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To,
Shri Akhilesh Kumar Trivedi
Advisor - Networks, Spectrum and Licensing
Telecom Regulatory Authority of India,
New Delhi, India

ITI Recommendations and Feedback on the Consultation Paper on Assignment of Spectrum in E&V Bands, and Spectrum for Microwave Access (MWA) & Microwave Backbone (MWB) Supporting a Licence-Exempt Regulatory Regime for the V-band

The Information Technology Industry Council (ITI) is the premier global advocate and thought leader for the information and communications technology industry. ITI's membership comprises leading technology and innovation companies from all corners of the tech sector, including software, digital services, and internet companies. They are headquartered across Asia, the United States, and Europe, and many are significant investors and employers in India.

ITI writes to you today in support of making the 57-64 GHz, and, if possible, the 64-71 GHz frequency ranges available under a licence-exempt regulatory regime without the application of light-licensing. ITI does not support band fragmentation through different licensing mechanisms of mobile services; therefore, for 57-71 GHz, we believe that a licence-exempt approach is appropriate.

New services and applications require larger bandwidths to support consumer demand for data-intensive applications. In addition, the splitting of frequency bands increases costs and thus causes delay in manufacturing and bringing new devices to market because of regulatory uncertainty.

While we note that the WRC-19 amended the Radio Regulations to include an IMT identification in the 66-71 GHz frequency range, it is clearly stated that "this identification does not preclude the use of this frequency band by any application of the services to which it is allocated and does not establish priority in the Radio Regulations". It is important to avoid fragmenting 57-71 GHz. This would effectively create a hard border splitting the 57-71 GHz with IEEE technologies in 57-66 GHz and 3GPP technologies in 66-71 GHz.

That said, we support licence-exempt use in the 57-64 GHz since it provides greater market certainty, because it avoids the IMT identified bands in 66-71 GHz and provides a valuable guard band. We do

not believe that other licensed services should have access to 57-64 GHz but if there is a desire to licence then this should be in the 64-71 GHz band.

In terms of technical parameters, we would like to recommend the following limits per global best practices: 57-64GHz - ECC Recommendation 70-03, Annex 1: n1; ETSI EN 305 550, 20 dBm avg EIRP and 13 dBm/MHz EIRP PSD; and 57-71GHz - ECC Recommendation 70-03 Annex 3: c1.

The full 7 GHz (57-64 GHz) range should be designated for technology neutral, licence-exempt shared use. We believe that demand will increase and further expansion of communications and sensing applications are projected in the entire 7 GHz (57 - 64 GHz) of the band under a license-exempt regulatory regime. Present applications in other countries include high data rate short range communications and high-resolution field disturbance sensors. Other typical uses include telemetry, telecommand, alarms, data transmissions in general and other applications. Further, utilization of the V-band under a license-exempt regime with the applications and power levels authorized in other countries do not present an interference or coexistence risk to space-based services.

V-band is already allowed on license-exempt basis worldwide except for a few countries. If V-band continues to be restricted and licensed, innovative new technologies and products would be unable to see the light of the day and consumers in the Indian market would be deprived of the latest and innovative solutions such as replacing wired cables with new technologies. The full band is required to achieve very high data rates to transfer large volumes of data quickly in contactless ports like USB3, Ethernet, and DisplayPort.¹ Additionally, range resolution is proportional to the spectrum bandwidth. Therefore, the full band is required to achieve precise radar/motion sensing² in applications such as the following: in-vehicle child sensors,³ home security, and health care. Further, there is no need to define "indoor-use" for licence-exempt deployments in the V-band. Indoor use restriction would greatly limit the types of innovative devices allowed on the market and restrict growth.

DoT has through its reference letter to TRAI L-14035/10/2022-BWA has acknowledged that the device/chip ecosystem for supporting various technologies for data transfer between consumer devices in the V band has developed and license exempt basis would serve greater public interest and realizing significant socio-economic gains.

ITI believes that under a technology neutral license exempt approach, the V-Band will not require regulatory mandates. We would not recommend imposing restrictions to choose between Frequency Division Duplexing (FDD) or Time Division Duplexing (TDD) based configuration for the V band as it will restrict applications. We would recommend that for licence-exempt use in the V-band; a technology neutral approach may be adopted with FDD or TDD operations dictated by the specific applications.

¹ <https://www.molex.com/en-us/products/contactless-connectivity>

² <https://www.federalregister.gov/documents/2023/07/24/2023-15367/fcc-empowers-short-range-radars-in-the-60-ghz-band>


³ <https://www.fcc.gov/document/fcc-permits-hot-car-sensors-save-children>

We would recommend that carrier sizes in the V-band should be dictated by the applications utilized under a license-exempt regime on a technology neutral basis and do not need to be mandated in regulation. The entire V-band should be available for all user categories geographic areas on a license-exempt basis. This includes all users - OEMs, Start-ups, etc. - should have access to the de-licensed band to bring innovative technologies and solutions to the market. Under a license-exempt regulatory framework; the scope of services/usages should be left to the discretion of the operator / user. We also believe that under a license-exempt regulatory framework, the duration of spectrum access needs to be sufficient to ensure market certainty.

ITI thank you for the opportunity to provide our support for making the 57-64 GHz and if possible, the 64-71 GHz frequency range available under a licence-exempt regulatory regime without the application of light-licensing.

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