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Sent: Tuesday, November 14, 2023 1:52:58 PM

Subject: RE: Consultation Paper issued by TRAI - Open and De-licensed use of Unused or Limited Used Spectrum Bands, for Demand Generation for Limited Period in Tera Hertz Range

Respected Sir / Madam,

Diwali Greetings from Uno Minda Limited !

My name is Gitesh Mutha and I Head the Corporate Technology Office at Uno Minda Limited. We are a 1.6b \$ (FY22-23) Indian Automotive Tier-1 manufacturer with 72 plants globally manufacturing state-of-the-art automotive electronics products. One of our product line is related to ADAS products, wherein the below mentioned email and the consultation paper released by TRAI is very relevant. I write this email to you in the same regards.

We apologize for the delay in replying to the below email. We needed more time to collect and compile the relevant technical information.

With regards to Chapter IV, Clause 4.11, Q4, and Chapter VI, Q4 we would like to provide the following comments please:

1. In our opinion, it is need of the hour to license-exempt the 77-81 GHz frequency band for automotive radar application.
2. All the upcoming ADAS features like collision detection, cruise control, lane departure warning, automated emergency braking etc. use radar as the primary sensor. The range and accuracy of radar is critical for effective functioning of these safety features. The CMVR has recently published relevant AIS standards for testing and certification of these safety features, which reassures the fact that regulatory bodies also promote adoption of these safety features in upcoming vehicles.
3. Due to its higher frequency, 77GHz radar has the advantages of high accuracy and good signal penetration w.r.t. existing 24Ghz band. Therefore, 77GHz radar is more suitable for long-distance (about 250 meters) detection.
4. As for 79GHz, since the bandwidth of the 24GHz ISM band is only 250MHz, its "resolution" and "detection range" are limited. Therefore, in 2015, the International Telecommunications Union (ITU) decided to open the 76-81GHz frequency band for automotive radar applications. 79GHz not only has a wider bandwidth than 24GHz vehicle radar, allowing the resolution to be compressed to 5 centimetres, but the equipment is also smaller and easier to install later.
5. It has also been proved by multiple bodies (FCC, GB ...) that there are no health concerns by these frequency spectrums.
6. The following organisations have implemented/supported 77-81 GHz spectrum for automotive radar applications:
 - a. MIC, Japan
 - b. European Conference on Postal & Telecommunications (CEPT)
 - c. European Telecommunications Standards Institute (ETSI)
 - d. FCC
 - e. Multiple countries in Asia-Pacific region
- 7.

Basis the above reasons, **we hereby kindly urge TRAI to consider license-exempt of 77-81 GHz frequency band for automotive radar application.**

We would be please to provide you any further detailed justification on this topic, as per your request. Apologies again for the delayed response. We pray that our response is considered in the deliberations at TRAI.

We look forward to your positive response in the said matter.

Thank you for your co-operation.

With best regards,



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