

11 October 2021

Malaysian Communications and Multimedia Commission  
MCMC HQ Tower 1  
Jalan Impact, Cyber 6  
63000 Cyberjaya  
Selangor Darul Ehsan  
MALAYSIA  
Attention: [spectrumplanning@mcmc.gov.my](mailto:spectrumplanning@mcmc.gov.my)

Dear Sir/Madam

**EXPERT SUBMISSION TO MCMC IN RELATION TO THE PUBLIC CONSULTATION PAPER:  
WIRELESS LOCAL AREA NETWORK (WLAN) IN THE 6 GHz FREQUENCY BAND**

Please see the attached expert submission to the public consultation paper – including [Appendix A](#) and the separate WPC paper entitled **Optimising IMT and Wi-Fi spectrum allocation: The compelling case for 6 GHz band partitioning in Asia-Pacific** - for the MCMC's kind consideration. This paper is being published today in order to meet that deadline for responses to the MCMC's 6 GHz band public consultation. It will be presented to major regional ITU and GSMA forums on 21 October 2021.

***The report finds there is a compelling case for policy makers, regulators and mobile network operators (MNOs) in Asia-Pacific – including Malaysia - to allocate only the lower part of the 6 GHz band (5925-6425 MHz) for unlicensed use with the upper part of the band (6425- 7125 MHz) to be allocated for IMT services in Asia-Pacific as soon as practicable.***

Critically such an approach preserves future flexibility as any assignment of the 6 GHz band to unlicensed use is not a decision that can be reversed, this is quite different to the assignment of the band to licensed uses. Importantly, a decision to allocate the upper part of the band (6425-7125 MHz) to IMT services can be made now before 2023 at the WRC-23. Full global harmonisation of the band can follow in WRC-23 (with even greater support for the ecosystem development).

The major reasons for this recommended approach are inter alia:

- (i) An acute need for additional mid-band spectrum in Asia-Pacific given lack of C-Band and low-band spectrum which could be partially addressed by the partitioning of the 6 GHz band. Early field studies show that the 6 GHz band is a very good substitute for the 3.5 GHz band in terms of performance;

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- (ii) A large allocation to Wi-Fi does not of itself address the digital divide: The allocation of the entire 6 GHz band for unlicensed use does not provide additional coverage and help bridge the region's urban digital divide which COVID-19 pandemic has highlighted is a key public policy issue;
- (iii) The allocation of 1.2 GHz of prime spectrum to Wi-Fi is not supported by any demand analysis. Further, such a decision would be premature as experience and studies are showing that faster broadband services (especially 5G)/larger data allowances/ recharges mean reduced Wi-Fi offload;
- (iv) Strong regional FWA growth supports an IMT allocation in the 6 GHz band: Growth in 4G and 5G FWA in Asia-Pacific region (which has underdeveloped fixed network infrastructure especially fibre deployments) would be supported by reservation of additional mid-band spectrum in the 6 GHz band to support additional users and higher download usage patterns;
- (v) The likely economic benefits are maximised with shared allocation of the 6 GHz band spectrum as the short and long term economic benefits of improved IMT and Wi-Fi services can both be secured;
- (vi) Partitioning the 6 GHz band assists in future proofing for future 5G advanced and 6G services;
- (vii) Making more IMT spectrum in the 6 GHz band supports strong mobile/ wireless competition by making available 700 MHz of additional mid-band spectrum. This will ensure at least 3 to 4 MNOs in a market have sufficiently large IMT spectrum portfolios to provide high speed, high quality wireless broadband and to be viable/sustainable in commercial terms; and
- (viii) Possible additional proceeds to Government arise from the allocation of IMT spectrum in the 6 GHz band.

In terms of technical issues, it is further recommended that:

- **Lower part of the band:** The allocation of the lower part of the 6 GHz band (5925-6425 MHz) for unlicensed use should generally be restricted to indoor use with a maximum mean EIRP 250 mW (23 dBm), or very low power 25 mW (14 dBm) outdoor; and
- **Upper part of the band:** The allocation of the upper part of the 6 GHz band (6425-7125 MHz) for IMT use, will be subject to addressing the possible interference/co-existence issues in relation to existing 6 GHz services, namely FSS and FS services.

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I would be pleased to answer any questions which the MCMC has in relation to this submission. Please contact me on [scott.minehane@windsor-place.com](mailto:scott.minehane@windsor-place.com) or on +61 412 995535.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Scott W Minehane'.

Scott W Minehane  
Managing Director

Question	Response
<p><b>Question 1</b></p> <p><b>MCMC seeks your views and comments on the demand for spectrum for Wi-Fi in the 6 GHz frequency band.</b></p>	<p>WPC is strongly of the view that demand in Malaysia is for additional IMT spectrum (as compared with spectrum for Wi-Fi) given <i>inter alia</i> the limitations on C-Band spectrum for IMT services and growing demand.</p> <p>Please specifically refer to section 4 on demand for IMT spectrum and section 5.4 of the attached WPC paper on 6 GHz band.</p>
<p><b>Question 2</b></p> <p><b>MCMC seeks your views and comments on the emerging technologies utilising the 6 GHz frequency band.</b></p>	<p>WPC is of the view that partitioning the 6 GHz band between IMT and Wi-Fi assists in future proofing for future 6G services.</p> <p>Please specifically refer to sections 4 and 5.7 of the attached WPC paper on 6 GHz band.</p>
<p><b>Question 3</b></p> <p><b>MCMC seeks your views and comments on the frequency range within the 6 GHz frequency band that could be considered for Wi-Fi under the Class Assignment in Malaysia. Should MCMC consider allowing Wi-Fi to operate in the entire 1200 MHz (5925 MHz to 7125 MHz frequency band) or only in the 500 MHz (5925 MHz to 6425 MHz frequency band)?</b></p>	<p>WPC strongly supports the partitioning of the 6 GHz between IMT Services and allowing Wi-Fi to operate under a class assignment in Malaysia. WPC would recommend that the MCMC allocate only the lower part of the 6 GHz band (5925-6425 MHz) allowing Wi-Fi to operate under a class assignment, with the upper part of the band (6425- 7125 MHz) to be allocated for IMT services.</p> <p>Please see the attached WPC paper on the 6 GHz band especially the Executive Summary and section 6.1 of the attached WPC paper on 6 GHz band.</p>
<p><b>Question 4</b></p> <p><b>MCMC seeks your views and comments on:</b></p> <p><b>i. the coexistence between Wi-Fi and incumbent services (i.e. fixed service and fixed-satellite service); and</b></p> <p><b>ii. the potential interference mitigation between these services.</b></p>	<p>There are a number of important issues to be addressed by the MCMC. Please refer to section 6.2 of the attached WPC paper on the 6 GHz band for our considered views.</p>

Question	Response
<p><b>Question 5</b></p> <p><b>MCMC seeks your views and comments on the potential technical and operational conditions to be imposed if the 6 GHz frequency band is introduced for Wi-Fi under the Class Assignment. Should part of the frequency band be limited to indoor operation? Should standard power devices operating under the Automatic Frequency Coordination (AFC) system be adopted in Malaysia?</b></p>	<p>The allocation of the lower part of the 6 GHz band (5925-6425 MHz) allowing Wi-Fi to operate under a class assignment should generally be restricted to indoor use with a maximum mean EIRP 250 mW (23 dBm), or very low power 25 mW (14 dBm) outdoor. We note that the establishment of an AFC system is significant task in both technical and regulatory aspects. Currently there are no studies that confirm that AFC system could guarantee adequate protection to fixed services and this now the subject of much debate and litigation in the United States on potential harmful interference. And lastly the standards for AFC are yet to be developed.</p> <p>Please refer to section 6.2 of the attached WPC paper on 6 GHz band.</p>
<p><b>Question 6</b></p> <p><b>What other key issues need to be considered in introducing Wi-Fi in the 6 GHz frequency range?</b></p>	<p>Please see the attached WPC paper on 6 GHz band which addresses a number of key issues on the future use of this important spectrum band.</p>