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RADIO SPECTRUM POLICY GROUP

Request for a Report on

Efficient awards and use of spectrum bands harmonised for Electronic Communications Services

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1. INTRODUCTION

EU spectrum policy promotes the sufficient availability of spectrum for Union policy areas. Particular emphasis is put on wireless broadband (WBB) electronic communications services (ECS). In this regard RSPG published various opinions and reports on WBB. In particular, the possible spectrum supply to respond to future needs for terrestrial WBB has been addressed in a recent WBB opinion¹, which recommends possible solutions and options to supply additional spectrum for WBB in the time frame 2013-2020.

As well as considering the availability of additional EU harmonised spectrum for WBB, it is also important to ensure the efficient assignment of existing harmonised spectrum to spectrum users and the efficient use of scarce spectrum resources. This should be a pre-condition for accruing the potential socio-economic benefits through digital services provided over WBB networks.

In this context the requirements of future WBB systems with regard to spectrum use need to be considered. Non-technical² conditions with regard to spectrum use are determined by license conditions and relevant provisions of national law. These non-technical usage conditions influence the service quality characteristics that service providers are able to provide. Examples of such conditions include the usable block size, provisions on territorial coverage obligations, technical performance characteristics or the possibility or right to rely on spectrum sharing and spectrum trading. Ideally these conditions – while safeguarding competition and adhering to the principles of technology and service neutrality - should be linked to future WBB system requirements³ and thereby promote the efficient use of spectrum and avoid underutilisation.

¹ RSPG13-521(rev1) "RSPG Opinion on Strategic Challenges facing Europe in addressing the Growing Spectrum Demand for Wireless Broadband"

² Contrary to non-technical conditions, technical conditions are to a large extent defined usually before the authorisation process through harmonisation decisions, e.g. block edge masks.

³ The aim of this activity is not an in-depth assessment of future spectrum requirements. It should rather focus on the objective to make awards and related usage conditions "fit for purpose" for future WBB systems.

Against this background the European Commission seeks the advice of the RSPG on best practices with regard to efficient awards approaches and efficient use of spectrum for ECS and an assessment as to how award approaches and non-technical usage conditions can best contribute to meeting the requirements of future WBB systems and the efficient use of spectrum.

2. RELATION TO STRATEGIC SPECTRUM POLICY FRAMEWORK

The Radio Spectrum Policy Programme (RSPP) promotes the efficient use of spectrum.

Firstly, Article 3 of the RSPP defines the policy principle to encourage "efficient management and use of spectrum to best meet the increasing demand for use of frequencies reflecting the important social, cultural and economic value of spectrum".

Moreover Article 4 of the RSPP promotes efficient use of spectrum by setting requirements with regard to authorisation measures. In particular Member States are required to

- "put in place, where appropriate, selection criteria and procedures for granting rights of use of spectrum that promote [...] the efficient use of spectrum as a public good [...]";
- "promote the ongoing efficient use of spectrum for networks, devices and applications";
- "[w]here necessary in order to ensure the effective use of rights of use of spectrum and avoid spectrum hoarding, [...] consider taking appropriate measures, such as financial penalties, incentive fees tools or the withdrawal of rights";
- "adopt allocation and authorisation measures appropriate for the development of broadband services [...] with the aim of achieving the highest possible capacity and broadband speeds".

In this context the same Article addresses the need for the identification and sharing of best practices on authorisation conditions and procedures. "In order to avoid the possible fragmentation of the internal market due to divergent selection criteria and procedures for harmonised spectrum", it requires the Commission, in cooperation with Member States, to "facilitate the identification and sharing of best practices on authorisation conditions and procedures and encourage sharing of information for such spectrum to increase consistency across the Union, achieved in line with the principles of technology and service neutrality".

3. REQUEST FOR REPORT

This Request for a Report reflects the intention expressed by the RSPG in its "Work Programme 2014 and beyond" to address the issue of efficient awards and use of spectrum bands harmonised for Electronic Communications Services.

The Commission seeks the advice of the RSPG on best practices in the EU regarding spectrum award approaches and related conditions of spectrum use. The findings of this activity should be focussed on the assessment of how different key elements of awards and related conditions of use have an impact on the efficient use of spectrum and can meet the performance and capacity requirements of future WBB systems.

Relevant elements are inter alia existing practices on spectrum renewal and award of new spectrum and the related licence conditions, authorization procedures and rules (e.g. auction types and rules), incentives to move to more spectrum-efficient technologies (e.g. small cells, next generation transmission technology, mesh networks), incentives for spectrum and/or infrastructure sharing, incentives for freeing up bands, transfer and leasing of spectrum usage rights, reclaiming and alternative use of underutilized spectrum.

In particular regarding auctions in the EU, there is a large amount of experience and know-how to share among Member States. Other successful assignment procedures have been carried out in Europe that should also be considered.

More specifically, the requested Report on "Efficient awards and use of spectrum bands harmonised for Electronic Communications Services (ECS)" should:

- Based on the findings of the RSPG WBB Opinion⁴ with regard to spectrum supply, assess the suitability of the current and potentially future EU harmonised bands for ECS with a focus on usage rights conditions to meet spectrum requirements of future WBB systems taking into account different geographical characteristics, market situations, and different usage scenarios so that spectrum is well utilized and future speed, capacity and coverage requirements can be met;
- Provide views and best practices on spectrum award approaches and related conditions of use with a view to promote efficient use of spectrum and meet the spectrum requirements of future WBB systems. In particular, best practices should be discussed with regard to:
 - Auction approaches and design (e.g. types, rules);
 - Incentive measures to promote efficient usage of spectrum based on market mechanisms (e.g. leasing, trading, incentive payments), incentives or requirements for meeting technical performance characteristics (e.g. small cells, LTE-A, TDD), and further innovation;

⁴ RSPG13-521(rev1) "RSPG Opinion on Strategic Challenges facing Europe in addressing the Growing Spectrum Demand for Wireless Broadband"

- Regulatory approaches to spectrum sharing and/or pooling with a view to achieve higher transmission speeds and capacity, e.g. through forming contiguous spectrum blocks or carrier aggregation.
- Relevant methods to implement technology neutrality and service neutrality in line with the EU telecom rules regarding current EU harmonised bands for ECS (with a deadline of 24 May 2016) including taking appropriate measures which could include withdrawing underutilised spectrum for ECS;
- Duration and timeline for potential new bands which could be made available for WBB⁵ in the short and medium term including re-authorisation of frequency bands already harmonized;

In developing this Report, the RSPG work should be carried out in coordination as necessary with BEREC, e.g. where support is needed on licensing and competition issues.

In carrying out work to establish this Report, the RSPG should organise interactions with stakeholders in particular with regard to the suitability of harmonised and identified bands for ECS with a focus on usage rights conditions to meet spectrum requirements of future WBB systems. This should include the strategic considerations on spectrum of the R&D community framed in the Public Private Partnership on the 5th Generation of Communication Systems (5G PPP)⁶ as part of the Union Research Framework Programme Horizon 2020 (H2020).

The report should be the basis for any future need for RSPG to develop recommendations on the subjects in question, if appropriate, depending on the development of ongoing legislative initiatives.

4. ORGANISATIONAL ASPECTS

Deliverable:	RSPG Report
Timing:	June/November 2015
Public Consultation:	Yes

⁵ Future WBB bands under considerations at national level such as 1452-1492 MHz, 2.3-2.4GHz and relevant time plans (700 MHz issue considered mid-term and in relation to « long term UHF »)

⁶ http://ec.europa.eu/research/press/2013/pdf/ppp/5g_factsheet.pdf