



Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title: **Statutory Notice of Ofcom's proposal to make Ultra-Wideband Equipment (Exemption) Regulations**

To (Ofcom contact): **Paul Chapman**

Name of respondent: **Faisal Ahmed**

Representing (self or organisation/s): **UK Broadband**

Address (if not received by email): **faisal.ahmed@ukbroadband.com**

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Name **Faisal Ahmed** Signed (if hard copy)



Paul Chapman
03.83
Spectrum Policy Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA

By email to: paul.chapman@ofcom.org.uk

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UK Broadband's Response to the Statutory Notice on Ofcom's proposal to make Ultra-Wideband Equipment (Exemption) Regulations

Dear Mr. Chapman,

We are grateful for the opportunity to submit a response to this consultation on ultra-wideband technology (UWB), a technology and application which UK Broadband (UKB) believe should only be permitted having due regard to co-existence with Fixed Wireless Access (FWA) primary services, including technologies such as Broadband Wireless Access (BWA).

UKB notes that the Consultation is specifically concerned with the drafting of the Proposed Regulations. UKB supports the Ofcom view that it is not appropriate at this time to conduct a further policy consultation, for the reasons given by Ofcom.

Ofcom's proposed regulations are required to comply with the mandatory European Commission Decision of 21 February 2007 on harmonisation of the radio spectrum for equipment using UWB in a harmonised manner in the Community (2007/131/EC). UKB agrees with Ofcom that the use of a UK Statutory Instrument is appropriate and that the proposed regulations have enacted the EC Decision as closely as possible. Further, UKB agrees that it is appropriate that UWB should be allowed to operate on a licence-exempt basis. However, this must be on a non-interference basis to licensed spectrum applications such as BWA.

Ofcom's previous studies in this field have been of great value in informing the work of the EC, CEPT and ITU. In particular, UKB applauds Ofcom for its role with stakeholders in the work of ECC TG3 (the committee within CEPT who were tasked by the ECC to prepare the response to the various EC mandates on UWB).

BWA services are becoming increasingly important to the EU economy. Research by Europe Economics suggests that BWA providers may contribute over €17 billion to the EU economy over the next ten years. Further, current market trends suggest that BWA based on WiMAX will represent an increasingly important and vital part of the developing European electronic communications sector. BWA is important also for strategic reasons. It can provide a competitive alternative to existing communications networks across and within national borders and its development will allow for new and innovative services generating significant wider employment and spin-off services.

To take advantage of the potential benefits of BWA, EU companies such as UK Broadband have already made considerable investments, particularly in purchasing licences to operate in the 3.4 to 3.8 GHz band. These investments have already generated high-skilled employment and established innovative industries in several EU Member States.

UK Broadband Limited
c/- PCCW (Europe) 3rd floor 78 Brook Street, London W1Y 1YD Tel 020 7297 6100 Fax 020 7629 5943

Registered office: 20-22 Bedford Row, London WC1R 4JS Registered in England Number 4713634



It is therefore important, if the EU is to achieve the Lisbon competitiveness objectives, that BWA services enjoy an appropriate regulation which can foster market development. UK Broadband believes that all FWA spectrum licence holders (including BWA) should be protected by regulation which respects their rights and investments.

Further, UKB notes that the work of ECC TG3 is on-going and that the EC Decision on UWB at the December 2006 meeting of the Radio Spectrum Committee may be subject to amendment. The continuing work includes technical study of mitigation techniques, designed to assist in co-existence with FWA. Some more detailed comments on this are presented below.

Article 3 of the Decision is implemented in sections 3 and 4 of the Proposed Regulations. UKB agrees that the Proposed Regulations adequately define “indoor” operation and the additional non-indoor exemptions. UKB notes that exemptions are granted on the condition that the UWB equipment does not cause harmful interference to any wireless telegraphy.

Paragraph (5)(a) correctly sets out the mean and peak emission levels for the frequency bands 3.4 to 4.8 GHz as currently adopted by the EC. Paragraph (5)(b) specifies alternative emission levels which can be applied between 3.4 to 4.8 GHz if low duty cycle mitigation techniques are employed. UKB is concerned that these techniques are neither fully defined nor proven.

The time-limited restriction for a maximum mean emission level in the frequency bands from 4.2 to 4.8 GHz of -41.3dBm/MHz will apply up to 31 December 2010; Ofcom will amend the Proposed Regulations in 2010 to align with further EC requirements. UK Broadband believe that equipment using UWB technology should operate exclusively above 6 GHz as soon as practicable.

UK Broadband welcomes Ofcom’s decision not to allow further exemptions to cover UWB equipment that uses alternative mitigation techniques other than those already specified. Techniques such as Detect and Avoid mechanisms are undefined and unproven; they remain under study in ECC TG3. UKB welcomes Ofcom’s intention to monitor these ongoing studies and urges Ofcom to conduct its own research in this problematic area.

A possible relaxation of the permitted out of band power level between 3.4 and 3.8GHz is also under consideration by ECC TG3 and ECC. UKB understands that any such revision would represent a compromise between the interests of the UWB and FWA industries (as recorded in the Chairman’s notes of the TG3 meeting). UKB will continue to work with the ECC TG3 to ensure protection of licensed spectrum between 3.4 and 3.8GHz whilst seeking industry-wide agreement on this issue. It must be noted that the ECC TG3 discussions on FWA in the 3.4 to 3.8 GHz band focused on providing only a statistical assessment of service degradation for different use cases. In connection with this, TG3#18_26-A3R0 (Summary of discussions on Power level in band 3.4 to 3.8GHz) states,

“there is limitation on this approach:

- Modelling separation distance is difficult based on different usage models
- There are a range of parameters proposed, like indoor penetration loss, some parameters of which are proprietary to FWA vendors e.g. fractional frequency reuse, which lead to difficulty in agreeing to a single value to model.
- Study is limited to FWA and does not include mobile.
- Impact on outage for different service level is difficult to model e.g. for dynamic scheduling, time domain modelling.”

UKB therefore urges Ofcom to continue to support the work of ECC TG3 as summarised in Doc. ECC(07) 012 Annex 6 (ECC TG3 Overall Work Plan), and to maintain a sceptical stance on mitigation techniques in the frequency band 3.4 to 4.8 GHz.



UK Broadband welcomes Ofcom's intention to finalise the Proposed Regulations and to publish a statement as soon as possible, leading to a UK implementation of the EC Decision before 21 August 2007.

Yours sincerely,

Faisal Ahmed
VP Strategy and Market Planning