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

Proposed Response to Japan’s Ministry of Internal Affairs and
Communications for Frequency Realignment Action Plan (2023
Edition)

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This document drafts a proposed response to the Japan MIC’s consultation “Frequency Realignment Action Plan (2023 Edition)”.

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5 Electronic filing

November 2, 2023

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7 Re: Consultation “Frequency Realignment Action Plan (2023 Edition)”

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9 Dear [Radio Department, Radio Policy Division, Telecommunications Infrastructure](#)
10 [Bureau/Telecommunications Bureau](#),

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12 IEEE 802 LAN/MAN Standards Committee (LMSC) thanks Japan’s Ministry of Internal Affairs
13 and Communications (MIC) for issuing the consultation that call for comments on “Frequency
14 Realignment Action Plan (2023 Edition)” and for the opportunity to provide feedback.

15
16 IEEE 802 LMSC is a leading consensus-based industry standards body, producing standards for
17 wireless networking devices, including wireless local area networks (“WLANs”), wireless
18 specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and
19 wireless regional area networks (“WRANs”). We also produce standards for wired Ethernet
20 networks, and technologies produced by implementers of our standards are critical for all
21 networked applications today.

22
23 IEEE 802 LMSC is a committee of the IEEE Standards Association and Technical Activities, two
24 of the Major Organizational Units of the Institute of Electrical and Electronics Engineers (IEEE).
25 IEEE has about 400,000 members in over 160 countries. IEEE’s core purpose is to foster
26 technological innovation and excellence for the benefit of humanity. In submitting this document,
27 IEEE 802 LMSC acknowledges and respects that other components of IEEE Organizational Units
28 may have perspectives that differ from, or compete with, those of IEEE 802 LMSC. Therefore,
29 this submission should not be construed as representing the views of IEEE as a whole¹.

30
31 IEEE 802 LMSC follows Japan’s regulatory activities regarding radio local area networks
32 (RLANs) and supports MIC proceedings on enabling Standard Power (SP) using Aautomatic
33 Frequency Control (AFC) for spectrum sharing with fixed communication systems operating
34 in 5925 MHz to 7125 MHz and authorizing 6425 MHz to 7125 MHz for Very Low Power
35 (VLP) and Low Power Indoor (LPI) modes of operation.

36
37 IEEE 802 LMSC applauds and appreciates MIC’s progress in finalizing technical conditions on
38 Client-to-Client (C2C) communications as well as the coverage for 320 MHz channel bandwidth
39 in the 6 GHz band published in September 2023. In particular, IEEE 802 LMSC recognizes MIC
40 for itstaking the global leadership in finalizing detailed technical specifications for C2C. As we
41 stated in our filing in August 2023, C2C is critical to efficient ey-of-spectrum utilization and
42 enabling a diverse set of different Wi-Fi applications, use cases, ~~and~~ industry segments and
43 business models in the 6 GHz band (i.e., 5925 MHz to 7125 MHz) across the globe.

44
45 Please find below ~~the~~ IEEE 802 LMSC’s specific comments on this consultation focusing on the
46 aspect of the consultation related to the 6 GHz band.

47
48 **Target for Securing over 1 GHz of License Exempt Spectrum for Wi-Fi by the End of 2025**

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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.

50 IEEE 802 LMSC applauds MIC's progressive approach in committing to allocation of over 1 GHz
51 of license exempt spectrum for Wi-Fi to enable 10 Gbps services by utilizing Wi-Fi 6 and Wi-Fi
52 7 technologies, which are developed by IEEE 802 standards, in the 6 GHz band. MIC's
53 commitment makes Japan along with the United States of America the global champions for low
54 cost wireless connectivity.

55

56 **6 GHz as a Priority Initiative**

57

58 IEEE 802 LMSC appreciates MIC's ~~in-listing-of-the~~identification of 6 GHz regulatory expansion
59 as a priority initiative for the action plan and recognizes MIC's determination in the introduction
60 and enablement of Wi-Fi 7 technology based on IEEE P802.11be [1] and spectrum sharing for SP
61 operation using sharing mechanisms such as AFC to improve system coverage and system
62 throughput performance.

63 Both the Wi-Fi 7 technology and the SP operation using AFC heavily rely on the availability of
64 sufficient spectrum (e.g., of over 1 GHz) to accommodate multiple 160 MHz and 320 MHz
65 channels. In the case of Wi-Fi 7, enterprise deployments and scaled deployment of advanced
66 applications such as AR/VR, for example in education and health industries require multiple 320
67 MHz channels to fully utilize the advantages of the technology. In the case of SP operation with
68 an AFC system, without extending the band to upper 6 GHz band (i.e., 6425 MHz to 7125 MHz)
69 and considering limited spectrum availability from an AFC system, the channel bandwidth may
70 be limited to 20 MHz for enterprise indoor and outdoor deployments. Please note that even with
71 additional shared spectrum in the upper 6 GHz authorized for license exempt operation, only a part
72 of the license exempt spectrum will be accessible at each location because of the AFC system
73 frequency availability calculation.

74 Today, AFC technology is mature. AFC systems are going through detailed certification processes
75 in the United States of America and Canada and SP deployments are imminent. Various chipset
76 vendors and original equipment manufacturers (OEMs) have been demonstrating and promoting
77 their Wi-Fi 7 products, some of which have already emerged in the market. IEEE 802 LMSC
78 respectfully encourages MIC to finalize expansion of the 6 GHz band to the upper 6 GHz band,
79 including the authorization of ~~the~~ outdoor use ~~for~~of Wi-Fi operation.

80

81 **7025 MHz to 7125 MHz Band**

82 With regards to MIC's consideration of 7025 MHz to 7125 MHz band as related to the World
83 Radiocommunications Conference 2023 (WRC 2023), IEEE 802 LMSC recommends allocation
84 of the band to license exempt operation.

85

86 Full allocation of the 6 GHz band will enable Wi-Fi utilization of 7 x 160 MHz channels for indoor
87 enterprise deployment with reuse pattern 7. In the case that the last 100 MHz is not available to
88 Wi-Fi, such reuse pattern is not feasible in deployments.

89

90 With MIC's continued sharing studies for outdoor operation at 6425 MHz to 6570 MHz and 6870
91 MHz to 7125 MHz (to accommodate presence of Field Pick-up Units (FPUs) and broadcast
92 mobile services incumbent operation in the band), we understand that outdoor IMT operation will
93 be even more challenging than that of Wi-Fi due to higher power transmission.

94

95 **Conclusion**

96
97 IEEE 802 LMSC supports MIC's renewed commitment to allocation of over 1 GHz of license
98 exempt spectrum and prioritization of the expansion of 6 GHz regulations enabling SP using AFC
99 for spectrum sharing with fixed communication systems operated in 5925 MHz to 7125 MHz and
100 authorizing 6425 MHz to 7125 MHz for VLP and LPI modes of operation. We respectfully request
101 MIC to consider our comments listed in this response and hope that the new regulation will be
102 enacted in a timely manner.

103
104 Respectfully submitted

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106 By: /s/.

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108 IEEE 802 LAN/MAN Standards Committee Chairman

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112 References:

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114 [1] "IEEE Draft Standard for Information technology--Telecommunications and information
115 exchange between systems Local and metropolitan area networks--Specific requirements -
116 Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY)
117 Specifications Amendment: Enhancements for Extremely High Throughput (EHT)," IEEE
118 P802.11be/D4.1, September 2023.