

## Spectrum Forum Meeting – Saturday 9<sup>th</sup> July 2005

### Spectrum Report – Microwaves

I said last January (in the Spectrum Managers' Meeting), that “the situation on the amateur microwave bands remains fluid and the subject of considerable concern in the long term.” This remains the position, although there has been some positive progress, reported later.

Almost without exception, the Amateur Services are still under threat in all the bands from 1.3GHz to 76GHz, due to Primary User commercial or military pressures everywhere in the microwave spectrum. In almost all bands there continue to be sub-band restrictions, geographical restrictions or restrictions on unattended operation.

Little has changed, as UWB technology continues to develop.

The UK Microwave Group (UKuG) has continued to provide excellent support to the Society, both directly and via the Spectrum Forum, particularly with respect to the continuing debate on spectrum defence, and new, young, professional amateurs have contributed much, very positive, input. I would particularly like to record my thanks to Murray Niman (G6JYB), Peter Blair (G3LTF), and the UKuG for their very positive support over the past 18 months.

The role of Special Interest Groups is the subject of an Information Paper to the 2005 IARU R1 Triennial Meeting (Committee C5) later this year.

#### **1.3GHz band**

In the 1.3GHz band, it is confirmed that the Galileo GPS system (30x50W satellites) will use frequencies in the amateur band. This is the subject of an Information Paper to the 2005 IARU R1 Triennial Meeting (Committee C5) later this year.

Objections by Primary users continue to delay decisions on beacons and ATV repeaters, although there are some signs of progress.

#### **2.3/2.4GHz band**

At 2.3/2.4GHz, at the moment, the scenario is still quiet: there appear to be few problems between satellite operation and WLAN activities at 2400MHz, although if the power limit on SRDs is raised (probable, in view of commercial pressure from the “big players”), then there may be considerable problems for the Amateur Satellite Service.

#### **3.4GHz band**

Recently proposed as part of the 3 -10GHz spectrum for UWB applications, many of which are “domestic” in nature and, therefore, likely to affect urban locations. Some of these, amounting to millions of units throughout EU are listed below.

(PVP/PVR/Personal movie players; Digital Camera; MP3 players; Internet Connections (tablets); Peer-to-peer file sharing; External Hard-drive for backups; HDTV streaming from set-top boxes; Remote Monitors; Business Video projectors; Videophones, Scanner; Laser Printers; PC speakers; Video projectors and surround speakers for home theatre; Video Game Consoles; Mice/tracking ball/pointers; Keyboards; Joysticks; Headset; PDAs for file downloads (calendar/email synchronization)

In this respect, it is encouraging that we are beginning to see reservations from satellite operators with regard to the potential interference scenario of UWB implementation.

### **5.7GHz band**

No change. Subject to the “invasion” by UWB devices, as mentioned above.

Roll-out of WLL in the 5.7GHz band is proceeding, and its use may still necessitate a move from this Amateur international frequency (5760 – 5762MHz) to the “reserve” frequencies (around 5668MHz) which have been suggested for some years in IARU R1. However, this is of little consolation to the Amateur Satellite Service who may not be able to move quite as easily as the Amateur Service.

### **10GHz band**

No change. Still subject to restrictions and to the “invasion” by UWB devices.

### **24GHz band and above**

No change in the 24GHz band situation. Subject to UWB Vehicle SRR until (estimated) 2020, despite the strong technical objections by the Amateur services, the Radio Astronomy service and other users. This has resulted in the imposition of “safeguards” near sensitive sites and UWB SRR remains an unprotected service, although there are a number of (legal) points which remain to be resolved by Ofcom. Discussion continues.

The 77 -81GHz band will be phased in for UWB Vehicle SRR, as 24GHz is phased out.

Response to Ofcom “consultation” has gone forward, and been accepted, with the result that Ofcom have publicly stated that the 75.5 -76.0GHz band will remain available to the Amateur Services (at least in the UK) after 2006 and it should be possible to regain Amateur Primary status in this segment. This is the subject of a late-submission Paper to the 2005 IARU R1 Triennial Meeting (Committee C5) later this year.

Clashes of interest in the bands above 76GHz are not seen as serious at this time, since the “re-use” distance of the higher mm bands should allow effective sharing without too many interference problems, although this may change with the rapidly evolving technology.

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