

Public consultation on making the 26 GHz and 40 GHz bands available for mobile technology in the UK

Qualcomm Response

At a time when digital technologies are essential tools to meet economic, energy and environmental needs, 5G as an "open innovation platform" is a source of growth, innovation, and social inclusion. Qualcomm would like to thank Ofcom for the opportunity to provide our view and welcome its decision to make over 6 GHz of millimetre wave ("mmWave") spectrum available across the 26 GHz (24.25-27.5 GHz) and 40 GHz (40.5 GHz-43.5 GHz) bands for mobile technology, including 5G.

26 GHz and 40 GHz bands offer an opportunity for indoor and outdoor mobile services in urban, sub-urban and rural areas: for instance, city centers, localized areas such as stadiums, railway stations, factories, campuses, shopping centers, etc., as well as fixed wireless access (FWA) and industrial broadband deployments. 5G mmWave is a technology adopted in several markets with a mature ecosystem of devices. As mmWave adoption continues to spread across the world, handsets, and a variety of other devices and CPEs supporting mmWave are being introduced into the markets.

Qualcomm do agree with the terms of the auction indicated by Ofcom and would like to encourage the regulator to accelerate the timing with the objective to make it available already in 2023. Comprehensive information on how mmWave is already transforming societies around the world can be found at the following website: <https://qualcomm.ft.com/>

Furthermore Qualcomm would like to highlight the following:

- The mmWave market is accelerating globally, as the 26 and 28 GHz bands are assigned, and deployments have started in several countries around the world. In Europe, an increasing number of countries are planning to make mmWave available in 2023. So far,

mmWave has been made available in 14 countries (Italy, Spain, Germany, Finland, Estonia, Denmark, Greece, Sweden, Slovenia, Croatia, Malta, North Macedonia, San Marino, Russia, etc.) and more are in the pipeline in 2023: Norway and Austria, for example, are in the process of making available the 26 GHz band. With high-speeds and powerful connectivity, 5G mmWave is unleashing new possibilities for mobile communications.

- Qualcomm believe that mobile operators are and need to continue being a central part of the spectrum licensing process and market development so that scale can be maximised which benefits the entire ecosystem, including the 'verticals'.
- When it comes to mmWave eco-system development, Qualcomm note that substantial progress has been made in the last few months and we can confirm that infrastructure, chipsets and devices that support the 24.25-27.5 GHz band are available in the marketplace. In particular, according to GSA:
 - 192 operators in 48 countries/territories have been investing in 5G mmWave (testing, trialling, planning, acquiring licences, deploying, or operating networks)
 - 140 operators in 24 countries/territories hold licences enabling mmWave deployment in one of these bands.
 - 28 operators identified as actively deploying mmWave spectrum for 5G in 16 countries/territories.
- When it comes to licensing, Qualcomm supports Ofcom proposal allowing MNOs to be awarded licenses in high density areas. Furthermore, although the physical nature of the mmWave spectrum is not compatible with licensing obligations such as coverage or commitment of investment, Qualcomm is of the view that, in order to assure that no market distortion is artificially created, and spectrum hoarding is not encouraged, specific obligations may be considered such as a commitment to deploy in a given period (e.g., 12-18 months from the licensing moment), "use-it-or-lease-it" or "use-it-or-loose-it", etc. In case such conditions are included, the regulator should also make sure that the secondary

market is sufficiently established to allow for efficient spectrum trading and/or leasing to take place. Any obligations attached to the licensing of these spectrum bands should be known before the licensing and communicate to all interested parties in a fair and transparent manner.