European Commission

AGENDA

- **Introduction by the Commission** (Andreas Geiss)
- **Presentation by JRC on coexistence PMSE-LTE** (Detlef Fuehrer)
  - Opportunity to ask questions
- **Presentation by Ofcom UK** (Mrs Helen Hearn and Mr Vaughan John)
  - Discussion
- *Coffee break (11:30-11:50)*
- **Presentation by the Commission on the preliminary elements of the proposal** (Bart Schaap)
  - Discussion with stakeholders
- **Conclusions and next steps**

Preliminary elements of the proposal on spectrum harmonization for wireless audio PMSE

PMSE Stakeholders' Workshop
European Commission, Brussels, 18 February 2014

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Spectrum

* Disclaimer: the views expressed are those of the author and cannot be regarded as stating an official position of the European Commission

Overview

- Drivers of change
- Consequences for wireless audio PMSE
- Policy objectives on PMSE
- Consultations and expertise
- Objectives and preliminary elements of the proposal

Drivers of change

- *Increasing demand of wireless telecommunication services*

Consumers growing needs for access to broadband services; Digital Agenda for Europe target of 30 Mbps for all by 2020

- *Fostering efficient use of spectrum by introducing digital technology*

Switch over from analogue to digital television broadcasting, high quality television leads to more demand (e.g. HDTV); introduction of Single Frequency Networks for broadcasting in the UHF spectrum

Consequences for wireless audio PMSE

- **PMSE users are facing significant change**

- ***conclusions CEPT Report 32 of 30 October 2009*** identifying among others the following elements:

➢ *historic use of the 470-862 MHz band will need to adapt*

➢ *"controlled" access to the spectrum*

➢ *need to identify new frequency bands (considered 216-233 MHz, 1452-1559 MHz, 1785-1800 MHz, duplex gap in 790-862 MHz)*

- ***RSPG Opinion on Strategic Challenges facing Europe in addressing the Growing Spectrum Demand for Wireless Broadband (2013)***

➢ *indicates that for the 470-790 MHz band PMSE services are likely to lose significant spectrum capacity and have to migrate to other technologies/or bands in the long-term*

Policy objectives on PMSE

- ***Communication*** *on "Transforming the digital dividend into social benefits and economic growth" (COM(2009) 586 final, 18 October 2009)*

"Ensuring the continuity of wireless microphones and similar applications by identifying future harmonised frequencies ….to determine the best strategy to ensure an efficient 'migration path' for current users and producers of devices…"

- ***Decision*** *on 'establishing a multiannual radio spectrum policy programme' (RSPP; Decision 243/2012/EU)*

➢ Article 6.6.: "…examine ways and, …, take technical and regulatory measures, to ensure that the freeing of the 800 MHz band does not adversely affect PMSE users"

➢ Article 8.5.: " …seek to ensure the necessary frequency bands for PMSE, …, to improve the integration of the internal market and access to culture."

To be noted….

- Any EU policy measure on PMSE will not aim to meet all spectrum requirements of professional PMSE users, but rather to create a baseline (i) for economies of scale and the functioning of the internal market, and (ii) for "average" social and cultural needs.
- Individual Member States will remain fully responsible to make available frequencies for large spectrum needs like broadcasting sites and extraordinary (yearly)events (e.g. European Song Contest).

Consultations and expertise

- *Mandates to CEPT including a recommendation on the best approach to ensure the continuation of existing PMSE services* (2008) *and on the technical conditions regarding spectrum harmonisation options for wireless radio microphones and cordless video-cameras (PMSE equipment)* (2011);
- *A public consultation held mid-2012;*
- *Stakeholders workshops in October 2010 and in June 2013;*
- *A study on the socio-economic aspects of spectrum harmonisation regarding wireless microphones and cordless video-cameras (PMSE equipment);*
- *Discussions with the Member States in the Radio Spectrum Policy Group and Radio Spectrum Committee;*
- *Commission Joint Research Centre to perform testing on LTE-PMSE coexistence.*

Some of the outcomes

- Stakeholders (manufacturers and users) supports identifying future "core frequency bands" to be harmonised at EU level to satisfy the longer term demand originating from PMSE applications
- CEPT report 50 recommends the availability of the 823-832 MHz and 1785-1805 MHz band (800 MHz and 1800 MHz duplex gaps) on an EU-wide basis, under harmonized technical and operational conditions for wireless audio PMSE applications
- The VVA-study identified the uncertainty about future availability of spectrum as an important barrier for investments

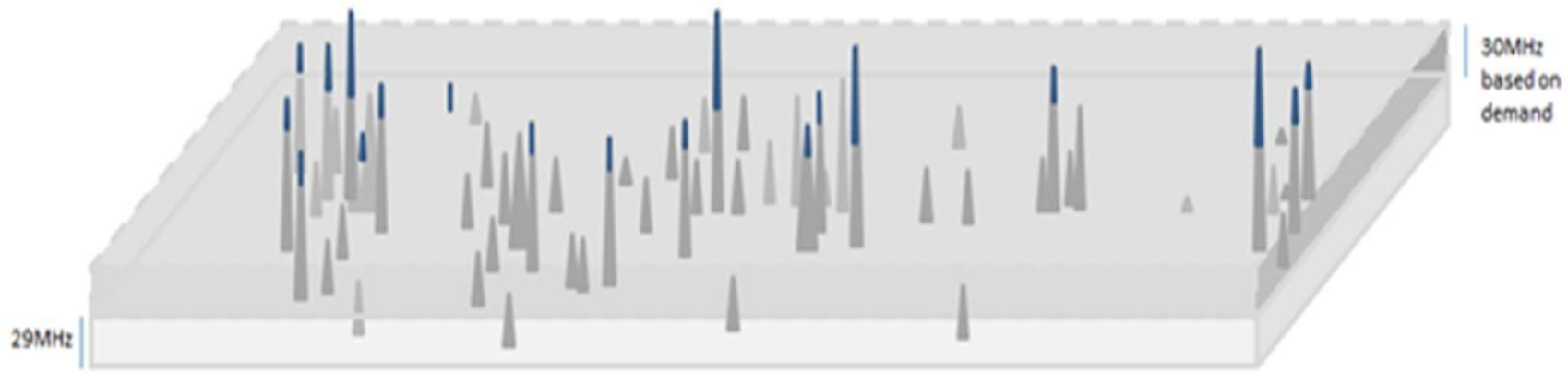
However…

- Stakeholders (manufacturers and users) expressed doubts as to the usefulness of the duplex gaps due to fears of possible harmful interference caused by LTE use in adjacent bands and stressed the availability of interference free spectrum use in the UHF band (470-790 MHz)
- Possible constraints due to possible interference problems from using LTE technology in adjacent bands was noted in CEPT Report 50 and given further attention (Addendum to CEPT Report 50).
- The most critical case is if the PMSE receiver is located close to a transmitting MFCN pico BS, which uses frequency bands close to those frequency ranges in use by the PMSE receiver (should be avoided and apply mitigation techniques) Also MFCN User Equipment close to PMSE receivers can cause harmful interference risks.

Objectives of the proposal

- *Create a long-term certainty on defined available spectrum as a baseline for wireless audio PMSE use*
  - to meet daily ordinary spectrum needs of social and cultural events
  - fostering conditions for the stimulation of research and development on new technologies
- *Strengthen the single market for wireless audio PMSE applications*
  - Fostering economies of scale for manufacturers
  - Fostering cross border use of PMSE equipment
- *Effective and efficient use of spectrum*
  - Take into consideration local and temporary requirements
  - Taking into account the avoidance of harmful interference (need for a 100% duty cycle by professional PMSE users)
  - Foster the use of the 1785-1805 MHz by PMSE users

Preliminary possible elements for a Commission Decision



- Base line of 29 MHz (both duplex gaps) shall be made available under harmonised technical conditions as described in CEPT Report 50
- Additional 30 MHz, preferable in the 470-790 MHz, shall be designated and made available upon request by PMSE users
- All further additional spectrum requirements will be addressed at the discretion of the Member States though national case-by-case solutions

Agreements on using small cells where required

In order to prevent harmful interference to wireless audio PMSE used in both duplex gaps for indoor social, political, cultural or other events agreements between wireless audio PMSE users and mobile electronic communications network operators are encouraged, pursuant to which small cells may be deployed as necessary to ensure the interference free use of the duplex gaps

Thank you for your attention!

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