

Question 1: This executive summary sets out Ofcom's proposals for the release of the digital dividend. Do you agree with these proposals?:

No. There are two main concerns:

(a) Granting the released spectrum as proposed may remove the opportunity for a further DSO that has the potential to yield further spectrum in the medium term (e.g. MPEG4, SFN). There is a risk that the UK's potential for prosperity through spectrum use will be prematurely constrained.

(b) PMSE use is not clearly understood in the review. Thus the proposals to deregulate Channel 69 and release the post-DSO interleaved spectrum for other uses may not lead to optimal use of the spectrum either technically or socially.

Question 2: Do you have any comments on our analysis of the essential constraints that will apply to the available UHF spectrum?:

Considerable weight is given to the requirements to comply with international obligations regards interference. This contrasts with within-UK interference issues. User-citizens will expect the future spectrum framework to encourage self-regulation and compliance. Interleaved spectrum use poses a particular challenge and to abandon its coordinated management prematurely is too high a risk. There is still a need for a interleaved spectrum coordinator which can assure optimal use of this spectrum.

Question 3: Do you agree with the more detailed analysis and proposals regarding these technical constraints as set out in Annex 10?:

Missing from the analysis is the use of interleaved spectrum for self-help relays (which was subject to a parallel consultation). These are potentially heavy users of spectrum in certain areas where terrestrial DTT reception proves difficult. The extent to which this use will need to grow or diminish will not become apparent until the DSO programme is fully underway. Together with PMSE, these are both citizen-user groups which will require intervention regards access to interleaved spectrum.

Question 4: Do you have any comments on Ofcom's assessment of the potential uses of this spectrum? Are there any potential uses which should be considered that are not mentioned in this document?:

HD is clearly important to consumers. If the terrestrial spectrum is to be used to assist universal coverage of these services then it will be needed to facilitate a further switch-over to use equipment which makes more efficient use of the spectrum (e.g. MPEG4, SFN). To grant the dividend at this stage denies that option.

The separation of PMSE into professional use and community use is potentially misleading. The current coordination undertaken by JFMG makes no such distinction, either financially or with respect to spectrum grants.

Channel 69 is an important resource because it serves nomadic users who need fast and reliable service anywhere within the UK using common equipment. In contrast,

the optimal solution for fixed sites is use of interleaved spectrum. The dividend framework should positively encourage the latter, more efficient use of spectrum. To deregulate Channel 69 will encourage a 'free for all' and compromise its facility for nomadic use.

There are two type of uses omitted from the review (a) self-help relays and (b) 'radio' (sound-only broadcast). The latter is too often regarded as a special case of television or multi-media distribution. However, it has a distinct consumer base with its own patterns of use arising from its ability to be enjoyed in 'eyes busy' situations. The success of the iPod (and mobile phones with similar features) illustrates the potential of this type of consumption.

Question 5: Do you have any comments on our analysis of the choice between a market-led and an interventionist approach to the release of this spectrum? Do you agree with the analysis of different mechanisms for intervening to remedy potential market failures?..:

Markets are not good at assessing long term worth, particularly where technology is concerned. Grant of spectrum is intimately associated with the capability of the technology and its value to citizen-users. To make tradeable grants of a decade or more will attract speculation (cf land/real-estate). There must be incentives to make proper and timely use of this unique resource.

As the appointed guardians of the spectrum, Ofcom must expect to intervene where speculation is conflicting with its purposes and responsibilities. Bidders must be left in no doubt about this.

Ofcom must have regard to the desirability of promoting competition in RELEVANT markets (s3(4)(b) of the Act). The analysis is weak in assessing whether there IS a market in interleaved spectrum, except where some may be reassigned to local television. The citizen-users are too disparate to constitute a relevant market at this stage. Speculation in this market could lead to regulatory and compliance failure. What is required is intervention, particularly regarding managing clearance of Channels 67 and 68.

Question 6: Do you agree with our proposals to continue making available channel 69 for use by low power PMSE devices? Do you agree with our proposal to make some or all of the spectrum available for use on a licence-exempt basis?..:

Channel 69 should continue to be used as a national, regulated resource for nomadic PMSE use. A portion of it may also continue to be licence-exempt where users are prepared to accept the risk of interference. For the majority, fixed-site users that seek immunity from nomadic use, frequencies other than those in Channel(s 63-69 need to be available.

Under the Communications Act 2003 citizen-users with a defensible claim should be empowered to legitimately receive a grant of spectrum, according to its availability and their means. In particular, PMSE users must be encouraged to use spectrum in an

efficient and compliant manner. The research shows wide ignorance of the current licensing arrangements. Unfortunately, this has resulted in very significant non-compliant use and under-representation and poor appreciation of the sector. The disparity is indicated by Sagentia's 2005 estimate of 58000 radio microphones in use against Quotient's report of some 2000 licences issued by JFMG. The PMSE Pro User Group currently believe that there are now over 180,000 radio microphones in use across 45,000 venues.

A particular issue is meeting the needs of the hard-of-hearing under the Disability Discrimination Act, which is significantly facilitated through use of PMSE equipment. Typically, the feed to an audio-frequency induction loop (AFILS) is generated from radio microphones because they provide such a good audio signal. To jeopardise this socially worthwhile investment would conflict with Ofcom's responsibility to have regard to the needs of persons with disabilities (s3(4)(i)).

Question 7: Do you agree that there should be transitional protection for professional PMSE users to ensure that they can continue to access interleaved capacity until at least the end of 2012? Do you have any views on the mechanism for providing future access to this spectrum?:

Note that the current coordination management by JFMG of Channel 69 and the interleaved spectrum makes no distinction between 'professional' PMSE users or community users.

For the reasons given in the answer to Question 6, managed access to the post-DSO interleaved spectrum and Channel 69 must be maintained to at least 2012. An organisation such as JFMG should coordinate use of the interleaved spectrum. To encourage compliance, the fees could be appropriate to the users' means. For example, recognised charitable organisations would enjoy a lower tariff than commercial users.

Sagentia estimates that 95% of the equipment lies within the released spectrum with Channel 69. It will not be practical for this amount of use to be condensed reliably into a deregulated Channel 69. Sagentia is also convinced that demand for PMSE equipment is continuing to increase.

The attractiveness of the released spectrum is dependent on removing the potential sources of interference that PMSE use represents. An organisation such as JFMG could help maximise the released spectrum value if it is given an early mandate to manage its clearance. However, there must be spectrum available at reasonable cost into which PMSE use can migrate. This suggests continued access to the post-DSO interleaved spectrum for the foreseeable future.

Question 8: Do you consider that additional spectrum from the digital dividend should be reserved for low power applications? If so, please provide as much evidence as possible about the nature of the application and its potential value to society.:

New, low-power consumer applications are likely to use Channel 69 since this is proposed to be deregulated, which will invite use other than for PMSE. Any use of Channel 69 and interleaved spectrum must be clear of its managed use by the PMSE sector. It would be appropriate for a spectrum manager such as JFMG to manage any novel uses of Channel 69 and the interleaved spectrum.

Question 9: Do you consider that it would be desirable to hold back some spectrum from award with a view to its potential use for future innovation? If so, please provide comments on how much spectrum should be held back, and for how long.:

If an organisation such as JFMG is given responsibility to manage the post-DSO interleaved spectrum, it would be appropriate for users to make application to them for other use than PMSE.

Because of the special problem concerning incumbent PMSE users of Channels 67 and 68, it would be appropriate to postpone the auction of these channels. This would be compatible with a strategy that reserves spectrum space for later innovatory uses.

Question 10: Do you agree with our proposal that we should package the interleaved spectrum in a way that would be suitable for use by local television services, but not reserve spectrum solely for this use?..:

The research has shown that there is potential demand for local television. It is therefore prudent that the packaging flags the possible use within the interleaved spectrum. However, as long as the spectrum is not used, it should be available for (short term) PMSE use irrespective whether the spectrum is awarded or not, as currently. Spectrum management will need to be undertaken by an organisation such as JFMG.

Because the bandwidth on offer is suited to television, its award should be conditional on that use until such time as Ofcom is satisfied that it is no longer an appropriate use of spectrum. It should then be released back to the interleaved spectrum manager for subsequent exploitation.

Question 11: Do you agree with our proposal to package the spectrum in a way which does not preclude mobile broadband use, but to take no further action in relation to this use?..:

Special care is required to ensure that any future spectrum users respect the needs of incumbent low-power user (e.g. PMSE radio microphones).

Question 12: Do you agree with our proposal that we should not intervene in the award of this spectrum to reserve spectrum for DTT? Do you agree that we should package the spectrum in a way which is suitable for DTT use?..:

Ofcom must demonstrate that now is the right time to auction the proposed released spectrum since this strategy will be irreversible. As more consumers experience HD in the next year this may become a UK delivery priority. It may therefore be necessary to manage a further DSO as HD terrestrial equipment replaces SD. Just as spectrum was required to engineer the original DSO, the same spectrum may be needed to facilitate the next.

Question 13: Do you consider that we have included in our analysis the most material risks in relation to market failure?..

The opportunity cost analysis of not having spectrum available to move to more-spectrum efficient DTT is not presented.

It is acknowledged that PMSE is unlikely to be able to enter an auction simply because there is no market focus. Speculation and/or market failure is thus likely. In the medium term, management of the PMSE sector is essential, not least to realise the market potential of the released spectrum.

Question 14: Do you agree with our proposal to auction licences for the use of the available UHF spectrum?..

Ofcom must finally demonstrate that it does not need the spectrum for a further DSO exercise for the first generation DTT equipment. After that, auctions are appropriate in RELEVANT markets. The market for interleaved spectrum is not well understood and it has incumbent PMSE use, which will need to increase. Auctioning packages that permit local television will clarify what interleaved spectrum remains for fixed-site, long term PMSE use.

Question 15: Do you agree with Ofcom's proposals as to the timing of any auction? If not, what alternative proposal would you make and why, and what evidence and analysis can you provide in support of your alternative proposal?..

The market value of the released spectrum will be coloured by the strategy concerning existing PMSE use. No auction should proceed until the PMSE arrangements are clarified and showing evidence of effect. For example, a publicity campaign to clarify the regulation of PMSE use should yield a proven positive response. This evidence would then inform the cleared spectrum market.

Question 16: Do you have any views on which of the packaging options identified for the cleared spectrum would be most suitable?..

The comments in this response assume that released spectrum will be lost to PMSE use. If there is any way in which controlled access can be retained by packaging or otherwise then this will be of value, particularly in areas with potential shortage of PMSE spectrum (e.g. London, Glastonbury). A spectrum manager such as JFMG would be a competent arbitrator to be able to negotiate quickly with awardees when such special situations arise.

Question 17: Do you have any views on which of the packaging options identified for the interleaved spectrum would be most suitable?:

The interleaved spectrum coverage, net of local television, is by its very nature not clearly defined. This is not a useful basis for introducing competition between PMSE users. Should this ever be auctioned then it should be as ONE package to achieve optimal use through coordinated, competent management. It is suggested that such management would oversee all interleaved use, including PMSE, local television and self-help relays.

Question 18: Do you have any views on which of the auction design options would be most suitable?:

There is a risk of market failure regards any attempt to auction spectrum relating to PMSE use. Because of the incumbent use of Channels 67 and 68 it will require different packaging and auction design.

Question 19: Do you agree with Ofcom's proposals for the non-technical terms of the licences to be awarded for use of the UHF spectrum?:

There is a risk of speculation in spectrum property. Ofcom is responsible for ensuring optimal use of the spectrum and speculators may be content not to use the spectrum, denying its proper use by society.

Ofcom should be encouraged to set terms which make the awardee's purpose clear with agreed milestones. If Ofcom is not satisfied with progress then the award should be at risk. 'Use it or lose it' terms should be present, which could be expressed as Ofcom having first option to buy back the award at a discount.

In particular, local television awards using interleaved spectrum should not be tradeable for anything other than local television services.

Question 20: Do you agree with the analysis of the options as set out in this Impact Assessment?:

Ofcom's overarching objective is, through the awarding process, to maximise the value of the spectrum to society. There is merit in measuring the success in achieving this objective in monetary terms. With further research monetary values can be put on what might appear to be interventionist behaviour. The issue is striking an efficient and timely balance to assessing whether each sector is a RELEVANT market i.e. able to respond in a market-led way.

The assessment analyses PMSE community use and PMSE professional separately where, technically, there is no distinction. Both users currently use the same, managed spectrum, though possibly in a non-optimal way. The real issues are (a) what fee potential the various users have and (b) how to manage the changes in spectrum use the sector will have to endure. The solutions offered are thus not soundly based and invalidate the assessment.

Ofcom should use its privileges to ensure that the PMSE sector as a whole is fairly treated through DSO and beyond. Spectrum management using an organisation like JFMG is appropriate and could realise greater value from both the interleaved spectrum and Channel 69 than hitherto. Further work is required in exploring this option.

The assessment does not deal with the impact on self-help relays and the consequent interactions with other users of the interleaved spectrum.

Additional comments:

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