

Response to Draft RSPG 2010 Work Programme

Version 1.0

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Vodafone welcomes comments and is happy to discuss the contents of this submission. Please contact Andy Hudson, Head of Spectrum Policy on +44 7786 250119 or at andrew.hudson@vodafone.com

Key Vodafone comments

Vodafone welcomes the opportunity to comment on the draft Radio Spectrum Policy Group (RSPG) 2010 Work Programme and is generally supportive of the work items proposed.

We believe it is important to develop an overall spectrum strategy which will help to drive the uptake of mobile broadband, especially in rural areas, encourage innovation and secure long-term investment in the industry.

There are several areas which we believe will help underpin the development of the multi-annual policy programme by the Commission:

- Vodafone believes that it would be helpful for the RSPG to develop a detailed view of the overall demand for spectrum. We need to find additional spectrum in order to support the greater demand for mobile data services. At the same time the migration of video services to NGA networks and satellite will, in the long term, reduce demand for spectrum from other users.
- The identification and release of spectrum should be considered as a multi-stage process, where future steps are anticipated and explicitly included in the roadmap. Decisions made today can either create or eliminate opportunities for the future. A more strategic approach is required to address these interdependencies.
- The issue of licence renewal for mobile operators will become increasingly important as the original GSM licences approach their expiry dates. The uncertainty this generates may deter further infrastructure investment, and could potentially result in disruption for customers. The legal framework for licence renewal is relatively ambiguous and the approach taken by national regulators has differed significantly. It would therefore be helpful for the RSPG to debate the options in order to inform decision-making.
- Vodafone believes that the RSPG should carefully consider a regime of tradable, perpetual licences (subject to meeting specific conditions), as in the US and proposed in the UK.
- The RSPG should consider ways to avoid the excessive fragmentation of spectrum as mobile broadband services require larger and larger contiguous blocks to meet increasing customer expectations. We should explore licencing models which allow more collaborative use of spectrum (e.g. pooling) and the way in which spectrum caps are applied across different frequencies.

Specific comments on the work items:

1. Multiannual Radio Spectrum Policy Programme (RSPP)

We believe that the development of a multi-annual RSPP is an important step forward, increasing certainty over spectrum availability and therefore supporting long term investment decisions. As an important input into the RSPP, it would be valuable to introduce a public consultation into the development of the RSPG Opinion.

Vodafone believes that it is important to develop a view of long term demand for spectrum to inform efficient allocation. There is clear evidence from various studies of the economic value of making additional spectrum available for mobile services¹. This is particularly important for the provision of high-speed rural broadband, for which the UHF band is well-suited. At the same time the migration of video services to NGA networks and satellite will, in the long term, reduce demand for spectrum from other users.

To balance supply and demand, it is important for regulators to consider spectrum bands in a holistic way, rather than making decisions on a band-by-band basis. An aligned roadmap, considering spectrum release as a multi-stage process, where future steps are anticipated and explicitly included in the roadmap, should take this into account.

Finally, the RSPG should seek to accelerate the release of new spectrum identified in the aligned roadmap and assist in the removal of any outstanding barriers to refarming, both to UMTS and LTE.

2. Harmonised EU participation in international negotiations

No comment.

3. Digital Dividend

It is important that the progress made on the Digital Dividend is now translated into the rapid release of spectrum and deployment of new services.

We would urge the RSPG to recommend that regulators do not make decisions which would effectively preclude further spectrum allocations to mobile services below 790MHz (for example by allocating adjacent spectrum to wireless microphones or other related short range devices).

The workstream should begin to think about the conditions which would have to be met in order to consider making additional spectrum, beyond the initial 72 MHz, available as for example the FCC is now contemplating in the US. One way to facilitate access to spectrum below 790MHz might be through the use of overlay licences as described in section 5.

¹ Commission study "A European approach to the digital dividend" launched on 15 November 2008, conducted by Analysis Mason, DotEcon and Hogan&Hartson (http://www.analysismason.com/EC_digital_dividend_study)

4. Competition Aspects in spectrum management and usage

The possible effects on competition of infrastructure sharing and spectrum sharing are likely to be dominated by local considerations, although we agree that central analysis and guidance to drive thinking around these areas would be helpful.

Vodafone believes that one of the key challenges is to avoid the fragmentation of spectrum reducing its value. For mobile broadband using LTE, wider channels allow greater spectral efficiency and provide a better user experience. At the same time spectrum allocations are getting smaller, with only 2x30MHz of usable spectrum in the 790-862MHz band. This means that it is not efficient for all operators to have equal spectrum allocations in each band. Although it should not prescribe specific models, the RSPG should examine options for licensing models which would allow collaborative use of larger channels (e.g. with 10 or 20 MHz instead of 5MHz) by several operators instead of spreading narrow licences amongst individual operators.

Spectrum caps are increasingly being applied by regulators as new spectrum is auctioned. Again, there is some inconsistency in the way caps are applied and how well they meet long-term policy objectives. We believe analysis and guidance from the RSPG would help local operators in these debates.

It is important that the advantages of introducing the new technologies supported in the amended GSM directive are realised as quickly as possible. We therefore urge the RSPG to provide guidance to regulators on possible remedies to avoid market distortion as a result of refarming, particularly those which are quick and straightforward to implement.

5. Technology impact on spectrum management

Assuming it can be demonstrated that low power cognitive devices are suitable for deployment, the RSPG analysis of possible regulatory regimes should not focus exclusively on unlicensed use. An alternative approach, based on spectrum property rights, has been proposed by economists. Such a spectrum management regime, based on broad, flexible and tradable spectrum property rights may yield much higher social welfare². A clear spectrum property rights regime is an essential requirement for the development of complex contractual structures, such as wide-area mobile networks or other nationwide services. Whilst we acknowledge the social value of unlicensed spectrum for a certain number of specific applications, regulators need to be aware that an unlicensed regime is not without cost to society. First there is an opportunity cost of not being able to deploy alternative radio systems with higher value to society. Second the unlicensed regime is not free of rules; on the contrary, it is subject to very heavy regulation based on a maximum limit of output power, in order to minimize interference. The benefits of one or other regime depend primarily on the scarcity of the resource.

² T. W. Hazlett, Information Economy Project Conference on "Tragedies of the Gridlock Economy," George Mason University School of Law (Oct. 2, 2009).

One way to implement such a property rights regime could be through the definition of "overlay" rights, where operators are allowed to build network "around" the primary users. A spectrum management regime that is based on property rights can be easily implemented in a framework where devices have to consult a database before transmitting, as it is currently discussed in the relevant CEPT groups.