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

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| Draft Liaison to China MIIT’s consultation on its updated regulations of radio management on UWB equipment |
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This document drafts a proposed liaison to the WTO notification issued by the Ministry of Industry and Information Technology (MIIT) of the People’s Republic of China for its updated regulations of radio management of Ultra Wideband (UWB) equipment.

See

<https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/TBTN23/CHN1753.pdf&Open=True> and <https://docs.wto.org/dol2fe/Pages/FE_Search/ExportFile.aspx?id=297960&filename=2023/TBT/CHN/23_12098_00_x.pdf&Open=True>

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Electronic filing October 9, 2023

Re: Notification on its updated radio management regulations on UWB

Dear Telecommunications Bureau,

IEEE 802 LAN/MAN Standards Committee (IEEE 802 LMSC) thanks the Ministry of Industry and Information Technology (MIIT) of the People’s Republic of China for issuing updated regulations of radio management on Ultra Wideband (UWB) equipment [1] following its consultation on the “Ultra Wideband (UWB) Equipment Radio Management Regulations (Draft for Comments)” in February 2023 (“the consultation”).

IEEE 802 LMSC is a leading consensus-based open standards development committee for networking standards that are used by industry globally. It produces standards for networking devices, including wired and wireless local area networks (“LANs” and “WLANs”), wireless specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). Technologies produced by implementers of our standards are a critical element for all networked applications today.

IEEE 802 LMSC is a committee of the IEEE Standards Association and of Technical Activities, two of the Major Organizational Units of the IEEE. IEEE has about 400,000 members in over 160 countries and its core purpose is to foster technological innovation and excellence for the benefit of humanity.  IEEE is also a major accredited standards development organization whose standards are recognized world-wide. In submitting this document, IEEE 802 LMSC acknowledges and respects that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802 LMSC. Therefore, this submission should not be construed as representing the views of IEEE as a whole[[1]](#footnote-1).

Please find below the IEEE 802 LMSC’s specific comments on the updated radio management regulations.

On 6 February 2023, IEEE 802 LMSC submitted its reply to the consultation. IEEE 802 LMSC appreciates that our comments on aligning the proposed spectral density mask with those in IEEE Std 802.15.4-2020 [2] have been taken into account and that the allocation has been widened to include the necessary roll-off for 500 MHz channels. Alignment with the spectral masks in the standard provides benefits in terms of availability of products, time to market, and international harmonization.

However, IEEE 802 LMSC is surprised to find a new maximum value of 650 MHz for the 10 dB bandwidth in the proposed regulations. The 650 MHz value corresponds to the IEEE HRP spectral mask specification for systems nominally occupying 499.2 MHz 3 dB bandwidth [2]. This was also the specification IEEE 802 LMSC quoted in its response to the consultation.

In this follow-up to our previous response, IEEE 802 LMSC would like to highlight that other 3 dB bandwidths are part of the specification [2]. In particular, the HRP UWB PHY includes IEEE HRP UWB PHY channel 11 with a nominal 3 dB bandwidth of 1331.2 MHz centered on 7987.2 MHz. Since wider bandwidth are required to support high-resolution sensing applications and high-accuracy ranging applications, bandwidths of over 500 MHz have been included in the specification. IEEE 802 LMSC would kindly like to ask MIIT to reconsider whether the 650 MHz maximum limit for the 10 dB bandwidth is required. As of now, no other regulatory regime for UWB contains an upper limit on the 10 dB bandwidth. The inclusion of such an upper limit may limit the capabilities of UWB equipment in utilizing the IEEE HRP UWB PHY channel 11 to support high-resolution sensing applications and high-accuracy ranging applications.

IEEE 802 LMSC also would like to repeat its request to keep the existing 6 to 9 GHz allocation for UWB systems. Restricting UWB to frequencies above 7125 MHz will prohibit access to the very popular IEEE HRP UWB PHY channel, channel 5. There have not been any reports of low power UWB systems causing interference to other systems anywhere in the world, so a reduction of the frequency allocation for the UWB systems does not seem necessary to protect other spectrum users.

**Conclusion**

IEEE 802 LMSC thanks the MIIT for the opportunity to provide this submission and kindly requests MIIT to consider our requests to abolish the 650 MHz maximum limit for the 10 dB bandwidth and to keep the existing 6 to 9 GHz frequency allocation in its updated regulations on radio management of UWB equipment.

Respectfully submitted,

By: /ss/.

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References:

[1] Ministry of Industry and Information Technology of the People's Republic of China, “Regulations on Radio Management of Ultra-Wideband (UWB) Equipment,” G/TBT/N/CHN/1753, 31 August 2023.

[2] “IEEE Standard for Low-Rate Wireless Networks,” in IEEE Std 802.15.4-2020 (Revision of IEEE Std 802.15.4-2015), vol., no., pp.1-800, 23 July 2020, doi: 10.1109/IEEESTD.2020.9144691.

[3] “IEEE Standard for Low-Rate Wireless Networks--Amendment 1: Enhanced Ultra Wideband (UWB) Physical Layers (PHYs) and Associated Ranging Techniques,” in IEEE Std 802.15.4z-2020 (Amendment to IEEE Std 802.15.4-2020), vol., no., pp.1-174, 25 Aug. 2020, doi: 10.1109/IEEESTD.2020.9179124.

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)