25 September 2017

Comments on RSPG's draft opinion on a long-term strategy on future spectrum needs and use of wireless audio and video PMSE applications

ARD and ZDF would like to thank the RSPG for issuing its draft opinion on a long-term strategy on future spectrum needs and use of wireless audio and video PMSE applications and for inviting comments on it. The draft opinion duly reflects the current situation and respective developments in the past. We would like to draw the Group's attention to the following issues.

As stated by the RSPG, the tuning range concept and sharing of PMSE with primary services in most of the PMSE frequency ranges has worked well in the past years. One reason for this is that most of the primary users of PMSE are sharing respective spectrum capacities with partners in a continuous and stable form. PMSE as a service is used mainly in a time-limited fashion and on defined locations and thus occupies unused spectrum ranges of the primary service without introducing any harmful interference.

In the past years, many of the PMSE core bands have been subject to reallocation of the primary service, e.g. 700 and 800 MHz bands for audio PMSE and 2 GHz ranges in some Member states for video PMSE. At the same time, the PMSE industries are facing more sophisticated productions demanding more and higher quality links for which sufficient spectrum resources are required. Even with full access to the remaining UHF spectrum technological improvements resulting in a better spectrum efficiency for Audio PMSE equipment will not match the foreseen demand of this application. We acknowledge that a denser spectrum use could be achieved inter alia with the expansion of detailed planning and a better on-site coordination. We would like to see more engagement from some Member States in this regard, especially in view of medium and big events where coordination of different PMSE user groups is essential. National regulators could facilitate coordination among these groups and should see this as their assignment. Further we like to ask the RSPG for more frequent reviews of the spectrum supply for PMSE applications in consultation with stakeholders.

Current research on sharing opportunities in new spectrum ranges, especially for audio PMSE, merely constitutes a substitute for the latest loss of capacities in the 700 MHz band. We welcome the RSPG's proposal to foster further studies and also like to encourage the Commission to mandate studies on sharing opportunities in additional frequency bands which are appropriate for the different PMSE applications. We also like to point out that the conditions and restrictions for a possible sharing scenario need to be clear and should not unduly limit its practical use in daily operation of both applications, PMSE as a sharer and the primary service.

As the RSPG has pointed out, 5G could be a possible technological development enabling PMSE to use spectrum more efficiently but as 5G is in an early phase of

development, manufacturers need time to research possible use cases. If 5G technology turns out to be suitable for PMSE applications appropriate spectrum resources must be made available. We like to point out that for PMSE users it is of great importance to have free access to production frequencies and that it is essential not to depend on Mobile Network Operators for the operation of a media production network (under additional charges). This should be considered when introducing 5G so that appropriate access possibilities can be created. Therefore, we do support the RSPG's recommendation to include this topic into European research programs like Horizon 2020 in order to secure further funding of these R & D activities.

Audio

In the draft opinion, a baseline of about 60 MHz is mentioned in order to maintain recurring ordinary needs. While this is a good starting point to serve the needs of daily, often smaller productions, the current core spectrum in the UHF 470-790 MHz range is crucial for many productions and big events. A further reduction of this spectrum will have a severe effect on the ability to conduct these events. We welcome the statement in the draft opinion to follow the Lamy Report recommendation to keep the core Audio PMSE spectrum available at least until 2030. This helps the industries to plan in advance and make investments based thereupon. Yet we foresee a need for the UHF band for PMSE beyond 2030. It will remain the core band for Audio PMSE applications. In CEPT currently different alternative frequency bands for Audio PMSE substituting the 700 MHz loss are under study. While they are often suitable in terms of technical parameters they go along with rather tougher restrictions in view of spectrum sharing. This creates uncertainty for the industries involved in view of developing and adopting new equipment. The industry developing and using PMSE equipment needs a reliable environment. Therefore we would want to ask the European Commission to support the studies of further frequency ranges and mandating the CEPT with the appropriate tasks in order to assign new tuning ranges for Audio PMSE.

RSPG states that more intensive use of the VHF-band could compensate for the loss of parts of the 700 MHz band by 2020. We cannot agree with this opinion. Although high quality audio is possible and transmission losses are minimal, the larger antenna sizes of VHF-Equipment are not acceptable at most professional use cases, where the transmitters must be concealed on the body. Also interference due to electrical or electronic equipment and equally digital devices is generally higher at VHF frequencies. Since VHF wavelengths are longer than their UHF counterparts, enabling them to travel greater distances and pass through obstructions like walls and ceilings, all types of interference will travel farther, and thus be more problematic, at VHF frequencies.

Video

For Video PMSE the 2 GHz spectrum range is still the core band. We welcome that the RSPG acknowledges this in its draft opinion. While wireless video links in higher frequency ranges are slowly introduced in current productions and are one way to face higher demands like 4k/8k video, HDR etc., they are not suitable in every scenario. For covering outdoor events ranging over large areas, e.g. cycling events or marathons, links in the 2 GHz range are essential to send video signals to relaying aircrafts. Insofar, we would like to emphasize the RSPG's recommendation to make additional spectrum for Video PMSE available in the 2GHz band on a national level.