



Blu Wireless Technology Ltd.

Blu Wireless Technology Ltd
1 Temple Way (5th Floor)
Bristol
BS2 0BY

www.bluwirelesstechnology.com
info@bluwirelesstechnology.com

Blu Wireless Submission to DCMS regarding: *Statement of Strategic Priorities for telecommunications, the management of radio spectrum and postal services*

27 March 2019

Introduction:

Blu Wireless is pleased to have the opportunity to provide a response to DCMS in relation to the industry consultation on strategic priorities for OFCOM's management of radio spectrum. As a leading provider of millimetre wave 5G wireless products and technologies we firmly believe that there are significant opportunities for improving the UK's telecommunications infrastructure in two key applications areas.

- 1. Gigabit Grade Broadband** – using Fixed Wireless Access using millimetre wave spectrum to deliver gigabit grade broadband to homes and businesses. In July 2018 the FTIR set a target of delivering gigabit grade networks to 15 million premises by 2025 with nationwide coverage by 2033. It is also noted that the current coverage is less than 5% compared to over 75% in other leading European nations. The assumption in the FTIR is that this coverage will be delivered using fibre to the premises. However, there are several significant problems associated with the full rollout of fibre – including obtaining way leave, access to poles and ducts for the 'last mile' connection to premises. Resolving these issues is widely recognised as being both time consuming and costly. Therefore, we believe that gigabit grade wireless services based on the use of cost-effective license exempt millimetre wave wireless technologies operating in the 57-71 GHz band can play a key role in accelerating rollout this infrastructure by taking a hybrid fibre wireless approach to the deployment of gigabit grade broadband.
- 2. Transport.** The December 2016 National Infrastructure Commission report on 5G for the UK concluded that the number one priority 5G use case which could deliver the most economic benefit to the UK was improved passenger wireless connectivity. This is closely linked to the increasing demand for railway passengers to have internet connectivity while travelling by train – to improve the passenger experience and to improve productivity for business travellers. The UK Government has stated that "High quality services on heavily loaded, high capacity trains, would require at least 1 Gbps to each train today", and studies by OFCOM (October 2018¹) have estimated that this could reach 3.6Gbps per train by 2025. These data rates can only be feasibly delivered using the bandwidth that is available at millimetre wave frequencies. The 66 – 71GHz band, recommended by OFCOM as one only of two frequency bands capable of supporting this application, is particularly attractive because of the wide bandwidth available, the lack of any current use, and is license exempt. Blu Wireless is working on the deployment of a 5G mmWave system for First Group (the UK's largest rail company)

¹ <https://www.ofcom.org.uk/spectrum/information/rail-passenger-data-access>

which will be deployed on their South West Rail Network from London Waterloo from the end of 2019²

Blu Wireless therefore believes that OFCOM should build on recent work on updating radio regulations pertaining to operation in the 57-71 and the 66-71 GHz bands in order to ensure that the UK is able to take advantage of emerging millimetre wave technology and products for the delivery of these two leading 5G applications.

Answers to Questions

Q1: Do you agree with the Governments strategic priorities and desired policy outcomes for telecommunications, the management of radio spectrum and postal services?

We agree that OFCOM's strategic priorities should include management of radio spectrum for improved gigabit grade broadband and improved wireless connectivity for transport.

Q2: Does this document set out clearly the role of Ofcom in contributing to the Government's strategic priorities and desired outcomes?

We are also pleased that OFCOM is leading the way at a European level within the relevant CEPT groups³ in Europe in order to harmonise access to millimetre wave spectrum and associated regulations across all members of CEPT. However, we are concerned that the timescale for reaching agreement on these regulations will be too long resulting in delays in product approval needed for deployment of equipment. Current estimation is that a further round of 2 to 3 CEPT meetings will be required before the final regulations will be approved in 2020. This is a significant concern as product approval should commence during 2019 prior to deployment on the UK rail network in early 2020 – with consequent knock on effects causing delay in rolling out improved train passenger wireless connectivity. However, there is path by which one of the member states – such as the UK - can voluntarily implement the regulation before it is fully harmonised across all CEPT member states. Therefore, we request that OFCOM considers this request and assigns the necessary internal priority and resources to allow the UK to adopt these important regulations in 2019 in anticipation of full adoption by all other CEPT member states from 2020. We also note that these regulations are also equally relevant for the delivery of wireless gigabit broadband services and hence both of the applications discussed above would benefit from this accelerated approach to spectrum regulation.

We would welcome the opportunity to meet with DCMS and OFCOM to discuss these important issues in more detail.

Yours sincerely

Mr Mark Barrett
Chief Marketing Officer
Blu Wireless Technology Ltd

² <https://www.firstgroupplc.com/news-and-media/latest-news/2019/25-02-19.aspx>

³ Rec 07 03 for CEPT Report 70 regarding new regulations for 54-71 GHz as being debated within the SRD/MG group

Blu Wireless Technology Ltd is a leading supplier of millimetre wave wireless technology and products for infrastructure applications. The company is based in Bristol, is backed by several major investors led by ARM and including Calculus and currently employs over 80 professional engineers. The company is recognised worldwide as one of the leading suppliers for carrier grade mmWave technologies with customers in the USA, Europe and Asia.

Blu Wireless is also a key partner and supplier of 5G mmWave equipment in two the six 5G Test Beds being supported by DCMS's 5G Test Bed and Trial programmes. The first of which is the Liverpool 'L5G' project for 5G Health Care applications where a mesh network of 90 nodes was deployed in 2018 – and which will be further extended by another 350 nodes in 2019. The second project is the 'Autoair'⁴ project aimed at 5G connected vehicle mobility applications. Here a network of millimetre wave nodes has been deployed around the two mile high speed bowl at the Millbrook proving ground to support high speed gigabit level track to car (train) applications. This will also be further extended in 2019 to evaluate the latest generation of millimetre technology operating in the 57-71 GHz band.

⁴ <https://www.youtube.com/watch?v=X1zyISRWslg>