Cover sheet for response to an Ofcom consultation

BASIC DETAILS

Consultation title: **Spectrum Framework Review Implementation Plan**

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Representing organisation: **UK Microwave Group**

Address (if not received by email):

CONFIDENTIALITY

What do you want Ofcom to keep confidential?

Nothing	Ö	Name/address/contact details/job title	
Whole response		Organisation	
Part of the response		If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation to be confidential, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

Yes		No	

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom's website, unless otherwise specified on this cover sheet, and I authorise Ofcom to make use of the information in this response to meet its legal requirements. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Name *Murray Niman G6JYB & Peter Day G3PHO* Signed (if hard copy)

UK Microwave Group Response to Ofcom Spectrum Framework Review Implementation Plan

Who we are

The UK Microwave Group (UKuG, www.microwavers.org) is the representative body specifically for UK amateur radio enthusiasts who operate on the microwave bands. It is affiliated to the Radio Society of Great Britain (RSGB, www.rsgb.org) and the RSGB Spectrum Forum. UKuG also liase with AMSAT-UK and BATC who are also users of UK Amateur Microwave allocations.

UK Microwave Group membership includes operators of terrestrial, amateur satellite and Earth-Moon-Earth links, using a variety of leading edge weak signal receivers. Systems also include Microwave Propagation Beacons, Voice Repeaters and Fast-Scan Television Repeaters

Our response is largely based on those bands which are of interest to UK Amateur Microwave operations, but also includes notes based on our membership also being citizen consumers.

We would highlight that this response includes a request for experimental access to promote research and innovation on some additional mm-wave bands which are presently low occupancy.

UK Microwave Group - www.microwavers.org

Chairman: **Peter Day G3PHO**

Secretary: **Martyn Kinder G0CZD**

Treasurer: **Steve Davies G4KNZ**

On the RSGB Spectrum Forum, UKuG is represented by the RSGB Microwave Manager Mike Dixon G3PFR, and actively supported by UKuG committee members Peter Day G3PHO and Murray Niman G6JYB

Spectrum Framework Review – Implementation Plan
UK Microwave Group replies to Consultation questions

Policy on release of spectrum
Question 4.1-4.5 Do you see scope for using simpler auction formats in the future than used in the UK in the past?

We do not subscribe to the auction concept as being the most appropriate in all circumstances. Consideration should be given to simpler award mechanisms which can favour financially weaker, more spectrally efficient or more innovative applications.

Part of VHF Band III (174 – 230 MHz)
Question 5.1 Do you agree with these proposals for the award of Band III?
Yes – We would appreciate additional DAB coverage, preferably with improved audio quality.

Part of 410 – 425 MHz (410-415 MHz paired with 420-425 MHz)
Question 5.2 Do you agree Ofcom should award a national licence on a technology and service neutral basis by auction or is there another option for award that is more likely to meet users' requirements?
Question 5.3 Do you think that spectrum in the band should be allocated for emergency services and business radio use?

Any allocation and spectrum mask should not only take into account not only the Primary user, but also the need to minimise interference to short range devices such as car alarms etc.

470 – 854 MHz Broadcast Dividend
Question 5.4 Do you believe it is appropriate wait until after the RRC in 2006 before developing policy proposals?

There is already considerable activity which may be applicable to future use of these frequencies. Ofcom should consult on the applications of this band with an open view to collate data, as there are opportunities for a terrestrial Hi-Definition TV service, as well as commercial/mobile services. Subsequent planning should be a harmonised approach in line with RRC/European parties.

872 – 876 MHz paired with 917 - 921 MHz
Question 5.5 Do you agree Ofcom should award a UK licence on a technology and service neutral basis by auction?
Please consider Short Range Devices, especially with regard to the 872-876MHz band.

L-Band (1452 - 1492 MHz)
Question 5.6 Do you think Ofcom's proposal is appropriate?

Priority for this allocation should be retained for broadcast services. Ofcom should not pre-empt trials of L-Band DAB currently occurring in the London area. There are many receivers in the market place with L-band DAB capability. As Ofcom states, DMB and DVB-H are also possibilities. Feedback from the separate 'Radio Preparing for the Future' consultation should be considered.

1781.7 – 1785 MHz paired with 1876.7 – 1880 MHz (GSM/DECT Guard Bands)
Question 5.7, 5.8
No comment

1790 – 1798 MHz
Question 5.9 Do you believe the release of this band is a priority?
No comment

2010 – 2025 MHz
Question 5.10-5.12
No comment

2290 – 2302 MHz
Questions 5.13-5.15
The top end of this band is immediately adjacent to the Amateur 2.3-2.4GHz (13cm) allocation, and we request that a spectrum mask is used to prevent undue interference. Furthermore the auctionable value of this allocation would be more certain if thorough measures to mitigate the impact of UWB are agreed upon.

2500 – 2690 MHz
Question 5.16 Is a technology neutral award the right approach for the award of 2500 – 2690 MHz?
Question 5.17 Do you consider an auction in 2006/7 appropriate?
Question 5.18 Do you have any views on the relevance of encouraging new entry through the auction design, and if so how this might be effected?
Question 5.19 What do you consider is the right approach to packaging this spectrum?

UKuG notes that on the 18-March 2005 ECC Decision 05/05 mandated 2500-2690 for UMTS/IMT2000 on a 5MHz block basis. The option of Wifi and other low power allocations in the guard band at 2500-2520 should be considered, to extend the nearby ISM band. Ofcom should work on a harmonised basis with Europe to minimise uncertainty for commercial operators. We would highlight that the auctionable value of this allocation would be more certain if thorough measures to mitigate the impact of UWB are agreed upon.

3.6 – 4.2 GHz (3695-3875 MHz paired with 4015–4195 MHz)
Question 6.1 Do you agree that the band should be open for further terrestrial applications once Ofcom has clarified and regularised current usage in the band?

Yes. However we would highlight that this is a prime UWB operating band

10 GHz (10.125-10.225GHz paired with 10.475–10.575GHz)
Question 6.2 Do you agree with the proposal to award a single UK licence on a service and technology neutral basis?

Amateurs have terrestrial allocations at 10-10.125 and 10.225-10.475. Operators have narrowband CW, SSB, voice, propagation beacons, and Amateur Television systems and repeaters. New forms of digital modulation for data and TV are also being developed for these frequencies. In addition the Amateur Satellite service has an allocation extending over 10.450-10.500GHz. We would highlight the need to extend protection for Amateur Satellite operations on a harmonised international basis over the full 10.35-10.50GHz range to include USA and Japanese systems.

The Amateur service would welcome greater freedom to deploy unattended propagation beacons (mainly in the ~10.37GHz area).

Thus the higher 10.5GHz band needs to kept noise free to permit the Amateur Satellite Service to receive very weak signal fluxes. Protection measures for Amateurs in this band as well as suitable spectrum masking to prevent interfering signals/noise permeating the principle Amateur Centres of activity are requested. UWB mitigation measures are also urged.

28GHz (28.0525-29.4525GHz), 32GHz Band (31.8-33.1GHz), and 40GHz (40.5-43.5GHz)
Question 6.x, , including 'encourage its use for the development of innovative services and technologies'

UKuG notes that demand and occupancy on these bands has been consistently low. The Amateur allocations currently have a large gap, with nothing between 24GHz (which has moisture absorption, and is now subject to Car SRR), and 47GHz which is technically challenging for most operators.

UKuG wished to highlight that Ofcom has a statutory obligation under the Comms Act 2003 to promote Innovation. These three frequency bands are potentially accessible with the standard operating frequency of Waveguide-22 based equipment (26.5-40GHz). Of these 28GHz and 32GHz could for example be easily accessed by x3 multiplication from the popular 10GHz Amateur band. We would highlight that current design and standards for Amateur equipment nowadays is largely of a narrowband highly frequency accurate nature, and thus our requests are for only 0.1-0.2GHz allocations in these bands. We are confident that UK Amateurs would be willing to publish results on propagation characteristics etc. Permitting experimentation in this manner would therefore be of benefit to the UK as a whole.

Therefore UKuG requests that Ofcom give consideration to the RSGB being given Notice of Variation (NoV) authority for access to these bands on an experimental non-interference basis.

Question 8.3/8.4 *Do you have a view on the period that might be allowed to elapse before removing restrictions on the 3.4 GHz licences? We would also be interested in your views on whether we need to seek to resolve this issue at any particular time.*

We would highlight that the Amateur allocation in the 3.40-3.475GHz range should be considered in any increase in occupancy. Decisions on UWB and its mitigation are also needed to better inform the debate regarding 3.4GHz usage.

Question 8.8 *Do you have a view on whether it is useful to have a working definition of the term "3G services"? If so, do you agree with the definition set out for illustrative purposes above?*

Useful - Yes. However, given the increasing data rates possible from WiFi, UWB, proposed 4G systems and others, any definition adopted needs to be future proof. Definitions may need to be standards/technology based as services may converge.