**Dynamic Spectrum Alliance Limited**
http://www.dynamicspectrumalliance.org

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# DSA's input to BEREC's consultation on Draft BEREC Guidelines on Very High Capacity Networks

The Dynamic Spectrum Alliance ("DSA") welcomes the opportunity to contribute to the BEREC's consultation on its draft BEREC Guidelines on Very High Capacity Networks ("draft Guidelines"). The update of the BEREC Guidelines is essential for a harmonised understanding of the term very high capacity network ("VHCN") across the EU.

We appreciate that BEREC is inviting stakeholders to comment specifically on the update of criterion 4 (performance thresholds for wireless networks) and that BEREC is planning, as put forward in BEREC's Outline Work Programme 2024, to start work to update criterion 3 in 2024. Yet, DSA would like to provide high level observations to the overall Guidelines, as we believe these would be helpful for the interpretation of criterion 4 too.

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.[1]

**Need to reflect the 'Digital Decade Policy Programme 2030' framework**

Although we appreciate that the aim of the review of the 2020 BEREC Guidelines is to take fully into account 5G developments, it would be odd that the updated BEREC Guidelines did not reflect the ambitions of the Digital Decade Policy Programme 2030[2] adopted in December last year, as it constitutes the policy framework for the deployment of VHCN in the next decade.

[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] DECISION (EU) 2022/2481 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 December 2022 establishing the Digital Decade Policy Programme 2030. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022D2481&from=EN

The principles and objectives of the Digital Decade Policy Programme 2030 could be reflected in paragraphs 4 and 11 of the draft BEREC Guidelines, along the following lines:

> *4. This objective of promoting the widespread deployment and take-up of very high capacity networks is at the core of the EU's ambition towards a gigabit society.* ***According to the Digital Decade Policy Programme 2030, by 2030 all end users at a fixed location are covered by a gigabit network up to the network termination point, and all populated areas are covered by next-generation wireless high-speed networks with performance at least equivalent to that of 5G, in accordance with the principle of technological neutrality.*** *Therefore, the concept of very high capacity network is used also in other initiatives taken by the EU institutions to support this ambition.*[4]
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> *11. Recital 13 established the link between these two parts of the definition of very high capacity networks in Article 2(2) by developing the concept of equivalence of network performance and providing a baseline scenario based on two different topologies: (i) fibre roll out (at least) up to a multi-dwelling building in the case of a fixed-line connection and (ii) fibre roll out up to the base station in the case of a wireless connection. This is in line with the principle of technology neutrality based on the equivalence of the achievable performance of the networks.* ***The principle of technology neutrality has been also enshrined in the connectivity targets of the Digital Decade Policy Programme 2030.***

**Need to fully consider the entire communications network**

DSA fully supports BEREC's interpretation (as set out in paragraphs 15 and 46 of the draft Guidelines) that the VHCN definition is not limited to a certain part of the network hierarchy but instead encompasses the entire network (including the access network), and, that for this reason, the QoS parameters of performance thresholds 1 and 2 apply to the entire network.

For that principle to be fully applicable, BEREC should consider what happens up to the end-user device. Although this has been taken into account by BEREC in the elaboration of the performance thresholds 1 and 2, as they refer to the path from the end-user to the first point in the network where the traffic of the end-user services is handed over to other public networks, the fact that the Guidelines exclude limitations caused by the customer premises equipment (CPE) in the case of fixed networks is a matter of concern.

Whereas for wireless networks excluding mobile equipment (ME) makes sense, excluding all types of CPE for fixed networks would leave out of the assessment an essential part of the access network. Given that Wi-Fi is the primary way end-users connect to their fixed networks, the performance of the Wi-Fi segment should be part of the assessment to determine whether a fixed network does have VHCN capabilities (i.e., whether it meets

performance thresholds 1). In DSA opinion, a different approach would be flawed as it would mean ignoring the performance of the last-meter network segment.

The impact of Wi-Fi on the customers' experience is recognised by the major ISPs, who advertise products and services to enable their customers to get the most out of their fibre connectivity, for example:

- Vodafone's super Wi-Fi,
- Orange's Wi-Fi sérénité,
- BT's whole home Wi-Fi,
- DT's WLAN Pakete,
- Movistar's smart Wi-Fi.

Consistent with the principle that VHCN are to be promoted (by the EECC and BEREC) for the benefit of end-users, i.e. that what is of interest is the end-user QoS (as reflected in paragraph 15 of the draft Guidelines), BEREC should consider the connectivity as experienced by the end user, i.e. the experience up to the end-user device - as opposed to the network termination point.

This means that the BEREC Guidelines should consider Wi-Fi equipment, usually provided by the same ISP providing the broadband offer, as part of the fixed access network rather than of the end-user equipment. Only limitations due to end-user devices such as laptops, tablets, smartphones, TV sets, etc. should be excluded from the performance thresholds 1 and 2.

The DSA strongly recommends BEREC to amend paragraph 21 as follows:

> *21. Notes to criterion 3 and criterion 4*
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> *(...)*
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> *c. The performance thresholds 1 and performance thresholds 2 refer to the path from the end-user[8] to the first point in the network where the traffic of the end-user services is handed over to other public networks (e.g. nearest peering point) and in case of round-trip parameters back to the end-user (see paragraphs 54 and 55).*
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> *Footnote 8: Without taking into account limitations caused by the customer premises equipment* ***other than Wi-Fi equipment*** *respectively mobile equipment.*

Paragraph 64 of the draft Guidelines acknowledges the importance of in-building connectivity of equivalent performance to fibre, although DSA regrets that BEREC does only refer to this requirement as "desirable". According to paragraph 15 "Very high capacity networks are of importance since they are capable of providing end-user services with a particularly high quality of service (QoS)". If performance is capped by a poor network inside the building, in

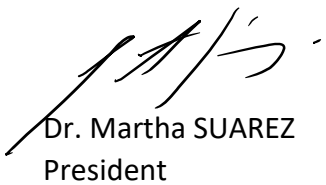
aspects under the control of the ISP (as is usually the case of Wi-Fi equipment), there will be no positive impact for the end-user of having a VHCN reaching the building.

DSA believes that this interpretation is in line with the VHCN definition under the EECC. Given that the EECC refers to VHCNs as fibre networks at least up to the distribution point at the serving location, the Wi-Fi equipment can be considered as the distribution point. Also, in DSA's view the reference to "at least to" in the VCHN definition provides flexibility for BEREC to incorporate in the interpretation of VHCNs the last meter.

As a general remark, VHCNs both for fixed and wireless (i.e., for all criteria) should not only consider fibre to the base station/multi-dwelling building but also make sure that the wireless standard implemented by the base station/in-building equipment is capable of handling such speed to the end-user (i.e., minimum 5G/Wi-Fi implementation).

DSA would like to thank BEREC again for organizing this consultation and remains available to meaningfully contribute to BEREC's work on the promotion of full connectivity in the EU.

Respectfully submitted,



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