**Before the  
Federal Communications Commission**

**Washington, D.C. 20554**

In the Matter of )

)

Petition for Rulemaking: Amendment of ) CG RM-11844

Rules Governing Ultra-Wideband Devices )

and Systems )

**Comments of Decawave Inc**

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Decawave would like to express its full support for Robert Bosch LCC’s request[[1]](#footnote-1) to review the ultra-wideband (UWB) rules. As pointed out in the Petition for Rulemaking, these rules were always intended to be revisited. After nearly 17 years without reported interference, we believe a thorough review is now overdue. Practical experience has shown that UWB is an extremely efficient spectrum user and a review of the rules such that more applications can benefit from the advantages of UWB is now necessary.

Decawave develops and supplies ultra-wideband semiconductor transceivers that operate under FCC Part 15, Subpart F (the ultra-wideband rules) and/or Subpart C, § 15.250 (the so-called wideband rules). Our customers use our products mainly in real-time localisation systems, including secure access for vehicles.

As Robert Bosch LCC has pointed out, the waiver process has been used to modify the UWB rules for a large number of applications and manufacturers. However, to provide an equal playing field for all operators, including smaller ones that can’t afford to go through the waiver process in order to bring their innovations to the market, a consolidation of the waivers into an updated set of rules is required.

Here, Decawave’s priority is a review of the prohibition on fixed outdoor transmitters. The Second Report and Order[[2]](#footnote-2) motivated this prohibition on a desire to prevent wide-area communication systems from using ultra-wideband. However, as noted in the same Second Report and Order, the low permitted transmit power levels are insufficient to operate ultra-wideband based wide-area communication systems. The main use of ultra-wideband is in real-time localisation systems (RTLS), where it is the only RF technology providing such functionality with high precision. The current prohibition on fixed outdoor transmitters unnecessarily prevents outdoor RTLS applications. When challenged by a waiver request[[3]](#footnote-3), this prohibition was lifted for that applicant. Based on these considerations, we believe there is no technical justification for the prohibition on fixed outdoor services and we would like to request that this restriction is reviewed.

Decawave supports the goal of having more globally harmonised rules. Bosch’s suggestion to focus on the interference to licensed spectrum users in general, rather than limiting the UWB applications (paragraph 40) should be an important guiding principle.

During a review of the UWB rules, Decawave would urge the FCC to also align the ultra-wideband rules with the wideband rules of Subpart C, § 15.250.

Decawave supports Robert Bosch LCC’s request to allow UWB for terrestrial vehicular use. The secure access mechanism currently being developed by IEEE 802.15.4z will protect American consumers from relay-attack based car theft.

The current requirement for handheld devices to stop transmitting if they haven’t received an acknowledgement from an associated receiver within 10 seconds is one of the differences that should be addressed. Decawave believes there is no technical justification for this requirement and notes that wideband systems operating under § 15.250 use overlapping spectrum under similar conditions without the requirement for an acknowledgement.

1. Robert Bosch LLC, Petition for Rulemaking, 18 Jun 2019, CG RM-11844 [↑](#footnote-ref-1)
2. UWB Second R&O, 19 FCC Rcd at 24571, paragraph 27 [↑](#footnote-ref-2)
3. Request by iRobot Corporation for Waiver of Section 15.250(c) of the Commission’s Rules, ET Docket 15-30

   (filed Jan. 22, 2015) [↑](#footnote-ref-3)