



CONSULTATION
Call for comments to
Draft RSPG Opinion on a long-term strategy on the future use of the UHF
band (470-790 MHz) in the European Union
RESPONSE OF PEARLE*

Ref: AD/2015/P6764

Identification number
EC register 4817795559-48

Brussels, 12 January 2015

by mail to: CNECT-RSPG@ec.europa.eu

INTRODUCTION

Pearle*-Live Performance Europe, the interest representative of over 5000 live performance organisations, welcomes the opportunity to comment to the draft opinion of the Radio Spectrum Policy Group on the long-term strategy on the future use of the UHF band.

The opinion is of particular interest as it explores issues which affect PMSE. Indeed, the live performance sector has a direct interest in the policy objectives of the European Union on the use of the UHF band, as it is the spectrum range that is used on a daily basis for thousands of cultural performances and events. As end users, live performance organisations wish to provide the best audio quality to its audiences. The sector caters for what becomes the creative (audiovisual) content which thrives also the development of the wireless broadband.

In this regard Pearle* welcomes the fact that the EU acknowledges the specific needs and challenges for the PMSE and aims to provide for sustainable solutions.

In its introduction the RSPG states that "After the World Radio communication Conference 2015 (WRC-5) the 694-790 MHz ("700 MHz) frequency band will be effectively allocated on co-primary basis to the mobile service alongside the broadcasting service."

Further on the opinion refers to the commitment of the EU to pursue cultural objectives, such as required by article 167 (4) TFEU and as it recognised in the Digital Agenda for Europe and in particular the Radio Spectrum Policy Programme (RSPP).

In section 3, the paper explains the scope of the opinion, including a proposal for regulatory and/or market options for a long-term strategy for the whole UHF band, thereby assessing in particular the possible need for assigning the 700 MHz band for WBB before 2020 in the EU and thereby assessing the possibilities to ensure the operations of PMSE and PPDR in the UHF band, whilst taking note of other potential bands.

COMMENTS

The comments below focus on particular parts of interest for our sector. For the purpose of clarity, the numbering of the text of the draft RSPG Opinion has been followed.

4. Current overview in EU Member States

4.2. Programme Making and Special Events

Pearle is of the opinion that PMSE is used in **all Member States** of the EU. In every EU Member State, at theatres, concert halls, arenas, or festivals, events are programmed which make use of wireless microphone equipment. There is a clearly a **lack of data and information** with public authorities and regulators on the use of wireless microphones for different ranges of cultural events.

If the 700 MHz sub-band is used for wireless broadband across the EU, access for PMSE use will be difficult as IMT does not allow coexisting with PMSE due to interference on the channels used by PMSE.

There needs to be a firm indication and European-wide agreement as to where **alternative spectrum** will be found in order that PMSE may continue to operate, such as the 470-600 MHz.

As described in the Implementing Decision (2014/641/EC) on harmonised technical conditions of spectrum use by programme making and special events (PMSE) equipment, the centre duplex gap caters for an absolute minimum amount of spectrum available throughout the EU. For professional live events this is hardly an option and in reality will be rarely used for quality audio output. The interference from adjacent bands used for wireless broadband reduces substantially the actual bandwidth, so that only a small bandwidth is usable in a noise-free manner. This is the case for the centre duplex gap in the 800 MHz and is no different from a possible centre duplex gap in the 700 MHz.

In particular for professional use, the live performance sector underlines the **need for access to 100 MHz for daily use** (in single productions as well as for venues with multiple halls); such as quoted in the above mentioned Implementing Decision.

- **It would be helpful should the RSPG Opinion**, for the sake of information and transparency, mention the required spectrum need for professional use by PMSE.

If the result is that PMSE will have to compose a frequency plan taking small parts of the UHF band to allow for a total access of 60 MHz or more needed for a theatrical production, it will become extremely complex and difficult to technically master the production for each of the actors and musicians throughout the production, thereby aiming to avoid interference from IMT.

6. Developments and related standardisation activities

In the sub-section 6.3.1. (prerequisites for the service level convergence) it is observed that "for citizens access to free television services is essential" and that "convergence may be supported by combining the rights of use of spectrum with further obligations and conditions in order to fulfill public cultural policies and general interest objectives".

Likewise for cultural events, many of those events are offered for free or at very low prices to citizens as they are organised by cultural institutions, public theatres and other public or subsidised cultural organisations, or the cultural administrations at municipal or local level. **Access to culture** for all citizens is a basic right acknowledged by public authorities and therefore needs to be preserved.

Likewise the provision of free AV media services, adequate solutions and business models would need to be developed so that technical standards can be deployed which allow PMSE use the equipment that make it possible to continue offering the cultural services to its audiences who take part in real-time events in concert halls, theaters, or at outdoor events.

Subsection 6.4. describes the initiatives funded by the EU on the next generation wireless broadband. Effective support should require for WBB to research and develop standards to allow sharing spectrum and coexisting with other users.

On the same note, it is of high priority that the EU funds projects, research and studies to allow for PMSE to develop next generation wireless microphone technology. The research undertaken by the JRC on LTE - PMSE coexistence in November 2013 can be considered as a first start in this regard. It is regretful that further research has not been planned to allow for further tests to be carried out in real life situations.

- **The RSPG could advise** for the EU to fund and establish research projects on next generation wireless microphone technology and impact assessment studies on current and new developments following from the implementing Decision 2014/641/EC and the current incumbent use of the 700 MHz by PMSE.

7. Elements for the Long term strategy

7.1. The overview

Spectrum for PMSE: referring to the lost access to the 800 MHz it has been noted that **Member States hardly provided for compensation** or support to finance new equipment. Whereas the auctioning of the 800 MHz resulted in substantial income, the fact that Member States refrained of compensation schemes for the PMSE, whilst adhering to the policy objectives to ensure cultural diversity and access of culture for its citizens, is unacceptable. The loss of the 800 MHz band was therefore only mitigated in the sense that technically productions can continue to operate, though this happened not without increasing number of interference problems to be solved under immediate circumstances and with important investment in new equipment, adjustment to new standards and training of its technicians.

- **The RSPG opinion can therefore nuance** the presumption that the loss of the 800 MHz was mitigated.

In the last sentence of the paragraph on PMSE, the RSPG opinion calls on the **PMSE community to develop more efficient spectrum usage and technologies**. Whereas academics and researchers already demonstrate that wireless microphone technology makes use of spectrum in a highly efficient way, and whereas in reality since decades PMSE has been using spectrum in the most efficient way sharing for example with broadcasting, the question of efficient spectrum usage is one to be addressed to all users, not in the least with regard to wireless broadband. On the contrary, other sectors can learn from PMSE on how to be efficient.

- **The RSPG should refrain in its opinion to target the PMSE community to be more efficient, without addressing the same requirements to other users**, not in the least in the case of WBB, who as a primary user should prioritize efficient use when claiming such large amount of the UHF band.

Pearle agrees with the opinion to develop efficient technologies, which, as quoted above under point 6, requires the access to EU funding and support for research and development.

7.3. Approach for the Long term strategy for the band 470-694 MHz

Pearle underlines the RSPG opinion that **certainty is needed** for PMSE community, which covers both public and private or commercial live performance organisations. Taking into consideration the recent investment made due to the loss of the 800 MHz and taking into consideration that wireless microphone equipment is in average replaced every ten years, it is crucial to identify in a timely manner and if applicable, additional spectrum for PMSE.

8. Migration issues

b. Possible economic consequences of migration (including cost of technology upgrades)

Pearle is surprised that the RSPG opinion does not address migration of PMSE below 694 MHz. The relative costs for live performance organisations (public, private, commercial, and large, medium-sized and small) are important to be taken into consideration and may also affect local, regional or national public authorities owning or supporting theatres and other venues.

- The RSPG, when supporting the provision of wireless broadband services in the 700 MHz, should also recommend in its opinion the need for Member States to establish necessary **compensation schemes** for replacement of currently useful but soon to be redundant equipment. In addition, the compensation scheme should include an undertaking that any redundant equipment will not be sent back by governments to be sold into markets in competition with new or other equipment.

Whilst compensation for equipment is one thing, the other thing is also the training of technicians and the increasing time needed to build a good frequency plan for each live production. This leads to substantial **additional costs in terms of training and working time**, and **extra burdens for the SMEs** by which the live performance sector is characterised.

- In the context of the goals of the new European Commission on better regulation, the RSPG should include considerations of additional costs and burdens, bearing in the mind the impact of such proposal.

9. The opinion of the RSPG

In the first point the RSPG supports the provision of wireless broadband services in the 700 MHz band.

- The RSPG should however also ask for **any legislative measure to be accompanied by an independent evaluation and evidence** of the effective use of the new spectrum for WBB, as it concerns a large amount of spectrum compared to any other sector of which considerable amounts are said to be currently underused.

In the point focusing on **PMSE**, the RSPG rightfully says that there is a need to have technically appropriate and sufficient spectrum for PMSE. It is not clear what the RSPG understands by 'depending on developments and requirements of such services, there could be a need to identify additional spectrum'.

- As the PMSE community has already stated, and in particular for the case of live performance, there is a **daily need of 100 MHz** to provide for real-time presentations to audiences at events. **The RSPG can acknowledge this need in its opinion**, whilst referring to developments in the way live events are presented.

The RSPG encourages the PMSE industry to develop more advanced and spectrum efficient technologies. In this regard the RSPG could also encourage the EU to support the PMSE industry through funded projects, research and studies to do so.

In addition Member States should not only seek to promote spectrum sharing and the flexibility of license conditions in bands currently used, but also to establish a **platform of exchange with the PMSE community** to address issues on a regular basis such as interference, access to the spectrum, access to information on available frequencies, establishment of inventory of the PMSE community.

- The RSPG can encourage Member States for regular exchange with stakeholders reaching out to the PMSE community, including live performance associations.

CONCLUSION

As the RSPG intends to propose a deadline for making the 694-790 MHz available for the electronic communication services, it must be taken into consideration that time is needed for the live performance sector to adjust to any changes.

Several years are needed to research and develop new standards and equipment (3-5 years); in addition it has to be reminded that the lifespan of well maintained equipment goes up to 20 years, which only recently has been replaced after the digital switchover from the 800 Mhz.

It is of the utmost importance for all stakeholders involved to dispose of clear timeline and clear indications to which spectrum one will have access.

Therefore it is recommended to allow for as much time as possible in order not to jeopardize the daily operations of live performance organisations and allow for enough transition periods to adjust its equipment and technologies.

Any required change should be accompanied by an appropriate compensation scheme for the replacement of equipment and including budgets to allow for training and the working time needed to obtain the new skills to handle the new equipment.