HUBER+SUHNER Singapore

2010-03-29

Response to IDA's consultation paper and the proposed regulatory framework for the 60 GHz frequency band

To: Andrew Haire (Deputy Director-General)
Attachments: -

1 Introduction

Huber+Suhner very welcomes this consultation on the release of the 60 GHz frequency band.
As a manufacturer of 60 GHz Point-to-Point Wireless Ethernet Bridges (brand: SENCITY®Link), Huber+Suhner sees a growing demand for such equipment especially in FLANE applications (**F**ixed **LAN E**xtension).

The oxygen absorption characteristic of the 60 GHz band offers, we believe, a unique capability of only operating over limited range, which in turn allows a high link density.

In Singapore, Huber+Suhner is represented with an own affiliate. Mister Melvin Goh and Mister Tun Hee Ong will be to your disposal for any further questions. More information on SENCITY®Link can be found at http://www.sl60.com.

2 Responses

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.

Huber+Suhner has contributed to the CEPT ECC Report 113 and does therefore approve it.

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

The CEPT ECC Report 113 concludes that mitigation techniques need to be implemented to reduce the mutual interference possibilities with ITS. The report proposes light licensing or a co-ordination process as mitigation techniques.
Since Huber+Suhner believes, that such mitigation techniques will slowdown the market demand for 60 GHz point-to-point links (see answer to Question 9), the frequency band 63-66 GHz should only be opened up for higher power fixed wireless services if a light (or full) licensing will be IDA's choice for the implementation.
Huber+Suhner's preferred solution is a **free licensing scheme**, that would - as a consequence of the conclusions made in CEPT ECC Report 113 - exclude the frequency band 63-66 GHz for high radiation equipment.

In any case, the gain and power limits should be according to Annex UBa.2.1 of the ETSI EN 302 217-3 V1.3.1 (2009-07) standard.

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.

Comments on IDA's proposed *frequency bands*:

- Huber+Suhner agrees on the proposed frequency band for low radiation equipment.
- Huber+Suhner has given his opinion about the proposed frequency band for high radiation equipment in Question 2.

Comment on IDA's proposed *100 MHz guard band*:

- Ok.

Question 4

IDA invites views and comments on the above two options for IDA to adopt for the channel plan.

Huber+Suhner's preference is Option 1 (= no specific channel plan), which allows maximum flexibility.

Question 5

IDA invites views and comments on IDA's preferred channel plan (Option 1).

Huber+Suhner agrees, that Option 1 (= no specific channel plan) is the right choice for high power fixed wireless services.

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.

Huber+Suhner mainly agrees with the proposed technical framework.

Depending on IDA's final licensing scheme choice, the frequency band 63-66 GHz should also be opened for point-to-point fixed wireless systems (see answer to Question 2).

Also, the RF output power for point-to-point fixed wireless systems should be according to Annex UBa.2.1 of the ETSI EN 302 217-3 V1.3.1 (2009-07) standard. This standard states, that the output power does depend on the antenna gain.

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.

The limit cap on the RF output power should be according to Annex UBa.2.1 of the ETSI EN 302 217-3 V1.3.1 (2009-07) standard.

The penetration rate at 60 GHz is much lower than at other (lower) frequencies. There is no known influence of the 60 GHz output RF signal which would explain health concerns.

Question 8

IDA invites views and comments on IDA's proposal to exempt low-radiated power devices (≤40dBm EIRP) from licensing.

Ok. Low radiation equipment like mobile phones will be used in a nomadic way and have low gain antennas. This will limit their use to only few meters (e.g. 10m).
Due to the physical properties of the 60 GHz band (high oxygen attenuation), Huber+Suhner believes that the high-radiated power devices should be exempt from licensing too.

Question 9

IDA invites views and comments on IDA's preference for a full licensing approach for high radiation equipment (> 40dBm EIRP) operating in this band.

Huber+Suhner believes that **free** licencing would be the correct approach. Huber+Suhner considers that a full licence approach (including a high amount of fees) will at best slowdown or, at worst, stop completely the market demand for 60 GHz point-to-point links.
The main users of such links are responsible for the administration of computer networks which are not at all willing to pay any annual licence fees for their links.
Similarly, the licensing scheme envisaged by IDA, will lead to delays for the authorization to use the equipment, which will be too long (5-6 weeks) to make possible some applications (temporary type connections for events for example).
As an alternative to the licence free scheme proposed by Huber+Suhner, it can be thought of setting up a light licensing scheme which could be a viable solution. The application should then be made through an Internet platform, in order to simplify the procedure on the user side. The fee should not exceed EUR 200.- for a period of 5 years.

The 60 GHz band has already been released as a free licensing scheme in several countries (USA, Germany, Switzerland, Austria, Japan, Australia, etc.). None of these countries have reported any interference problems.

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.

The combination of the physical properties of the 60 GHz signal propagation (high oxygen attenuation) and the limits given by the ETSI EN 302 217-3 V1.3.1 (2009-07) standard, will make sure that the radiation of such equipment will be within safety limits.