



Formal response from the Radio Society of Great Britain.

September 2005

1. About the Radio Society of Great Britain

The Radio Society of Great Britain (RSGB, www.rsgb.org.uk) is the recognised national organisation that represents the interests of the UK's 60,000 licensed radio amateurs. Formed in 1913, The Society is recognised as one of the leading organisations in the world in the field of amateur radio. It collaborates with its fellow national societies via the International Amateur Radio Union (IARU).

2. What is Amateur Radio?

Amateur radio is a science based technical hobby enjoyed by over three million people worldwide. Amateur radio is recognised by the International Telecommunication Union (ITU) as a service and is listed in the ITU Radio Regulations as the Amateur Service and the Amateur-Satellite Service. The Amateur Services share much of their spectrum with other users, particularly in the frequency ranges covered by the WAPECS concept.

Amateur radio has a tradition of scientific investigation and experimentation which continues to the present day and radio amateurs have been at the forefront of almost all technical innovations in the field of radio communications. For example UK Amateurs, who have designed and built a 2.4GHz Amateur Service transponder for the ESA Satellite SSETI-Express, have contributed to this response whilst in Plesetsk assisting final test prior to launch.

The amateur voice, packet and television repeater network, and leading edge modulation methods such as PSK31, are some of the many examples of spectrum efficiency and leading edge design and implementation. Amateur systems inherently employ narrow bandwidths due to the modest allocations and crowded nature of many of the available bands, and utilise receivers that often need to operate very close to the noise floor.

One important aspect of Amateur Radio we would highlight is its role for emergency communications, which complements the Public Sector Services. For example, in the UK the Radio Amateur Emergency Network (RAYNET), established for over fifty years, is working with the CSIA unit of the Cabinet Office in response to the 2004 Civil Contingencies Act. Its groups provide cover at public events across the country every week of the year in support of those organisations named as the 'User Services' in the UK Amateur Licence [1]. Amateur Radio plays a valuable role in disaster zones when commercial communications infrastructure fails, such as the Asian Tsunami and most recently following Hurricane Katrina.

3. WAPECS Response

The RSGB welcomes the opportunity to make this submission to the EU Radio Spectrum Policy Group (RSPG), and would be pleased to provide any further information or amplification of any aspect of this response.

Permission is granted to publish a copy of this response on the RSPG website.

Q1. *Do you agree with this operating definition of WAPECS? Do you consider that the WAPECS concept should include spectrum intended for private, as well as public, applications?*

and

Q2. *Do you consider that the term “platform” should be more closely defined?
If so, what definition do you propose?*

For convenience, we have reproduced the RSPG WAPECS concept diagram in the Annexe and would highlight that a number of the bands overlap allocations to the Amateur and Amateur Satellite Services.

Our first concern is that the WAPECS concept whilst undoubtedly forward looking, at times seems too radical. A more gradual and evolutionary approach that offers long term continuity may attract greater support. WAPECS implies a higher prioritisation of spectrum rights over other services that may share the same spectrum. Footnote-1 in the consultation¹ that refers to the International Radio regulations should therefore be fully incorporated within the definition to add clarity and to re-assure other spectrum users as follows:-

“Wireless access platforms for electronic communications services (WAPECS) are the platforms used for radio access to electronic communications services regardless of the technology they use, or the bands they operate, **whilst fully recognising the obligations of the International Radio Regulations.**”

The Framework Directive as quoted in footnote-2 of the consultation² also leaves it unclear as to whether non-commercial services are included. Given that spectrum is often shared (and is likely to be more so in future), the definition needs to be carefully reviewed. It needs to consider the distinction and overlaps between public vs. private, operators/vendors vs. users, commercial vs. non-commercial sectors, as well as ongoing convergence for some services. In this context the Amateur Services support wider public, social and education goals but are non-commercial in nature.

Another factor is that a single band/service may be shared between varying sectors and applications. Good instances of this are Wifi bands that are license-exempt (and thus non-protected), which makes distinctions and prioritisation near impossible.

Q3. *What, if any, constraints should there be on the provision of services using spectrum primarily in the broadcast domain?*

Broadcasting is generally distinguished by very high power long-range services that need to be internationally co-ordinated. Spectrum use may also be subject to Public Service, Digital Switchover Policy and Coverage obligations that may add to spectrum constraints. Terrestrial broadcasting in the VHF/UHF bands needs to take far more account of long range (and occasionally anomalous) propagation than, for example, short-range low power microwave WLANS.

We would highlight that a recent published Spectrum Demand Study [2] forecasts the Broadcast sector will place the highest demands on spectrum – more so than FWA/WLAN/Mobile services

¹ Recognising the obligations on Administrations under the ITU Radio Regulations

² The Framework Directive defines “electronic communications service” as “a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting...” However, the Framework Directive also covers electronic communication networks, which are not limited to commercial use.

Q4. *What specific rules should be introduced or maintained to safeguard the delivery of Services of General Economic Interest (SGEI) in the future? Is it most appropriate to deal with these issues through the regulation of spectrum, or through other instruments such as competition law or state aid policy?*

Whilst WAPECS is aimed largely at market based services, we note that no corresponding initiative exists for SGEI which may include Public Safety/Emergency Services, and Scientific, Educational and Recreational use. The latter services (which include the Amateur Services) all have significant social value, but are unsuited to market mechanisms, and rely on spectrum regulation for their protection. State Aid and Competition Law do not seem to be naturally suited to redress the balance.

We note that the RSPG has been considering a paper on Scientific Spectrum use, in isolation from other activity. Should it ever emerge as a policy document, it would be in the wake of WAPECS, and other SGEI would be no better off.

We would therefore advocate a more balanced policy that includes full safeguards for all SGEI within the current WAPECS process.

Q5. *How do you think changes in spectrum policy will impact on the requirement for standardisation? What policy will best ensure the timely availability of standards?*

Whilst there have been some notable EU Standards successes (such as GSM), all too often ECC/CEPT finds itself struggling to implement/mitigate imported standards. These are often not optimised for a crowded EU Spectrum environment – UWB being a case in point. We also note that difficulties can arise between ‘Technology Neutrality’ and ‘Harmonised Standards/Spectrum’. It is the latter that tend to lead to economies of scale, and consumer benefits. We also observe greater (sometimes ad-hoc) efforts at interoperability in the IEEE and other bodies, than in European ones.

Referring back to Q4, a framework which fosters EU Innovation and Standards Development, which is more open (including timely access for and consultation with SGEI), and leads to timely and successful exploitation needs to be developed.

Q6. *Are there any other challenges that the RSPG should consider?*

A more crowded spectrum raises issues of interference and interoperability. More information, measurements and data-sharing are needed to inform reliable assessments.

In some cases harmonised narrow (e.g. 5-10MHz wide) Primary Exclusive allocations at microwave frequencies may actually result in cheaper equipment and more efficient spectrum use than needing to regulate/design for wider shared Secondary Allocations. We believe this could be the principal viable future path for the Amateur Services, which use weak signal fluxes in 1-10GHz bands and above. It may also be appropriate for some modest range/data-rate commercial applications as well.

This issue is particularly acute for the Amateur Satellite Service, which has small Secondary Allocations at 1.2, 2.4, 5.6 and 5.8GHz. These are vulnerable to interference especially on the earth to space direction where unwanted signals will be re-radiated by our satellites across what can be very wide geographical area.

Q7 *What is your view on the long term policy goals mentioned above and more specifically on how to achieve the right balance between “minimising and harmonising constraints” presented under point 9?*

The Amateur Services are highly reliant on harmonised allocations (and bandplans within them) so we do not favour policies that result in spectrum fragmentation. This applies to Amateurs directly and other services with which we may have to coexist. Any policy adopted should include careful control and monitoring of (potential) interference issues.

Q8. *Are there any other long term policy goals that the RSPG should consider?*

The lack of WAPECS would not seriously impede development by services, which are already financially strong. Referring back to our answers for Q4/5/6, the RSPG should prioritise spectrum policy development for those areas that may be weaker, but are of significant social value.

Q9. *Do you think that these steps form an adequate basis for achievement of the European objectives in this area? Are there any other steps that are required?*

We are concerned at further rapid changes to spectrum regulation in bands we share. The WAPECS concept is quite new and little known in the broader EU. The consultation document makes little reference to established ITU/ECC/CEPT processes, nor does it currently appear to incorporate safeguards for SGEI including the Amateur Services. Objectives and benefits need to be clarified versus the status quo. A risk or impact assessment process needs to be incorporated similar to the policy that the UK Regulator Ofcom has adopted (and recently refined) [3]. Further development of policy in this area needs to be subject to full public consultation.

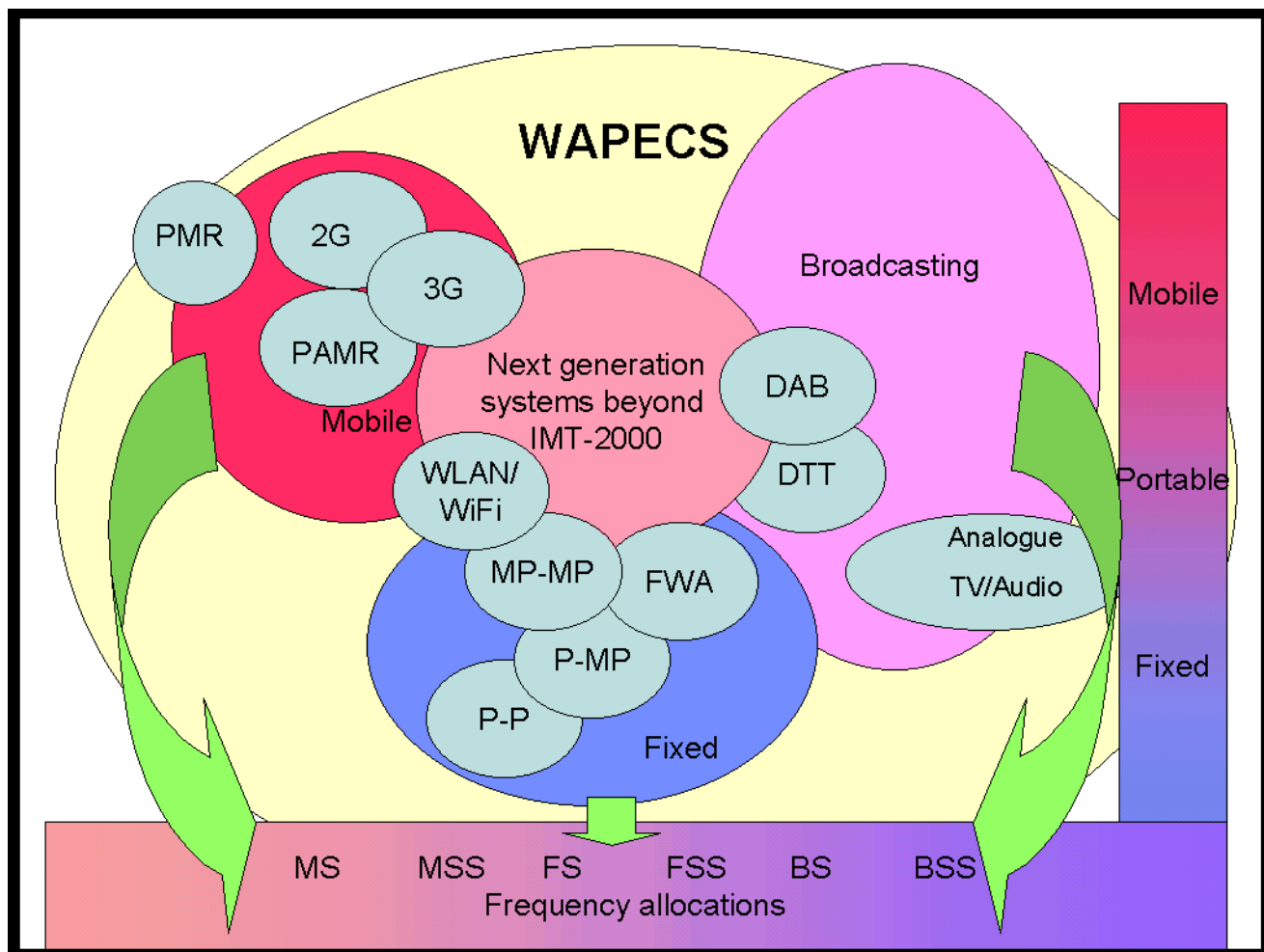
Therefore, we advocate a slower more transparent implementation in order to give time to refine the concept, assess the bands affected in more detail, add balance/safeguards and gain wider recognition and acceptance.

RSGB September 2005

REFERENCES

- [1] Ofcom BR68 Amateur Radio Licence, Paragraph 12(1) – The latest list of ‘User Services’ comprises:- Any UK Police force, Fire & Rescue service or Ambulance trust, HM Coastguard, Local Authority Emergency Planning Officers, any health authority, any government department, British Red Cross, St John Ambulance, St Andrew’s Ambulance Association, WRVS, Salvation Army, and any utility service.
- [2] “Spectrum Demand for non-Government Services 2005-2025”, Analysys & Mason, 1-Sept-2005, The report was commissioned by the UK Treasury Independent Audit of Spectrum Holdings (IASH) and is available from www.spectrumaudit.org.uk
- [3] “Better Policy Making”, Ofcom’s Approach to Impact Assessments, issued 21st July 2005, and effective from August 1st 2005

Annexe - The Wapecs Concept



Abbreviations			
2G	Second generation mobile	MP-MP	Multipoint to Multipoint fixed links
3G	Third generation mobile	MS	Mobile Service
BS	Broadcasting Service	MSS	Mobile Satellite Service
BSS	Broadcasting Satellite Service	P-MP	Point to Multipoint fixed links
DAB	Digital Audio Broadcasting	P-P	Point to Point fixed links
DTT	Digital Terrestrial Television	PAMR	Public Access Mobile Radio
FS	Fixed Service	PMR	Professional (Private) Mobile Radio
FSS	Fixed Satellite Service	WAPECS	Wireless Access Platforms for Electronic Communications Services
FWA	Fixed Wireless Access	WLAN	Wireless Local Area Networks

NOTE: WAPECS Bands that overlap the Amateur and Amateur Satellite Services are SRDs at 430MHz, along with WLANS at 2.4, 3.4 and 5.7GHz