

Narrative Statement

Exhibit 1

Description of Proposed Experimental Operation
AERONET WIRELESS BROADBAND CORP.
SAN JUAN, PR

AERONET WIRELESS BROADBAND CORP. (AERONET) is a Wireless Internet Service Provider ("WISP") provisioning broadband service via license-exempt spectrum in the 902-928 MHz, 2.4 GHz and 5 GHz bands

AERONET WIRELESS BROADBAND CORP. submits on our own behalf the following.

AERONET desires to develop and deploy systems for the delivery of efficient, affordable high-speed Internet access utilizing radio spectrum in the 3650 - 3700 MHz band. To support this advanced system development, AERONET is requesting an authorization to conduct a temporary system performance trial at San Juan, Bayamon, Ponce, Caguas, Humacao, Mayaguez and Arecibo areas of Puerto Rico to determine the relationship between theoretical performance predictions and actual system performance of new technology for high speed Non-Line Of Sight ("NLOS") wireless broadband service under signal propagation conditions typical in the San Juan suburban and rural areas.

The objective of the system trials proposed herein is to determine the feasibility and optimum equipment configuration requirements for utilization of the 3650 - 3700 MHz band to deploy high speed NLOS wireless data services to indoor and outdoor installations 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 channel Fixed Satellite Service ("FSS") facilities along with various interference mitigating protocols used in the modulation. The results of these tests will be used to establish the minimum system parameters and hardware required to provide reliable, affordable high speed wireless data services without an adverse impact on existing FSS operations as well as adverse impact on additional band users as outlined in the Commissions Report and Order (ET Docket No. 04-151). AERONET proposes to utilize 14 MHz-wide channels in 14 MHz steps utilizing Quadrature Amplitude Modulation with an EIRP not to exceed 40 dBm (10 watts). All transmission devices will be fixed and located within a 20 km radius area. Primary base station and remote equipment for these trials will be the AN-100® system developed by Redline Communications and configured by the manufacturer for transmissions in the 3650 MHz band. All base stations and remote devices utilized by AERONET for these tests will be professionally installed and will operate in compliance with Part 90 and within the parameters and power levels in the Report and Order, ET Docket No. 04-151. Information provided by the manufacturer for the antennas and transmission equipment is attached for reference as **Exhibit 2** and **Exhibit 3**.

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To assure protection of existing FSS earth stations and Federal Government operations in this band, a search of the IBFS database was conducted to identify facilities in the 3650 - 3700 MHz band located within 180 km of the proposed service area. This separation distance is the maximum radius of the FSS Protection Zone as defined in Report and Order, ET Docket No. 04-151.

Two Grandfathered FSS stations are located within the operating range: SES Americom and Ultracom. Both FSS Station appear to be non operational. The SES Americom station was dismantled. Ultracom operation are currently being investigated to confirm it non operative status.

Due to operations status of existing facilities, no interference to FSS earth stations and Federal Government operations is expected to occur. Should interference from these experimental operations occur to existing authorized facilities, the tests will be suspended immediately pending resolution of the interference.

While this equipment does meet the Commissions intent of *Interference Mitigation*, this equipment does not presently meet 'the letter of the law' regarding the "contention-based" protocol requirement currently under Commission Reconsideration. The planned equipment has an excellent compliance record from its utilization in the licensed 3.5 GHz bands utilized outside the United States. Additionally, a major portion of this trial will be to provide the Commission adequate data sufficient to act on currently open Petitions for Reconsideration regarding the mandatory requirement of the use of 'contention-based' protocols. Another specific goal of these tests is to monitor for interference in the adjacent frequency bands. From these tests, AERONET can determine if additional filtering at the band edges is necessary to avoid adjacent channel interference problems. Should interference to existing adjacent channel users of this band occur, AERONET will take immediate action, including discontinuance of operation, to eliminate the interference.

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. As this band is currently being used for this type of service in Europe, the results will be used to establish the minimum system design specifications required to achieve reliable coverage in the typical rural and suburban areas of the United States under recently released changes to Part 90 of the Commissions rules.

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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 number of users simultaneously accessing the network
- Quality of Service (QoS) reliability based on new technologies such as
- VoIP, and Video Over IP.

This test will consist of a Point to Multipoint system utilized at a specific distance from the hub site. By using AERONET extensive tower base for these tests, the impact of an actual full system deployment can be experienced for this spectrum. Since a TDD system is proposed, a maximum of only one simultaneous transmission will exist at any one point in time. Once service is verified at a test site, the trial of service availability at that site continues on a 24-hour basis for the ten (10) trial period requested herein. Among other collection procedures, reports from volunteer users at each site will be utilized to determine system performance and reliability.

AERONET already hold significant experience providing wireless high speed two-way data services to customers in other frequency bands in a variety of markets. AERONET currently provides License Exempt Wireless Broadband to over 900 customers in a service area of almost 1,000 square miles of Puerto Rico. AERONET has learned how the local geography, land clutter, atmospheric conditions and frequency of operation affect propagation and interference characteristics of these systems. Along with the technical characteristics of its existing operations, AERONET also has learned the business and communications demands of its customers within its service areas. From this technical and market experience, AERONET is uniquely qualified to model operation in the 3650 - 3700 MHz spectrum to determine its ability to match the reliability and quality of service expected by residential, business and educational customers.

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The data obtained from these tests will contribute to the further development and utilization of unlicensed operation as a secondary service to FSS earth stations and government operations in the 3650 - 3700 MHz band. Upon successful completion of these trials, AERONET 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.

With regards to AERONET's selected trial area of PR, the Commission is advised that these markets represent a typical suburban and rural area of planned deployment by typical Wireless Internet Service Providers across the United States. AERONET views these market areas as essential to AERONET's 3650- 3700 trial. The suburban and rural areas has unique hot weather, rain and extreme humidity along with downtown areas, commercial and industrial districts that span more than 25 miles.

Exhibits

- 1 Experimental Description
- 2 Directional Antenna Data
- 3 Equipment Information
- 4 FSS Facilities Considered
- 5 Antenna Structure Data
- 6 Modulating Signal Description
- 7 Necessary Bandwidth
- 8 TOWAIR Antenna Structure Registration Results