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DSA Response to the consultation on the BEREC Report on the diversification of the 5G ecosystem

The Dynamic Spectrum Alliance ("DSA") appreciates the opportunity to provide comments to BEREC on its Report on the diversification of the 5G ecosystem.

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, fostering 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 spectrum sharing enhancing broadband access.[1]

The DSA very much welcomes the BEREC Report and appreciates that BEREC has done the effort to highlight and describe the increasingly diverse 5G ecosystem. Indeed, we see that the offerings of traditional telco/MNO are becoming more hybrid e.g., through 5G slicing and edge cloud evolutions. In addition, we see a whole range of new actors appearing in the 5G area, like tower companies, industrial players engaging in private networks, Open RAN software solution providers and cloud providers.

Yet, while 5G is of key importance for the digitization of society, it does not and cannot function in a vacuum. The devices that leverage 5G also require different accompanying connectivity technologies. Smartphones typically do not only rely on mobile networks, but typically include many wireless technologies such as Wi-Fi, Bluetooth, GPS and Near-Field Communications and operate in an "always best connected" mode. Therefore, the DSA would like to respectfully encourage BEREC to consider a holistic approach to connectivity and to spectrum, at a moment where the EU is working in defining its digital targets for 2030 through the "Path to the Digital Decade" Programme, which recognizes connectivity and spectrum as essential enablers towards those targets[2].

Such a holistic approach would require recognizing and equally encouraging all the gigabit technologies that will be required in the EU in the next decade, including 5G, but also fibre, latest generations of Wi-Fi or satellite. An approach to connectivity that exclusively focuses

[1] Our membership spans multinationals, small-and medium-sized enterprises, as well as academic, research and other organizations from around the world. A full list of DSA members is available on the DSA's website at www.dynamicspectrumalliance.org/members.

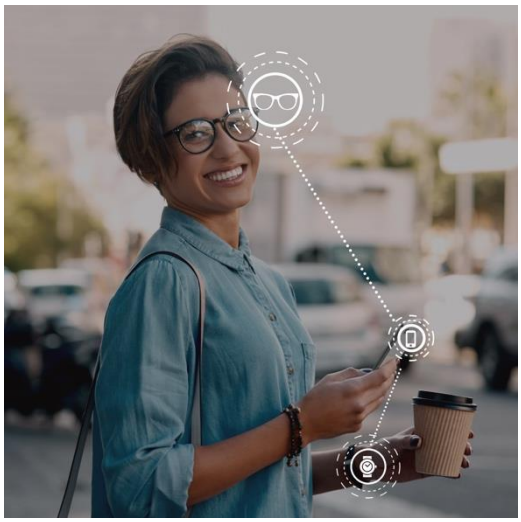
[2] Proposal for a Decision of the European Parliament and of the Council establishing the 2030 Policy Programme "Path to the Digital Decade" of 15 September 2021, COM (2021) 574.

on 5G and fibre but that is silent on other key technologies such as Wi-Fi or satellite, which can highly contribute to the availability of affordable and innovative services in the EU, is incomplete and does not fully recognize Europe's digital future.

While BEREC is looking into 5G and its ecosystem, we call on BEREC to consider the role played by other technologies, such as Wi-Fi or satellite, as part of the diversified ecosystem that leverages 5G. Such an approach would be essential to ensure an effective implementation of the guiding European principle of technology neutrality.

In particular, thanks to its low cost and easy deployment, Wi-Fi is a perfect complement to fibre and 5G and a main contributor to ensuring that the promise of digitalization reaches all Europeans, especially citizens and small businesses such as start-ups and SMEs[3]. Sitting at the edge of fibre networks, Wi-Fi is also a key technology for in-building connectivity. The new standards Wi-Fi 6E and Wi-Fi 7 provide gigabit speeds and very low latencies, being able to boost innovative applications based on other networks (such as 5G, 6G, satellite or fibre).

Wi-Fi and 5G are therefore complementary technologies, both necessary to provide European citizens the wireless experience expected in a truly digital gigabit society. One example that illustrates the need to enable Wi-Fi and 5G altogether is Augmented Reality and Virtual Reality ("AR/VR"). Advanced AR/VR systems, when on the go, will use both a Wi-Fi 6E/7 link to connect the headset with a computing device (usually a smartphone) and a 5G connection to the internet. The Wi-Fi link is essential to allow light AR/VR headsets, and such headsets in turn can contribute to 5G revenues and therefore support 5G investments.



[3] See "Open Letter to European Union Institutions: Ensuring Wi-Fi Connectivity in an Innovative and Truly Connected European Gigabit Society", available online at: http://dynamicspectrumalliance.org/wp-content/uploads/2021/11/20211129-Open-Letter-to-EU-Institutions.pdf

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As a wireless technology, the sustainability of Wi-Fi as a key enabler for Europe's connectivity and innovative services, requires that EU regulators adopt spectrum policies that ensure that enough licence-exempt spectrum for Wi-Fi is made available.

In addition to 5G diversification, the DSA strongly encourages BEREC to use its competences on connectivity to urgently start looking at Wi-Fi related developments, its complementarity with and impact on 5G, and to analyse the regulatory barriers that might be impeding its development in the next decade and the impact these barriers may have on the European society.

We understand that Wi-Fi is not part of the BEREC Working Programme 2021, but the DSA respectfully believes that the importance of this topic deserves its consideration as an ad hoc topic.

The DSA remains at BEREC's disposal to discuss in more detail the role played by Wi-Fi in Europe's digital future.

Respectfully submitted,

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