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RADIO SPECTRUM POLICY GROUP

Request for an Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union

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1. INTRODUCTION

Following the digital switchover of terrestrial broadcasting and the designation of the digital dividend (800 MHz band) for wireless broadband (WBB) electronic communication services (ECS) in the Union¹, the remaining UHF TV broadcasting band ('UHF band': 470-790 MHz) has become subject to competing demand by existing broadcasting and potential future mobile use due to its inherent advantage for the provision of high-quality, high-capacity and low-cost ECS. Furthermore, the so-called white spaces within this frequency band are widely used by wireless microphones for programme making and special events (PMSE). Also providers of public protection and disaster relief (PPDR) services claim additional harmonised spectrum in the UHF band.

In this regard, the World Radiocommunications Conference in 2012 (WRC-12) took a decision on the co-primary allocation of the 694²-790 MHz ('700 MHz') band to both the mobile and the broadcasting service in ITU Region 1 (including the EU) as of WRC-15. The 700 MHz band represents 30% of the UHF band available for terrestrial TV broadcasting in the Union. While a few Member States have put forward considerations to release the 700 MHz band for wireless broadband use within the next years³, the majority of Member States are still in the process of assessing options for the future use of this band. Furthermore, WRC-15 will deal with additional spectrum allocations to the mobile service and identification of additional frequency bands for International Mobile Telecommunications (IMT)⁴, which may include proposals regarding the 470-694 MHz frequency range. All these developments call for a coherent EU position on the future use of the UHF band in time for WRC-15.

The RSPG adopted in June 2013 an Opinion on the strategic challenges facing Europe in addressing the growing spectrum demand for wireless broadband, in which it recommends to the Commission to develop, in cooperation with the Member States, a long-term strategic policy on the future use of the entire UHF band (470-790 MHz) in the EU. According to this Opinion, such policy has to take into account the spectrum needs of digital terrestrial television (DTT) platforms, the spectrum needs of PMSE,

¹ This is still an ongoing process in several EU Member States.

² The lower band edge is subject to refinement at WRC-15.

³ For example, France, Germany and Finland.

⁴ WRC-15 agenda item 1.1

the spectrum needs of PPDR and the possible benefits arising from future convergent broadcasting-mobile platforms to deliver linear audiovisual services and mass audience video and data to mobile devices. In particular, the RSPG recommends the development of a strategy on the 700 MHz band (including a target date for its availability) taking into account the duration of broadcasting licenses, the impact on consumers, the necessity to transition to new technologies, the resulting costs for the different players, the variety of DTT platforms in Member States and cross-border frequency coordination issues. Furthermore, the RSPG recommends considering measures to facilitate any migration to new modes of spectrum use and to review standards applicable to broadcast, cable, and terrestrial reception. The RSPG has also adopted a report on "Strategic sectorial spectrum needs" as well as a report on "Proposed spectrum coordination approaches for broadcasting in the case of a reallocation of the 700 MHz band".

In order to develop a holistic spectrum policy approach on the UHF band balancing short-term and long-term developments, the Commission has already requested several complementary inputs through the issuance of a Mandate to CEPT on technical conditions for WBB in the 700 MHz band⁵ and their applicability for PPDR, the launch of a study on the challenges and opportunities for convergence of terrestrial wireless platforms⁶, and has convened a High Level Group of industry representatives to provide a strategic advice to the Commission on the future use of the UHF band⁷. In addition to its work on the Commission Mandate, the CEPT is also studying options regarding the future use of the band 470-694 MHz.

Against this background, the European Commission seeks the advice of the RSPG on the major elements of a strategic policy for the UHF band in the EU with the long-term objective to ensure a sustainable 'win-win' situation for the sectors concerned as well as consumer benefits while promoting the single market and fostering EU's role in global developments. Likely short-term developments in the 700 MHz band need to be taken into account within an integrated approach.

2. EU SPECTRUM POLICY OBJECTIVES

The Digital Agenda for Europe sets out the target of providing fast broadband connections to all European citizens of at least 30 Mb/s by 2020 based on the principle of technology neutrality. It also promotes innovation and the take-up of digital services while fostering cultural diversity and creative content.

The Radio Spectrum Policy Programme (RSPP) promotes wide availability of wireless broadband networks and services (Article 1(d), Article 6(1)) and the development of innovative audiovisual media services on the basis of clearly

⁵ Document RSCOM12-37rev3

⁶ SMART 2013/0014

⁷ Press release at: http://europa.eu/rapid/press-release_IP-14-14_en.htm?locale=en

substantiated need (Article 7). The RSPG also calls for ensuring a sustainable spectrum resource for PPDR (Article 8(3)) and PMSE (Article 8(5)) applications.

In particular, Article 3(b) of the RSPG lays down a spectrum target for WBB of at least 1200 MHz by 2015 based on the spectrum inventory. In the context of the ongoing EU spectrum inventory process, the Commission has to report in 2014 on spectrum use and demand for different services and applications within the 400 MHz – 6 GHz frequency range, including on the need to harmonise additional frequency bands for WBB (pursuant to Articles 6(5) and 9(4) of the RSPG).

Further RSPG provisions relate to overarching policy objectives fostering the single market, technology innovation, efficient spectrum use, and interference mitigation. In particular, Member States are required to:

- "fully exploit the potential of the internal market in order to foster economic growth and economies of scale [...] by enhancing the coordination and harmonisation of technical conditions for the use and availability of spectrum" (Article 3(j));
- "enhance flexibility in the use of spectrum, in order to promote innovation and investment, through the possibility of using new technologies" (Article 4(2));
- "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" (Article 3(a));
- "avoid harmful interference or disturbance by other radio or non-radio devices, inter alia, by facilitating the development of standards which contribute to the efficient use of spectrum, and by increasing immunity of receivers to interference [...]" (Article 3(k)); in addition, Article 11(2) stipulates enhanced cooperation and consistency regarding technical standardisation issues in fulfilment of the objective of efficient spectrum use.

The UHF band represents a strategic asset for the take-up of more and better audiovisual and data services and henceforth for the achievement of the Union's audiovisual, broadband and spectrum policy objectives.

3. REQUEST FOR OPINION

This Request for an Opinion follows the intention expressed by the RSPG in its "Work Programme 2014 and beyond" to develop a long-term strategy for the UHF band 470-694 MHz including a realistic vision for the DTT platform, and the assessment of the possible implementation of WBB in the 694-790 MHz band.

Member States differ in their approach to the future use of the UHF band, mainly due to national differences in the socio-economic and cultural role and resulting spectrum needs of DTT. Therefore, the RSPG is requested to develop a framework for a long-term strategy for the UHF band (470-790 MHz), which aims at achieving a win-win

situation for the sectors concerned and consumers and includes a possible roadmap for spectrum management beyond 2020. Thereby, the RSPG is requested to take into account different national schedules and the need to balance short-term developments in the 700 MHz band and long-term developments regarding the rest of the UHF band.

The development of a long-term strategy for the UHF band largely depends on underlying technological, socio-economic and cultural factors and trends. In this regard, the RSPG is requested to take into account consumer demand, in particular for audiovisual services, and to consider relevant aspects of next-generation technology for the terrestrial wireless delivery of audiovisual and data services, including the potential of broadcast-broadband convergence as well as business and cost implications for potential and incumbent users as well as consumers.

More specifically, the requested Opinion "on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union" should:

1. Assess the future role and spectrum needs of DTT platforms and provide an overview on the conditions and durations of DTT licenses in Member States;
2. Assess possible developments and related standardisation of DTT and WBB platforms for the provisions of audiovisual and data services as well as devices, and the potential of their convergence; assess resulting benefits and costs for existing spectrum users in the UHF band as well as consumers;
3. Propose regulatory and/or market-based options as well as a related roadmap for the long-term spectrum strategy for the whole UHF band assessing in particular:
 - a. the possible need for assigning the 700 MHz band for WBB before 2020 in the EU in the light of the spectrum assignment situation for WBB as well as the benefits in the coordinated release of the 700 MHz band for WBB across the EU (e.g. in terms of cross-border coordination effort including with respect to non-EU countries);
 - b. possibilities to ensure the operation of PMSE and PPDR in the UHF band, while noting other potential bands.
4. Indicate measures facilitating any migration (e.g. technology upgrades or economic implications) in support of the proposed spectrum strategy options including measures relating to TV receivers in order to mandate more efficient technologies and to minimize hurdles for consumers.

The RSPG is invited to organise interactions with stakeholders to the extent necessary, including in particular the R&D community dealing with strategic views on spectrum within the Public Private Partnership on the 5th Generation of

Communication Systems (5G PPP)⁸ as part of the Union Research Framework Programme Horizon 2020 (H2020).

4. ORGANISATIONAL ASPECTS

Deliverable:	RSPG Opinion
Timing:	February 2015
Public Consultation:	Yes

⁸ http://ec.europa.eu/research/press/2013/pdf/ppp/5g_factsheet.pdf