

Cover sheet for response to an Ofcom consultation

BASIC DETAILS	
Consultation title:	Digital Dividend: clearing the 800 MHz band
To (Ofcom contact):	DDR Cleared-Award Project Team
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Representing (self or organisation/s):	Orange UK
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Orange response to Ofcom consultation 'Digital Dividend: clearing the 800 MHz band', April 2009

Executive summary

Orange welcomes Ofcom's consultation on its proposals to clear channels 61, 62 and 69 of the digital dividend spectrum that will be released as a result of digital switchover (DSO). Orange has been a vocal advocate for the release and harmonisation of the 800 MHz band for mobile broadband use for many years and we are pleased that other European Administrations¹ are also proposing a release of this spectrum. This will lead to the possibility of increased harmonisation of spectrum, hence availability of equipment for the development of mobile broadband in Europe. However, whilst in the longer term, this spectrum may be considered a substitute for the 900 MHz, until the spectrum has been fully released and mass market availability of consumer equipment is available, it is Orange's view that this spectrum will merely serve as a compliment to spectrum at 900 MHz.

The band plan for using this spectrum will be finalised at CEPT in May 2009 and the Report/ Decision should be approved in September 2009, allowing standards equipment to be developed and produced from 2010/ 2011. However, even within this timeframe, there will not be a mass market availability of equipment to be used within the 800 MHz band until 2013/ 14, as the spectrum becomes released in the UK, under Ofcom current proposals. Ofcom's proposal to release channels 61, 62 and 69 will ensure that the UK is able to benefit from a harmonised band plan bringing the benefits of increased economies of scale from equipment development.

Orange fully supports Ofcom's proposals to:

- Clear DTT from channels 61 and 62)
- Clear PMSE from channel 69

We urge Ofcom to keep industry and stakeholders regularly updated and briefed on negotiations regarding the clearance of this band. In fact, we would welcome the appointment of a representative on the programme management board. We look forward to further discussion on the funding mechanisms and the auction design.

For the avoidance of doubt, whilst Orange does not currently believe that 800 MHz spectrum is a viable substitute for 900MHz spectrum, due to the timing and availability of the 800 MHz spectrum and associated ecosystem, we urge Ofcom to progress a programme of speedy release of spectrum to ensure that there is no slippage from the current timeframe.

¹ Sweden, Finland, France, Switzerland and Germany

Introduction

Orange welcomes Ofcom's consultation on its proposals to clear channels 61, 62 and 69, from the current PMSE² and DTT³ users, of the digital dividend spectrum that will be released as a result of digital switchover. This will lead to the possibility of increased harmonisation of spectrum, hence availability of equipment for the development of mobile broadband in Europe. Along with the UK, Sweden, Finland, France, Switzerland and Germany have also announced their recent intention to clear channels in the range 61 to 69 to enable mobile broadband use.

Prior to WRC07⁴, the intention of the mobile industry was to ensure that, at least 112MHz of spectrum was identified in the UHF band (470 to 862 MHz) to serve mobile broadband consumers over the next ten years. However, only 72MHz (790 to 862 MHz) of this spectrum was identified during the WRC07 and if channels 61, 62 and 69 are not cleared from the current incumbent users, it would mean that only 54MHz would be available in the UHF band for IMT allocation. This is not sufficient to service future anticipated consumer demand. In fact, it is Orange's view that further consideration should be given to the release of channel 60. This would improve the quality of service for mobile broadband consumers, and would be in line with the European Commission's view that additional spectrum should be released within the 800 MHz band,

The band plan for using this spectrum will be finalised at CEPT in May 2009 and the Report/ Decision should be approved in September 2009, allowing standards equipment to be developed and produced from 2010/ 2011. However, even within this timeframe, there will not be a mass market availability of equipment to be used within the 800 MHz band until 2013/ 14, as the spectrum becomes released in the UK, under Ofcom current proposals. Ofcom's proposal to release channels 61, 62 and 69 will ensure that the UK is able to benefit from a harmonised band plan bringing the benefits of increased economies of scale from equipment development. Backed by independent research from RTT⁵ which examined the impacts on mobile handset design and the costs, of not having common frequency bands identified, the GSM Association concluded that there are significant economies of scale to be had in the production of terminals with internationally identified common frequency bands. To this end, it is particularly important that the use of these 72 MHz is with as few constraints as possible to ensure that the spectrum can be used in the most efficient way.

However, in Orange's view there has been relatively little liaison with potential operators in relation to the DTT protection clause despite a clear mandate to pursue and resolve this issue. It is fundamental to the future deployment and award of spectrum that this practical coexistence and responsibilities of parties in this area is resolved. Orange welcomes further discussion and debate on the appropriate levels of co-existence that are required.

In addition, Orange encourages Ofcom to complete negotiation in relation to revision of GE06 arrangements as soon as possible to accommodate the harmonised UK allocation

² Programme Makers and Special Effects

³ Digital Terrestrial Television

⁴ World Radio Conference

⁵ "The advantages of common frequency bands for handset production",
http://www.rttonline.com/home_frame.htm

to mobile in channels 61-69. It would also be helpful if Ofcom could provide regular updates on the status of the negotiations and the changing impact of cross border interference over time as agreements are reached with neighbours singly or in cascade.

Orange's expertise is primarily in mobile spectrum and networks. To this end, we do not propose to comment in detail on any of the questions where they are more relevant to broadcasting.

Orange supports Ofcom's proposals to:

- Clear DTT from channels 61 and 62
- Clear PMSE from channel 69

We look forward to further discussion on the funding mechanisms and the auction design. For the avoidance of doubt, whilst Orange does not currently believe that 800 MHz spectrum is a viable substitute for 900MHz spectrum, due to the timing and availability of the 800 MHz spectrum and associated ecosystem, we urge Ofcom to progress a programme of speedy release of spectrum to ensure that there is no slippage from the current timeframe.

The costs and benefits of clearing the 800 MHz band

Question 1: Do you agree that clearing DTT from channels 61 and 62 and PMSE from channel 69 to align the upper band of cleared spectrum in the UK with the emerging digital dividend in other European countries is likely to further the interests of citizens and consumers to the greatest extent?

Orange supports Ofcom's proposals. In fact, the GSMA report⁶ presented to the WRC-07 concluded that economies of scale are necessary for networks and can be noticed when exceeding 100 M customers. From a technical point of view, harmonisation assists coordination at the borders and enables equipment to work in other countries with a similar band plan.

We would also urge Ofcom to consider extending its proposals to release channels 61 and 62 and consider release of channel 60, in line with current European Commission views.

Moving DTT from channels 61 and 62

Question 2: Do you agree that the proposed DTT migration criteria are proportionate and appropriate? If not, please explain why and clearly identify any other criteria you believe should be adopted and why.

Following publication of this consultation, Orange has had discussion with Arqiva and we believe that the Ofcom proposals represent a fair balance of risks and costs with an overall consumer benefit.

⁶ http://www.gsmworld.com/our-work/public-policy/spectrum/digital-dividend/frequency_harmonisation.htm

Question 3: Do you have views on the options identified and our assessment of them? Do you believe there are other, superior options, and, if so, why? Do you agree that the hybrid option is most consistent with the DTT migration criteria?

We believe that the most appropriate option is the one that brings least disruption and cost for consumers and spectrum users (by adopting a final broadcasting planning for example) ie the hybrid option.

Question 4: Do you have views on the implementation-timing options identified and our assessment of them? Do you agree that DSO-integrated implementation is most consistent with the DTT migration criteria? If not, why not?

Whilst Orange supports the option which would release the 800 MHz spectrum for mobile broadband services in the shortest available time, in reality there is only a six month difference in delivery timeframe between any of the three options. To this end Orange would support the option that provides the most certainty in terms of delivery. Orange is concerned about the length of time that will be required to carry out the migration. Whilst this is, to some extent, unavoidable, we would like sight of a detailed project plan with regular update meetings so that we have reassurance that negotiations and clearance are progressing in a timely manner.

This is particularly key in the event that an award for this spectrum takes place prior to release and availability of the spectrum.

Question 5: Do you agree that a programme-control and -governance arrangement such as that outlined above is appropriate?

Orange supports the proposed governance structure. Whilst we do not see ourselves being heavily involved in the detail of the project, we would encourage the appointment of a representative for the mobile industry so we are able to keep abreast of the ongoing issues. Alternatively, we would request regular project updates to ensure that the project is progressing to agreed timescales.

Question 6: Do you agree that the four cost categories adequately capture the costs associated with clearing DTT from channels 61 and 62? Are there any costs that do not appear to have been accounted for in any of these categories?

Ofcom suggests that costs for clearing channels 61 and 62 fall into the following categories:

- Spectrum planning
- Infrastructure reengineering
- Communications and support

- Programme management

This seems reasonable.

Question 7: Do you agree that our cost profile is a reasonable basis for planning the capital expenditure for clearing DTT from channels 61 and 62?

Ofcom proposes the following cost profile for clearing DTT from channels 61 and 62:

- spectrum planning: bulk of these costs would fall in 2009 and 2010 as spectrum plans for main and relay stations are developed, though costs will continue to be incurred at a reduced level throughout 2011, 2012 and 2013;
- infrastructure reengineering: costs would begin to be incurred from 2010, when initial works orders are placed, and to continue through to a peak in 2012/2013, when we expect that the bulk of the network engineering works will be undertaken;
- communications and support: expect a relatively low level of activity in the initial years, consisting largely of planning and coordination with DSO-related communications to the extent appropriate, with communications and support activities ramping up in 2012 and 2013; and
- programme management: expect these costs would begin to be incurred from late spring 2009, when the programme-management and governance structures will be established and planning undertaken, continuing through to managing network changes and communications in 2012 and 2013.

This seems to be an appropriate cost profile, however, we would urge careful management of costs to ensure that it is not a reason for any delay to migration of existing users.

We are in the process of reviewing Ofcom's cost model which was released on 15 April. We will come back with any further comments.

Moving PMSE from channel 69

Question 8: Do you agree that these are the most appropriate criteria to assess which spectrum is the best alternative to channel 69 for PMSE?

Ofcom has assessed alternative options for the PMSE users in channel 69 based on the following criteria:

- technical: Could the spectrum be used without interference by wireless microphones? How many microphones could use it? Would microphones interfere with adjacent users?
- coverage: Could the spectrum be used by wireless- microphones across the UK? How close would it be to other spectrum usable by microphones? When would the spectrum be available for use by microphones? and

- economic: What other uses of the spectrum would be displaced by wireless microphones? How valuable would they be to citizens and consumers? What would the likely costs for PMSE users be?

Whilst these appear suitable criteria, there is no consideration given to the regulatory issue that PMSE is not an ITU service. This means that they operate without a licence and can neither create interference nor claim protection. This has a significant impact on the coverage criteria, particularly as they do not provide national coverage.

Question 9: Do you agree with our technical and coverage analysis of the possible alternatives to channel 69 for PMSE?

Orange is supportive of the Ofcom position that it is too early to make definitive decisions in relation to any PMSE use of the 790-862MHz channel duplex. Orange supports the Ofcom proposal for the use of channel 38.

Question 10: Do you agree with our economic assessment of the realistic alternatives to channel 69 for PMSE?

Orange supports the methodology.

Question 11: Do you agree that channel 38 is the best alternative to channel 69 for PMSE?

See answer to question 9

Question 12: Do you agree that we should award channel 38 to the band manager on the same terms as would have applied to channel 69?

Orange believes that it is more appropriate for the PMSE community to agree how best to manage its spectrum.

Question 13: Do you agree with our proposal to maintain PMSE access to channel 36 on 12 months' notice to cease and to the rest of the cleared spectrum (channels 31-35, 37 and 61-69) until DSO is completed in the UK in late 2012?

A review should be undertaken to consider the viability of use of channel 60 before a final decision is taken on whether to maintain these channels for PMSE use.

Question 14: *Do you agree with our approach to determining eligibility for, and our assessment of the level of, funding to move PMSE from channel 69?*

Orange has no comment.

Question 15: *Do you agree that three years is long enough for PMSE to move from channel 69?*

Orange is supportive of clearance by end 2012. However, we urge Ofcom to give regular industry updates as we cannot afford any slippage from this date.

Impact assessment

Question 16: *Do you agree that with our analysis of the key impacts of our policy options? Are there any other key impacts we should assess?*

In our view, Ofcom has included all the relevant costs.

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