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DSA
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DSA response to Ofcom consultation on licence-exempt spectrum in the 5.8 GHz band

Introduction

The Dynamic Spectrum Alliance (DSA) is a global organization advocating for laws and regulations that will lead to more efficient and effective spectrum utilization.[1] The DSA's three goals are closing the digital divide globally, enabling the Internet of Things and alleviating the "spectrum crunch". The DSA is pleased to provide input to Ofcom's consultation on its proposals to extend Wi-Fi access in the 5 GHz band to an additional 125 MHz (5725 to 5850, the '5.8GHz band')[2].

Q1: Do you have any comments on the drafting of the Proposed Regulations?

As Ofcom sets out in section 3 of its Statement, the evidence of increasing demand for Wi-Fi is clear and compelling. Building and maintaining robust wireless connectivity – including Wi-Fi – depends on access to license-exempt radio frequency spectrum. As Ofcom notes, UK consumers depend everyday on Wi-Fi as the final link to connect their homes to high-speed broadband networks. And each year more and more traffic is offloaded onto licensed-exempt spectrum to accommodate rising demand for mobile data. In addition, expanding licensed-exempt spectrum has made public Wi-Fi initiatives possible across the UK, bringing broadband to public libraries, community centres, and government institutions.

For these reasons, DSA applauds Ofcom's efforts to make additional license-exempt spectrum available in the 5 GHz band. In particular, the 5 GHz bands offer the potential of larger channel sizes and greater bandwidth. This is critical because the Wi-Fi standard, IEEE 802.11ac amendment allows for channel sizes of 20, 40, 80, and 160 wide channels. However, a sufficiently large block of license-exempt spectrum is required to take advantage of these larger channels sizes. DSA therefore strongly supports Ofcom's decision to open up the 5.8 GHz band to increase the amount of spectrum available for Wi-Fi and other license-exempt technologies.

DSA also supports Ofcom's adoption of technology neutral spectrum policies. Spectrum is a scarce resource, and as such, Ofcom should maximize its use through policies that promote sharing across a wide variety of users and platforms. DSA believes that license-exempt spectrum can be made available in a manner that both maximizes its use by new users and protects incumbents.

Q2: Do you have any comments on the proposed technical parameters?

The DSA believes that the proposed technical parameters are overly cautious and that they would limit the utility of the spectrum released for licence-exempt use. The proposed ban on outdoor use and the low power limits would severely limit the applications that could be used in

[1] Our membership spans multinationals, small-and medium-sized enterprises, and academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the amount of available spectrum to the benefit of consumers and businesses alike. A full list of DSA members is available on the DSA's website at www.dynamicspectrumalliance.org/members/.
[2] https://www.ofcom.org.uk/__data/assets/pdf_file/0032/98159/5p8-Regs.pdf

the new band. Ofcom can achieve coexistence of multiple platforms, including satellite, in the 5.8 GHz band without these unnecessarily stringent power limits and the ban on outdoor use.

Specifically:

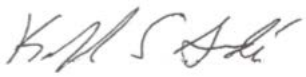
- Ban on outdoor use: The proposed ban on fixed outdoor use is unnecessary and would rule out many use cases for Wi-Fi, such as public outdoor Wi-Fi initiatives and inexpensive point-to-point backhaul solutions that can further drive down the costs of broadband. The outdoor Wi-Fi market is growing globally driven by demand for outdoor connectivity. In the United States alone, the outdoor Wi-Fi market is expected to reach $37.7 billion by 2020.[3]

- Power limit: The proposed radiated power limit of 200 mW is too low. The maximum conducted power should be increased to 1W, with a maximum EIRP of 4W. This would allow for greater utility of the band and improve signal strength to facilitate a wider range of applications. In addition, it would bring the UK on par with the United States, where licence-exempt Wi-Fi devices can operate at up to 1W conducted power and a max EIRP of 4W both indoors and outdoors in the 5725-5850 MHz frequency range. These higher limits allow for greater utlity of the band, and in the United States, these limits have been sufficient to allow for coexistence with incumbent users.

If Ofcom proceeds to adopt the proposed limits, it should, at a minimum, commit to further study of both outdoor use of the 5.8 GHz band as well as increasing the power limits in the future.

Finally, DSA supports Ofcom's proposal to continue to reexamine the DFS requirements in the 5 GHz band. Wi-Fi access point technology has made great strides, and DFS requirements should be updated to reflect these technological improvements and make the Wi-Fi experience better for consumers.

Respectfully submitted,



Kalpak Gude
President, Dynamic Spectrum Alliance

[3] *See* The Global Outdoor Wi-Fi Market, Trends, Drivers and Projections (July 2015) at http://www.strategyr.com/MarketResearch/Outdoor_Wi_fi_Market_Trends.asp.