



16th April 2007

Mr. Andrew Haire
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Soft copy to: Jason_teo@ida.gov.sg

Dear Mr.Haire

Re: Regulatory framework for devices using Ultra-Wideband technology

Motorola thank IDA for the opportunity to comment on the regulatory framework for ultra-wideband (UWB) technology and we are please to offer the following comments.

Question 1: IDA invites views and comments on the proposal to allow UWB devices to operate in frequency bands which are used for other radiocommunication services such as fixed-satellite (FSS), fixed services (FS) and radionavigation.

Comment: We believe that UWB technology can be used to increase the utilisation of radio spectrum to the benefit of the community and we support the deployment of UWB provided the appropriate limits on emissions and regulations are applied to protect existing services.

In February of this year the EU Commission published a decision^[1] specifying a maximum emission level of -85 dBm/MHz in the band 3.4 to 3.8 GHz. This is similar to the value used for IMT band in the range 1.6 GHz to 3.4 GHz. We believe that a value of -85 dBm/MHz is necessary for the proper operation of wireless broadband systems in the 3.4 – 3.8 GHz band and we would like to propose that Singapore harmonise with Europe by adopting the emission limit of -85 dBm/MHz for the band 3.4 to 3.8 GHz. This band is part of a candidate band for IMT-Advance and the adoption of the value will cover the future use of the band for mobile broadband.

We would like to propose that the range starting at 8.5 GHz be extended to 9 GHz and that the power level for this range (8.5 to 9 GHz) be increased by 6 dB, from -41.3 dBm/MHz to -35 dBm/MHz. This would allow for increased adoption in this range as it would align with most common UWB implementations.

Question 2: IDA also seeks views on the possible scenarios of harmful interference from UWB devices to other licensed bands and the possible measures to reduce the risk of interference.

Comment: The draft Report on Complementary Study of FWA¹ in the 3.4 to 3.8GHz band^[2] provide some scenarios of interference to FWA.

Question 3: IDA welcomes views and comments on the proposal to adopt a licence-exempt approach for UWB consumer and business data communication systems which comply with the UWB technical specification and operate with peak emission within the 3400 MHz and 10600 MHz band.

Comment: Refer to comment on the adoption of -85 dBm/MHz in Question 1.

Question 4: IDA further invites comments on the proposal to allow licence-exempt UWB devices implemented with mitigation techniques to operate at a higher peak emission level within the 3400 to 4800 MHz band as compared to generic UWB devices without mitigation techniques.

¹ Fixed Wireless Access



Comment: We note that work is in progress by ECC TG3 on technical requirement and validation of the efficiency of DAA to protect FWA at 3.4 to 3.8GHz band.

Question 5: IDA welcomes views and comments on the proposal to adopt licence-exemption approach for UWB vehicular radar devices which comply with the UWB technical specification and operate with peak emission within frequency bands 21650 – 29500 MHz and 77000 – 81000 MHz.

Comment: We see the need for neighbouring countries to harmonise on the technical specification to allow for the cross border movement of vehicles. For example: Vehicles from Singapore crossing over to Malaysia and vice versa.

Question 6: IDA welcomes views and comments on the decision to license, on a case-by-case basis, the use of UWB imaging systems with peak emission below the 960 MHz or in the 3400 to 10600 MHz band.

Comment: In ITU Region 3, the bands: 406.1-430 MHz; 440-470 MHz; 806-824/851-869 MHz; 4 940-4 990 MHz; and 5 850-5 925 MHz have been identified for public protection and disaster relief (PPDR). In addition many government networks also operate at frequencies below 5 GHz. To minimise harmful interference to these radio systems we recommend the use of UWB imaging systems be restricted to professional users. We also recommend that restriction be placed on the importation of such equipment into the country to prevent intentional disruption to radio systems.

Question 7: IDA also seeks comments if licensing conditions are required as further safeguards to existing users in the abovementioned band. If so, please identify and explain the potential interference to the mobile and trunked services from the UWB imaging devices operating in the frequency band below 960 MHz. Please also explain what are the safeguard measures that could be adopted.

Comment: Please refer to our comment above (for Question 6). In addition to restricting UWB imaging equipment to professional users it may be useful for the users to be made aware of the interference potential of UWB equipment to radiocommunications systems. Where practical or necessary, electromagnetic shielding should also be considered.

Question 8: IDA welcomes views and comments on the proposed licensing fee structure for UWB devices. Please provide supporting reasons to justify your view.

Comment: We make no comment on this question.

Sincerely,

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Reference:

[1] Commission Decision of 21/II/2007 <
http://ec.europa.eu/information_society/policy/radio_spectrum/docs/ref_docs/uwb_04_orig_w eb.pdf>

[2] TG3#17_24-A3R0_Annex3_draft report on FWA.doc, "Report of Complementary Study of FWA in the 3.4 to 3.8 GHz band", 17th ECC TG3 meeting, London, December 2006

[3] TG3#18_26R1. "Report from the 18th meeting of ECC TG3"