

*May 19, 2023*

## **DSA high-level observations to European Commission’s exploratory consultation on the future of the electronic communications sector and its infrastructure**

The Dynamic Spectrum Alliance (“DSA”) welcomes the opportunity to contribute to the Commission’s exploratory consultation on the future of the electronic communications sector and its infrastructure.

The [DSA](#) is a global, cross-industry, not for profit organization advocating for laws, regulations, and economic best practices that will lead to more efficient utilization of spectrum and foster innovation and affordable connectivity for all. We advocate for policies that promote unlicensed and dynamic access to spectrum to unleash economic growth and innovation. Additionally, we advocate for a variety of technologies that allow dynamic access to spectrum.

The DSA is pleased to contribute to the discussion on how European citizens can benefit from high quality and affordable connectivity with the following observations.

As a foreword, the DSA would like to emphasise that a combination of technologies, including 5G, fibre, satellite and Wi-Fi, will be required to achieve the digital and green transformation of the EU economy. Rather than promoting one technology over the other, the DSA and its members value each technological solution as long as it serves specific needs and are best suited for specific use cases or applications. For example, Wi-Fi and fibre are best suited for indoor connectivity while 5G is the solution for connectivity on the go. While the EU is progressing towards its connectivity targets as renewed in the Digital Decade Policy Programme 2033 (“DDPP”), the DSA is highly concerned that a new connectivity bottleneck is likely to emerge in indoor connectivity if no action is taken to ensure high-level Wi-Fi connectivity.

According to the conclusions of a recent DSA report on how Europeans connect to the internet, the vast majority of data traffic in Europe is actually delivered over fixed networks. Mobile networks only deliver traffic equivalent to 5% of the fixed network traffic<sup>1</sup>. The report also concludes that Wi-Fi handles over 90% of fixed network traffic, i.e. the vast majority of internet traffic in Europe.

These figures illustrate the paramount importance of Wi-Fi (non-cellular) technologies in the provision of electronic communications and digital services in the EU. Whilst Wi-Fi connectivity

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<sup>1</sup> DSA white paper “How do Europeans connect to the internet? 2022”. <https://dynamicspectrumalliance.org/wp-content/uploads/2022/06/DSA-WhitePaper-How-do-Europeans-connect-to-the-Internet.pdf>

has for a long time been taken for granted, as we aim at fully embracing the gigabit economy in the next decade (as set out in the DDPP 2030), it requires policy attention to ensure it does not become the new connectivity bottleneck in the EU.

This would mean giving priority to unlocking the spectrum necessary for the next generation of Wi-Fi (Wi-Fi 6/6E and 7) to deliver its high-performing features, such as very high throughput and low latency. In this sense, the DSA praises the European Commission's decision of 2019 to open up part of the 6 GHz band (5945-6425 MHz) to licence-exempt use, while we strongly urge it to complete this positive path by opening up the rest of the band (6425-7125 MHz) in line with what advanced digital leaders such as the US, South Korea and Japan have already done.

Gigabit Wi-Fi will play a pivotal role in achieving EU's digital ambitions. Wi-Fi is the key connectivity enabler for applications and services of the next decade such as immersive technologies (XR). In addition, as the primary way used by Europeans to connect to the internet, gigabit Wi-Fi will be required to fully deliver on the EU's promise of gigabit connectivity within the premises (home, office, etc.) set by the DDPP. Recital 13 of the DDPP highlights that the ultimate goal of the 2030 gigabit connectivity target is allowing end-users to "use" gigabit services provided by gigabit networks<sup>2</sup>. Strategic innovation sectors such as education and health will make use of abundant connectivity, mostly in an indoor environment.

Wi-Fi can also positively contribute to EU's sustainability goals. According to a 2020 ARCEP Report, 70-80% of network emissions are due to the access network and fibre networks are ten times more energy-efficient than mobile networks<sup>3</sup>. Therefore a combination of fibre and Wi-Fi is a greener option for indoor connectivity than 5G. In this same vein, considering that energy efficient windows, with a high attenuation effect, are expected to become the standard in Europe, indoor coverage will be provided in a much more energy-efficient way from inside, via fibre and Wi-Fi connectivity, than from outside via 5G connectivity, as the latter requires additional base stations and power to compensate the building attenuation.

Failure to put in place the right enablers for Wi-Fi technology means a real risk for the EU to miss the advances stemming from the Wi-Fi economy.

As recognised by the Commission, radio spectrum policy is a key element to boost EU competitiveness and innovation. A regulatory solution on the upper 6 GHz band that would prevent EU businesses from joining the global Wi-Fi ecosystem that is emerging, boosted by

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<sup>2</sup> Recital 13 of Digital Decade Policy Programme 2030: "(...) By 2030, networks with gigabit speeds should become available to those who need or wish to have such capacity. **All Union end-users should be able to use gigabit services provided by networks at a fixed location** deployed up to the network termination point. (...)" [emphasis added by DSA].

<sup>3</sup> Achieving Digital Sustainability, ARCEP, 15 December 2020.

[https://en.arcep.fr/uploads/tx\\_gspublication/achieving-digital-sustainability-report-dec2020.pdf](https://en.arcep.fr/uploads/tx_gspublication/achieving-digital-sustainability-report-dec2020.pdf)

economies such as the US, Brazil, South Korea or Canada, will undermine EU competitiveness, autonomy, ability to innovate and attractiveness to invest.

The DSA urges the European Commission to work proactively towards making available the entire 6 GHz band for Wi-Fi use. We appreciate the Commission and EU Member states are working in a EU common position to the World Radiocommunication Conference 2023 (“WRC-23”), where, among other things, the future of the upper 6 GHz band will be discussed.

The DSA recommends the Commission:

- To oppose an IMT identification of the 6425-7125 MHz band for the EU region at WRC-23. IMT identification is not required nor desirable: providing additional 700 MHz for mobile, which only carries 5% of wireless internet traffic, is not an efficient use of spectrum. In addition, an IMT identification will have a negative impact on the Wi-Fi ecosystem that is growing around the full 6 GHz band. WRC-23 is an opportunity to help ensure that Wi-Fi can grow and meet the European users' requirements in terms of capacity, innovative applications and lower costs through preserving economies of scale for the entire band.
- To authorise operation of Wi-Fi in the 6425-7125 MHz band so that the EU can benefit from the extensive ecosystem already serving the entire 6 GHz band. Opening the 6425-7125 MHz band to Wi-Fi would multiply EU’s Wi-Fi capacity by 2.5, while introducing 5G in the band would have a minimal (5%) impact on EU’s overall connectivity capacity. Also, 5G in the 6425-7125 MHz band would mostly be used to provide for additional capacity in densely populated areas, rather than for extending coverage, which is at the core of the DDPP.
- To focus on making the EU harness mobile connectivity to support mobility and to develop strategies – including on spectrum – to increase the coverage of mobile networks in line with the policy goals of the DDPP.

Respectfully submitted,



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