

Elements for a long-term strategy on spectrum requirements for wireless PMSE applications

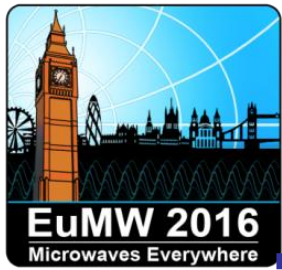
London, 3 October 2016

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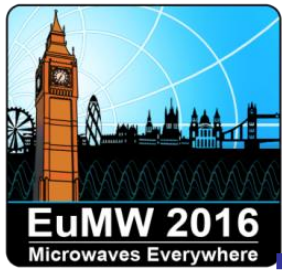
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* Disclaimer: the views expressed are those of the author and cannot be regarded as stating an official position of the European Commission



Agenda

- Indication of the spectrum requirements
- Identification for a framework on PMSE spectrum requirements
- Request for a RSPG Opinion for a long-term strategy
- How PMSE stakeholders can contribute on finding appropriate solutions for a wireless PMSE framework



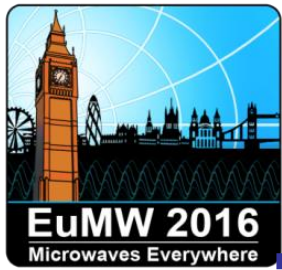
Commission Implementing Decision

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)

Aim of the decision

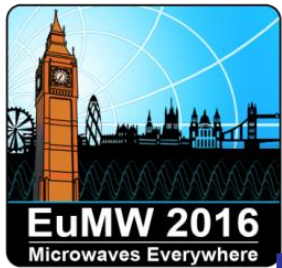
- Harmonise the technical conditions to give support to efficient use of spectrum and facilitate economies of scale for the audio PMSE sector
- However, not to provide all the spectrum requirements for the audio PMSE applications that can occur; those should mainly be dealt with at national level



Spectrum requirements for daily social and cultural needs

Results of the Commission's Impact Assessment show that daily "average" social and cultural events vary from 40 to 90 MHz, however the spectrum needs are mostly locally (in limited areas) and timely bounded.

An example: in the UK is estimated that 50 percent of the audio PMSE assignments is limited to 4 per cent of the area locations (Quotient Associates, Dec. 2006).

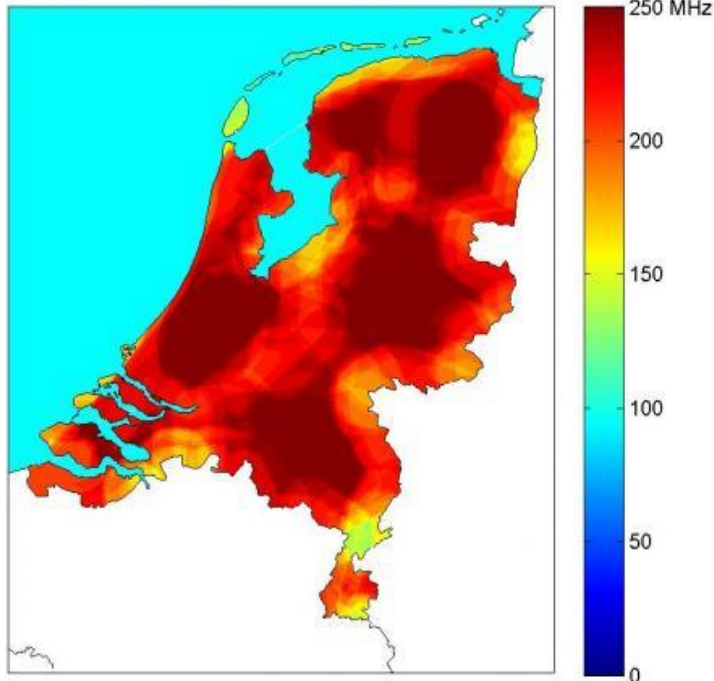


Consequently to be considered

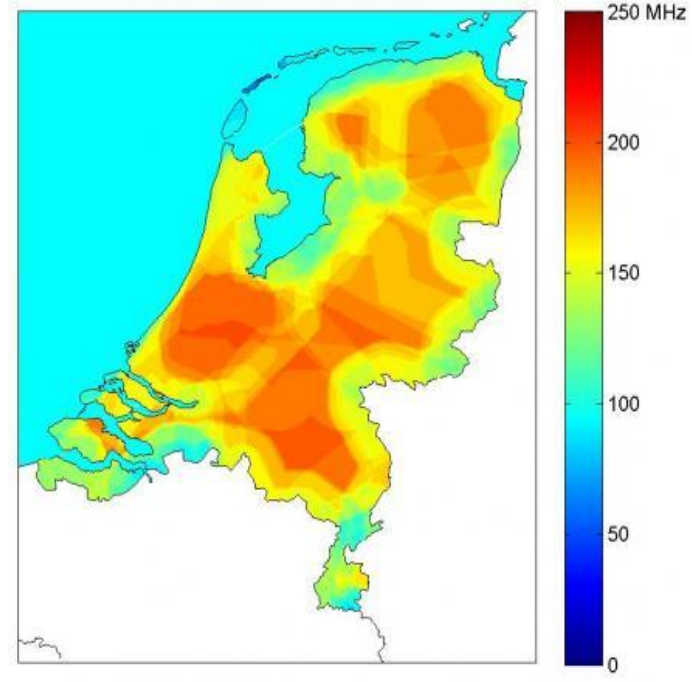
- Harmonisation of spectrum for wireless audio PMSE use as a single user in an wide covered geographical area in all probably result in spectrum sterilisation (dedicated spectrum remains most of the time not used or underused at most locations with only use at limited "hotspots")
- Spectrum requirement for wireless audio (and video) PMSE applications varies significantly between Member States
- Solution should be sought in flexibility of available spectrum by shared use of spectrum in identified geographical areas and in time

An example: The Netherlands

Available spectrum for wireless microphones,
470-791 & 823-832 MHz
indoor use
min=90.00MHz max=278.00MHz



Available spectrum for wireless microphones,
470-694 MHz & 823-832 MHz
indoor use
min=50.00MHz max=202.00MHz

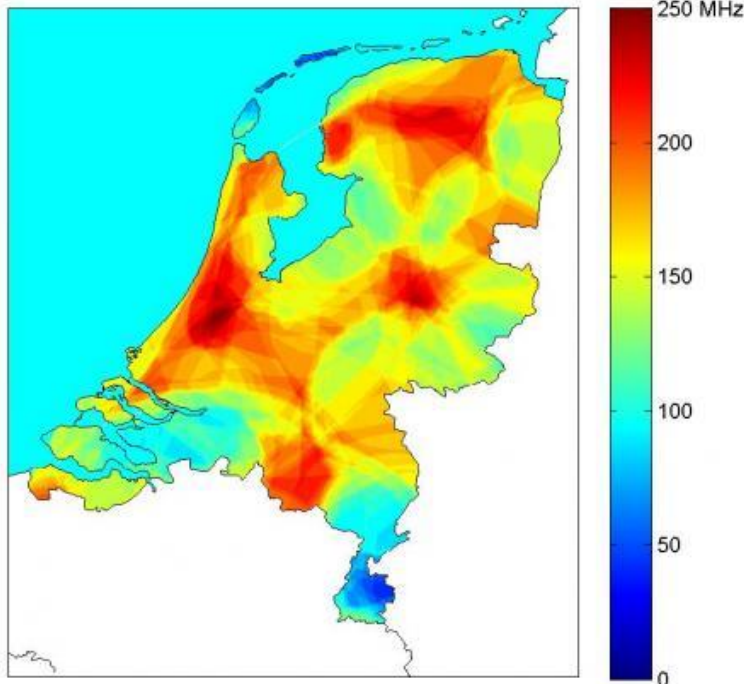


Effects on **indoor** spectrum availability in UHF spectrum following the reallocation of the 700 MHz band (worst case scenario):, average loss of white spaces between 40 MHz to 76 MHz; remaining available spectrum for wireless audio PMSE in UHF band minimum 50 MHz and maximum 202 MHz

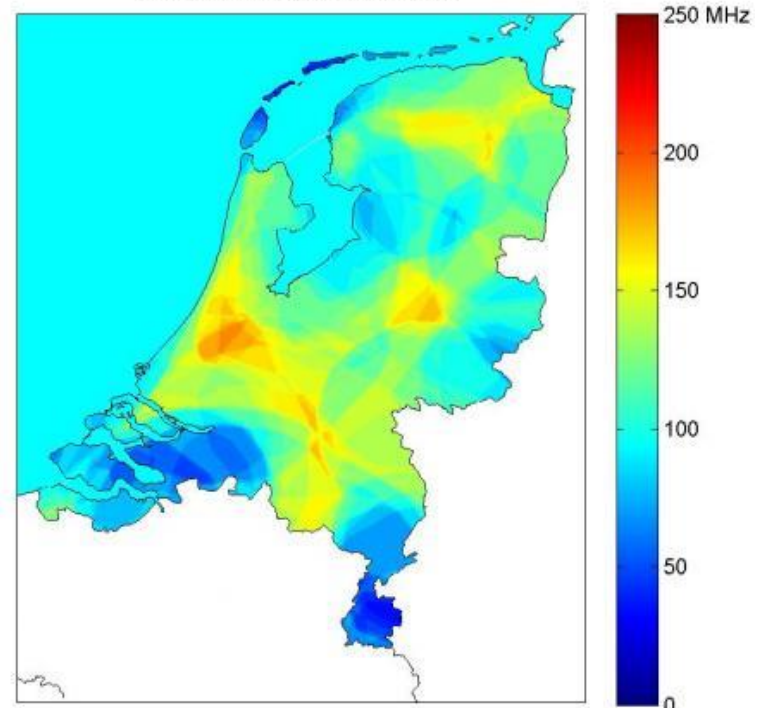
Source: Agentschap Telecom

An example: The Netherlands

Available spectrum for wireless microphones,
470-791 & 823-832 MHz
outdoor use
min=42.00MHz max=252.00MHz

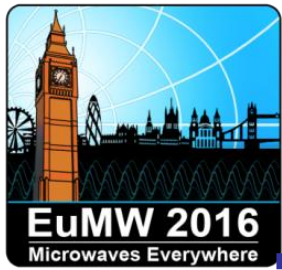


Available spectrum for wireless microphones,
470-694 & 823-832 MHz
outdoor use
min=32.00MHz max=186.00MHz



Effects on **outdoor** spectrum availability in UHF spectrum following the reallocation of the 700 MHz spectrum (worst case scenario):, average loss of white spaces between 10 MHz to 66 MHz; remaining available spectrum for wireless audio PMSE in UHF band minimum 32 MHz and maximum 186 MHz

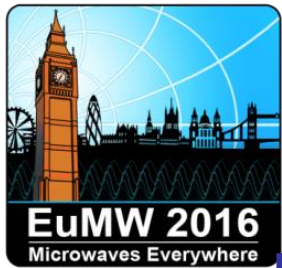
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Analysing the consequences

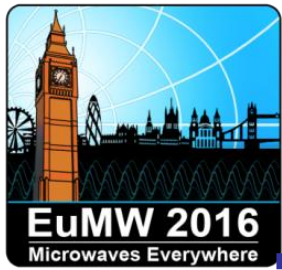
- The crucial question to be answered is not the total loss of the potentially available spectrum for wireless audio PMSE users, but
 - providing an insight in the geographical mapping, visualising where the actual spectrum needs for the wireless audio PMSE users factual are, locally and in time.

Consequently, spectrum availability and the factual local needs of the audio PMSE users can be analysed and the outcome can show the actual geographically spectrum constrains for the wireless audio PMSE.



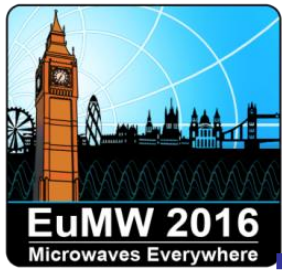
Request for an Opinion from the RSPG on a long-term strategy on spectrum requirements facing the future needs and use of wireless audio and video PMSE applications

- Assess possible solutions and options for meeting the expected future needs (both wireless audio and video PMSE) after 2020
- Indicate technological developments and regulatory requirements
- Assess the relevance of a common "roadmap" identifying principles and approaches of spectrum availability



How PMSE stakeholders can contribute finding appropriate solutions

- PMSE stakeholders should provide more specific information on the daily average requirements, locally and in time identifying the geographically spectrum needs in all Union Member States
- Identifying in which specific geographical areas there are spectrum constraints for wireless audio and video PMSE applications (instead of discussing an "overall problem" of spectrum loss)
- Develop new technologies which will contribute to an appropriate sharing of spectrum use with other spectrum users
- Identifying new spectrum ranges which could be useful in the concept of spectrum sharing



Thank you for your attention!

European Commission
DG for Communications Networks, Content and Technology
Unit B.4 - Spectrum