

Ofcom
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11th April 2022

Freshwave's response to Ofcom's consultation "Enabling spectrum sharing in the upper 6 GHz band" dated 28th February 2022

Freshwave welcomes the opportunity to respond to the above consultation ('the U6 GHz Consultation').

Freshwave invests expertise and capital in digital infrastructure. We are a leading network service provider, bringing together mobile operators, public authorities, and real estate providers to extend high quality mobile coverage and capacity in thousands of locations across the UK, including within 2000+ buildings.

Increasingly we are also deploying and managing mobile private networks (MPNs) for a variety of applications and have acquired several Shared Access Licences (SALs), as well as Local Access Licences (LALs) which use MNO spectrum. We also deploy and manage a large number of Wi-Fi networks both indoors and outdoors.

We support Ofcom's objective to promote spectrum sharing, localised use, and innovation, and are broadly supportive of the proposals in this consultation.

Responses to the specific U6 GHz Consultation questions are given below.

Question 1: Do you agree with our proposals to add the 6425-7070 MHz band to the Shared Access framework?

Yes, we agree that this band should be made available for innovation, leading to potential new commercial and public services. We agree also that the spectrum should be licensed so that Ofcom can coordinate sharing with others (including with existing users whose services could be adversely affected by licence-exempt use) and revoke licences in the future if necessary.

Ofcom should continue to actively participate in the WRC-23 preparations and ensure longer term usage of this band is harmonised with other countries. However releasing the spectrum now, rather than waiting for the outcomes of WRC, could help inform those preparations.

We agree that the Shared Access framework is the best method for submitting and approving licence applications. We understand Ofcom's ambition is to speed up this process by automating it and hope that this can be completed soon despite the introduction of another Shared Access band.

We agree also that licences should be technology neutral. However Ofcom may want to consider capturing information on the proposed technology for research purposes and to help diagnose any interference issues.

Question 2: Do you have any comments on potential uses for this licence?

We agree that mobile (5G) and Wi-Fi will be the main technologies to make use of this band. For Wi-Fi the significant additional spectrum would allow faster speeds for bandwidth-intensive applications and increase the capacity for each access point.

For 5G the impact of this additional 645 MHz is potentially hugely significant as the maximum channel bandwidth otherwise available in the SAL Frequency Range 1 (FR1) bands is currently only 100 MHz (in the 3.8-4.2 GHz band). 3GPP band n96, which includes the U6 GHz band, has channel bandwidths of up to 400

MHz, which could allow ultra-fast connectivity e.g. for rich immersive extended reality (XR) applications with multiple simultaneous users.

Question 3: Do you have any comments on our proposed licence conditions, licence fee or minimum separation distance?

We agree broadly with the licence conditions. However we expect only limited leakage from buildings so EIRP limits could perhaps be relaxed on a case by case basis where appropriate, e.g. for a factory with significant geographical separation from neighbouring potential users of this band. This would help increase the range and reduce the number of network nodes required, especially given the lack of a medium power licence type for this band.

Regarding pricing, we note generally low SAL numbers in the 3.8-4.2 GHz and mmWave bands. We consider the proposed licence cost is too high and could limit innovation. In our view it would be better to start with lower pricing, perhaps £80 per year, and increase the price if there is evidence of high demand or spectrum hoarding. This approach could similarly be adopted for the 3.8-4.2 GHz and mmWave bands, i.e. £80 per year regardless of channel bandwidth.

Question 4: Do you have any comments on our technical analysis?

We have no comments on the technical analysis.

Yours sincerely,



Mike Kennett
Head of Regulatory Affairs
Freshwave