

Microwave Report 13-Jan-2007

This is my first report in my official role, having succeeded Mike Dixon G3PFR who I am pleased to see is being made RSGB Life Vice President in recognition of his contributions.

Bands

23cm – Key management issue had been increasing issues with PU links, and new concern re 23cm harmonic. Progress by Galileo is slow but still a concern. An initial review of the current bandplan has been undertaken. A paper has been input to Vienna for discussing a coordinated alternative based on 10MHz of usable bandwidth, notably for narrowband long range users in the 1296 area (which is ok for now). A UK change would be enabled by lower BW Digital ATV clearance of underused datcomms freqs. We need to engage with PUs more to understand their own plans.

2.3GHz - No change – 2320 is fairly quiet, whilst 2400+ is becoming untenable from QRM which affects Satellites and ATV. It was pleasing to see Ofcom withdraw its proposals for high power 2.4GHz licence-exempt systems after widespread opposition during the consultation stage.

3.4GHz – A coordinated effort is being made to promote 3.4GHz use by contests, Radcom, and Amsat-NA Eagle planning. It is important to promote take up of 3.40-3.41GHz allocations in CEPT to defend our position in the face of intense commercial pressures (as per Vienna paper B13)

5.7GHz - New CEPT UWB mask will be helpful on this band and 10GHz. Pressure on the 5.8GHz satellite section is expected from new Transport systems and Wimax use. Increasing numbers of 5GHz Wifi are starting to become available. So far there has been little enthusiasm by amateurs to activate the 5668 IARU reserve frequency as a precaution.

10GHz - It is hoped that the recent Foundation access will present new low cost educational and beginners opportunities for both narrowband and ATV communities. However the Ofcom 10GHz Auction is most unwelcome.

24GHz - More Car Radar is likely, especially in the 24.192 Secondary segment. Users are anxious for Ofcom to clear all remaining beacon moves to the 24.048 Primary section (esp GB3DUN)

47GHz - Quiet. GB3FNM will be the first GB3 Class UK Beacon if approved, assisting the Southern group of enthusiasts.

75.5GHz – Main effort has been on getting EU35 implemented. It is pleasing the CEPT and now Ofcom will now maintain permanent access. We have achieved Primary in the top 125MHz section, partly by trading in unwanted secondary 81GHz spectrum. Ofcom have updated IR2028 to reflect this and the main Amateur Licence schedule is due to be updated shortly. We should spread our success around other CEPT states, many of whom have lost access to 75.5 which is largely clear of Car radar.

Operating

The new licence offers a number of benefits to the microwave community inc 10G Foundation access, mm-Wave Intermediate access, remote operation and clearer Beacon use. 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. Group summary:-

UK Microwave Group: Membership buoyant and active. Pleasing to see interest in Beginners Workshops, and MBE-21 Beacon Development. There is a keen interest in beacons and contest/QSO procedures. Microwave awards transfer is in progress to UKuG from RSGB.

BATC: Some 23cm ATV repeaters are encountering PU interference. The BATC BGM near Cambridge was keen on spectrum-friendly DATV in 23cm and 70cm, as well as opportunities for simple 10GHz wideband FM ATV kits

Amsat – Whilst Cubesats are numerous on VHF/UHF, the larger projects are far more microwave orientated. Of particular interest in the microwave bands are:-

- Ofcom 10GHz Auction affecting Amsat-DL Phase-3E/5A – interaction is still ongoing. This is notable for IARU-R1 support and other international interest in this UK-specific issue.
- Amsat-NA Eagle Project features 23cm and 3.4GHz uplinks and 5.8GHz broadband data downlink. The former would be a sharing risk with Radars and the latter isn't allocated in the UK and Region-1. An initial approach to Ofcom needs to be re-submitted with a stronger case. Close liaison has occurred with the IARU Satellite coordinator Graham Shirville G3VZV over this exciting project. Amsat-UK are also building a new 2.4G transponder for the next SSETI satellite
- A list of new Amateur Satellite Service allocations has been generated which need to be raised through IARU for future WRC, inc 1240, 2390 (as well as 50MHz)

Microwave Beacons

Beacons have been the focus of much attention since Spring 2006. All active Microwave beacons have had their keeper data refreshed and a batch of applications was resubmitted in September along with a suggested framework for modernising the licensing process. Ofcom have been rather slow on this, not helped by the workload from the new Amateur licence . The applications are:-

Batch-1: Resubmitted 4-Sep-2006

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

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

IARU-R1 Vienna Interim Conference, Feb-2007

Papers submitted into C5, Dec-2006

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