further O2 notes that Ofcom are using high site counts for each of the networks in its model; for scenarios 1 and 2, 8,500 sites are used for the 800MHz network and 17,000 sites for the 1800MHz network. Ofcom does not provide any information regarding the level of coverage or capacity they believe operators would rollout to justify these assumptions. O2 believes these numbers are high, and beyond what would be economically sensible for any operator to deploy.
 - iii) Further, Ofcom appears to be assuming that each 10MHz paired block of 800MHz spectrum results in a new network being deployed so the cost advantage for one network can be multiplied by the number of available 10MHz blocks in each policy option to determine the total benefit. In reality, extra networks may not be built, either as a result of one operator successfully acquiring more than one 10MHz block or as a result of network sharing agreements.

⁴ <http://www.ofcom.org.uk/consult/condocs/800mhz/costmode.xls>



2. O2 believes that when a more realistic set of assumptions are included in the analysis, the cost benefits of using 800Mhz compared to 1800MHz for mobile broadband benefits for each option reduce substantially, so that while option D remains positive for scenarios 1 and 2, the overall advantage over the do nothing case falls significantly.
3. On this basis, we remain supportive of Ofcom's proposed approach but we do not agree with the claimed level of cost benefit arising therefrom.