

Geesteren, 04 September 2019

Aileen Chia (Ms)  
Deputy Chief Executive (Policy, Regulation & Competition Development),  
Director-General (Telecoms & Post)  
Infocomm Media Development Authority  
10 Pasir Panjang Road  
#03-01 Mapletree Business City  
Singapore 117438

Subject: RAIN Submission to IMDA consultation paper on PROPOSED POLICY FRAMEWORKS FOR THE ALLOCATION OF 800 MHZ, TDD 1900 MHZ AND FDD 2100 MHZ SPECTRUM BANDS of 17 MAY 2019

Dear Miss Aileen Chia,  
My name is Jacques Hulshof and I am the regulatory consultant of RAIN and in that capacity I am member of ETSI TG34 and - TG28, CEPT ECC SE24, CEPT ECC SRD MG, and on a regular basis I visit ECC WG FM and REDCA.

The RAIN RFID Alliance is an association of companies that make and use passive UHF RFID technology. Currently RAIN has over 160 members worldwide and more companies join the Alliance every month, see also [www.RAINRFID.org](http://www.RAINRFID.org).

RAIN (=RAdio frequency IdentificatiON) is a wireless technology that connects billions of items to the internet, enabling businesses and consumers to identify, locate, authenticate, and engage each item.

#### **RAIN RFID Technology**

RAIN RFID is a global alliance promoting the worldwide adoption of UHF RFID technology. RAIN uses the GS1 UHF Gen2 protocol which ISO/IEC has standardized as 18000-63. RAIN is intended as a nod to the link between UHF RFID and the cloud, where RFID-based data can be stored, managed and shared via the Internet. A RAIN RFID solution uses a reader to read and write a tagged item, manage the data and take action.

The following document "IMDA consultation paper on proposed policy frameworks for the allocation of 800 MHz, TDD 1900 MHz and FDD 2100 MHz spectrum bands" from the Singapore Info-communications Media Development Authority (IMDA) came to our notice.

RAIN RFID is becoming an increasingly important technology for end users in markets including retail, aviation, healthcare, IoT, smart manufacturing in all countries of the world. Studies around the world have highlighted the benefits of RAIN RFID, which account for many billions of tags worldwide. The amount of spectrum available in Singapore in these bands will be smaller compared to that available in some other countries, for example with US 902 – 928 MHz, Europe with 865- 868 MHz and 915 - 919.4 MHz, Australia with 915 - 918 MHz, generating real benefits.

RAIN has no comment on the specific proposals for LTE, but would like to highlight its concern at the loss of spectrum

RAIN would like to urge IMDA to release 5 MHz spectrum in the 915-920 MHz band to compensate losing 866-869 MHz band so developing a global RAIN RFID band.  
This band is adjacent to the existing 920-925MHz band

If you need any additional information about this submission, please don't hesitate to contact us.

Sincerely

A handwritten signature in black ink, appearing to read 'Jacques Hulshof', written over a light blue horizontal line.

Jacques Hulshof  
Regulatory Consultant RAIN