

Form 442 Question 7: Experimentation Description

A. The complete program of research and experimentation proposed including description of equipment and theory of operation.

Fresnel Wireless Systems has recently purchased the wireless group from Centerpoint Broadband Technologies Inc. This experimental license application will be used to take the place of Centerpoint's previously approved experimental license (**File No. 0152-EX-PL-2001**). All parameters of this new application are identical with the exception of the company and the location of the transmitters, which will be located one building over from the previous Centerpoint location.

Equipment List

- 2 Indoor Units (IDU)
- 2 38GHz Outdoor Units (ODU), radio units
- 2 30 cm parabolic antennas
- 2 RG-8 coaxial cables

Equipment Description/Theory of Operation

The radio link will consist of two radio terminals. Each terminal will consist of an indoor unit that provides user interfaces for data connections and user configuration. The IDU connects to an ODU via an RG-8 coaxial cable. Digital baseband signals are aggregated in the IDU via an asynchronous mux and sent to the ODU where the up conversion to the final output frequency occurs. The output of the ODU is connected directly to the back of the 30cm antenna. The distance between the two radio terminals is approximately 150ft.

B. The specific Objectives sought to be accomplished.

1. Simulate the field environment variables that will be used during upcoming field trials.
2. Test long term BER performance in an actual field environment.

C. How the program of experimentation has a reasonable promise of contribution to the development, expansion, or utilization of the radio art, or is along line not already investigated.

Testing of various parameters in a field environment is highly desirable so as to simulate real world situations that are not capable of being duplicated in the lab.