

Trex Enterprises Corporation
FCC Form 442
Exhibit 1
Response to Item 4

**NARRATIVE STATEMENT AND REQUEST FOR NATIONWIDE
SCOPE**

Narrative Statement. By this application, Trex Enterprises Corporation (“Applicant”) seeks Commission consent for the testing and experimentation of a fixed, point-to-point data communications system using the upper millimeter wave bands, *i.e.*, spectrum above 70 GHz. In this experiment, Applicant seeks to test transmissions in the 71-76 GHz and 92-95 GHz bands.

The proposed experiment is in the public interest because, in accordance with Section 5.63 of the Commission’s Rules, it will contribute to the development, extension, or expansion, or utilization of the radio art. Heretofore, the upper millimeter wave band has not been used or developed by commercial interests and has only been used lightly by government interests. Advances in technology have led to the development of equipment that offers the possibility of providing high-speed, high throughput communications in bands of spectrum that were previously thought to be unusable or marginally useable. It should be noted that significant development and testing has already been undertaken with respect to Applicant’s technology and Applicant is confident that its real-world testing will yield positive and fruitful results.

The Applicant wishes to continue its testing. More specifically, the Applicant wants to demonstrate that its technology can provide reliable high-speed, high-throughput communications in all weather conditions. In addition, the experiment will establish the distances at which communications links may be reliably maintained. The Applicant wants to demonstrate its technology’s capability by working with the US Army Space and Missile Defense Command (“SMDC”) to develop a data link that will serve as an all-weather back-up system for certain SMDC communications systems. (The government contact at the SMDC for this project is Terry Bauer at (256) 955-5456.) By separate application, in addition to the SMDC related tests, the Applicant wishes to demonstrate that its technology can provide reliable high-speed, high-throughput communications in all weather conditions in a non-military context.

Nationwide Scope. Although the application only specifies Black Mountain, San Diego, California, as a testing site, Applicant intends to test at several locations, including locations in Hawaii and Alaska. Applicant requests that, pursuant to this application, it be provided with the ability to test anywhere in the United States as long as the appropriate environmental and non-interference requirements, if any, are satisfied. The nationwide scope of the experimental license will permit Applicant to its equipment in varying weather conditions. This will enable the Applicant to gain valuable information on the effect of different environments on upper millimeter wave band communications.

If the Commission does not believe the experimental license should be granted on a nationwide scope, Applicant requests the opportunity to meet with the Commission to discuss establishing the geographic scope of the experiment.

Allocation Status of 71-76 GHz and 92-95 GHz Bands. Currently the 71-74 GHz, 74.0-75.5 GHz, and 92-95 GHz bands are allocated on a co-primary basis for fixed, mobile, and fixed-satellite services, as well as mobile satellite services (71-74 GHz band) and radiolocation (92-95 GHz band). All three bands are allocated for Federal Government and Non-Federal Government use. See 47 C.F.R. § 2.106. WRC-2000 extended the co-primary allocation of fixed, mobile, and fixed satellite services to the 75.5-76.0 GHz band. WRC-2000 also added a broadcasting/broadcasting satellite allocation to the 74-76 GHz band. In the 92-95 GHz band, WRC-2000 eliminated the co-primary allocation of fixed and mobile services from the 94.0-94.1 GHz band and added a Radio Astronomy allocation to the band. Between current allocations and allocations from WRC-2000, the 71-76 GHz band and the 92-95 GHz, except for the 94.0-94.1 GHz, are allocated for fixed services, such as what Applicant wishes to test. Therefore the Commission can grant an experimental license for fixed services in these bands that are or will be consistent with current allocations or allocations in WRC-2000.