

Narrative Statement
Description of Proposed Experimental Operation

Exhibit 1
Wisper ISP
St. Louis, MO

Wisper ISP is a Wireless Internet Service Provider providing broadband service via license-exempt spectrum in the 902-928 MHz, 2.4 GHz and 5 GHz bands to over 2000 customers in a sixty mile circle around downtown St. Louis. Wisper ISP is also active in a number of Commission proceedings that directly or indirectly pertain to the license-exempt industry. Wisper ISP submits on our own behalf the following.

Wisper ISP 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 3650 – 3700 MHz band. To support this advanced system development, Wisper ISP is requesting an authorization to conduct system performance trials in the rural and suburban St. Louis Metropolitan Area. This area includes both the Illinois and Missouri side of the St. Louis area 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 St. Louis Metro 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 in suburban and rural Metro St. Louis 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 channel Fixed Satellite Service (“FSS”) facilities along with various tests will be used to establish the minimum system parameters and hardware required to provide reliable, affordable high speed wireless data services without and 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)

Wisper ISP 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 96 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 Wisper ISP 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**.

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. A printout of the database study is attached as **Exhibit 4**.

As demonstrated by the database search, the nearest facilities were found to be more than 401 km (250 Miles) distant, well outside the protection zones identified in the Report and Order. Due to the distance separation of the proposed operations to the existing facilities in the database, 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, Wisper ISP 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, Wisper ISP 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.

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

- Maximum coverage area from a single hub site
- Signal reliability over time
- 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.

Up to 25 test sites may be utilized at various distances from the hub site. Locations currently utilizing regular Wisper ISP service on other spectrum will be utilized for the test transmissions. By using Wisper ISP's extensive customer 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 six of simultaneous transmissions 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 at least 1000 hours. Among other collection procedures, reports from volunteer users at each site will be utilized to determine system performance and reliability.

Wisper ISP already holds significant experience providing wireless high speed two-way data services to customers in other frequency bands in a variety of markets. Wisper ISP currently provides License Exempt Wireless Broadband to over 2000 customers in a service area of almost 1,000 square miles of rural and suburban Metro St. Louis Area. Wisper ISP has learned how the local geography, land clutter, atmospheric conditions and frequency of operation affect technical characteristics of its existing operations, Wisper ISP also has learned the business and communications demands of its customers within its service areas. From this technical and market experience, Wisper 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, educational and local government customers.

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, Wisper ISP will report its data and other findings from these test 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 Wisper ISP selected trial area of metro St. Louis region, the Commission is advised that these markets represent a typical rural/suburban area of planned deployment by typical Wireless Internet Service Providers across the United States. Wisper ISP views these market areas as essential to Wisper ISP's 3650-3700 trial. The rural and suburban Metro St. Louis area has unique hot and cold weather, rain, fog, ice, and extreme humidity along with downtown areas, commercial and industrial districts that span more than 120 miles.

Exhibits

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| 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 |