Minister Pakosta
Minister of Justice and Digital Affairs
Ministry of Justice and Digital Affairs
Suur-Amerika 1
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Estonia

17 October 2025

The importance of Wi-Fi in the upper 6 GHz band for the digitalisation of Estonia

Dear Minister Pakosta,

We are writing to make an urgent plea for you to ensure that the Estonia will have the wireless connectivity it needs to be competitive with other advanced economies.

The Radio Spectrum Policy Group (RSPG) of the European Commission is exploring how to enable shared use of the upper 6 GHz frequency band between licence-exempt technologies, such as Wi-Fi, and mobile networks, such as 5G. As a compromise solution, it plans to enable both Wi-Fi and mobile to access some of the 700 MHz available in this band.

While the broad and diverse Wi-Fi ecosystem needs access to the entire band, we have sought to provide constructive feedback on the RSPG's proposals to make efficient use of the spectrum on a shared basis – in line with the European Commission's mandate. By contrast, the mobile industry is arguing against a compromise. It is now demanding exclusive use of the entire upper 6 GHz band for mobile services, arguing this would strengthen Europe's digital sovereignty.

But this misguided and narrow view disregards the fact that efficient and effective use of this important spectrum is key to ensuring European competitiveness with other developed markets, such as North America and South Korea. As discussed below, dedicating the entire band to mobile would provide only marginal benefits for a few mobile operators at the expense of the hundreds of millions of European consumers, businesses and organisations that rely on Wi-Fi.

Wi-Fi and broadband networks work hand-in-hand

Consumer grade Wi-Fi[1] needs access to at least 320 MHz in the upper 6 GHz band to ensure Estonia's citizens can capitalise on the country's high-speed fixed networks – fibre networks now cover 75% of households in Europe, according to the FTTH Council of Europe. As Wi-Fi carries the vast majority of data traffic in Europe, it is essential to ensure there is sufficient spectrum available to prevent congestion and interference in home and enterprise[2] networks.

Across Europe, fixed networks carry 89% of all data traffic, while mobile networks carry 11%, according to mobile industry body GSMA[3]. Despite this huge disparity, Wi-Fi has access to significantly less spectrum than mobile. These traffic patterns show Wi-Fi's need for the upper 6 GHz band far exceeds that of mobile.

[1] Ideally, enterprise networks should be allowed to access the entire upper 6 GHz band, even on a non-priority basis, to enable channels larger than 20/40 MHz in dense deployments.
[2] Enterprise networks also include industrial networks used in factories and industrial settings.
[3] Source: The GSMA report The Importance of 6 GHz to Mobile Evolution.

To enable digital transformation, Estonia and the EU have placed great emphasis on the need for fibre connectivity across the full range of business sectors. The "last metre" connection within all households and businesses is almost always a Wi-Fi connection, and this final critical wireless link to both terminal device(s) and indoor networks must not become a bottleneck. Without access to the upper 6 GHz band, Wi-Fi operations will become congested and the user experience will suffer, particularly in dense enterprise networks.

European stakeholders want better Wi-Fi

As the responses to the RSPG consultation show, a wide range of European stakeholders, including major universities, events organisers and retailers, are calling for the upper 6 GHz band to be made available for Wi-Fi. Cost-effective and versatile, Wi-Fi is used across the world to deliver high-performance indoor connectivity. Consumers and businesses in countries with access to the full 6 GHz band experience lower latency and faster speeds and can connect many more Wi-Fi devices in a single location than their counterparts in Europe.

5G in the upper 6 GHz band cannot address this performance gap. Signals from 5G mobile base stations struggle to penetrate building walls, particularly when using relatively high frequencies, such as those in the upper 6 GHz band. Wi-Fi's superior performance, together with the fact that it is embedded into most devices, explains why consumers and enterprises prefer it to 5G for indoor connectivity. More than 90% of enterprises in Europe and North America regard 6 GHz Wi-Fi- as a significant advancement, while 80% agree that 6 GHz is integral to powering future connectivity, according to a survey[4] by research firm IDC.

Whereas mobile networks will only ever use the 6 GHz band at peak hours in high density locations, most Wi-Fi traffic will gravitate to this spectrum, as it will be the most performant band. At one event held annually in Europe, 44% of Wi-Fi traffic is now using the 6 GHz band, according to a presentation[5] by Juniper Networks.

Keeping pace with other advanced economies

Contrary to suggestions made by the mobile industry and its allies, the U.S. has no plans to make any of the 6 GHz band available for cellular services. The recent One Big Beautiful Bill Act does not direct the FCC to re-examine the existing allocation. Any such outcome would be nearly impossible to effectuate because the full band is in use by Wi-Fi throughout North America.

In addition to the U.S., Canada, South Korea, Colombia, Saudi Arabia and other countries are benefitting from the availability of more and wider Wi-Fi channels that can reliably support advanced applications. They are taking advantage of readily and widely available 6 GHz Wi-Fi equipment, which makes highly efficient use of this spectrum band. More than 5,000 Wi-Fi 6 GHz device models are now available. By contrast, even the mobile industry body GSMA concedes that 6 GHz mobile equipment will not be available until 2029 at the earliest[6].

In short, reserving the entire upper 6 GHz band for mobile services would be an act of self-harm. Rather than enhancing Estonia's technological position, such a move would make it harder for its citizens and companies to compete in an increasingly digital economy. Without robust indoor connectivity at their homes and businesses, people can't reliably access the advanced services they need to be fully productive.

.[4] Source: 6 GHz Wi-Fi: Powering the Future of Enterprise Connectivity
[5] Source: Juniper Wi-Fi 7/6 GHz and learnings
[6] Source: The GSMA report The Importance of 6 GHz to Mobile Evolution

Therefore, we strongly recommend that you support the RSPG's efforts to reach a compromise solution that will meet the actual needs of Europeans, rather than the counterproductive call to reserve all the upper 6 GHz band for potential use by the mobile industry at some uncertain future date.

Yours sincerely

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