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7 August 2023

The Chairman
Malaysian Communications and Multimedia Commission
MCMC HQ Tower 1
Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan
MALAYSIA
(**Attention: Spectrum Planning and Assignment Division**)
via npwg.sec@mcmc.gov.my

Dear Sir/Madam

EXPERT SUBMISSION TO MCMC IN RELATION ON SELECTED ASPECTS OF THE PUBLIC CONSULTATION PAPER: PROPOSED MALAYSIA'S POSITIONS FOR WORLD RADIOCOMMUNICATION CONFERENCE 2023 (WRC-23) AGENDA ITEMS

Please see the attached expert submission on selected aspects of the public consultation paper on the Proposed Malaysian positions on the World Radiocommunications Conference 2023 (WRC-23) agenda. My key focus is in relation to Agenda Item 1.2.

While Appendix A to this covering letter contains our substantive comments in relation Agenda Item 1.2, the key aspects of this submission argue that Malaysia in addition to supporting the identification of IMT in the 7025-7125 MHz frequency band with appropriate regulatory and technical conditions should strongly support proposals to identify the frequency band 6425-7025 MHz for IMT by creating a new Radio Regulations footnote with appropriate conditions. In the alternative Malaysia should support amendments to the WRC-23 agenda such that such identification is possible on a region wide basis. The key arguments in support of such an approach for Malaysia include:

- The need for additional IMT spectrum in the key Malaysian urban areas of the Klang Valley (including the Federal Territory of KL, Selangor etc), Penang (ie Georgetown/Seberang Perai), Johor etc for mobile and fixed wireless access (FWA) services. The challenges of making significantly more C- Band and low-band spectrum in Malaysia which are well-known to the MCMC could be partially addressed by allocating the upper 6 GHz band to IMT services;

- Facilitates larger future assignments of mid-band spectrum allowing DNB and the second 5G provider to both secure larger contiguous blocks of mid-band spectrum to support Malaysia's likely future mobile broadband demand;
- An additional 500 MHz allocated by the MCMC for use of radiocommunications devices (WLAN applications) in the 5925 MHz–6425 MHz band, subject to the conditions stipulated in the Class Assignment in early 2022 has been sufficient to meet demand now and going forward;
- The likely economic benefits from 5G/6G and Wi-Fi 6/7 in Malaysia are maximised with shared allocation of the 6 GHz band spectrum between IMT and Wi-Fi services;
- The need to future proof key midband spectrum for future 6G services.

In comparison with Region 1 and Region 2, only 100 MHz of bandwidth at 7025-7125 MHz is being considered for IMT identification in our Region 3, which is considerably less than in the other Regions. This will hinder IMT development in Region 3 and will mean that Region 3 countries such as Malaysia will not be able to take advantage of the socio-economic benefits of IMT to the same extent as in Region 1 and Region 2.

I have also taken the opportunity to attach the separate WPC paper titled ***Updated Report: Optimising IMT and Wi-Fi spectrum allocation: The compelling case for 6 GHz band partitioning in Asia-Pacific, November 2022*** - for the MCMC's kind consideration.

The updated WPC report found that there continues to be 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. In this updated WPC report on the 6 GHz band there are many additions, amendments and updates including but not limited to:

(i) Detailing the considerable global momentum building in relation to allocating/reserving the upper 6 GHz band for IMT purposes;

(ii) Summarising the 3GPP completed technical specifications of 5G NR band n104 as part of 3GPP Release 17; and

(iii) The need for larger future assignments of mid-band spectrum beyond initial 5G spectrum assignments which emphasises the need for upper 6 GHz band to be allocated to IMT purposes.

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 (*already done in Malaysia*); and

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- ***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 (still to be done in Malaysia).

I would be pleased to answer any follow up questions which the MCMC has in relation to this submission on Malaysia's position on the WRC-23 agenda items relation to AI 1.2. Please contact me on scott.minehane@windsor-place.com or on +61 412 995535.

Yours sincerely,

Scott W Minehane
Managing Director

APPENDIX A

COMPLETED TEMPLATE FOR RESPONSE

Agenda Item	Comments and Views on Proposed Malaysia's Positions
	Fixed, Mobile and Broadcasting Issues
Item 1.2.	Malaysia in addition to supporting the identification of IMT in the 7025-7125 MHz frequency band with appropriate regulatory and technical conditions should strongly support proposals to identify the frequency band 6425-7025 MHz for IMT by creating a new Radio Regulations footnote with appropriate conditions. In the alternative Malaysia should support amendments to the WRC-23 agenda such that such identification is possible. The key arguments in support of such an approach for Malaysia include: • The need for additional IMT spectrum in the key Malaysian urban areas of the Klang Valley (including the Federal Territory of KL, Selangor etc), Penang (ie Georgetown/Seberang Perai), Johor etc for mobile and fixed wireless access (FWA) services. The challenges of making significantly more C- Band and low-band spectrum in Malaysia which are well-known to the MCMC could be partially addressed by allocating the upper 6 GHz band to IMT services; • Facilitates larger future assignments of mid-band spectrum allowing DNB and the second 5G provider (as decided upon in May 2023[1]) to both secure larger contiguous blocks of mid-band spectrum to support Malaysia's likely future mobile broadband demand;[2] • An additional 500 MHz allocated by the MCMC for use of radiocommunications devices (WLAN applications) in the 5925 MHz–6425 MHz band, subject to the conditions stipulated in the Class Assignment in early 2022 has been sufficient to meet demand now and going forward; • The likely economic benefits from 5G/6G and Wi-Fi 6/7 are maximised with shared allocation of the 6 GHz band spectrum between IMT and Wi-Fi services; • The need to future proof the availability of key midband spectrum for future 6G services in Malaysia. Examples of 6G

[1] Refer to www.reuters.com/technology/malaysia-says-will-move-dual-network-model-5g-after-80-coverage-2023-05-03/

[2] For example, the recent trial in the UAE is focused on achieving 10Gbps download speeds using 400MHz of spectrum in the 6 GHz range. Refer to www.commsupdate.com/articles/2023/08/04/uae-regulator-and-telcos-reach-10gbps-in-5g-advanced-trial/

Agenda Item	Comments and Views on Proposed Malaysia's Positions
	use cases include holographic communication, the internet of senses, massive digital twins, and the exponential increase in mobile broadband communication.[3] Utilising 6G for the integration of the physical and human world unleashes the innate potential of human beings through sensors, AI/ML, and digital twin models.[4] To achieve this vision, essential requirements for spectrum availability are needed to enable 6G deployment. Low-band spectrum is critical for rural and deep indoor coverage. The sub-THz range (92-300 GHz) can offer ultra-fast low latency 6G services in localised areas. Mid-band spectrum is essential for cost-effective wide-area networks, providing a balance between capacity and coverage. Thus, spectrum from all frequency ranges – low, medium, and high – is critical for commercial success of 6G. In comparison with Region 1 and Region 2, only 100 MHz of bandwidth at 7025-7125 MHz is being considered for IMT identification in our Region 3, which is considerably less than other Regions. This will hinder IMT development in Region 3 and will mean that Region 3 countries such as Malaysia will not be able to take advantage of the socio-economic benefits of IMT to the same extent as Region 1 and Region 2 countries. It is important to note that such an approach would be consistent with a range of Asia-Pacific countries including those in North Asia, South Asia and South East Asia.

[3] Ericsson, *6G spectrum – enabling the future mobile life beyond 2030*, (March 2023).

[4] Guillaume Mascot, Nokia, *Spectrum for 6G*, Asia Pacific Spectrum Management Conference, Bangkok, April 2023