

# FACEBOOK

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**RE: Public Consultation Paper: Wireless Local Area Network (WLAN) in the 6 GHz band.**

Facebook, Inc. (“Facebook”) welcomes this opportunity to submit comments in response to the public consultation of the Malaysia Communications and Multimedia Company (MCMC) regarding wireless local area network (WLAN) use in the 6 GHz band.<sup>1</sup> As noted in the Joint Comments we filed jointly with a group of technology companies, we strongly support the MCMC’s proposal to make the 6 GHz band available for license-exempt WLAN use.

Connectivity is at the heart of Facebook’s mission to give people the power to build community and bring the world closer together. Making the 6 GHz band available on a license-exempt basis is an important opportunity for Malaysia to support broadband connectivity in both 5G and next-generation networks and will open the door to a host of new and innovative use cases. By making the full 1200 MHz (5925 MHz to 7125 MHz) available for license-exempt use under Class Assignment, the MCMC will ensure that Malaysia reaps the full benefits of this band.

Facebook provides these additional, separate comments in response to Question 2 focused on the significance of the 6 GHz band to the future of Augmented Reality and Virtual Reality (AR/VR).

Sincerely,



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<sup>1</sup> [https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/PC\\_WiFi.pdf](https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/PC_WiFi.pdf).

**Submission of Facebook, Inc.**

Question	Response
<p><b>Question 2</b> MCMC seeks your views and comments on the emerging technologies utilising the 6 GHz frequency band.</p>	<p>Facebook offers these additional comments to provide some additional detail around the AR/VR use cases in the Low Power Indoor (LPI) and Very Low Power (VLP) portable device class proposed in our Joint Comments.</p> <p>Virtual Reality (VR) devices and technologies are already available on the market today utilizing the 5 GHz band. The 6 GHz band provides new opportunity for wide channel bandwidth for these devices. Beyond gaming, VR has been put to use by businesses to <a href="#">train employees</a>, to improve educational opportunities by <a href="#">allowing students to explore the world</a>, and to <a href="#">transform medical training</a> by allowing students to prepare for emergencies with VR technology.</p> <p>VLP devices are a class of wireless communications devices with the potential to introduce a new generation of innovative use cases to the consumer market. They can support a wide range of applications such as in-vehicle uses, AR/VR technologies (as wearable peripherals), as well as other personal area network applications. In all instances, however, they depend upon low latency, high data rates, and power efficiency for long battery life. For consumer adoption of this exciting new class of devices to become widespread, it is critical that the devices be allowed a power level sufficient to operate at their full potential without technological constraint.</p> <p>The promise of these devices is enormous and exciting. For instance, with the right devices, AR technology will allow consumers to communicate with their family and friends from anywhere in the world. This type of technology would also provide transformative benefits to those with hearing or vision impairments, such as by enabling consumers to hear better in noisy environments and see better in dimly lit areas. Likewise, AR technology has the potential to revolutionize how medical patients are diagnosed (and ultimately treated). Tools are currently being developed to help doctors predict the onset of neurodegenerative diseases in older adults, including debilitating diseases such as Alzheimer’s and dementia. Although a number of these technologies are still in development, Facebook in partnership with Ray-Ban has released its first generation <a href="#">smart glasses</a>, which allow the user to capture photos, videos, listen to music and take calls.</p> <p>To make advanced AR and wearable technologies a reality, VLP devices need sufficient power and the use of wide channel bandwidths to achieve low latency and high throughput. At unnecessarily restricted power levels, VLP devices will drop significantly more connections to other devices, reducing reliability and disrupting the user experience. Maintaining a persistent connection is particularly critical in the AR/VR context due to the importance of sustaining a seamless, immersive experience without interruptions. At lower power levels, VLP devices (which may include wearables as well</p>

	<p>as game controllers) also experience higher latencies, which preclude their use for latency-sensitive applications, such as real-time conversations and interactive gaming.</p>
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Therefore, to bring these technologies to Malaysia, we recommend that the MCMC consider making the full 6 GHz band available for license-exempt use for the LPI and VLP device classes.