

Spectrum Forum Manager's Meeting 9th June 2007

HF Manager's Report

1. 136kHz

Experimental work is still ongoing on the 136kHz band, though some UK amateurs have had to limit or curtail activity on account of continuing interference problems from an additional transmitter, located at Rugby, in the NW Europe LORAN-C chain. Ofcom has agreed to investigate with Trinity House interference to the 136kHz Amateur bands from LORAN, as they note that Radionavigation band finishes at 130kHz in this region.

WRC07 Agenda item 1.15 specifically is to consider a secondary allocation in the ITU Radio Regulations to the Amateur Service in the frequency band 135.7 – 137.8kHz. Whilst there is some opposition to the proposal IARU is optimistic.

2. 500kHz

Following continued discussion with Ofcom on the RSGB proposal of September 2004 for experimental access to 500kHz, Ofcom agreed to offer NoVs, for one year from March 2007, against suitable Special Research Permit applications. Currently, there have been 35 NoVs issued and around 17 stations active. One station is reported not to be active on account of interference from the house's ADSL installation.

The ERP limit of –10dBW limits propagation to within the UK during the daytime, with longer distances being achieved at nighttime. Deep fading of nighttime paths means that QRSS is less reliable. Some concern has been expressed by NoV holders that without an increase in ERP experimentation may possibly stagnate; more power, either 0 or 10dBW, would allow transatlantic and near-continent paths to be explored. This would provide more incentive to experiment on aerials. As far as is known no interference to primary user services has resulted, nor have any RFI problems, due to the transmissions, been reported.

The RSGB is supporting and providing some leadership within the IARU 500kHz Working Group to secure IARU & national administration support for either raising the matter at WRC-07 under Item 1.14, or getting the issue on the agenda for WRC-10/11. The latest position is that CEPT may propose a footnote to the Radio Regulations that would allow, if agreed at WRC07, National Administrations discretion to consider services other than the Maritime Mobile service access in this area of spectrum.

3. 5MHz

Ofcom has issued currently 930 NoVs for 5MHz, and increase of 170 in the year.

The experimental transmissions on 5MHz of the GB2RS news service, by G3LEQ, G4HPE, GM4NTL and M0AFJ, has proved to be very popular with listeners and NoV holders across the UK. Following the news broadcast the newsreader forms a net and

exchanges SINPO and QTH Locator reports. Overall the combination is a valuable part of the 5MHz Experiment as it possibly involves the greatest number of NoV holders than any other 5MHz activity, and uses newsreaders purposely scattered geographically across the UK.

The 5MHz Experiment continues with around 12,000 logs of QSOs and nearly ½ million reports for the three 5MHz propagation beacons. Around 185 callsigns appear in the database with more than 10 QSOs, 26 with more than 100 QSOs, and 32 stations have submitted logs with more than 100 QSOs. One of the issues is the reduction in the use of SINPO reporting, which is essential for the Experiment. The issues are being addressed with an article proposed for RadCom shortly. Whilst the 5MHz database is developing well a survey of the data quality has shown that the error rate in some of the entries is unacceptably high. This is partly being addressed by the introduction earlier this year of a computer based logging program, 5MHzLog. This carries out formatting and other checks as the log data is keyed in, thus eliminating many of the errors. The basic algorithms used in this logging program are now being developed in a separate program that it is intended will identify and correct many of the errors within the data that is already held.

There are currently no issues with the cadet involvement; a re-launch within the Air Cadets is planned to promote the experiment.

RSGB has supported IARU Region 1 in its quest to gain a small band, on a secondary basis, at 5MHz within a wider review of the spectrum between 4 and 10MHz (Agenda item 1.13). IARU sees this as an un-related matter their requirement for 7MHz expansion. CEPT are currently proposing that a footnote be added to the Radio Regulations that would provide National Administrations discretion to make allocations in the range 5260-5410 kHz to the Amateur service.

4. 7MHz

WRC07 Agenda item 1.13 deals with the review of allocation to services in the band 4 to 10MHz. Whilst this item excludes the allocation of the band 7.0 – 7.2MHz to the Amateur service our interest remains to extend the 40m band to 7.3MHz. There are strong pressures emerging in CEPT's pre-conference planning that indicate that progress on this IARU requirement will be difficult.

5. HF Band Plan compliance

This long-term source of concern to some has re-surfaced again, partly on account of congestion on 40 and 80m at this stage of the sunspot cycle. It is most pronounced when major contests, and possibly rare DXpeditions, tend to cause the Band Plan to be ignored. Matters should ease somewhat with the re-planning of 40m in 2009 as currently the only solution for those operating below 20m is to use 30m, which of course is not available for SSB operation. RSGB has been active in recent IARU Region 1 Conferences to improve the guidelines for Contest Organisers to encourage more contests to use contest-preferred segments and where possible to harmonise contests. It is not thought that RSGB contests are particularly to blame in this respect, as the problem is really most apparent with the increasingly popular contests such as CQWW DX and WPX, ARRL International DX, etc. However, the issue remains under review between the HF Manager, the Spectrum Director and the Sports Radio Director.

A further issue concerning the lower HF bands – 40m, 80m and 160m – is the provision of bandwidth for some digital modes. This has been highlighted by the GB2RS News Service finding difficulty using MT63 for such transmissions. This is just one example of pressure for more spectrum from the growth in popularity of digimodes, and could ultimately put pressure on the current boundaries of the bandwidth-defined band-planning segments.

6. Deliberate Interference

Whilst the problem of determined disruption of Amateur activity, typically but not exclusively DXpedition operation, has been a matter on which the RSGB has been asserting its views and trying to build consensus at IARU level since 2002, the recent N8S and BS7H DXpedition operations has caused much concern within the DX community. RSGB has been successful with other National Societies to agree the need for better education and training on operating practices and ethics. However, the RSGB view is that whilst this is necessary to reduce the instance of poor operating it will do little to address the more serious elements that are determined to disrupt the hobby. An RSGB paper on this matter was not approved in total at the IARU Region 1 Interim Meeting earlier in the year; the part that was not carried proposed an international approach to setting up an HF monitoring system to locate the main culprits. A review is currently underway that is expected will result in a more comprehensive paper, for the forthcoming IARU Region 1 Conference in 2008, that will address the key objections to the proposal put forward earlier this year.

7. Euroloop

My previous report to the Spectrum Forum outlined the consideration that CEPT has been giving to the spectrum engineering aspects of a proposed HF spread-spectrum system, called Euroloop, which is part of the European Railway Traffic Management System. Acting on behalf of IARU Region 1 representation was made at most of the CEPT SE24 meetings on the matter, and the effect of ionospheric propagation and signal aggregation was modelled and verified through practical experiment.

The final position reached was a 14dB lowering of the requested H-field level. Although Euroloop is unlikely to be installed within the UK, the final levels that have been agreed mean that we will be unlikely to get any interference from installations within Europe, except under very exceptional circumstances during the very peak of the sunspot cycle. The lower level that was agreed, will assist our continental “cousins” by reducing the area around the railway track where the noise floor will be increased by the system.

Considerable support was given by RSGB and DARC during the public consultation, which helped to secure the final position.

8. HF Beacons & Internet Gateways

The RSGB presented a paper, that was approved, at the IARU Region 1 Interim Conference that clarified the general position on unattended beacons below 20m. Apart from some special exemptions National Societies within Region 1 will not support such beacons on the bands below 20m. The proposal goes forward for ratification by the full Conference, when it meets next year.

Support and advice has been give to several requests about un-attended HF beacons, including that given to the Poldhu Radio Club in their application for an un-attended 160m beacon to investigate Guglielmo Marconi's claim that he was the first to receive a wireless signal across the Atlantic.

Advice has been given on the application for a Special Research Permit/NoV to study the technical and operational challenges that an Internet/HF Speech gateway system poses for Emergency Communications.

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