

Question 1: The executive summary sets out our proposals for the digital dividend geographic interleaved award. Do you agree with these proposals?:

No.

Astrium has serious concerns with the principles set out in the executive summary.

The current DTT implementation plan perpetuates the inefficiencies of the analogue network it replaces.

The analogue network is based on a small number of very high power transmitters (lighthouses) augmented by a large number of lower powered relays to provide the required level of coverage. The potential for mutual interference between the high power transmitters is mitigated by operating them on separate frequencies which is spectrally inefficient. Digital television has been designed to eliminate these constraints by being able to operate on a single frequency network which is spectrally efficient.

Interleaved spectrum is thus a waste product of the current DTT plan. It is a degraded version of a valuable product and should not be auctioned as though it has intrinsic value comparable to fully cleared spectrum. To meet Ofcom's stated objective to maximise the total value to society, as stated in the consultation of 6th June 2008, measures should be promoted to enable this interleaved spectrum to be converted to the much more valuable fully cleared spectrum.

This can be achieved by converting the 'lighthouse' model of digital TV broadcasting to a cellular network of low-powered UHF transmitters operating within a highly efficient single frequency network (SFN). This low-power transmitter network would be fed by fibre or Ku/Ka band satellite as in the current plan with the advantage that many more users would be able to use indoor aerials. It would also have a lower carbon footprint.

This model can exist within the constraints of RRC06. It also meets the requirements of DCMS for digital TV to be received through the viewer's normal aerial.

The benefits to mobile operators are obvious and the costs of the cellular broadcast network can be mitigated by placing an obligation on the mobile operators to add the broadcasting facilities to their base stations in return for more spectrum. Furthermore, as an alternative, the mobile operators may cover the costs of converting rural viewers to Freesat, who could then immediately upgrade to HDTV.

This approach could be advantageous in a country such as Scotland where population density and terrain favour the cellular/satellite model.

While the aim should be to encourage novelty, efficiency and higher value uses of UHF spectrum, it is self-evident that increasing the amount available will have long term benefits.

Astrium's view is that an early auction of interleaved spectrum would, contrary to

expectations, be detrimental to the long term development of valuable new services.

Astrium has no further comments on the remaining questions.

Question 2: Do you have any comments on our assessment of the most likely uses of the geographic interleaved lots? Are there any potential uses which should be considered that we have not mentioned?:

Question 3: Are there any other types of DTT transmission that should be protected from potential cognitive devices or other factors that we should take into account?:

Question 4: Are there any potential future PMSE applications, other than currently available wireless microphones, in-ear monitors and talkback systems, that you consider should be protected from potential cognitive devices?:

Question 5: Is there sufficient evidence to require protection for other services such as mobile television, bearing in mind the potentially negative implications of such protection for deployment of cognitive devices?:

Question 6: What levels of coverage and aggregation are of interest to you?:

Question 7: Do you agree that the median option offers an acceptable balance between protecting reception of DTT services and maximising new DTT services using geographic interleaved lots?:

Question 8: Do you agree with the proposal for a series of awards of spectrum lots - an award of lots for Caldbeck, Winter Hill and Wenvoe in late 2008 or early 2009, a single award in 2009 of large lots and awards of lots for other locations linked to DSO?:

Question 9: Do you agree with the proposal to hold the combined award for large lots of geographic interleaved spectrum shortly after the cleared award in 2009? What should the time interval be?:

Question 10: Do you agree with our approach to expressions of interest in order to finalise the spectrum lots appropriate to allocate by auction?:

Question 11: Do you agree that we should run single unit ascending bid auctions for the award of each of the spectrum lots for Caldbeck, Winter Hill and Wenvoe?:

Question 12: Do you have comments on whether the initial auctions of spectrum lots for Caldbeck, Winter Hill and Wenvoe should be run in sequence or in parallel?:

Question 13: If the initial auctions are run in sequence do you have a preference for the order in which they run?:

Question 14: Do you consider that a combinatorial clock auction would be more suitable than a simultaneous multiple round auction for the combined award of large lots suitable for aggregation?:

Question 15: Do you agree with the proposal that the phased award of medium/small spectrum lots at locations linked to the DSO timetable should be by single unit ascending bid auctions? If not, which would be your preferred auction format and timing?:

Question 16: Do you agree with the proposals for the main rules that we are minded to adopt for each of the three single unit ascending bid auctions?:

Question 17: Do you have any comments on the technical licence conditions we are proposing to include in the licences?:

Question 18: Do you agree that the licences for the geographic interleaved spectrum should not allow the co-ordination threshold to be exceeded?:

Question 19: Do you agree that where the geographic interleaved spectrum is used for the operation of a DTT multiplex, we should replicate the ownership restrictions from the Broadcasting Act regime relating to (a) local authorities, (b) political bodies, (c) religious bodies and (d) bodies exerting undue influence but not replicate restrictions relating to (e) broadcasting bodies and (f) advertising agencies?:

Question 20: Do you agree that we should facilitate interoperability between existing DTT multiplex operators and new operators using cleared spectrum?:

Question 21: We welcome views on the merits of the proposed approach to information provision:

Question 22: Do you agree with our approach to assessing whether the awards of geographic interleaved spectrum fully promote competition and efficiency?:

Question 23: Do you have particular concerns about possibilities for award outcomes to fail to fully promote competition in downstream markets or to result in inefficient use of spectrum? If so, please explain what these are and provide supporting evidence.:

Question 24: Do you agree with our proposals to include an information provision licence condition to help facilitate efficient secondary trading?:

Question 25: Do you agree with our view that we should not apply any general remedies other than for information provision in the geographic interleaved award?:

Question 26: Do you agree with our initial assessment that we should not intervene in the geographic interleaved award to remedy any potential impact on competition resulting from the holding of geographic interleaved spectrum by either Sky or NGW/Arqiva?:

Additional comments: