March 26, 2021

Radio Spectrum Policy Group

VIA EMAIL
CNECT-RSPG@ec.europa.eu

RE: **Draft RSPG Opinion on Spectrum Sharing – Pioneer initiatives and bands**

Facebook, Inc. ("Facebook") is pleased to submit these comments in response to the public consultation of the Radio Spectrum Policy Group ("RSPG") on its Draft RSPG Opinion on Spectrum Sharing – Pioneer initiatives and bands.

Facebook observes that spectrum sharing is a tool that can achieve some of the following objectives:

- Enable the introduction of new applications in bands where incumbents applications are operating.
- Enable multiple users of the same application to share a single band.
- Enable several operators to pool their resources in order to lower the cost of deployment in hard to cover areas.

Facebook recommends that the RSPG focus on achieving specific goals in specific bands rather than seek the promotion of sharing in general. The goal of spectrum efficiency should be paired with the goal of deploying real services to citizens.

Facebook recommends that the RSPG identify the following three opportunities as pioneer initiatives and bands:

- investigate the possible use of the band 3.8-4.2 GHz for local applications while protecting receiving earth stations and other existing applications and services,
- Investigate how spectrum sharing could enable mobile operators to extend the coverage of mobile networks in an economically viable manner,
- Enable the deployment of 320 MHz channels Radio Local Area Network (RLAN) technology (e.g. Wi-Fi 7) in 6425-7125 MHz while protecting satellite services and fixed links.

3.8-4.2 GHz for local networks

Local connectivity is required to support the most demanding 5G use cases, including Ultra Reliable Low Latency Communications (URLLC). Vertical applications based on local

connectivity are enablers to key EU objectives such as digitise European industry and more generally the EU digital strategy.

As RSPG already recognised that "*spectrum demand for verticals has been addressed in the mid-bands in a dissimilar way in MS, due to different national circumstances*". This is particularly detrimental to vertical applications' ecosystems which rely on economies of scale at the European level, but also for EU companies operating in several Member States. As a result, the digitisation of the EU industry has not progressed at the pace initially anticipated.
Facebook observes that the 3.8-4.2 GHz opens up an opportunity for local connectivity throughout Europe, by ensuring that appropriate sharing mechanisms with satellite and other incumbent services are identified.

The use of the 3.8-4.2 GHz should be studied from a technical compatibility perspective. Facebook does not consider it necessary or appropriate to restrict the deployment models strictly to 'vertical applications', which definition would be challenging to establish. Facebook recommends developing Least Restrictive Technical Conditions that would enable a wide range of local network and local applications, including Ultra Reliable Low Latency Communication (URLLC) applications, but without excluding applications such as broadband communications.

Spectrum sharing to support improved coverage of mobile networks in rural areas
Mobile Broadband networks are increasingly becoming a critical infrastructure supporting the everyday life of EU citizens. Competition - in particular infrastructure competition - has proved to be a powerful tool to promote the availability of affordable state-of-the-art mobile broadband services. However, the deployment of competing mobile broadband infrastructure in rural areas is economically challenging, leading to a digital divide between urban and rural areas.
While rural coverage challenges are much larger than a simple question of spectrum sharing, Facebook argues that Europe should ensure that spectrum - and spectrum sharing frameworks - are not causing delay in the deployment of 5G networks in rural areas. Facebook recommends that BEREC and RSPG consider launching a joint initiative in full cooperation with Mobile Network Operators to identify the best spectrum award and licencing method supporting coverage of rural areas.

Facebook underlines that:

- Mobile Networks Operators are best placed to deliver mobile broadband services and should be involved in any such initiative, for example, the internet para todos initiative from Telefonica.

- Since spectrum awards are conducted at national level, EU wide targets could be identified at Union level[1], while Member States/National Regulatory Agencies could identify the most appropriate sharing framework depending on national circumstances. Best practices could then be identified and shared at Union level.

Open 6425-7125 MHz to RLANs

Facebook argues that the RSPG should consider opening the 6425-7125 MHz to Radio Local Area Networks (RLANs). RLANs play a key role for personal connectivity (e.g. connectivity of AR/VR glasses), local connectivity (connection of devices around the home and the office) and mobile connectivity (off-load of mobile broadband traffic, especially for devices within homes and buildings). Opening the 5945-6425 MHz is a significant first step to enable Wi-Fi 6E and channelisation up to 160 MHz. However, Wi-Fi 7 is being standardised with 320 MHz channelisation to support higher data rate and lower latency. Such Wi-Fi connectivity would bring significant additional QoS not just for end users, but also for companies and industries using RLANs as a productivity tool. Enabling 320 MHz RLAN channels deployment would match the EU's ambition to make very high capacity networks - i.e. networks capable of delivering services to end-users with downlink data rates higher than 1Gbps - widely available to end users. Most end users access their fiber connection through Wi-Fi and it is important to avoid that the Wi-Fi link becomes the bottleneck of the transmission. Enabling Wi-Fi 7/320 MHz channels in 5945-7125 MHz will guarantee that users will fully enjoy the benefits of the investment made in the EU fiber networks.

5945-6425 MHz would only support a single 320 MHz channel and therefore cannot be considered 'Wi-Fi 7 ready'. This explains why many countries around the world have opened - or are in the process of opening - the full 5925-7125 MHz band to RLANs. In particular, the USA, South Korea and Brazil have already moved forward and made the full 5925-7125 MHz available to RLANs. Many other countries (including the Kingdom of Saudi Arabia and Jordan) indicated in public consultations that they would align with what is the de facto worldwide ecosystem.

Opening the 6425-7125 MHz to RLANs requires the identification of a sharing framework to ensure the protection of satellite and fixed link services in the band.

Respectfully submitted:

[1] In particular, the Commission proposed 2030 target for all populated areas to be covered by 5G would require innovative cooperation between MNOs, regulators, local and national governments and the European Union.

BY:

/s/ Guillaume Lebrun
Guillaume Lebrun
Public Policy Manager
guillaumelebrun@fb.com

Facebook, Inc.