

Consultation title	Improving spectrum access for Wi-Fi – spectrum use in the 5 and 6 GHz bands
Representing (delete as appropriate)	Organisation
Organisation name	Intel Corporation

Your response

Question	Your response
Question 1: Do you have any comments on our proposal to open access to the 5925-6425 MHz band for licence-exempt Wi-Fi use?	<p>Access to 5925-6425 MHz is critical to meet the demands for WAS/RLAN (Wi-Fi 6E) and other license exempt RLAN technologies in the UK. Access to the 6 GHz band will enable Wi-Fi to continue delivering positive experiences for the most bandwidth-intensive applications.</p> <p>Where available, Wi-Fi 6E will utilize up to 14 additional 80 MHz channels and 7 additional 160 MHz channels in 6 GHz for applications such as high-definition video streaming and virtual reality applications. Wi-Fi 6E devices will leverage these wider channels and additional capacity to deliver greater network performance and support more Wi-Fi users at once, even in very dense and congested environments.</p> <p>Intel Corporation supports Ofcom’s vision of being an “early adopter” and possibly being the first CEPT member state to open 5925-6425 MHz for operational licence exempt Wi-Fi use. Additionally, Intel Corporation encourages Ofcom to consider also opening 6425-7125 MHz for licence exempt Wi-Fi use because incumbent users are the same in both the lower 6 GHz and upper 6 GHz bands. The compatibility and sharing studies performed within CEPT are equally valid for both parts of the 6 GHz band, which currently indicate that sharing between Wi-Fi and incumbent users is possible when using low power indoors (~250 mW) and very low power outdoors (~25 mW).</p> <p>The proximity to 5 GHz means that 6 GHz chipsets and RF front-end modules will be available mid-2020.¹</p>
Question 2: Do you have any comments on our technical analysis of coexistence in the 5925-6425 MHz band?	<p>As previously mention in response to Question 1, Intel Corporation notes that coexistence conclusions reached for 5925-6425 MHz are equally valid for 6425-7125 MHz since incumbent services are the same in both bands. We note that the above mentioned CEPT studies allowed for higher power than Ofcom contemplates in this consultation for a 20 MHz channel. We suggest 11 dBm/MHz for a 20 MHz channel for a total power of 24 dBm (250 mW).</p>

¹ [Broadcom Press Release](#) and [Celeno Press Release](#)

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	<p>W.r.t. CBTC at 5.9 GHz (while noting no UK deployments), coexistence protection requirements in CEPT for 5.9 GHz CBTC have currently centred on the use of guard bands up to 5945 MHz. Given the extremely limited roll out of CBTC across the CEPT region Intel Corporation believes the use of guard bands is disproportionate as a solution to the protection requirements of CBTC. In addition, examination of the current receiver performance of CBTC systems (from ECC Report 301 and CEPT report 71) shows significant scope of improvement when compared to similar Wi-Fi receiver performance. Guard band requirements imposed on WAS/RLAN in 5925-6425 MHz should be minimised to maximise usable spectrum for WAS/RLAN through use of CBTC systems with more robust and state-of-the-art receiver performance.</p>
<p>Question 3: Do you agree with our proposal to remove DFS requirements for indoor Wi-Fi up to 200mW from the 5725-5850 MHz band?</p>	<p>Intel Corporation agrees with Ofcom’s proposal to remove the DFS requirements for indoor devices. Noting that the Czech Republic is also considering a similar relaxation, we encourage both Ofcom and CTU (Czech Telecommunications Office) to work together on a common approach for indoor usage as this will further help drive the equipment eco-system.</p>
<p>Question 4: Do you have any comments on other options that may be available for Wi-Fi and RLANs within the 5 GHz band?</p>	<p>Intel Corporation would like to comment on repeated proposals for expanding DFS requirements to include detection of fast frequency hopping radars. The more complex the radar signature that is needed to be detected, the higher the likelihood of false detects and the subsequent loss of service.</p>