

January 6, 2022

RSPG Secretariat
Avenue de Beaulieu 33,
B-1160, Bruxelles, office BU33 7/65
cnect-rspg@ec.europa.eu

Re: Public Consultation on the Draft RSPG Work Programme for 2022 and beyond

Dear Sir/Madam,

The Dynamic Spectrum Alliance (DSA¹) respectfully submits these comments in response to the Radio Spectrum Policy Group (RSPG) consultation on the “Draft RSPG Work Programme for 2022 and beyond.” DSA commends RSPG for its efforts to ensure efficient assignment and use of scarce radio frequencies and to make spectrum available for new wireless services that will facilitate competition, enhance connectivity, and promote investment. DSA believes that providing additional spectrum access options through use of new spectrum management tools, such as dynamic shared access systems, will benefit competition, create conditions for innovation, and spur more rapid deployments of wireless networks and services.

DSA recommends that telecommunications regulators worldwide take a balanced approach between licenced, licence-exempt, and lightly licenced options when allocating spectrum to wireless broadband services. An unbalanced approach may have the unintended consequence of creating artificial scarcity, which could, in turn, increase the cost of broadband access. Licenced and licence-exempt spectrum bands will both play important and complementary roles in the delivery of advanced wireless services. We believe that coordinated shared spectrum should be considered in spectrum planning.

DSA notices that the Draft RSPG Work Programme primarily focuses on spectrum for national licenced mobile networks. We therefore suggest that a more balanced approach be taken that incorporates elements related to licence-exempt and lightly-licenced access options.

In keeping with this philosophy, DSA recommends the following changes to the Draft RSPG Work Programme:

¹ 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. Our membership spans multinationals, small-and medium-sized enterprises, as well as academic, research and other organizations from around the world all working to create innovative solutions that will benefit consumers and businesses alike by making spectrum abundant through dynamic spectrum sharing. A full list of DSA members is available on the DSA’s website at www.dynamicspectrumalliance.org/members

A. 3800-4200 MHz

CEPT is expected to initiate its work to harmonise access to the 3800-4200 MHz band for local licenced networks. DSA supports these efforts to make more spectrum available for new users and use cases. However, the technical work planned by CEPT will not be sufficient to ensure that local licenced networks benefit from economies of scale of the single market. Harmonisation of the procedures and conditions to access spectrum will also be necessary to eliminate the need for companies seeking to operate in several Member States to analyse and comply with each country's regulatory framework separately. A better approach would be to develop a coordinated framework for spectrum access that includes best practices on key licensing issues. Furthermore, adoption of new spectrum tools, such as dynamic spectrum access systems, may be especially relevant for the 3800-4200 MHz band, which will benefit from an RSPG-level strategy. DSA recommends that RSPG initiate a work item to deliver guidance and harmonisation of a licensing framework and potential use of dynamic shared access systems for local networks in the 3800-4200 MHz band.

B. License-exempt spectrum strategy

By every measure, the demand for spectrum for Wireless Access Systems including Radio Local Area Networks (WAS/RLAN) continues to grow unabated, driven in large part by video consumption. This trend is expected to continue with Augmented, Virtual, and Mixed Reality becoming popular, which will further strain existing network capacity. These applications are critical for quality of healthcare, education, manufacturing, transportation, and a variety of other aspects of life. Moreover, licence-exempt RLANs also complement licensed networks with "Wi-Fi" traffic offloading from mobile devices increasing with each generation of mobile wireless service.²

The Digital Decade's 2030 goal is that every household be covered by a gigabit network. Already today, as broadband speeds available to residential users are gradually increasing towards that goal, the link from a Wi-Fi access point to a user's Wi-Fi enabled device starts developing into a bottleneck. This is particularly apparent in households and enterprises where there are multiple Wi-Fi enabled devices in operation at the same time. This trend has become more evident globally during the time of the COVID pandemic. As parents work from home and children learn remotely, there are often multiple video conference applications active on multiple devices concurrently. This can amount to a considerable amount of RLAN traffic which can easily exhaust the available bandwidth.

² According to the Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2017– 2022 White Paper, Wi-Fi offloading has increased from 30 percent of the traffic for 2G phones to 40 percent of the traffic on 3G phones, 59 percent of the traffic on 4G phones, and is expected to transport 71 percent of the traffic on 5G phones.

Studies, such as the [ASSIA study on Wi-Fi](#) and [its DSA companion whitepaper](#) on the consequences of the report's findings, demonstrate that Europe is facing a severe Wi-Fi spectrum crunch in years to come, significantly sooner than 2030. Indoor connectivity carries the vast majority of internet traffic and Europe currently has no spectrum strategy to respond to this challenge.

There is an insufficient amount of 5 GHz spectrum in Europe to meet forecasted demand for licence-exempt access as most sub-bands are either not available on a European-wide basis or come with significant restrictions attached to protect incumbents. Even the additional 480 MHz recently opened in the 6 GHz band will not be able to fully satisfy the future demand for local wireless connectivity capacity. In acknowledgment of this demand, many developed countries in all three ITU regions already opened the full 1200 MHz (5925-7125 MHz) of the 6 GHz band for technology-neutral licence-exempt use by Wi-Fi 6E, Wi-Fi 7, 5G NR-U and other compliant technologies. To prevent Europe from falling behind, the RSPG should identify the best solutions to secure the long-term quality of service of licence-exempt networks.

C. New work item: Wireless technologies for gigabit connectivity in households, schools, hospitals, and SMEs

Rationale

WAS/RLAN technologies are the cornerstone of gigabit connectivity in Europe. The Digital Decade strategy will further reinforce their role through ensuring that every home, SME, school, and hospital is connected to gigabit networks at the horizon of 2030. However, end users cannot benefit from such gigabit infrastructure without adequate local connectivity, which means WAS/RLAN resourced with an appropriate amount of spectrum.

WAS/RLANs also greatly contribute to the EU Green Deal by reducing the energy impact of digital technologies, as the combination of fiber networks and WAS/RLAN, and specifically Wi-Fi, has been found to be much more energy efficient than mobile networks for providing broadband connectivity.

WAS/RLAN standards are evolving rapidly. Wi-Fi 6E is already available and will benefit from the availability of 5945-6425 MHz in Europe. Wi-Fi 7 is currently under development, and the Wi-Fi Alliance is planning to launch the Wi-Fi 7 certification process in 2023. To deliver its full benefits, Wi-Fi 7 will require additional spectrum in the 6 GHz band.

Scope

The RSPG will investigate:

- the current role of WAS/RLANs in the EU digital delivery,
- the environmental impact of moving traffic from WAS/RLAN/Fiber to mobile networks,
- the expected contribution of WAS/RLANs to the EU Digital Decades objectives,
- the 2030 WAS/RLAN spectrum requirements, taking into account the introduction of Wi-Fi 7, and
- propose EU priority bands to respond to the WAS/RLAN 2030 spectrum demand.

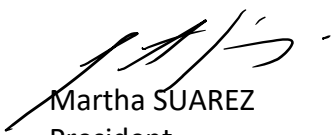
Planned Deliverables

RSPG Opinion
High-level workshops

Time schedule

Draft Opinion for Public consultation: September 2022
Final Opinion: January 2023

Respectfully submitted,



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President
Dynamic Spectrum Alliance