

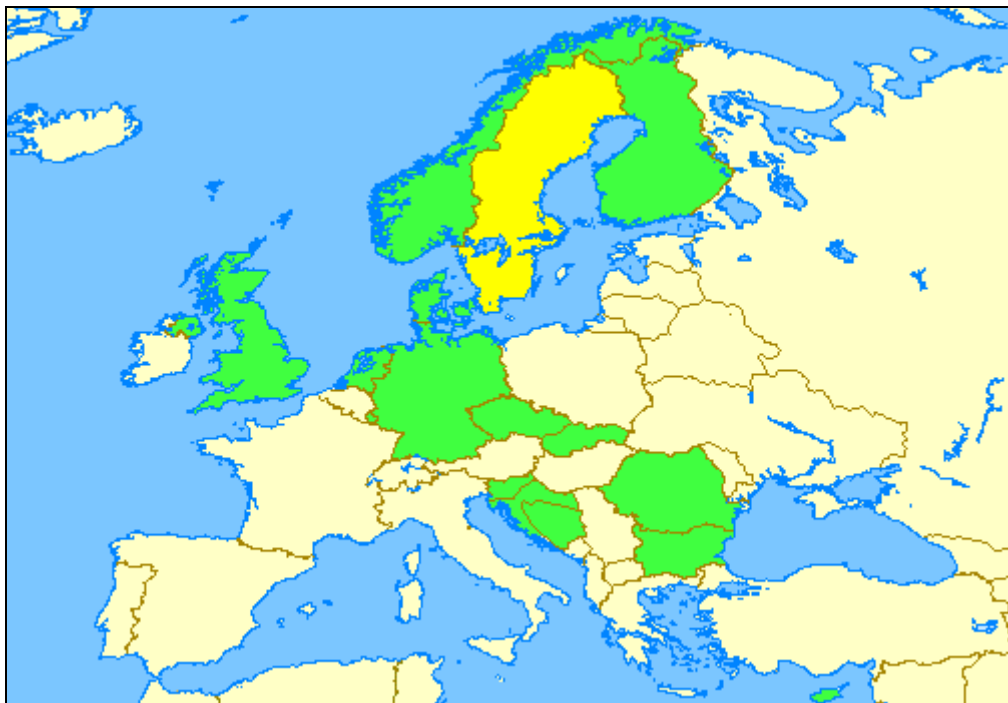
Microwave Managers Report Jan-June 2007

Highlights

- Microwavers benefit from new UK Amateur Licence
- Strong Input and Useful Results at Vienna IARU-R1 Interim Conference in February
- Significant review of RSGB VHF-Microwave Spectrum Requirements undertaken
- Considerable progress on Beacon Licensing (VHF and Microwave)
- EU35 approved and implemented in the UK Licence, retaining the 75GHz band
- Inputs to consultations on 3.4GHz, 10GHz, Galileo and WRC-07
- New work items on Licence Exemption and 2012 Olympics Spectrum

This is my first summer Spectrum Forum report in my official role, having succeeded Mike Dixon G3PFR who I am pleased to see was made RSGB Life Vice President in recognition of his contributions. Readers are referred to my January-2007 report on the Spectrum Forum website for the period Jul-Dec 2006

Murray Niman G6JYB, June 2007



Amateur 3.4GHz allocations in Europe – from Vienna Paper B13

Comment: Although CEPT allocation footnote EU17 provides for a 3400-3410MHz weak-signal allocation, amateurs in many countries still do not have access to the band

Microwave Bands Review

23cm – Early 2007 saw discussions prompted by RSGB Paper B15 which was subsequently endorsed at Vienna, regarding prudent fallback planning for 23cm. Meanwhile Galileo developments have been closely followed, and a paper submitted to the EU Commission consultation regarding Galileo Applications and Spectrum. At the operating level assistance has been rendered to the RMC regarding blocked repeater applications. It is also evident that some expansion of the 200kHz beacon sub-band may be necessary given rising of use and range of reception – perhaps to 250kHz wide.

2.3GHz - Following inputs to the Ofcom WRC-07 AI-1.4 consultation in March it was pleasing to see the Ofcom statement in June acknowledge Amateur use and firming its stance against future IMT mobile services in the 2.3-2.4 band. Whilst 2.4GHz Wifi/Bluetooth is welcome for remote control under the new Licence, it clearly is going to be an increasing problem for the Amateur Satellite Service.

3.4GHz – The 3.4GHz band is increasingly being designated for FWA and future IMT services. An RSGB input to CEPT successfully modified ECC Report-100 to ensure our presence was fully noted in the bottom 10MHz segment. UWB presence in the band has been partly mitigated

In response to such pressures a coordinated effort is being made to promote 3.4GHz use by contests, in Radcom, via Vienna paper B13 and support of the Amsat-NA Eagle project. An issue for the EME community is that 3456MHz (used by the USA) will become untenable in Europe as we concentrate on 3400-3410. Much of the higher German allocation has recently been auctioned like our own band.

5.7GHz – Ofcom and the EU are raising eirps for licence-exempt devices from 2W to 4W. New systems such as ITS may also appear in the 5.8-5.9GHz area. Whilst such devices are relatively low in number at present this will be unhelpful in future. The new UWB mask now largely respects this band and 10GHz. A serious structural weakness is that the 5760 narrowband segment is not aligned with the two Amateur Satellites allocations which have very little occupancy at present. It is pleasing that GB3FNM was recently cleared to operate at 5760.

10GHz – Two further inputs have been made to the Ofcom auction process – in regard of Spectrum Packaging and in respect of its potential temporary use for 2012 Olympics coverage. At present Ofcom are still reviewing inputs and other research prior to a final statement. Meanwhile it was particularly pleasing that after several years the GB3XGH and GB3CMS applications were approved. It is also hoped that additional benefits will accrue from the new Foundation level access to the band.

24GHz – Approval to move the remaining secondary beacon licences from 24192.xxx to the 24048 primary segment have been obtained for GB3ZME, MHK and DUN. In addition GB3MAN and GB3FNM have been newly licensed, which will support growing use of the band.

47GHz – A GB3FNM beacon has been approved in this band - a GB3 first.

75.5GHz – The February revision of the UK Amateur Licence implemented EU35 by permanently retaining the 75.5-76GHz band, including the top 125MHz section as Amateur Primary. This marks the successful end of a long standing effort.

134-275GHz+ It is pleasing to report new design activity underway on 134GHz and look forward to it coming to fruition. In the meantime we have been engaged with IARU and Ofcom in respect of potential bands above 275GHz in the context of both WRC-07 AI-7.2 and the Ofcom Licence-Exempt review. RSGB were pleased to be complimented on its 275GHz discussion paper at Vienna.

General Commentary

The new UK Amateur Licence introduced in Dec-2006 licence offers a number of benefits to the microwave community including 10GHz Foundation access, full mm-Wave Intermediate access, remote operation and clearer Beacon use. This was consolidated in the Feb-2007 revision when long term 75.5-76GHz access (as per EU35) was implemented; including 75.875-76GHz retained as full Primary - and the final withdrawal of the old 142GHz band from the frequency schedules

Despite spectrum issues, grassroots interest is high in the main user groups and a new Microwave Operating section in the RSGB 2007 Yearbook reflects this.

All three affiliated Societies with microwave interests seem to be pursuing innovative projects – UKuG has the MBE-21 Beacon engine and various other construction activities, BATC is expanding DATV work and Amsat-UK has transponder activity underway and is supporting Amsat-DL. and Columbus.

IARU-R1 Feb-2007 Vienna Conference

Despite it being an Interim conference, a strong input was made in conjunction with the VHF Manager to raise awareness and influence policy in C5. Adjustments to the IARU Handbook on Beacon were obtained whilst a number of papers were aimed at modifying Spectrum Requirements or raising awareness. Other outcomes were relevant to ATV contest logs and QSO definitions. It is unfortunate that Paper B16 which would underpin both Satellite and other spectrum realignment was approved, only to be later suspended by the EC. Actions picked up from Vienna include additional proposals on Beacons and a follow-on re 23cms band-planning under the B15 remit in time for the Region-1 conference at Cavtat in Nov 2008.

VHF/Microwave Spectrum Requirements

An action from Vienna to all Region-1 Member Societies was for comments on the IARU Spectrum Requirements document. In conjunction with the VHF Manager, a pragmatic and wide ranging review was carried out with inputs received from UKuG, Amsat-UK and BATC. The resultant (though non-public) RSGB input represented a thorough overhaul of the requirements and a strategy to achieve them - and this has recently been welcomed by the IARU C5 Chairman.

WRC-07

Pressures are expected to be very strong at WRC-07 under AI-1.4 for more IMT mobile spectrum to be granted in the lower microwave bands such as 3.4GHz (or 2.3 GHz in none-CEPT countries). In addition AI-7.2 offers an opportunity for new Amateur access to 275GHz+. In both cases IARU may need to significantly modify its approach to achieve greater success. Closer to home the RSGB input into Ofcom's AI-1.4 consultation had a degree of success in protecting 2.3GHz whilst raising awareness of our priority in developing 3.40-3.41GHz.

2012 Olympic Spectrum use

It is becoming clear that substantial (though temporary) amounts of VHF and Microwave Spectrum may be needed to support the UK treaty obligation for the 2012 games. Mobile camera video links in particular could affect amateur microwave allocations. So far one submission has been made in respect of the 10GHz band but several other bands are subject to review ahead of an expected Ofcom consultation later this year.

UWB – Ultra-Wideband

After a series of submissions by amateurs and others to CEPT, Ofcom have recently moved to implement the EU UWB solution. In its current form this has the 3.4, 5.6 and 10GHz amateur bands at much lower exposures than the US equivalent and is a largely satisfactory result. However vigilance needs to be retained as future alterations to this or its basis may undermine the situation.

Licence Exemption

Ofcom's new consultation on a framework for Licence Exemption is a significant strategic review and raises a number of issues – rights for Licence Exempt/SRD devices, proposed rises in the microwave noise floor (due to 'mis-application' of UWB limits), exemption at 275GHz+, exemption/access to 60GHz for short range links. It is clear though that early involvement of UKuG and RSGB in the background research for the review has proven to be helpful

VHF & Microwave Beacons

Beacons continue to be the focus of significant attention. After some delay a new 3-year Beacon NoV was agreed in early 2007 in parallel to Ofcom picking up the pace on application processing. The recent run of approvals has been one of the most successful in many years. Meanwhile support has been lent to the initiative launched after the RAL Roundtable in March for ensuring that existing beacons offer better service levels. Liaison has also been maintained with related parties including the VHF Manager, Propagation Committee and IARU-R1. Notable among this has been the support lent to the RAL VHF Cluster project for a 40/50/60/70MHz co-sited VHF system.

Batch-4: In Preparation

GB3FRS	1296.850	Farnborough	Site change
GB3COA	1296.tbc	Paisley	Changes

Batch-3: Submitted 11-May-2007

GB3RAL	40.050	Didcot	New Beacon
GB3RAL	60.050	Didcot	New Beacon

Batch-2: Submitted 16-Jan-2007

GB3RAL	70.050	Didcot	New Beacon	Approved Apr-2007
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Batch-1: Re-submitted 4-Sep-2006

GB3CMS	10368.960	Danbury	Power Change	Approved May-2007
GB3COA	1296.920	Paisley	Site Change	Withdrwn May-2007
GB3DUN	24048.890	Luton	Freq Change	Approved Apr-2007
GB3FNM	5760.920	Farnham	New Beacon	Approved May-2007
GB3FNM	24048.920	Farnham	New Beacon	Approved May-2007
GB3FNM	47088.920	Farnham	New Beacon	Approved May-2007
GB3MAN	24048.850	Rochdale	New Beacon	Approved May-2007
GB3MHK	24048.830	Martlesham	Freq Change	Approved Apr-2007
GB3XGH	10368.810	Rochdale	Revised Move	Approved May-2007
GB3ZME	24048.910	Telford	Freq Change	Approved Apr-2007

Regulatory Papers submitted

May-2006	Supported UKuG responses to Ofcom & EU on License exemption above 30GHz
Jun-2006	UK and IARU-R1 Responses to Ofcom 10GHz Auction
Aug-2006	Ofcom submission re 71-86GHz links inc 75.5-76GHz EU35 Implementation
May/Sep-2006	Submissions to CEPT on UWB
Dec-2006	Submission to CEPT re Report 100 on BWA in the 3.4GHz band
Mar-2007	Submission to Ofcom on WRC-07 Agenda Item 1.4 on future IMT Mobile Spectrum
Feb-2007	10GHz Auction Packaging
Apr-2007	10GHz Auction and 2012 Olympics use
Apr-2007	Submission to EU Commission on Galileo

Papers submitted to IARU-R1 Vienna Interim Conference C5, Feb-2007

B02	Bands above 275GHz
B13	Allocations at 3400MHz
B14	Microwave Spectrum Threats
B15	23cm Bandplan
B16	Amateur Satellite Service Spectrum
B17	Beacon data and specifications
C3	75GHz Spectrum update

Murray Niman G6JYB, June-2007