

Dear members of the Radio Spectrum Group,

On behalf of Wentzo, we first of all express our appreciation for the opportunity to participate in the consultation on the use of the upper 6 GHz band. We are happy to share our thoughts on the crucial role that WiFi plays in today's society and the specific needs of end users and what role the upper 6 GHz band has in this. Due to holidays and the absence of some of our colleagues we were not able to meet the deadline of the 20th of august. Hopefully our input is still appreciated and will be included in this consultation.

### **Dependency on WiFi**

WiFi has become a must-have technology for both households and organizations in Europe. We see that WiFi is an absolute 'must have' within critical sectors such as education, healthcare and government and a should have for organizations within the retail, hospitality and industrial markets. WiFi not only provides access to broadband internet, but also supports a wide range of (internal) applications and applications within the mentioned sectors. However, current limitations in the available spectrum are increasingly hampering the performance and reliability of WiFi networks, for example in densely populated urban areas. We see that bandwidth consumption is increasing due to these new applications and devices. Think, for example, of VR glasses in education and asset tracking in healthcare.

### **Sustainable developments**

One of the developments is that WiFi access points have an increasingly longer lifespan. The 'meantime between failures' has increased sharply in recent years. For example, HPE-Aruba already gives an MTBF of 148 years (source: [https://www.arubanetworks.com/assets/ds/DS\\_AP500Series.pdf](https://www.arubanetworks.com/assets/ds/DS_AP500Series.pdf)). For us, this translates as follows. Wentzo provides more than 60% of its services in a complete WiFi/ Network as a Service solution. Our contracts are usually 5, but increasingly also 6, 7 or even 8 years with new equipment. We see that the application of new WiFi technology and extra bandwidth often leads to fewer interferences, faster access to the network and internet and improved security.

We also see that the new WiFi standards are often a reason for companies to apply new applications and (be able to) develop innovations. At Wentzo, we work together with our customers and technology suppliers on various developments in this area. Consider, for example, the following three developments in which we are collaborating with leading institutions from the Netherlands and Europe;

1. controlling and managing a wide range of IoT devices
2. developing location based services with applications such as asset tracking and way finding (with e.g. FTM for very high accuracy)
3. energy consumption - with A.I. and machine learning to temporarily switch off WiFi access points at quiet times

Since our inception almost 25 years ago, we have been working on making networks available wirelessly. We see that in all verticals the switch has been made from wired connections as the primary connection, to WiFi as the primary connection. Often, the policy is 'WiFi, unless....' to securely connect tablets, smartphones, laptops, VR headsets, smart watches, etc. Primary processes within the organization depend on 'the last mile' which is accessed with WiFi. With the advent of WiFi, enormous savings have been achieved because the need for copper cables (Cat.5e) per workstation is eliminated. We see a next step in which kinetic energy is also used to connect light switches without battery and power connection to the network via a WiFi access point.

We see that digitization is going fast and that the growth and need for bandwidth go hand-in-hand with this. We notice that technological developments in Europe are slowing down due to a lack of bandwidth. The use of the upper channels within the 6 GHz spectrum is to blame for this. The increase in bandwidth requirements has already led to saturation on the 2.4 and 5 GHz bands. If the increase is the same, the current 6 GHz

spectrum will be too little before 2030. In doing so, businesses and organizations rely heavily on robust and reliable WiFi networks for their day-to-day operations. Researchers, students, and academics need access to high-speed networks to collaborate, share data, and access online resources. Being able to quickly set up network innovations is only possible if the WiFi network continues to develop. Current spectrum constraints limit the community's ability to take full advantage of the available technologies.

### **Recommendation**

We urge the European Commission to make the full potential of the 6 GHz band available for WiFi use. This will not only improve the performance and reliability of WiFi networks and associated applications, but also contribute to achieving the goals of the European Gigabit Society. By making sufficient spectrum available, we can ensure that Europe continues to play a leading role in the digital economy and that our end-users, including the Research and Education community, have access to the best possible connectivity. We can also contribute to new innovations and energy-saving measures. By fully unlocking the upper 6 GHz band, we are also joining global development in which countries such as the USA, Korea, etc. use the full 6 GHz spectrum for WiFi.

The Upper 6GHz band is not suitable for large area coverage of mobile communications. The usage of private cellular networks is a niche market (and expensive solution). Hence, from a spectrum efficiency point of view a license free spectrum is a logical choice for the Upper 6GHz band.

### **About Wentzo**

Wentzo is a Dutch network specialist that has been at the forefront of advising, installing and managing various (complex) WiFi networks for more than 20 years. We do this for more than 100 educational organisations (including in collaboration with the education cooperatives SURF and SIVON), more than 50 healthcare institutions and leading organisations such as the Utrecht Safety Region, McDonalds, The Social Hub and Koninklijke Jaarbeurs.

Best regards,

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