



Terms of reference for the Digital Dividend Review consultancy work

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Section 1

Introduction

- 1.1 Ofcom announced on 17 November 2005 the beginning of its Digital Dividend Review (“DDR”) – the project which will examine the options arising from the release of spectrum afforded by the digital switchover programme.
- 1.2 The available spectrum includes the spectrum released by analogue switch off - the UHF spectrum in bands IV and V (470 – 862 MHz) with the exception of the spectrum reserved for the 6 DTT multiplexes.
- 1.3 The potential future uses of this spectrum are wide ranging and include: broadband wireless access, cellular mobile (for example, 3G and systems beyond IMT-2000), private mobile radio, further terrestrial digital television services (including standard definition television, high definition television and local digital TV), mobile digital multimedia (including mobile television), and Programme Making and Special Events (“PMSE”). This is not an exhaustive list nor does it indicate prior preference.
- 1.4 With the launch of the DDR Ofcom has announced that amongst the key issues it will consider are the:
 - Potential uses of the available spectrum;
 - Technical limits on spectrum use to prevent potential interference;
 - Options for packaging frequencies to give maximum flexibility to the market; and
 - Options for the design of an efficient award/allocation process which aims to maximise the value of the available spectrum to the economy and society over time.
- 1.5 As part of the DDR, Ofcom will be developing its policy on the award of this spectrum. In order to assist its policy development Ofcom is commissioning Analysys Consulting (leading a consortium including DotEcon, Aegis and Mason) to undertake a study to further its understanding of the available spectrum and its possible uses based on detailed market, technical and economic analysis.
- 1.6 The market, technical and economic analysis will take into account the views from people and organisations with an interest in the use of this spectrum.
- 1.7 This work by consultants will help to inform Ofcom’s own policy development, which will result in the publication of a consultation document by Ofcom expected to be before the end of 2006.
- 1.8 As with all spectrum awards, Ofcom’s policy is to favour the use of market mechanisms to award this spectrum via a technology and usage neutral auction that maximises flexibility for the market. This approach is supported by the Government, as set out in the Secretary of State for Culture, Media and Sport’s speech on 15 September 2005 confirming the timetable for DSO. It is also in accordance with the European Commission communication of spectrum policy priorities for DSO, published on 29 September 2005.

Section 2

Terms of Reference

Objectives of the study

2.1 The overall objectives of this study are to:

- Improve the understanding of the available spectrum and its uses from a market, technical and economic perspective. This will involve a structured process of information exchange between market participants, the consultants and Ofcom.
- Consider a framework for the release of this resource to the market in a way that is likely to maximise benefits to the economy and society over time.

Market, technical and economic analysis

2.2 The key objectives of this analysis are to:

- Identify key potential uses and end user demand for this spectrum (“market analysis”);
- Identify the technical limits on the spectrum use (“technical analysis”); and
- Identify the incremental economic value (producer and consumer surplus) generated from the different uses of the released spectrum (“economic analysis”).

2.3 The market analysis will seek to enlarge Ofcom’s understanding of the commercial prospects and willingness to pay for spectrum for different uses. This will include building business case models for different spectrum uses and an assessment of how these business cases may vary dependent upon the use of different spectrum bands.

2.4 This analysis is not intended to determine the optimal use of the spectrum, but to help Ofcom package the available spectrum in a way that gives the market maximum flexibility to meet likely demand. It is Ofcom’s general policy to leave decisions on how spectrum is used, and by whom, to the market, as far as possible.

2.5 The study will also include a detailed technical analysis which will assess the feasible uses of the UHF spectrum (taking account of international constraints resulting from Regional Radio Conference 2006) and of other potentially substitutable spectrum bands. In particular the technical analysis will include:

- An assessment of how different uses can be combined within the available spectrum.
- An assessment of the substitutability, from a technical perspective, of different spectrum bands. This will inform an assessment of the market implications of using different spectrum bands to provide the same service.

2.6 The outputs of the market and the technical analysis will be combined to identify different possible combinations of uses of the band. This information is required to design an award process which allows an efficient outcome to be arrived at (highest value uses and users).

2.7 The final step is to identify the incremental consumer and producer surplus generated from the released spectrum under the assumed demand and supply

scenarios, taking account of whether other spectrum blocks are also used to provide the same services. This helps to inform the assessment of the benefits to the economy and society which may be generated from the use of this spectrum.

Assessment of optimal approach using market mechanisms

- 2.8 Noting that Ofcom's policy is to favour the use of market mechanisms to award spectrum this study will provide advice on the market mechanism which could best be used to achieve an efficient allocation of this spectrum to highest value uses and users.
- 2.9 This work stream involves building upon the work completed in the market, technical and economic analysis to take into account the likely future uses of this band, the types of organisations which may be bidding for spectrum, and the nature / pattern of their spectrum demands, in order to arrive at an assessment of the optimal approach for the award of this spectrum using market mechanisms.
- 2.10 This assessment will include consideration of: competition issues, the award process (suitability of auctions and where relevant the appropriateness of different auction formats, including, for example, consideration of overlay auctions), licence terms, award timing and spectrum packaging.

Market and regulatory failures and potential forms of intervention

- 2.11 Taking as a starting point the optimal market mechanism identified above, the study will also consider the relevance of any issues that may suggest a deviation from this approach.
- 2.12 This aspect of the study will include the assessment of the strength of evidence for possible market failures, research into the different forms of intervention, including the potential for intervention to lead to regulatory failure, and assessment of the treatment of social and public values. This will be informed by the results of the market, technical and economic analysis.

Stakeholder interaction

- 2.13 The study will involve significant engagement with stakeholders to develop a thorough understanding of possible future uses of this spectrum, the technical requirements of these uses and their market potential.
- 2.14 The stakeholder interaction, alongside further independent research, will result in an assessment of the likely future uses of the available spectrum. These are the uses which will be considered in the market, technical and economic analysis.

Timing and deliverables

- 2.15 It is anticipated that the study will provide interim results in the first half of 2006, with delivery of the final report to Ofcom in the second half of 2006.
- 2.16 This work will help inform Ofcom's policy development, which should result in the publication of a consultation document expected by the end of 2006.

Section 3

Next steps

It is Ofcom's objective that the study should be conducted on the basis of the best possible information available and should consider all the relevant issues. Ofcom is therefore keen for stakeholders to contribute to the study.

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