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Directorate-General for Communications Networks, Content and Technology

Electronic Communications Networks and Services

Radio Spectrum Policy Group

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RADIO SPECTRUM POLICY GROUP

Subject: Request for an Opinion from the RSPG on a long-term strategy on spectrum requirements facing the future needs and use of wireless audio and video PMSE applications

Request for an Opinion from the RSPG on

A LONG-TERM STRATEGY ON SPECTRUM REQUIREMENTS FACING THE FUTURE NEEDS AND USE OF WIRELESS AUDIO AND VIDEO PMSE

1. INTRODUCTION

In its Opinion on a long-term strategy on the future use of the UHF band (470-790 MHz) in the European Union¹ the RSPG included under point 12 of that document the view that the RSPG believes there is a need to have technically appropriate and sufficient spectrum for PMSE and considered that, depending on developments and requirements of such services, there could be a need to identify additional spectrum for audio PMSE. RSPG recommended that the PMSE industry develops more advanced and spectrum efficient technologies. In addition Member States should seek to promote spectrum sharing and ensure that licence conditions in bands currently used are as flexible as possible. The RSPG flagged in that context the need to find a solution for the continuation of PMSE delivery, noting that little headway has been made in the search for alternative frequency bands for PMSE up to now and that increased attention should be given to these needs in a timely manner. The RSPG recognised that spectrum requirements for PMSE vary significantly between Member States, but noted that new bands above 1 GHz are being explored within CEPT² in the context of harmonisation as well as possibilities to use duplex gaps in bands below 1 GHz for audio PMSE.

Recently, the Commission Implementing Decision on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union was adopted. This Decision foresees the possibility of audio PMSE use subject to national decisions and choice within the frequency bands 694-703 MHz and 733-758 MHz and ensures appropriate protection to existing systems in the adjacent 470-694 MHz band, namely digital terrestrial television broadcasting services and wireless audio PMSE equipment in accordance with their regulatory status.

In its Report on Strategic Sectoral Spectrum Needs³ the RSPG described the various PMSE applications and noted that PMSE needs should be recognised when affected by a re-allocation. The report indicated that a reliable regulatory environment is a prerequisite to give users the confidence needed to make the necessary investments associated with new conditions. With regard to video PMSE applications the RSPG Report noted that the future needs of PMSE video applications, especially at large events are not believed to be completely fulfilled within the current tuning range below 3 GHz.

When RSC members⁴ were asked if constraints for wireless audio PMSE use are expected after reallocation of the 700 MHz band and if that would require action at EU level, a majority of Member States indicated no need to revise the existing Commission Decision on wireless audio PMSE (2014/641/EU), while some Member States felt unable to provide an opinion at that point in time. It was however recognised during these discussions in the RSC#54 meeting

¹ RSPG15-595 final, dated 19 February 2015

² E.g. ECC Report 245

³ RSPG13-540 (rev2), dated 12 November 2013

⁴ Working Document RSCOM15-54

that a strategy on a long term spectrum use by PMSE would be useful. The Commission has therefore concluded that, while current EU measures are sufficient to tackle the medium term spectrum needs of audio PMSE, in particular following the Decision in 2014 identifying a baseline of 59 MHz of spectrum in a combination of availability at Union level and at national level subject to user demand, an RSPG opinion on a long-term strategy on both wireless audio and video PMSE spectrum use and requirements is required.

Although the CEPT Report 51 on "Technical conditions for ensuring the sustainable operation of cordless video-cameras" identified possible new bands to accommodate possible new spectrum for PMSE video applications, limited harmonisation has been achieved up to now in the area of video PMSE. A special focus seems to be required, considering that possibilities of spectrum access for video PMSE have already been reduced due to harmonisation activities for some bands to the benefit of ECS. CEPT is currently responding to an EC mandate to study and identify harmonised compatibility and sharing conditions for video PMSE in the 2.7-2.9 GHz frequency band, taking into account radar use.

2. BACKGROUND

In the conclusions of the RSPG Report on Strategic Sectoral Spectrum Needs concerning PMSE it is stressed that the spectrum demand considerations for future PMSE spectrum opportunities required consultation at the national level, in conjunction with subsequent national contributions to ongoing studies in the CEPT/ECC. The spectrum needs for PMSE use vary greatly in time and location, depending of the scale of event or programme, with only a limited stable spectrum demand at a daily usage (e.g. theatres and broadcast studios) with fixed locations, time and needs. Furthermore, the RSPG noted that industry i.e. wireless audio PMSE applications are moving towards wider tuning ranges. These views have been taken into account in the impact of the Commission Implementing Decision of 1 September 2014 on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union (2014/641/EU)⁵.

While Decision 2014/641/EU provides adequate medium - term availability of spectrum to meet wireless audio PMSE demands, in the longer term spectrum requirements for wireless audio and video PMSE applications may require further attention and long term strategy considerations, taking into account that a potentially increased and intensified shared use of spectrum in the future may affect the quality of PMSE services. Shared use of spectrum providing spectrum availability for the use of PMSE applications is challenged by constraints, such as the regulatory requirement to operate on the basis of non-interference and non-protection. Technological developments, like the digitalisation of audio PMSE equipment, require significant investments from industry. Stakeholders request a focus on harmonised spectrum at Union level in order to realise economies of scale to both wireless audio PMSE manufactures and users. In the event that spectrum ranges become too wide spread and fragmented among Member States, there is a danger that the necessary investments in new equipment and applications will not be made. Besides the need for a long term security regarding suitable spectrum ranges, sufficient accessibility to spectrum and its usability also needs to be taken into account in any long-term strategy, observing the need for spectrum which can provide the high quality of services required for, in particular, professional use.

In the most recent RSPG Opinion on the implementation of the current RSPG and its revision to address the next period (February 2016) RSPG states that it "will continue to carefully

⁵ OJ L 263, 03.09.2014, p.29-34

monitor the evaluation of this sector in order to review, when appropriate, the strategic spectrum issue and long term vision and spectrum availability and to develop if needed relevant recommendations". Such an approach will require an exchange of learning experience of the Member States which can include generalising Member States best practices implementing Decision 2014/641/EU as well as meeting spectrum demands for wireless video PMSE applications.

3. REQUEST FOR OPINION

This Request for an Opinion reflects the intention expressed by both the RSPG and the RSC that attention should be given to a long-term strategy with regard to future PMSE spectrum requirements in view of possible constraints for wireless audio and video PMSE needs, in particular noting the requirement for high quality of services in case of professional practice.

The Commission therefore formally requests the advice of the RSPG on a long-term strategy for the future needs of wireless audio and video PMSE applications. In particular, the Commission requests that the RSPG examines the expected impacts on PMSE services noting the evolution of existing use and taking into account a growing need for sharing of spectrum use. The Commission requests an assessment of the strategic options in terms of providing spectrum access for wireless audio and video PMSE applications that can provide the required quality of services for PMSE applications. On the basis of this long-term strategic assessment, the RSPG should also provide guidance on the relevance of a common "roadmap" to support the audio and video PMSE sector in obtaining access to spectrum taking into account different national needs.

More specifically, the requested Opinion on "**a long-term strategy on spectrum requirements facing the future needs and use of wireless audio and video PMSE applications**" should:

- Assess possible solutions and options for meeting the expected future needs and use of audio and video PMSE applications in a time frame after 2020, taking into account the bands currently in use by audio and video PMSE and the expected spectrum re-allocations within relevant bands (e.g. 700 MHz band), while ensuring a sufficient flexibility and acknowledging that the needs vary greatly between different Member States. Which solutions are sustainable in the long term, taking due account of high quality and latency requirements of certain types of PMSE applications?
- Indicate technological developments and regulatory requirements related to spectrum use which could contribute to meet the spectrum and quality of service demands for wireless audio and video PMSE. In this context consider shared use of spectrum, which could include appropriate and innovative sharing approaches e.g. the availability of geo-location databases with an appropriate geographic reach, the digitalisation of audio PMSE equipment, opportunities in higher frequency ranges, a higher level of certainty than a framework of non-interference and non-protection accessibility of spectrum in identified cases, as well as a common approach on authorisations and opportunities of localised temporary shared use of spectrum in case of large spectrum needs.
- Assess the relevance of a common "roadmap" identifying principles and approaches of spectrum availability for audio and video PMSE. In this context collect Member States' best practices in providing spectrum use with the required level of quality of

service and increasingly flexible conditions of spectrum access for wireless audio and video PMSE applications.

In developing this Opinion, the RSPG work should address audio and video PMSE separately and take into account ongoing processes, such as possible new spectrum resources and the outcome of the Licenced Shared Access trials. The timing requested may be reviewed in the light of developments, such as the outcomes of ongoing CEPT work or the success and take-up of LSA solutions.

4. ORANISATIONAL ASPECTS

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| Deliverable: | RSPG Opinion |
| Timing: | First draft June 2017 |
| | Final draft November 2017 (for public consultation) |
| Public Consultation: | Yes |
| Rapporteur: | TBC |