



## **Response to consultation on draft RSPG opinion: *Strategic challenges facing Europe in addressing the growing spectrum demand for wireless broadband***

The BBC welcomes the opportunity to respond to consultation on draft RSPG opinion: *Strategic challenges facing Europe in addressing the growing spectrum demand for wireless broadband*. The BBC's main representation is contained in a separate EBU submission and we fully endorse the views set out within that response. This submission addresses the BBC's principle interests as they relate to our wider international operations of the Global News division

### **Introduction**

The BBC is one of a number of European public broadcasters which broadcast internationally. The Global News division of the BBC attracts a global audience of 239 million people to its international television and radio services and its international-facing news websites and mobile services. It currently operates 28 language and regional services, including English. The division comprises BBC World Service (the international radio services, language TV services and on-line services), BBC World News (the international English language TV channel), bbc.com (the international online news service), BBC Monitoring (open source monitoring of TV, radio, web and print media around the world) and the international charity BBC Media Action.

The BBC Satellite Media Distribution System (SMDS) utilises a number of different satellites to distribute BBC World Service radio and TV programmes to its global audience of 180 million. The majority of these operate in the C-Band and currently between 3.9 and 4.2 GHz (by 2015 these downlink frequencies may change to anything between 3.4 – 4.2 GHz). BBC World News also uses C-Band satellites for distribution of their programmes to their distribution partners. BBC Monitoring relies heavily on its network of Receive Only Earth Stations to access frequencies right across the 3.4 – 4.2 GHz band in support of source monitoring operations, both within the UK and at its international offices.

In addition to the comments contained in the EBU response, we have the following comments on the draft RSPG Opinion:

### **RSPG recommendations**

*1. On the basis of the analysis in Annex 1 and the roadmap for future broadband spectrum in Annex 2 of this Opinion a strategic plan should be developed by the Commission to make the necessary spectrum available to meet the future demand for wireless (terrestrial & satellite) broadband services in the time frame 2013-2020, including the intermediate target in the RSPP of at least 1200 MHz of spectrum by 2015.*

We have no comments on this recommendation.

*2. The strategic plan should include: -*



- i) a detailed analysis of the usage of all bands identified in Annex 2, including the 700 MHz, 1.5 GHz, 2.3 GHz and 3.8-4.2 GHz bands, in Member States and their potential for wireless broadband services on a harmonised basis, prioritising the bands in accordance with their potential and timeframe in which they are likely to be available;*
- ii) further exploration of the economic and social implications of the various options at macro level;*
- iii) the spectrum needs for SAB/SAP (both audio and video applications);*
- iv) an analysis of the need for licence exempt spectrum for WBB.*

### 3.8-4.2 GHz

The BBC would like to draw the RSPG's attention to an experience in the UK with respect to the receive-only downlinks used by broadcasting between 3.4 – 4.2 GHz.

We understand that the licensing of receive-only satellite terminals (through TVROs) ceased a number of years ago in Europe. This was part of the move to deregulation in order to ease the burden of unnecessary regulation on companies and the public. As referenced in our introduction, the distribution for BBC Global News output relies on satellites operating in both C-band and Ku-Band. Although Ku-band is predominantly used in Europe, there are still C-band downlinks used in the UK - for example, at the BBC Monitoring facilities and at UK HF broadcasting transmitting sites.

Following EC Decision 2008/411/EC in May 2008 and the introduction of fixed broadband wireless access (BWA) into some C-band spectrum in the UK, BBC Global News saw significant increases in interference to BBC Monitoring operations. Being unlicensed, these sites had no protection and BBC Monitoring was forced to move reception to an alternative site. In July 2010, Ofcom published a consultation on Recognised Spectrum Access ("RSA") for Receive Only Earth Stations in bands including 3.6 – 4.2 GHz, stating that "the move should provide greater information about these stations, their use of spectrum, and potential interference problems". The introduction of RSAs has provided a mechanism to address this problem within the UK, but this experience highlights that any analysis of the usage of 3.8-4.2 GHz bands in Member States must take account of receive-only downlink sites. Clearly the burden of regulation was not an unnecessary one in this case.

*3. In addition to the above, the RSPG recommends the development by the Commission, in cooperation with the Member States, of a long-term strategic policy on the future use of the UHF band (470-790 MHz), taking account of, in particular, the spectrum needs of the DTT platforms in the EU, the spectrum needs of PMSE, and the possible benefits arising from future convergent broadcasting mobile platforms to deliver linear media/audiovisual services and high-audience video and data to mobile devices (smartphones, tablets, etc.).*

We note that international broadcasters such as BBC World Service are now also using television to connect with their global audiences and that the transition to DTT can be challenging for many countries. Any consideration of future use of 470–694MHz should recognise that the majority of countries in Africa rely heavily on this band to provide TV to the public and that the situation within



and outside Europe differs. As a result, any future attempt to secure global harmonisation of this band will face significant obstacles from, amongst other things, continued DTT use in Africa.

The BBC has no further comments to make on recommendations 4-7 other than to support those made in the EBU submission.

*8. The frequency range 3800-4200 MHz may play a role in the provision of ECS to enhance future capacity requirements especially in urban areas. The Commission should study the possibility of sharing in Europe between the FSS and terrestrial wireless broadband services in this frequency range, while recognizing that the situation within and outside Europe may differ, thus not enabling worldwide harmonisation for shared use of the band by wireless broadband services.*

The BBC welcomes the RSPG's recognition of the different situation within and outside Europe and the limitations this brings with respect to worldwide harmonisation for shared use of the band by wireless broadband services. We would like to highlight here the situation we face outside Europe with respect to the impact on our SMDS operations between 3.9 – 4.2 GHz.

All earth stations directly used by BBC World Service and BBC World News are receive-only and there are very few parts of the world where there is any requirement to register them with the local administration. Currently, less than 2% of receive-only earth stations used for BBC World Service programme distribution are registered. Not all earth stations are equal in their audience reach. For example, some may only serve a local radio station in a small town, whilst others may serve a transmitter capable of providing coverage across large parts of the world.

**Table 1: Quantity and audience of BBC World Service earth stations**

Registered Earth stations	Total number of earth stations	Weekly audience
10	629	180 million

**Note all figures are approximate and subject to change at any time.**

We continue to see problems with interference in many countries which have authorised wireless access systems in some parts of the C-band. At the beginning of 2012, we confirmed that Fixed Satellite Service (FSS) earth stations operating in the C-band and used for our international satellite distribution network had been affected by harmful interference in the following countries: D.R. of the Congo, Gabon, Guinea, Morocco, Nigeria, Tanzania, Uganda, Burkina Faso, Burundi, Rwanda, Pakistan, Cambodia, Trinidad, South Sudan and Jamaica. Recent cases include the silencing of the BBC World Service FM relay in Freetown, Sierra Leone in January, where local investigations revealed that a 3500 MHz WiMAX terminal had been installed nearby. There was also interference to a local FM partner in Pakistan, similarly traced to a WiMax installation.

These cases are generally limited to the wireless access systems deployed in the lower part of the C-band, typically a band of 200 MHz. If wireless access systems were to be deployed in additional parts of the band 3400 – 4200 MHz, many more interference cases must be expected. In many of



the aforementioned locations which have suffered harmful interference, various mitigation techniques have been deployed in order to allow the continuation of our operation. The success of these mitigation techniques has been mixed. In a large number of locations they have been able to remove sufficient terrestrial interference to allow the satellite service to be receivable. However, in some locations the spectral and /or geographic separation is insufficient to allow the deployment of practical filtering / mitigation techniques.

***9. In considering the harmonisation of frequency bands for wireless broadband the Commission should take into account the fact that the actual use of bands for wireless broadband in Member States will vary, depending on the national requirements for broadband access and for other services.***

We have no comments on this recommendation.