

## Subject: Award of the frequency bands in the 2GHz in the UK

09.03.2007

OFCOM, (the UK regulatory agency) has published a consultation on the awards of three frequency bands in the UK.

- Band 2500-2690 MHz
- Band 2010-2025 MHz
- Band: 2290-2300 MHz

The main body of the consultation is made up of 21 questions which are summarised hereunder per category. Additional information is also provided, which is categorised within the respective sections.

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### An Executive Summary

**Question 1:** *Do you agree with these proposals....?*

Inquam Broadband agrees with the majority of the proposals being provided by OFCOM, especially that the market needs access to the spectrum in the 2500 – 2690 MHz band as soon as possible.

Inquam Broadband disagrees that spectrum capping is not required. Since the existing mobile operators already have significant spectrum holdings, which have not yet been exhausted, and the 2 GHz spectrum that is the subject of this consultation is interchangeable with those frequency bands in terms of the types of allowable services and propagation. Those spectrum holdings create evident synergies between different blocks of spectrum.

Moreover the existing operators are all using the same technology platforms and therefore benefit from economies of scale for their deployments. Additionally they have comparable cost structures and technology platforms and thus no pressure to innovate. They have also existing customer bases which give them a meaningful power on the market.

When all the above factors are combined together, synergies between spectrum holdings, same technology platforms, same cost structures, existing customer base, we come to a clear distortion of the market, where the existing spectrum owners will see intrinsically a higher value for the spectrum in the 2GHz band. This leads to an asymmetrical market position in which the established players, who already have much more market power will intrinsically have a higher valuation the spectrum and could potentially tend to a “de facto” coalition, which will increase the price of the spectrum to the disadvantages of innovative new entrants.

Imposing a cap on the total amount of a spectrum an applicant for the new 2 GHz bands may own would be an appropriate approach for enabling access to spectrum by new entrants and would support competition and innovation. Furthermore, capping of the spectrum would force all licensees to use the most spectral efficient technologies, thus achieving one of the

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main goals of the OFCOM. In order to achieve those goals, the capping should be applied on the total spectrum per operator including their existing spectrum resources.

To sum up, Inquam Broadband is strongly in favour of having a cap of 25 MHz per operator for all the awards planned in this consultation.

- **Question 2:** *Do you agree with analysis in section 5...?*

Inquam Broadband agrees with the interference analysis as performed in section 5 of the consultation document.

- **Question 3:** *Do you agree that OFCOM should authorise the use of the three bands?*

Inquam Broadband agrees with OFCOM's proposal to authorise the use of the three bands listed in the consultation.

- **Question 4:** *Do you agree that awarding licences by auction is the appropriate mechanism?*

Inquam Broadband agrees that awarding licenses by auction is the most appropriate mechanism.

- **Question 5:** *Do you agree that to proceed with the awards as soon as practicable is likely to be in the interest of the citizens..?*

Inquam Broadband agrees that a relatively quick award for the bands is desirable.

- **Question 6:** *Do you agree OFCOM should award the bands by the end of 2007, while keeping the position under review in light of possible developments in European regulatory fora?*

Inquam Broadband fully supports this approach.

- **Question 7:** *Do you agree with OFCOM's proposals for the attribution of the bands (technology neutrality, tradability, conditions of tenure and absence of roll-out obligations)?*

Inquam Broadband strongly supports the proposed conditions, i.e. technology neutrality, full tradability, the fact that there are no coverage obligations and the indefinite timing of the allocation.

**Question 8:** *Do you have views on a whether or not there should be a "safeguard" cap in the 2.6 GHz..., on whether 90 MHz would be appropriate?*

Inquam Broadband disagrees that spectrum capping is not required. Since the existing mobile operators already have significant spectrum holdings, which have not yet been exhausted, and the 2 GHz spectrum that is the subject of this consultation is interchangeable with those frequency bands in terms of the types of allowable services and propagation. Those spectrum holdings create evident synergies between different blocks of spectrum.

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Imposing a cap on the total amount of a spectrum an applicant for the new 2 GHz bands may own would be an appropriate approach for enabling access to spectrum by new entrants and would support competition and innovation. Furthermore, capping of the spectrum would force all licensees to use the most spectral efficient technologies, thus achieving one of the main goals of the OFCOM. In order to achieve those goals, the capping should be applied on the total spectrum per operator including their existing spectrum resources.

To sum up, Inquam Broadband is strongly in favour of having a cap of 25 MHz per operator for all the awards planned in this consultation.

**- Question 9:** *Do you agree with OFCOM's proposal to package the spectrum in 2\*5 MHz for paired use and 1\*5MHz for unpaired use (2.6 GHz) and to allow the aggregation of lots by bidders?*

Inquam Broadband agrees with OFCOM's proposal to package the spectrum in aggregable lots of  $n \times 5$  MHz, with  $n = 1$  for unpaired use of the spectrum and  $n = 2$  for paired uses of the spectrum.

**- Question 10:** *Do you agree to allow the respective amounts of paired to unpaired spectrum (2.6 GHz) to be varied (maintaining the 120 MHz duplex spacing and allowing additional unpaired spectrum at the top of the band)?*

Inquam Broadband agrees with the proposal to vary the respective amounts of paired to unpaired spectrum.

**- Question 11:** *Do you agree on a restricted 5 MHz block between FDD and TDD and between TDD and TDD and with a modified out-of-band base station mask for second adjacent 5 MHz block?*

This seems a feasible solution. However the concerned operators shall be allowed to enter into a less stringent agreement after the acquisition of the spectrum. The operators could submit their agreement to the OFCOM for final approval.

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**- Question 12:** *Do you agree with OFCOM's proposal to award the 2010 MHz band as a single 15 MHz lot?*

Inquam Broadband agrees with OFCOM's view to award the 2010-2025 MHz as a single lot.

**- Question 13:** *Do you agree with OFCOM's proposal to award the 2290 MHz band as a single 10 MHz lot?*

Inquam Broadband agrees with OFCOM's view to award the 2290 MHz as a single 10 MHz lot.

**Question 14:** *Do you agree with OFCOM's proposal to combine the award of the 2,6 GHz and 2010 MHz band and to hold the award of the 2290 MHz separately and in advance?*

Inquam Broadband agrees with the proposed approach to schedule the award of the 2290 MHz band in advance and to combine the awards of the 2010 MHz and the 2,6 GHz band.

**- Question 15:** *Do you agree with OFCOM's proposal for a two-stage auction design for the 2,6 GHz and 2010 MHz bands?*

The design of the auction seems very complicated. However, it has the definite advantage to let the market express itself on the relative weight of the forecasted duplexing methods.

Inquam Broadband agrees with this approach.

**- Question 16:** *Do you agree with OFCOM's proposal to award the 2290 MHz through a second bid price sealed auction.*

Inquam Broadband is in favour of an ascending auction for the single block 2290-2300 MHz.

**- Question 17:** *Do you prefer a transmitter spectrum mask or a Spectrum Usage Rights (SUR) approach to specifying technical licence conditions?*

Inquam Broadband prefers a SUR methodology, which allows more flexibility in deploying a network.

**- Question 18:** *Do you have any comments on the spectrum masks defined below?*

Inquam Broadband has no comment on this question.

**- Question 19:** *Do you have any comments on the SUR parameters defined below?*

Inquam Broadband has no comments on this question.

**- Question 20:** *Do you have any comments on the SUR methodology and assumptions detailed in annex 11?*

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Inquam Broadband has no comments on this question.

**- Question 21:** *Do you have any comments on the use of the Visualyse tool as described, on the assumptions or the propagation model proposed in the annex 12?*

Inquam Broadband has no comment on the Visualyse tool.

The dual slope propagation model proposed in the consultation is well representative of a generic propagation environment in an urban environment for small cell, therefore seems to be adapted to the stated objectives.

**- Question 22:** *Do you have any comments on the assumptions detailed in annex 13?*

Inquam Broadband has no comments on this question.