

OFCOM Spectrum Framework Review Document AMSAT-UK Response

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?

There is a need to maintain scope for future innovation. Particular attention should be paid to technologies employing waveforms that generate large bandwidths. By taking up most of the spectrum they could inhibit future development.

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

Compendium of documents specific to users and applications should be published quarterly. For example, frequency allocation lists must be much more informative and interactive to allow identification of user intentions and applications and must encompass EU issues.

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

The Consultative Document places the future of a National Asset, namely Amateur Radio, in jeopardy. In particular the following are of great concern:

- a) Proposal to withdraw from amateur licencing. Withdrawal of Amateur licences will generate a "free for all" on our present bands and undisciplined attempts at communication could result in abuse and denial of facilities. A similar rationale to licencing aeronautical radio (Section 4.4.1) should read across to Amateur Radio; the same importance and intent applies. There is no reason why annual licence renewals should continue. The issuing of a once off Operators Licence valid for life is sufficient.
- b) The disregard of existing international agreements such as those in force with the ITU and EU can only result in disruption to international amateur communications.
- c) The suggestion that cognitive radio could potentially operate without warning on top of Radio Amateur stations is a major hazard to our operations.
- d) The deployment of Ultra Wide Broadband transmissions would constitute a major source of electronic pollution. If UWB goes ahead it should be restricted to 6-9.5 GHz
- e) The proposal to simplify access to Amateur Radio after having agreed the new Licence structure.

Amateur Radio in the United Kingdom performs the following National and International functions.

1. It provides a source of interest and expertise, which encourages and supports careers in electronics industries and services.
2. Amateur Radio operates and maintains National and International emergency communications networks for disaster relief viz. Mexican and Californian earthquakes, Lockerbie air crash, East Anglia floods, rescues of ocean-going yachts-people, Balkans uprisings and civil wars, New York's September 11th, and the Tsunami aftermath. Also its application to assist in countering the effects of a major terrorist attack should be recognized. There are some 60,000 licenced Radio Amateurs in the United Kingdom.
3. Amateur Radio provides a pool of telecommunications, computer and electronic expertise, which can be readily drawn upon in times of national emergency.
4. The Amateur Radio fraternity bridges cultural, political and ethnic boundaries. Its various modes of operation assist in overcoming language barriers and contributing to international understanding.
5. Amateur Radio participants provide one of the World's largest R&D facilities (unpaid) which contributes to the many fields of communications viz. propagation, new systems of transmission such as HF Digital Voice, meteor scatter, data modes and satellite communications.

If OFCOM is to embark on a revision of the Amateur licence structure we suggest that the entry-level licence, Foundation, be given full access to the Amateur Satellite Service. For reasons we do not understand there is currently an anomaly where Foundation licence holders are allowed to transmit on Amateur Satellite Service frequencies but are not permitted to carry out communications through Amateur Satellites. This is unnecessarily restrictive. All Amateurs should be permitted to communicate through Amateur satellites.

Q.4 Are there important lessons to be learnt from experience in other countries that is not addressed here?

Benefits are said to have accrued to other countries but in reality there is little hard data from countries that are comparable with the UK.

Q.5 Do you agree with OFCOM's intent to maximize the use of trading and liberalization?

No.

Q.6 Are there other areas, apart from those identified above, where trading and liberalization should be restricted? Are there areas identified above where you believe the trading and liberalization could be fully implemented?

The bands current allocated to the Amateur Radio Service and Amateur Satellite Service should not be subject to trading. These bands are the spectrum equivalent of National Parks and should be protected from unwarranted development.

Q.7 Do you agree with OFCOM's approach to providing spectrum for licence-exempt use?

Allocating just 7% for licence-exempt use seems an unnecessary restriction, however, the existing Amateur Radio Service and Amateur Satellite Service allocations should not be used to provide additional licence-exempt spectrum. There is spectrum available between 2.5-2.69 GHz. Consideration should be given to raising the upper limit of the current 2.45 GHz licence-exempt band by another 50 MHz.

Q8. Is OFCOM's proposed methodology to estimate the amount of spectrum provided for license-exempt use likely to deliver the right results?

OFCOM's conclusions are a considerable underestimate of the requirement for licence-exempt spectrum.

Q.9 What is the appropriate timing and frequency bands for making available any additional spectrum needed for license-exempt use?

No comment.

Q.10 Do you agree with OFCOM's longer term proposals for spectrum trading?

It would be useful to audit current programmes to arrive at conclusions.

Q.11 Is the approach set out here, and in Annex H, for developing technology-neutral spectrum usage rights appropriate? Are there alternatives?

Technology-neutral spectrum rights are the correct approach given the rate of new developments in communications technology.

Q12. Should OFCOM do more to resolve interference?

Yes, OFCOM's withdrawal from such issues should be revised. The enforcement of Regulations especially with respect to interference issues should remain an OFCOM responsibility.

Q.13 To what extent should OFCOM intervene in promoting innovation?

Radio Amateurs have been responsible for many new developments in communications. OFCOM should intervene to ensure that Interference Free spectrum is available for both the Amateur Radio and Amateur Satellite services.

Segments of Interference Free spectrum are required within the following ranges:

1.240 – 1.325 GHz

2.310 – 2.450 GHz

3.400 – 3.475 GHz

5.650 - 5.850 GHz

10.000 – 10.500 GHz

Radio Amateurs specialise in the reception of very weak signals and require protection from degradation of the noise floor by technologies such as UWB and Cognitive Radios.

There are many examples of innovative weak signal work carried out by Radio Amateurs. The Amateur Radio Mars Orbiter due for launch in 2007 will transmit data from a satellite in Mars Orbit for Radio Amateurs on Earth to receive. Its signals will only be receivable by Amateurs in the UK if the Amateur Satellite Service allocation is noise free. Earth-Moon-Earth communications, which provide worldwide coverage, take place in all the Amateur Radio Service allocations above 1 GHz. They can only be successfully carried out in interference free allocations.

Radio Amateurs have built more than 50 satellites; the signals they produce are typically only about 10 dB above the noise floor. Even a small increase in noise level would put in jeopardy the valuable scientific and experiment work carried out by Amateurs using these satellites.

The demand from UWB interests to use 3-10 GHz is excessive. Their requirements would still be met if they were restricted to 6-9.5 GHz.

Q.14 Do you agree with OFCOM's proposed approach to harmonization?

Harmonisation has to be achieved with the rest of the EU and the ITU. There must not be a UK unilateral approach.

Q.15 Can you foresee any problems with the proposed approach to harmonization other than those listed above?

See our answer to Q.14.

Q.16. Do you agree with OFCOM's proposal to continue with division by frequency as the primary method of dividing the spectrum?

Yes.

Q.17 Is OFCOM's approach of not intervening to mandate entitlements in time appropriate?

No comment.

Q.18 Do you agree with the RIA?

The listed approach from risk litigation is not rigorous.