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Andover Radio Amateur Club
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Responses to specific questions.

Q1: Are there any other major medium- to long-term spectrum management issues that this review should be considering? Are there any other significant technological or market developments that this review should be aware of when developing its thinking?

We are not able to comment as far as Amateur Radio is concerned.

Q2: Do you believe it is useful to publish a compendium of issues? How frequently should it be published? What information should be included?

Yes – Quarterly. Everything likely to impact upon any existing users of spectrum in our case Amateur Radio allocations.

Q3: Are there any other issues of sufficient significance to merit mention in this document?

See attached submission.

Q4: Are there important lessons to be learnt from experience in other countries that is not addressed here?

Not aware of any at present although there have been some worrying proposals for inappropriate technologies such as PLT.

Q5: Do you agree with Ofcom’s intent to maximise the use of trading and liberalisation?

Amateur Radio is not a commercial activity and its allocations should be left out of trading arrangements.

Q6: Are there other areas, apart from those identified above, where trading and liberalisation should be restricted? Are there areas identified above where you believe the trading and liberalisation could be fully implemented?

So long as the Amateur spectrum is left out and see Note 3 in the main body of the submission.

Q7: Do you agree with Ofcom’s approach to providing spectrum for licence-exempt use?

Yes, so long as there are no interference issues with the amateur service.

Q8: Is Ofcom’s proposed methodology to estimate the amount of spectrum provided for licence-exempt use likely to deliver the right results?

Not for Radio Amateurs to comment.

Q9: What is the appropriate timing and frequency bands for making available any additional spectrum needed for licence-exempt use?

Not for Radio Amateurs to comment.

Q10: Do you agree with Ofcom's longer term proposals for spectrum trading?

Provided the amateur allocations are excluded - no comment.

Q11: Is the approach set out here, and in Annex H, for developing technology-neutral spectrum usage rights appropriate? Are there alternatives?

Providing that, as stated in the Spectrum Framework Review, "at the same time neither reducing the efficiency with which spectrum is used or (increasing) the interference suffered by others."

Q12: Should Ofcom do more to resolve interference?

Having set the framework, Ofcom must be responsible for resolving any systematic interference resulting from approved systems. This we believe is OFCOM's prima facia task.

Q13: To what extent should Ofcom intervene in promoting innovation?

It is not Ofcom's function to promote innovation but to respond to it positively in an independent and unbiased way.

Q14: Do you agree with Ofcom's proposed approach to harmonisation?

So far as Amateur Radio is concerned, International harmonisation can be shown to be necessary right across the spectrum. (See Note 2).

Q15: Can you foresee any problems with the proposed approach to harmonisation other than those listed above?

It has been the experience of the Radio Amateur community that harmonisation is highly desirable as equipment, systems and signals frequently cross international boundaries.

Q16: Do you agree with Ofcom's proposal to continue with division by frequency as the primary method of dividing the spectrum?

Yes.

Q17: Is Ofcom's approach of not Intervening to mandate entitlements in time appropriate?

Not applicable to amateur radio so far as we are aware.

Q18: Do you agree with the RIA?

No – We consider harmonisation to be an essential feature of Ofcom's spectrum management.

Main body of submission

Amateur Radio is an International, regulated, science based hobby which offers a number of advantages to society including educational and social benefits. In return for achieving qualifications that assure their competence, radio amateurs are given the privilege of using various small segments of the spectrum with equipment that is not type approved and in many cases may have been designed and constructed by themselves. This is a very clear and necessary distinction between Radio Amateurs and other users of the spectrum such as Private Business Radio and Marine Radio users. Clause 1 Paragraph 1 of the UK amateur radio licence says "*The Licensee shall use the station for the purposes of self-training in communication by radio telecommunications which use (without limiting the generality of the foregoing) includes technical investigations.*" For more information on amateur radio, a video has been prepared by the national society the Radio Society of Great Britain and this seven minute presentation can be viewed on-line if you have access to "broadband" at:-

<http://www.essexamateurradio.org.uk/prehighpres.htm>

In order to maintain a vibrant amateur radio community it is essential that the present privileges are largely maintained right across the spectrum. The different aspects of amateur radio include:- self training to various levels, social and public service, educational and technical investigations which often lead to new developments in communications. (See Note 1). For such developments to continue allocations are required on all the present bands. Where rationalisation is needed amateurs could trade some spectrum for smaller, preferably exclusive and internationally co-ordinated bands in the interest of ongoing developments by amateurs.

Many of the interesting investigations undertaken by amateurs involve weak signal modes. The assertion that "Amateur receivers already work in the presence of a degraded noise floor" is not true in the microwave spectrum proposed for UWB. Much work is being done at levels limited mainly by ground noise.

Proposals to allow "Cognitive access" to our frequencies would destroy our ability to do useful work of this kind. Cognitive mechanisms are unlikely to pay attention to our pre-existing low level signals and thus regard our allocations as clear to use.

With proposed Ultra Wide Band systems that raise the noise floor, the "Genie" will be out of the bottle and unable to be put back once such schemes are approved. The onus should be heavily placed on the commercial interests proposing such schemes to prove beyond reasonable doubt that they will not adversely affect other services.

Firm regulation is essential to amateur radio especially because of its experimental and self training elements for which permission to use non "type approved" equipment is a vital part. If Ofcom wish to delegate this regulation it would make a great deal of sense to explore the possibility of getting the national society, the Radio Society of Great Britain to administer the amateur bands on their behalf in much the same way as the MoD manage their parts of the spectrum.

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Note 1

A good, current, example of outstanding development in amateur radio is WSJT by Joe Taylor, a Nobel Physics Laureate (US call-sign K1JT).

(See <http://pulsar.princeton.edu/~joe/K1JT/index.htm> for more details)

Note 2

Microwave bands do require international harmonisation because these frequencies are used for satellite and Earth-Moon-Earth communications on a worldwide basis. Also current UK microwave distance records for terrestrial operation are:- 1.3GHz - 2617Km, 2.3GHz - 1083Km, 3.4GHz - 980Km, 5.7GHz - 1244Km, 10GHz - 1275Km, 24GHz - 391Km, 47GHz - 203Km. Thus all these bands have the potential to cross international boundaries even from terrestrial stations. Indeed it is a fact that from the east and south coasts of the UK, international, cross border, propagation is a daily occurrence on the microwave bands.