



**RESPONSE TO PUBLIC CONSULTATION PAPER**

**Consultation on Proposed Regulatory Framework for 60 GHz Frequency Band  
19 February 2010**

Prepared by: Executive Council  
Association of Telecommunications Industry of Singapore

Approved by: Michael Ang  
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By email (IDA\_Consultation@ida.gov.sg)

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Dear Mr.Haire

**Proposed Regulatory Framework For 60 GHz Frequency band, 19<sup>th</sup>, Feb 2010**

The Association of Telecommunications Industry of Singapore (ATiS) is an association registered in Singapore and one of the objectives of the association is to assist the appropriate agencies in Singapore on standards, specifications of products and rules and regulations on telecommunications industry.

Radio spectrum in the 60 GHz band has propagation characteristics that is ideal for the deployment of short range, high speed data links. The high level of attenuation due to atmospheric absorption and rain fade in the 60 GHz band limits the range of radiocommunications systems operating in the band, allowing a high level of frequency reuse.

Intelligent Transport Systems (ITS) are advanced infocommunications systems for the road transport sector and can improve road safety and mitigate transportation problems. We believe that ITS is beneficial and desirable in Singapore and we commend iDA for making provisions for ITS in the 60 GHz band.

We are pleased to provide our comments on the public consultation concerning the 60 GHz band.

***Question 1: iDA invites views and comments on the compatibility report for ITS and Fixed Services to operate in the same frequency band, 63-64 GHz.***

Comment: Although ECC Report 113 was prepared for CEPT members states (in ITU-R Region 1), we find that the conclusion on the need to implement measures to protect ITS (in the band 63 – 64 GHz) from Fixed Service (FS) relevant to Singapore (in ITU-R Region 3)

***Question 2: iDA invites views and comments on whether 63-66 GHz frequency band should be opened up for high power fixed wireless services.***

Comment: We believe it is prudent to reserve the band 63-66 GHz as an interim measure to protect ITS in the band 63-64 GHz. The embargo on high EIRP (>40 dBm) operation in the 63 – 66 GHz band may be reviewed when ITS systems are deployed.

**Question 3: iDA invites views and comments on iDA 's proposed frequency bands to be allocated for operations of both low radiation and high radiation equipment. iDA also invites views and comments on a 100 MHz guard band at each end of the band to safeguard operations of other services in the adjacent channels.**

Comment: We have no issue with the proposed bandplans: 57 – 66 GHz for low EIRP (<40 dBm) transmissions; and 57.1 – 62.9 GHz, for high EIRP(>40 dBm) transmissions.

**Question 4: iDA invites views and comments on the above two options for iDA to adopt for the channel plan.**

Comment: We agree that Option 2 supports efficient spectrum usage. However, Option 1 can be made to promote efficient spectrum usage through an appropriate rate for the annual frequency fee; a rate that is proportional to the amount of spectrum used.

**Question 5: iDA invites views and comments on iDA 's preferred channel plan (Option 1).**

Comment: We have no objection to Option 1.  
An alternative is to add to Option 2 the flexibility of aggregating 2 adjacent channels to accommodate 100 MHz radio equipment.

**Question 6: iDA invites views and comments on iDA 's proposed technical framework on RF output power and key requirements for the deployment of multi-gigabit wireless technology in the 60 GHz band.**

Comment: We note that the maximum EIRP (RF Output Power) of MGWS, WPAN/WLAN are in line with ETSI EN 302 567 and we support the approach taken to harmonise the regulations for short range devices (SRD) in this band with those of other administrations.

We proposed the following be made clear to SRD users of low EIRP equipment in the band 57 – 66 GHz

- a) The operation of SRD with a maximum EIRP of 40 dBm and maximum EIRP power spectral density of +13 dBm/MHz is restricted to indoor use only.
- b) For SRD operating outdoors the restrictions are:
  - Maximum EIRP of 25 dBm and maximum EIRP power spectral density of -2 dBm/MHz
  - Non-fixed use.
- c) Outdoor operation of fixed SRD is prohibited.

**Question 7: iDA invites views and comments on whether there should be a limit cap on the RF output power for high radiated power Fixed Services and whether there are**

***potential health concerns for high radiation equipment.***

Comment: We note that a number of administrations<sup>1</sup> have imposed a limit on transmitter output power (to the antenna). We favour the limit of +10 dBm, as given in ECC Recommendation (09)01.

***Question 8: iDA invites views and comments on iDA 's proposal to exempt low-radiated power devices ( $\leq 40$ dBm EIRP) from licensing.***

Comment: This proposal is in line with SRD regulations for this band by other administrations.

***Question 9: iDA invites views and comments on iDA 's preference for a full licensing approach for high radiation equipment ( $> 40$ dBm EIRP) operating in this band.***

Comment: We support the licensing of high EIRP ( $> 40$  dBm) equipment operating in the band 57.1 – 62.9 GHz in support of better interference management. However we are concern that the fees currently applied in a full licensing scheme<sup>2</sup> may discourage the use of this band for offsite transmissions.

We propose that iDA consider a lighter licensing scheme with corresponding lower fees for high EIRP equipment used for offsite transmission.

***Question 10: iDA invites views and comments on the safety aspects of operation of 60 GHz wireless systems and what guidelines must be established to protect individual users.***

Comment: We understand that the 1 mW/cm<sup>2</sup> limit is similar to the restriction provided by ICNIRP guidelines<sup>3</sup> for the general public.

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1 ACMA (Australia), FCC (USA), Ofcom (UK), RSM (New Zealand)

2 GENERAL RADIO-COMMUNICATION STATION LICENCE (TERRESTRIAL MICROWAVE STATION) APPLICATION GUIDELINES

3 GUIDELINES FOR LIMITING EXPOSURE TO TIME-VARYING ELECTRIC, MAGNETIC, AND ELECTROMAGNETIC FIELDS (UP TO 300 GHz)