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Sennheiser response to Ofcom's consultation:
Award of 1492-1517 MHz spectrum for mobile services

About Sennheiser electronic SE & Co. KG

At Sennheiser, we aim to shape the future of audio by creating unique sound experiences for our customers. As a third-generation family-run business, we are equally proud of our over 75-year history and past accomplishments and innovations in the world of audio and of our ambition to shape its future.

Sennheiser electronic SE & Co. KG, headquartered in Wedemark (Germany), is the leading European manufacturer for professional audio solutions such as microphones, meeting solutions, streaming technologies, and monitoring systems. The business with consumer devices such as headphones, soundbars and speech-enhanced hearables is operated by Sonova Holding AG under the license of Sennheiser.

Potential for audio PMSE to share with supplemental downlink

Sennheiser notes, with interest, Ofcom's consultation on the award of the 1492-1517 MHz band for supplemental downlink (SDL). This will extend the existing SDL frequency allocation of 1452-1492 MHz in line with the Commission Implementing Decision (EU) 2018/661 which amends the Commission Implementing Decision (EU) 2015/750.

As Ofcom is aware, the needs of the audio Programme Making and Special Events (PMSE) industry continues to grow for low power audio applications such as wireless microphones and in ear monitors. To address these increased requirements and support the growth of events and productions as they respond to audience and consumer expectations, Sennheiser has developed Spectera, its wireless multichannel audio system (WMAS).

In the US, the band 1435-1525 MHz is available for audio PMSE, and we have developed a band variant of Spectera for this allocation. In Germany, audio PMSE is authorised to operate in the band 1452-1525 MHz on a shared basis with other services and applications, including supplemental downlink in the 1452-1492 MHz range.

As a global manufacturer, we are always interested in exploring spectrum harmonisation opportunities across countries and regions. With this in mind, we respectfully suggest that Ofcom may be able to further optimise the use of SDL bands (from 1452-1517 MHz MHz), alongside the existing PMSE allocation of 1517-1525 MHz, by considering the potential for audio PMSE to share with SDL.

The rationale for our proposal is as follows:

1. To ensure no disruption to our operation from interference, it is important to share with a known, predictable service. SDL, with base station transmissions only, provides a stable sharing environment.
2. To establish that spectrum is usable for PMSE, SDL transmissions can be detected through spectrum scanning procedures. Our protection requirements are so stringent that it is

incumbent on us to stay away from another user, in this case SDL. In this way, user equipment receiving SDL transmissions will be protected.

3. Sharing in the band 1452-1525 MHz would significantly align with the US audio PMSE allocation 1435-1525 MHz. This would provide opportunities for economies of scale.
4. There is potential to also include the band 1350-1400 MHz (or parts thereof) within the sharing opportunity in 1452-1525 MHz.
5. With SDL in 1452-1517 MHz harmonised within the European Union, this sharing opportunity could be adopted by other EU member states and thereby has the potential to provide a useful spectrum resource for audio PMSE. In addition, some CEPT countries have made the 1518-1525 MHz band available for audio PMSE which extends the spectrum available for PMSE.

The main caveat to the potential to share in this band is the extent to which SDL gets deployed. If there is extensive use, then there will be no white space available, and the band will not be viable for PMSE. This will be a major factor to consider should Ofcom look to explore sharing in this band, either unilaterally or via CEPT.

Sennheiser would welcome the opportunity to engage further with Ofcom on the proposal to explore sharing of audio PMSE and SDL in the 1452-1517 MHz band.