

**Award of available spectrum: 10GHz, 28GHz, 32GHz and 40GHz  
10GHz and the London 2012 Olympic Games and  
Paralympic Games**



**Response by the Radio Society of Great Britain**

**April-2007**

**Introduction**

This response to the above Ofcom discussion document is from the Radio Society of Great Britain (RSGB, [www.rsgb.org.uk](http://www.rsgb.org.uk)) on behalf of its members and the wider UK Amateur Radio community. The latter includes our national affiliates who have microwave spectrum interests - Amsat-UK ([www.uk.amsat.org](http://www.uk.amsat.org)), UK Microwave Group (UKuG, [www.microwavers.org](http://www.microwavers.org)) and the British Amateur Television Club (BATC, [www.batc.org.uk](http://www.batc.org.uk)).

RSGB is recognised as one of the leading organisations in the world in the field of amateur radio. It collaborates with its fellow national societies via the International Amateur Radio Union (IARU) through IARU Region-1 ([www.iaru-r1.org](http://www.iaru-r1.org)).

Amateur radio is a science based technical hobby enjoyed by over three million people worldwide. From a statutory point of view it is fully recognised by the International Telecommunication Union (ITU) as a service and is listed in the ITU Radio Regulations as the Amateur Service and the Amateur-Satellite Service. The wide-ranging role of amateur radio from training/education to satellite and emergency communications was recently highlighted in an exhibition, "Amateur Radio, a European Resource", which took place in the European Parliament at Brussels in March 2007.

This submission is our third related to the Ofcom 10GHz auction and we look forward to a full Ofcom statement on the overall situation.

We would be pleased to provide any additional information on request or participate in any future discussions, both with Ofcom or any other stakeholder who has an interest in this topic.

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*RSGB, Amsat-UK, UKuG & BATC, April 2007*

## Questions & Answers

### **Question 1.**

*How likely do you consider spectrum at 10GHz being required for the London Games?*

This is currently difficult for RSGB or probably many other stakeholders to quantify at present and we look forward to the broader Olympics consultation that Ofcom indicates will be forthcoming.

The final form of the 10GHz auction and spectrum packaging could itself be one of the variables, as is it not currently known if a PMSE-related organisation would be amongst the successful bidders.

Given the significant uncertainties at present, any results from this current consultation should be specific to the 10GHz auction segments (10.125-10.225 & 10.475-10.575GHz). It should not prejudge options in adjacent 10GHz spectrum or elsewhere - which should be subject to a separate consultation.

It is inevitable that the venues in the London area will see significant temporary spectrum demands. For venues further afield mentioned in the document (Old Trafford etc), use of existing/upgraded landline or satellite links should be maximised in order to minimise the wider impact. Furthermore, by 2012, equipment development may also have advanced and be able to make greater use of millimetre-wave spectrum for example, reducing the pressure on lower frequencies where the available bandwidths (esp. for HDTV camera links) may be difficult to accommodate.

For the present we do agree that the 10GHz auction segments may be particularly suitable for temporary Olympics applications and note that Ofcom have indicated that MoD restrictions in these channels are less onerous than in adjacent sections of the 10GHz band.

For amateur spectrum that overlaps with the auction segments such as the Amateur Satellite Service at 10.475-10.500GHz, RSGB and affiliated organisations such as Amsat-UK would be pleased to cooperate with Ofcom regarding appropriate measures, provided they are temporary and proportionate.

Adjacent spectrum in the 10.3GHz band that is mentioned in the discussion document is popular with amateurs. However this spectrum is also normally subject to considerable Primary User restrictions around London and certain other areas. These restrictions were mentioned in some detail in the original RSGB auction submission [1] and this probably makes it less suitable than the auction segments.

We also note that spectrum in the 2/2.5GHz bands is also currently subject to auction and in the past has been shared with PMSE video links. We would hope that Ofcom will clarify whether those bands are also likely to be needed on a similar temporary basis to spread the burden.

### **Question 2.**

*What impact would requiring licensees to avoid interference to any temporary use of spectrum at 10GHz for the London Games have on the optimal use of the spectrum? Please quantify this impact if possible.*

This is very dependent on the precise time period, frequency band(s) and geographic extents, for which more detail is needed. We would for example be extremely concerned with an extended outage that stretched from the test events in 2010/1 continuously through to the end of the formal events in 2012. If confined to the core 2012 period we believe the impact of such temporary usage/outage affecting overlapping 10GHz Amateur Satellite Service uplinks would be relatively easy to be manage.

Should the PMSE channels mentioned at 10.300-10.360GHz be heavily used, there is currently one 10GHz Amateur-TV repeater in North London that overlaps these and whom we have been in contact with.

If other adjacent 10GHz spectrum is affected (such as the very popular narrowband/beacon segment at 10.368GHz or other ATV frequencies) the affected userbase grows considerably, especially if non-London venues are included as well. In such a case (be it in 10GHz or another amateur band) we would need to know well in advance so alternative arrangements and annual contest schedules etc could be planned and notified in good time. RSGB welcomes the ongoing liaison that occurs with Ofcom that can include such topics.

### **Question 3.**

*What would be the most appropriate way of ensuring access for the London Games to spectrum at 10GHz awarded to successful bidders?*

Unlike most situations, the 'market' is unlikely to provide a solution by itself and we would expect Ofcom to directly manage the spectrum for both 10GHz and any other affected frequencies. A clear contact point and organisation will be essential for all concerned.

We agree with Paragraph-3.7 of Ofcom's discussion document and request that any temporary restrictions are specific regarding frequencies, timing, location etc. These should be publicly tabulated (and perhaps illustrated by mapping tools) on a well-defined section of the Ofcom website in good time. They should also be linked from the appropriate Olympic website(s) so such conditions are known to the spectrum planners/users of host and visiting media companies. It is important that imported equipment that may use non-UK standard frequencies is controlled to avoid interference risks (during the Olympics and beyond).

### **Question 4.**

*Do you consider that the proposed licence condition would most efficiently meet the objective of requiring successful bidders to avoid causing interference to any temporary use of spectrum at 10GHz for the London Games?*

We note that the proposed condition is:-

*Pursuant to paragraph 8 of Section 1 to the Wireless Telegraphy Act 2006, Ofcom may not revoke or vary this Licence under paragraph 6 of Section 1 to the Wireless Telegraphy Act 2006 except:....*

*f) if it appears to Ofcom to be necessary or expedient to do so in the interests of national security or for the purpose of securing compliance with an international obligation of the United Kingdom (including in particular a variation to the provisions of this Licence relating to the use of spectrum bands for the purpose of securing compliance with any international agreement or arrangements relating to the London 2012 Olympic Games and Paralympic Games to which the United Kingdom is a party).*

We believe it is important that any licence condition or licence variation specifically refers to the 2012 Olympics/Paralympics as the above largely does, and has maximum certainty that the normal spectrum user rights would resume afterwards. The first clause of f) could in theory refer to any other (undefined) international obligation or security issue and therefore seems to have some ambiguity for such a reassurance.

An appropriate and consistent form of wording should be adopted that would be suitable for other bands as well as the 10GHz auction segments. This should be included in the forthcoming broader Olympic spectrum consultation.

### **Reference**

[1] The last page of RSGB's first joint submission to the 10GHz consultation in Sept-2006 referred to the following:

#### **Primary User Restriction Zones**

Whilst mention of MoD airborne assets is mentioned in the 10GHz band, the consultation omits to mention existing restrictions on terrestrial services. In the Amateur Licence and in the 10.3GHz PMSE Licences available from JFMG (downloadable from [www.jfmg.co.uk](http://www.jfmg.co.uk)) there are zones around parts of the country which either exclude or severely restrict 10GHz users in order to protect the Primary User.

The Amateur licence lists 50km coordination radii around Harrogate, Waddington, Cheltenham and Bude. In addition we experience a 100km radius centred on Charing Cross. Similarly JFMG list frequencies around 10.3GHz as not being available in Northern Ireland and parts of Wiltshire, Surrey, Berkshire, Dorset, Somerset and Avon.