



***APWPT's Comments to the ECC Report 50***  
***"On technical conditions regarding spectrum harmonisation options for wireless radio microphones and cordless video-cameras (PMSE equipment)"***

1. ECC Report 50 (draft) creates the impression of an extensive analysis for the future use of the 1.8 GHz duplex gap. The relevant study group had considered "Technical conditions for the use of the bands 821-832 MHz and 1785-1805 MHz for wireless radio microphones in the EU". Cordless video-cameras were not considered.
2. In general APWPT agrees the position there is a basis to operate audio PMSE in the bands 821-832 MHz and 1785-1805 MHz. There is a public's interest in these two bands if the interference analysis shows a planning reliability:
  - a. Duplex gap 821-832 MHz

The assumptions in section 4.3.2 are based on the CEPT Report 30. This report was published years before LTE equipment was available. APWPT commented that changed interference scenarios should be considered (see the TG4 input document TG4(09)304 as of September 2009). At present LTE is on the march to be implemented Europe-wide. In Germany the expected interference has come clear. APWPT has repeatedly presented interference scenarios<sup>1</sup>. So far the CEPT Report 50 shows an incomplete and too optimistic view by taking over the studies of CEPT report 30 on the interference of MFCN to PMSE. In this report the LTE signal was only considered to be idle (no load) and the technical parameters of HDMA were taken as a

<sup>1</sup> Refer <http://www.apwpt.org/downloads/lte-interference-potential-to-micros30062012.pdf> and [http://www.apwpt.org/downloads/at\\_report-on-wm-in-a-lte-4g-environment\\_c.pdf](http://www.apwpt.org/downloads/at_report-on-wm-in-a-lte-4g-environment_c.pdf)

reference. With current available LTE equipment transmitted signals create a lot of out of band emission.

b. Duplex gap 1785 to 1805 MHz

The ECC Report 50 achieves:

*"At this stage there are no available CEPT/ECC studies concerning the impact of MFCN into digital audio PMSE. From the results of the studies available for the situation in the band 821-832 MHz it is reasonable to expect that a similar situation will occur in the band 1785-1805 MHz leading to some limitation on the types of audio PMSE applications that can be used in this band. Further information with regard to the usage of the band 1785-1805 MHz by PMSE applications will be provided in the Report B of CEPT in response to this EC Mandate on PMSE."*

3. APWPT concludes:

- a. The early assumption in the CEPT report 30 are no longer valid. Further studies are required that are considering the real interference scenario at both duplex gaps of MFCN to PMSE.
- b. The announced Report B should address this issue using the necessary resources to provide the necessary planning reliability for PMSE.
- c. In APWPT's view the current CEPT Report 30 validations are insufficient.
- d. The considerations of using the band 821-823 MHz as a guard band to protect the UE is not necessary because UE being affected by radio microphones are already that close to the event that they would destroy the production.
- e. The limitation of the transmitting power of hand held devices in the 823-826 MHz range is also overestimated for the same reason.
- f. Both precautions will not harm any MFCN base station service too.
- g. Because of simplicity the complete band should be available for PMSE equipment using 17 dBm in band. It would also simplify license regimes, conditions to place products on the market and to create scale of economies for the PMSE industry.
- h. Already in the meetings of SE 42 (responsible for writing the CEPT report 30) it was multiple times asked by the representative of the APWPT to

the LTE industry to provide more detailed information on the exact behaviour of LTE equipment and to cooperate in measurements campaigns to determine the true values. As LTE industry NEVER responded, APWPT conducted measurements in Germany with the help of local network providers.

The study on the interference from MFCN on PMSE by SE 42 which resulted in report 30 was made on the considerations from CEPT report 25-10 which also need updated as been concluded in this report 50 too. All the results in CEPT Report 30 considering PMSE are based on wrong assumptions. Therefor the conclusions in 4.3.2.3 are wrong

APWPT would like to stress out that the CEPT report 30 should e updated and amended to current available data from both member states as ALL stakeholders affected.

If WGFM thinks the measurements provided by APWPT discussed in 4.3.3 should be discussed and considered we would like to receive from WGFM guidance on how to execute these measurements to prove their reliability.

APWPT misses in the report that this study is necessary with regards to the constraints on availability for spectrum for PMSE and that alternative spectrum is badly needed.

Internal note:

~~The Report can be commented until December 17, 2012 to Bruno.espinosa@eco.cept.org. APWPT drafted a comment (to be finalized, Dre/Matthias)~~

## *Additional information on the APWPT*

### **Who we are?**

APWPT is an international non-profit organisation, which is representing the needs of all user of the PMSE sector. Members of APWPT include PMSE organisations, users and manufacturers.

### **What do we do?**

The PMSE sector is critical to the production of content for live entertainment of all genres. This sector extensively utilises wireless equipment such as Wireless Microphones, Wireless In-Ear Monitor Systems, Wireless Talk Back Systems and Wireless Instrument Systems.

For over fifty years wireless products have been used in the entertainment industry. In the past thirty years there have been vast improvements in production value and safety levels as a result of advances in wireless technology.

### **How do we do it?**

The PMSE sector currently relies on the spectrum interleaved between existing TV broadcasts, to enable the use of Radio Microphones, In-Ear- Devices and other short-range wireless devices. This equipment is an essential component of the European Entertainment Industry. Due to their efficient use of spectrum, radio microphones (they do not cause harmful interference and engineers create very defined frequency plans) are hardly noticed.

### **Who benefits from our activities?**

On a daily basis this sector is responsible for the production of content that has received world-wide acclaim and continues to attract a global audience. A vast array of organisations are reliant on radio spectrum for the production of content for **Performing Arts, Broadcasting, News Gathering, Independent Film and TV Production, Corporate Events, Concerts, Night Venues, Sports Events, Churches...** In addition, other sectors that utilise the current UHF spectrum include the Health Service, Education, Local Government, Political Programming and Conferencing.

In addition these technologies play a vital role in helping to improve security and safety levels within the Entertainment Industry and other sectors. Their benefits include improving the management of electrical safety, the reduction of noise levels, the development of safety in communications and reducing trip hazards as well as providing an essential tool for the security orientated services.

Its wireless equipment and the spectrum it operates on are crucial to the European Entertainment Industry.

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