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

November 10, 2025

Digitaliseringsstyrelsen
Landgreven 4
1301 København K
Denmark

Re: DSA response to Høring over udkast til fem bekendtgørelser på frekvensområdet (2025-10587)

Dear Sir/Madam,

The Dynamic Spectrum Alliance[1] (DSA) welcomes Denmark's leadership in harmonising and enabling licence-exempt use of the 5925–6425 MHz band, as outlined in the recent draft regulations on radio spectrum management. We commend the Danish authorities for their proactive approach in developing harmonised technical frameworks that promote efficient, innovative, and future-oriented use of mid-band spectrum, supporting Wi-Fi 6E and Wi-Fi 7 technologies.

The DSA encourage Denmark to build upon this foundation by extending licence-exempt access to the entire 5925–7125 MHz band. Full access to the complete 6 GHz spectrum is critical to enable the wide channel bandwidths—up to 320 MHz—needed for Wi-Fi 7 and emerging standards such as Wi-Fi 8. This extension will empower ultra-high-speed, ultra-low latency, and reliable wireless connectivity essential for advanced applications including augmented and virtual reality, telemedicine, smart manufacturing, and digital education. This will power advanced applications including augmented and virtual reality (AR/VR), telemedicine, smart manufacturing, and digital education, all of which are central to Denmark's digital transformation and innovation agenda.

The DSA remains committed to continued collaboration with Danish regulators and stakeholders, offering technical expertise, global best practices, and deployment insights to support the design of a sustainable, future-proof spectrum framework. Such a framework should ensure balanced coexistence with incumbent services while maximizing the public benefits of open, licence-exempt access across the full 6 GHz band.

Sincerely,

Dr. Martha Suárez
President
Dynamic Spectrum Alliance

[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: https://www.dynamicspectrumalliance.org/members

1. Strong Support for Full 6 GHz Wi-Fi (5945–7125 MHz)

The DSA strongly supports Denmark's initiative to harmonise the use of the 5925–6425 MHz band for licence-exempt use, including Wi-Fi, and commends Denmark for permitting both Low Power Indoor (LPI) and Very Low Power (VLP) operations consistent with European harmonisation under Commission Implementing Decision (EU) 2021/1067. We encourage Denmark to extend this framework to encompass the upper 6 GHz band (6425–7125 MHz) to maximise the technical and economic benefits of next-generation wireless technologies.

The lower 6 GHz band is already established and rapidly adopted across EU Member States, underscoring its critical role in enhancing wireless capacity and connectivity. Denmark's existing inclusive approach enabling both LPI and VLP devices supports indoor coverage, spectral efficiency, and high-density deployments in enterprise, industrial, and urban environments.

Extending licence-exempt access to the full 6 GHz band in Denmark will unlock sufficient contiguous spectrum—up to 320 MHz wide channels—essential for Wi-Fi 7 and emerging Wi-Fi 8 standards. Such wide channels are indispensable to achieve multi-gigabit speeds and ultra-low latency needed for advanced applications including augmented and virtual reality, immersive communications, telemedicine, smart manufacturing, and digital education.

Opening the full 6 GHz band (5945–7125 MHz) to Wi-Fi will deliver significant benefits, including:

- **Sufficient contiguous spectrum for Wi-Fi 7 and beyond:** Wide 320 MHz channels are critical for achieving multi-gigabit speeds and ultra-low latency, enabling emerging applications such as augmented and virtual reality, immersive communications, and telemedicine. The full band ensures that sufficient contiguous channels are available at scale across Denmark.
- **A globally harmonised device ecosystem:** Countries worldwide have embraced the entire 6 GHz band for licence-exempt use, promoting a rapidly expanding ecosystem of compatible devices and equipment. Full-band access in Denmark would enable consumers and industries to benefit from economies of scale, interoperability, and accelerated technology deployment.
- **Support for Europe's digital ambitions:** Comprehensive Wi-Fi access in the 6 GHz band will augment broadband capacity and catalyse digital transformation across sectors including industry, education, and healthcare, in alignment with the EU's Digital Decade objectives.
- **Efficient spectrum management and coexistence:** Automated Frequency Coordination (AFC) mechanisms for standard power devices in the upper 6 GHz band ensure coexistence with incumbent services. Meanwhile, LPI and VLP operations provide versatile options for indoor and portable applications while minimising interference risk.

The Radio Spectrum Policy Group (RSPG) recently published its Draft Opinion on the Long-term Vision for the Upper 6 GHz Band (6425–7125 MHz). As a global organisation dedicated to advancing spectrum policies that foster innovation, competition, and digital inclusion, the DSA strongly advocates for licence-exempt access to the entire 6 GHz band (5925–7125 MHz) across Europe under harmonised conditions for LPI and VLP operations consistent with those already applied in the lower 6 GHz range. This approach would maximise regulatory simplicity, enable Europe to fully benefit from a globally harmonised equipment ecosystem, and position the region as a global leader in next-generation wireless innovation, including Wi-Fi 7 and Wi-Fi 8.

Recognising that immediate full-band designation for licence-exempt operations may be constrained by national regulatory considerations, the DSA recommends that Denmark designate at least 320 MHz of contiguous spectrum within the lower portion of the upper 6 GHz band for licence-exempt use. This spectrum should support both LPI and VLP operations under access conditions aligned with those governing the lower 6 GHz band. Such an approach would provide ample capacity for diverse local broadband applications, avoid harmful fragmentation, and safeguard spectral efficiency, ultimately delivering greater benefits to consumers, enterprises, and the wider digital economy.

Furthermore, the DSA encourages Denmark to retain flexibility to extend licence-exempt designations to additional portions of the upper 6 GHz band as market conditions, technology developments, and national priorities evolve. A balanced and forward-looking spectrum strategy of this kind will reinforce Denmark's leadership in advanced wireless connectivity, promote efficient spectrum utilisation, and drive innovation and sustainability, while ensuring continued protection of incumbent services and alignment with broader European and international spectrum policy objectives.

2. Maximising the Benefits of Licence-Exempt Spectrum

Licence-exempt spectrum is the foundation of connectivity in today's digital society and economy. It enables ubiquitous wireless access, fueling innovation across consumer, enterprise, industrial, and public-sector services. Unlike licensed spectrum, which is restricted to specific operators, licence-exempt bands allow any compliant device to operate, fostering a diverse ecosystem of innovation and competition.

Wi-Fi plays a pivotal role in connectivity across Europe, accounting for approximately 90% of total IP traffic and generating substantial economic value.[2] It acts as the invisible backbone of the internet, powering home broadband, enterprise networks, educational institutions, healthcare facilities, transportation hubs, and industrial sites. Complementary technologies such as Bluetooth, Zigbee, and other short-range standards support billions of IoT devices from wearables and smart appliances to industrial sensors and medical equipment, creating interconnected networks that enable the digital economy to thrive at scale.

- **Economic Impact**
  - ✓ Economic studies show that Wi-Fi contributes over €4.9 trillion annually to global GDP and drives inclusive innovation.[3] This reflects Wi-Fi's pivotal role in enabling productivity, commerce, innovation, and connectivity worldwide
  - ✓ By 2030, the value of Wi-Fi is anticipated to grow further as Wi-Fi 7 adoption scales, offering multi-gigabit connectivity for enterprises, campus environments, factories, and households.
  - ✓ Licence-exempt spectrum underpins Europe's competitiveness by reducing broadband costs, lowering barriers for ISPs and community networks, and increasing consumer choice in digital services.
- **Public Policy Benefits**
  - ✓ **Digital Inclusion:** Open access to spectrum facilitates affordable connectivity solutions that reach underserved areas, helping to bridge the digital divide.
  - ✓ **Innovation and Entrepreneurship:** The absence of licence fees and administrative burdens makes unlicensed spectrum fertile ground for start-ups, SMEs, and community-led initiatives, enabling low-cost experimentation and rapid deployment.
  - ✓ **Smart Cities and Public Services:** Licence-exempt spectrum supports critical digital infrastructure such as connected lighting, transport systems, telemedicine, and public Wi-Fi hotspots in cities and municipalities.
  - ✓ **Resilience:** Wi-Fi and Bluetooth provide essential fallback and redundancy during emergencies, ensuring continuity of communication when licensed networks are unavailable.

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[2] https://6ghz.info/wp-content/uploads/2022/09/6-GHz-Infographic-Europe.pdf

[3] https://6ghz.info/wp-content/uploads/2022/02/Global_Economic_Value_of_Wi-Fi_2021-2025_202109-1.pdf

3. Regulatory Recommendations for Denmark

To ensure Denmark can maximise the benefits of licence-exempt spectrum within its applicable regulatory framework, we urge the Danish authorities to:

- **Keep regulatory burdens minimal**: Adopt light-touch regulation, with simple equipment authorisation and no requirement for individual licensing of unlicensed users, to maintain flexibility and promote rapid innovation.
- **Allocate as much licence-exempt spectrum as possible**: Expanding capacity in both the lower and upper segments of the 6 GHz band will ensure Denmark meets future demand for high-throughput and low-latency services, including Wi-Fi 7 and beyond.
- **Support advanced industrial and societal use cases**: Adequate licence-exempt capacity will sustain Denmark's leadership in emerging applications such as industrial automation, smart manufacturing, augmented and virtual reality for collaborative work and education, and highly reliable telemedicine solutions.
- **Encourage technology coexistence**: Ensure frameworks enable Wi-Fi and other licence-exempt technologies to effectively coexist with incumbent services, maximising efficient spectrum use while protecting existing deployments.

By sustaining a forward-looking, adaptive licence-exempt spectrum framework, Denmark can unlock long-term economic growth, foster social inclusion, and accelerate digital transformation aligned with the EU's Digital Decade objectives.

4. Conclusion

The DSA strongly supports Denmark's established framework permitting licence-exempt Wi-Fi use in the 5925–6425 MHz band, encompassing both LPI and VLP operations and urges the extension of this framework to include the entire 6 GHz band (5925–7125 MHz). Access to the full 1200 MHz of contiguous spectrum is critical for meeting the capacity, latency, and reliability demands of next-generation wireless technologies, including Wi-Fi 7 and the emerging Wi-Fi 8 standards.

The DSA looks forward to continuing its collaboration with Danish authorities to support the development of a forward-looking, inclusive wireless policy that benefits all stakeholders.