**Before the**

**Federal Communications Commission**

**Washington, D.C. 20554**

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| In the Matter of:  REPORT ON THE FEASIBILITY OF ALLOWING COMMERCIAL WIRELESS SERVICES, LICENSED OR UNLICENSED, TO USE OR SHARE USE OF THE FREQUENCIES BETWEEN 3.7-4.2 GHz TECHNICAL INQUIRY INTO  REFORMING TECHNICAL REGULATIONS | )  )  )  )  )  )  ) | GN Docket No. 18-122 |

To: The Commission

**COMMENTS OF DECAWAVE**

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Decawave welcomes the opportunity to give input to report on the feasibility of allowing commercial wireless services, licensed or unlicensed, to use or share use of the frequencies between 3.7‑4.2 GHz.

Decawave is a developer and supplier of Impulse-Radio Ultra-Wideband (IR-UWB) semiconductor devices designed to operate under FCC PART 15 Subpart C Section 15.250 (the so-called wideband rules) and/or under Subpart F (the ultra-wideband rules). The latter allows unlicensed operation in the 3.1-10.6 GHz range, albeit with outdoor restrictions and a very low transmit power density.

Decawave believes ultra-wideband (UWB) technology is ideally suited to address both the aim of the MOBILE NOW Act and the concerns of the current licensed users of the 3.7-4.2 GHz band. We recommend that the low spectral power density is kept but that the outdoor restrictions are removed to enable wide-area networks.

Since its introduction in 2002, UWB technology has been widely used without ever causing harmful interference in this 16 year period. This is due to the decision to limit the transmit mean power spectral density at a maximum of -41.3 dBm/MHz e.ir.p. The absence of interference reports shows that concerns at the time about interference at these very low power levels were unfounded. There are no technical reasons to keep the restriction on fixed outdoors transmitters. Removing this requirement will allow 5G operation, while the licensed users remain protected from harmful interference.

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