Enabling opportunities for innovation: shared access to spectrum supporting mobile technology

TalkTalk submission

March 2019

NON-CONFIDENTIAL

This is TalkTalk Group's response to Ofcom's consultation 'Enabling opportunities for innovation: shared access to spectrum supporting mobile technology' published on 18 December 2018.

1 Overview

1.1 Overall, we welcome Ofcom's plans to open up spectrum to a wider range of users to enable innovative uses. The approach has the potential to stimulate competition and drive consumer benefit through enabling new uses and increasing spectrum utilisation. We set out in section 2, the additional factors we believe Ofcom must consider when setting its strategy to enable innovation.

1.2 We support Ofcom's proposals to introduce a common approach to sharing across the three shared access bands, namely the 3.8-4.2 GHz band, the 1800 MHz shared spectrum ("the DGB") and 2300 MHz shared spectrum. We agree that opening up these bands for sharing could enable local uses, including industrial IoT, enterprise, logistics, mining and agriculture, and boosting connectivity in poor coverage areas using FWA. We comment on the proposals to change the authorisation approach for the DGB in section 3.

2 Enabling innovation

2.1 In addition to implementing the proposals set out in the current consultation document, we consider that Ofcom should give further consideration to the following factors when setting its overarching strategy to support better mobile coverage, 5G deployment and innovation:

Mobile handset support

2.2 We note that of the bands proposed for shared access, the 2300 MHz band and the DGB have mobile handset support, but 3.8-4.2 GHz band does not. The 2300 MHz band has broad mobile handset support; and the DGB has universal handset support as it is available for use with all standard mobile phones as DCS1800 (2G/GSM) and E-UTRA band 3 (4G/LTE).

2.3 The 3.8-4.2 GHz band does not have comparable mobile handset support, and we expect this will adversely affect its utility for the potential use cases Ofcom sets out. While NR band n77 covers 3300-4200 MHz, it is NR band n78 (5G TD 3500) which covers 3300-3800 MHz which "is the most commonly tested and deployed 5G frequency"[1]. It is evident that there is potential for use of 3.8-4.2 GHz for 5G NR, but it is by no means assured that the band will receive widespread support from device and handset manufacturers.

2.4 By contrast, the 3.6-3.8 GHz band is a core 5G band with handset support. We support the proposal in the Government's *Future Telecommunications Infrastructure Review* that Ofcom review the feasibility of a more flexible approach to licensing access to the 3.6-3.8 GHz band so that it can be used for innovation, rather than Ofcom pursuing its preferred approach of only awarding national licences by auction. We appreciate the proposals for access to awarded mobile spectrum set out in this consultation may be seen as a way of addressing this need, but note that it is as yet unproven.

[1] https://halberdbastion.com/technology/cellular/5g-nr/nr-frequency-bands/n78-3500-mhz

2.5 We consider that facilitating shared access by adapting the spectrum allocation process may be more effective and warrants further consideration in order to stimulate innovation and drive spectrum efficiency in line with Ofcom's objectives.

The role of neutral hosts

2.6 While making handset-friendly spectrum available on a shared basis is an important stimulant for innovation, it cannot be considered apart from the issue of regulated interconnects and roaming arrangements with the UK's four mobile network operators (MNOs). To benefit from the deployment of small cells resulting from wider access to spectrum, UK consumers must be able to easily access the services provided by the alternative operator or neutral host.

2.7 If the only way a consumer can gain service from a third party provider is to remove the SIM card from their phone, replace it with one from the third party for the duration of their time away from the coverage of their mobile service provider, then place the original SIM card back later, then we see little appetite for such a service.

2.8 Given the lack of support from the UK's four MNOs for third party neutral hosts to provide the all-important rural and in-building coverage, we believe Ofcom should review the potential for regulated neutral host interconnection mechanisms and tariffs; only with such intervention will we see the extended rural and indoor coverage that Ofcom seeks to achieve through this consultation.

3 Changes to the authorisation approach for existing CSA licensees

3.1 TalkTalk Communications Limited is one of the 12 nationwide Concurrent Spectrum Access licensees in the DGB. Since 2006 we have invested in the research and development of technology suitable for deployment in the DGB, which contributed to the successful 4G licence variation in 2016. Although we have chosen to not take forward our 4G femtocell programme to commercial launch, we continue to see potential uses for the band consistent with Ofcom's proposed changes to the authorisation approach.

3.2 We agree with the proposals Ofcom sets out in the consultation for low and medium power licences, centralising the coordination arrangements and applying cost-based fees. Fees must be kept under review as use of the band, and other sharing bands, develops to ensure they do not deter large-scale deployments.