

Narrative Statement

Description of Proposed Experimental Operation

Wireless Broadband Systems is a WISP deploying Fixed Wireless Broadband Networks to provide high speed internet access in Eastern Massachusetts. Wireless Broadband Systems desires to develop and deploy systems for the delivery of efficient, affordable high-speed internet access to homes and businesses utilizing radio spectrum in the 5400-5600 MHz band. To support this advanced system development, Wireless Broadband Systems is requesting an authorization to conduct system performance trials in the Boston, Ma area to determine the relationship between theoretical performance predictions and actual system performance of new technology for high speed wireless broadband service under signal propagation conditions typical in the Eastern Massachusetts areas.

The objective of the system trials proposed herein is to determine the feasibility and optimum equipment configuration requirements for utilization of the 5400-5600 MHz band to deploy high speed wireless data services to indoor and outdoor installations in this area using Time Division Duplex "TDD" technology. Additionally, these system trials will help ascertain the interference impact of system transmissions on existing co-channel and adjacent channels.

Wireless Broadband Systems proposes to utilize a 20 MHz-wide channel utilizing Quadrature Amplitude Modulation with an EIRP not to exceed 30 dBm (1 watt). All systems support DFS and TPC. All base stations and remote devices used by Wireless Broadband Systems for these tests will be professionally installed and will operate in compliance within the parameters and power levels required by the FCC.

An important aspect of these trials is to determine the coverage capabilities of this band for fixed Part 15-type wireless communications systems to both indoor and outdoor user installations.

Parameters to be determined by the system tests will include the following:

- Maximum Coverage area from a single hub site
- Signal reliability over time
- Signal penetration losses through foliage and building walls
- Changes in signal propagation due to weather conditions
- System durability based on the numbers users accessing the network
- Quality of Service (QoS) reliability based on new technologies such as VoIP, and Video over IP. (IPTV)

Up to 25 test sites may be utilized at various distances from the hub site. Locations currently utilizing regular P15 service on other spectrums will be utilized for the test

transmissions. Once service is verified at a test site, the trial of service availability at that site continues on a 24-hour basis for at least 1000 hours.

Wireless Broadband Systems has significant experience in providing wireless high speed two-way data services to customers in other frequency bands in a variety of markets. Wireless Broadband Systems currently provides License Exempt Wireless Broadband to over 100 customers in its service area. Wireless Broadband Systems has learned how the local conditions can impact these systems. Wireless Broadband Systems is uniquely qualified to model operation in 5400-5600 MHz spectrum to determine its ability to match the reliability and quality of service expected by residential, business and educational customers.

The data collected from these tests will contribute to the further development and utilization of unlicensed operation in this band.

Upon successful completion of these trials, Wireless Broadband Systems will report its data and other findings from these tests to the Commission to support future rules for this service. Should the Commission require further information or materials regarding the information submitted herein, such will be promptly furnished upon request.

Exhibits

- 1 Experimental Description
- 2 Directional Antenna Data
- 3 Equipment Information
- 4 Antenna Structure Data
- 5 Modulating Signal Description
- 6 Necessary Bandwidth
- 7 Towair Search Results