

From: Dmitry Zavyalov

To: Travis Nguyen

Date: July 08, 2026

Subject: Request for Info - File # 1339-EX-ST-2026

Message:

Description of Experimental Program This is a strictly private, non-commercial experimental field trial. The objective is to conduct a controlled technical evaluation of commercially available 6 GHz standard-power equipment (Mimosa Networks B6x, FCC ID: 2ABZJ-100-00116) across a fixed terrestrial path of 330 meters in Santa Cruz, California. While the Commission has authorized unlicensed 6 GHz operations, real-world propagation data for short-haul (sub-1km) links in densely populated residential environments remains limited—particularly in areas where the 5 GHz and 2.4 GHz bands are heavily saturated by overlapping Wireless Internet Service Provider (WISP) networks and consumer access points. At my specific test location, this congestion renders 5 GHz unusable for reliable point-to-point connectivity. This experiment is designed to: Quantify the effectiveness of the FCC-certified Automated Frequency Control (AFC) system in dynamically assigning clear channels within U-NII-5 (5.925–6.425 GHz) in a real-world suburban setting. Measure actual throughput, latency, and Modulation Coding Scheme (MCS) stability over a 330-meter fixed link using 80 MHz and 160 MHz channel widths. Evaluate whether 6 GHz can provide a sustainable, interference-free link in a micro-environment where lower unlicensed bands are fully saturated. The data collected from this short-distance deployment will contribute to the broader empirical understanding of 6 GHz link-budget performance in dense residential zones, a scenario increasingly relevant to future home-networking and short-backhaul applications.

Applicant Qualifications The applicant holds an active FCC-issued Amateur Radio operator license (callsign: NB1R) and has been actively experimenting with radio communications for many years. This experience provides a strong foundation in RF theory, propagation analysis, and regulatory compliance, ensuring that all experimental operations will be conducted with technical precision and full adherence to FCC rules.