IEEE P802.18
Radio Regulatory Technical Advisory Group (RR-TAG)

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| Proposed Response to China MIIT’s consultation “Technical requirements and test methods for new type approval of wireless LAN equipment adopting IEEE 802.11be technical standards” |
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This document drafts a proposed response to the China MIIT’s consultation “Technical requirements and test methods for new type approval of wireless LAN equipment adopting IEEE 802.11be technical standards”.

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Electronic filing July 1, 2023

Re: Consultation “Technical requirements and test methods for new type approval of wireless LAN equipment adopting IEEE 802.11be technical standards”.

Dear Sir/Madam,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the China Ministry of Industry and Information Technology (MIIT) for issuing the consultation “Technical requirements and test methods for new type approval of wireless LAN equipment adopting IEEE 802.11be technical standards” and for the opportunity to provide feedback on this topic.

IEEE 802 LMSC is a leading consensus-based industry standards body, producing standards for wireless networking devices, including wireless local area networks (“WLANs”), wireless specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). We also produce standards for wired Ethernet networks, and technologies produced by implementers of our standards are critical for all networked applications today.

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Please find below the responses of IEEE 802 LMSC to this consultation.

The IEEE Std 802.11ax-2021 standard [1] supports operation in the 2.4 GHz, 5 GHz, and 6 GHz bands, and products based on this standard are seeing significant adoption where regulatory rules permit deployment [2]. Based on IEEE Std 802.11ax-2021, the Wi-Fi industry is taking the lead in developing Wi-Fi 6E certification program and specifying a number of complementary coexistence strategies for bands with incumbent users, such as automated frequency coordination (AFC) [3] [4] for the 6 GHz band. Wi-Fi technology, based on the IEEE 802.11 standard, has an estimated 18 billion devices in use world-wide, with over 4 billion devices added annually [5]. In addition, the list of Wi-Fi 6E [2] certified products (which are based on IEEE 802.11 technologies) is growing. In 2022, over 350 million Wi-Fi 6E devices entered the market [6].

A new generation of IEEE 802.11 technologies, currently under development in the IEEE P802.11be amendment [7], will continue to improve performance and enhance spectrum coexistence capacities. To achieve the targeted performance improvements, IEEE P802.11be introduces advanced features including channel bandwidths of up to 320 MHz, multiple resource units to a single station, multi-link operation, enhanced quality of service (QoS), improved Target Wake Time, and improved spectrum management to accommodate coexistence with incumbents more effectively and efficiently. Please note that the P802.11be amendment currently supports carrier frequency operation between 1000 MHz and 7125 MHz with extension to 7250 MHz under consideration.

IEEE 802 LMSC commends MIIT’s effect and supports the proposed technical requirements and test methods for new type approval of wireless LAN equipment adopting IEEE 802.11be technical standards but kindly requests MIIT to consider allocating more spectrum (e.g., 5470 MHz to 5725 MHz, part of or the entire 6 GHz band) for license-exempt use.

IEEE P802.11be’s global 6 GHz channelization is designed to accommodate multiple 160 MHz and 320 MHz channels throughout the 5925 MHz to 7125 MHz band, if available. Many countries and cities in the Asia Pacific regions, including Singapore, Thailand, and Hong Kong S.A.R, have recently authorized license-exempt operation in the 5925 MHz to 6425 MHz band, which allows multiple 160 MHz channels and one 320 MHz channel. Some other countries, including Saudi Arabia, have allocated the entire 6 GHz band for license-exempt operation, which allows multiple 160 MHz channels and three 320 MHz channels. Availability of the 5470 MHz to 5725 MHz band, and/or part of or the entire 6 GHz band for license-exempt use will create economies of scale and produce a robust equipment market, benefitting China’s businesses, consumers, and economy, while providing societal benefits.

**Conclusion**

IEEE 802 LMSC thanks the MIIT for the opportunity to provide this submission and kindly requests MIIT to consider our responses in its future decisions regarding the use of wireless LAN equipment in the 5470 MHz to 5725 MHz and/or part of or the entire 6 GHz band.

Respectfully submitted

By: /ss/.

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References:

[1] “IEEE Standard for Information Technology - Telecommunications and Information Exchange between Systems Local and Metropolitan Area Networks - Specific Requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 1: Enhancements for High-Efficiency WLAN,” in *IEEE Std 802.11ax-2021 (Amendment to IEEE Std 802.11-2020)*, vol., no., pp.1-767, 19 May 2021, doi: 10.1109/IEEESTD.2021.9442429.

[2] Wi-Fi Alliance: Wi-Fi 6E momentum underscores need for entire 6 GHz band, November 2022. [Available online](https://www.wi-fi.org/news-events/newsroom/wi-fi-6e-momentum-underscores-need-for-entire-6-ghz-band) [accessed: 14 May 2023].

[3] Dynamic frequency coalition: Automated frequency coordination - an established tool for modern spectrum management, March 2019. [Available online](https://dynamicspectrumalliance.org/wp-content/uploads/2019/03/DSA_DB-Report_Final_03122019.pdf) [accessed: 14 May 2023].

[4] Intel: Spectrum sharing using automated frequency coordination. [Available online](https://www.intel.com/content/www/us/en/wireless-network/spectrum-using-automated-frequency-coordination.html#:~:text=Introducing%204th%20Gen%20Intel%C2%AE%20Xeon%C2%AE%20Scalable%20Processors%20Spectrum,and%20compliance%20considerations%20in%20the%206%20GHz%20band.) [accessed: 14 May 2023]

[5] Wi-Fi Alliance: Value of Wi-Fi. [Available online](https://www.wi-fi.org/discover-wi-fi/value-of-wi-fi) [accessed: 12 March 2023]

[6] Wi-Fi Alliance: Wi-Fi 6E certified products. [Available online](https://www.wi-fi.org/product-finder-results?keywords=wi-fi+6E&op=Search&form_build_id=form-5F5bhfMUfZOoa0Xo4k9oQD8nsj0GQLww76EPepJC5QQ&form_id=wifi_cert_api_simple_search_form) [accessed: 14 May 2023]

[7] IEEE Draft Standard for Information technology--Telecommunications and information exchange between systems Local and metropolitan area networks--Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Extremely High Throughput (EHT)," in IEEE P802.11be/D3.0, January 2023 , vol., no., pp.1-999, 1 March 2023.

1. This document solely represents the views of IEEE 802 LMSC and does not necessarily represent a position of either the IEEE or the IEEE Standards Association. [↑](#footnote-ref-1)