Alternative frequency ranges for wireless microphones[1]

In many countries, the provision of new spectrum for education, art, culture and the creative industry is being discussed in political decision-making bodies. Therefore APWPT provides further information on the subject.

1) Which frequency ranges are discussed?

- ***1350 to 1400 MHz***
  A frequency range for scientific use in the context of radio astronomy (observation of distant sky regions) and temporary military use, usually outside of urban areas.

- ***1518 to 1525 MHz***
  A frequency range for satellite communication which has been practically unused for many years.

Both frequency bands are recommended by the relevant European bodies for national deployment[2].

2) Why are alternative frequency ranges in discussion?

After the clearance of the 800 MHz band, now the frequency range 700 MHz is being prepared for use by "Cell Phone and Co"[3]. Security services should also have access to 700 MHz. This eliminates further use by wireless microphones[4].

3) On which basis alternative frequency ranges are discussed?
In 2012, the ITU, a sub-organization of the United Nations, undertook studies on alternative frequencies for wireless microphones in response to the coming impact of refarmed 700 MHz usage and to identify alternative frequency bands[5].
The study results were also considered in Europe in further studies[6].

Output: 1350-1400 MHz and 1518-1525 MHz are generally suitable for wireless microphones.

Limitation: Wireless microphones, which are operated worn directly on the body, should continue to be operated on frequencies in the UHF TV range.

4) How is the national implementation of the study results carried out?

Within national administration working practices, there are basically two procedures:

- The short-term provision of these frequency bands, e.g. for special events.
  The disadvantage is that no long-term planning security is granted.
  This makes investments more difficult.
- Adoption of alternative frequency bands in the national frequency allocation tables.
  The advantage of this approach is long-term provision and therefore offers investment and planning security for manufacturers and users of wireless microphones.

5) Additional information

APWPT and its members have participated in (inter-) national studies and decision-making processes for many years and have supported this work on a sustained basis. We are therefore fully informed about these processes and will be happy to provide you with advice.

You can contact us via these contact addresses: office@apwpt.org or +49 (0) 91 91 97 90 554

[1] Collective term for a set of wireless tools, so-called Audio PMSE.
[2] Adoption in the CEPT recommendations ECC REC 25-10 and ECC REC 70-03.
[3] Simplification for a range of wireless applications and services, typically provided by mobile operators.
[4] World Radiocommunication Conference in 2015 had suggested further use in the frequency range 694-703 MHz and 733-758 MHz.
[5] ITU-R Report BT.2338.
[6] For example ECC Report 245 and ECC Report 253.