

Experimental Application Exhibit Phoenix Urban and Country Communications, Inc.

Phoenix Urban and Country Communications, Inc. ("PUCC") is a new provider of fixed wireless services for medium-to-major markets in the United States. PUCC plans to develop and deploy systems for the delivery of efficient local and long-distance telephone service, high-speed Internet access service and Voice Over Internet Protocol (VOIP) service to businesses, consumers, local governments and schools utilizing radio spectrum in the 3650-3700 MHz band. PUCC expects that this promising new technology can be used to provide advanced communications services to communities presently underserved by the major telecommunications companies. Such communities include the medium-sized population centers and under-represented ethnic groups within the larger urban areas.

To support this advanced system development, PUCC hereby requests an experimental authorization to conduct system performance trials and limited market studies in various areas 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 in various urban and rural areas. The objective of this experimental program is to determine the feasibility and optimal equipment configuration requirements for utilization of the 3.65 GHz band to deploy high-speed NLOS wireless Internet and VOIP services to indoor and outdoor installation within the areas. PUCC will own all of the equipment, and will notify customers of the temporary nature of this experimental authorization.

PUCC proposes to utilize 20 MHz-wide channels, using presently available base station and remote equipment. Should PUCC seek to deploy different or additional equipment, it will seek a modification of this experimental license. The equipment will be configured to operate in the 3650-3700 MHz band. All base stations and remote devices used by PUCC for these experimental operations will be professionally installed and will operate in compliance with Part 15 of the Commission's Rules. The base stations (PacketMAX 3000) will operate using a non-directional antenna and operate at 1.0 Watt output power and ERP. The subscriber units (PacketMAX 100), will utilize a directional antenna with a beamwidth of 20 degrees, and operate at 0.1 Watts output power and 4.0 Watts ERP. The antennas for both the base stations and subscriber units will be attached to existing buildings/structures, and will in no event extend more than six meters above those existing buildings/structures.

While this equipment will operate consistent with Part 15 requirements, a specific goal of these tests is to monitor for harmful interference into the adjacent frequency bands. From these experimental operations, PUCC can determine if additional filtering at the band edges is necessary to avoid adjacent channel interference problems. Should interference to existing adjacent channels occur, PUCC would take immediate action, including discontinuance of operation, to eliminate the interference to licensed facilities. With respect to the potential for co-channel interference, PUCC has determined that the experimental operations will be more than the 150 km minimum separation distance to

the grandfathered Earth stations operating in the 3650-3700 MHz band. Appended to this exhibit is a chart reflecting the separation distances to those Earth stations.

An important aspect of these trials is to determine the coverage capabilities of this band for fixed Part 15-type wireless communications systems for both indoor and outdoor user antenna installations. As this band has not previously been used for these types of services, the results will be used to establish the minimum design specifications required to achieve reliable coverage in the typical metropolitan area. Parameters to be determined by the experimental operations 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; and
- System durability based on the number of users simultaneously accessing the network.

For further information regarding this experimental program, please contact PUCC's President and CEO, Mr. Leo I. George at the address reflected in PUCC's Form 442 to which this exhibit is attached.

Compliance with 150 km Minimum Separation Distance to Grandfathered Earth Stations

<u>Application Site</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Nearest FSS Station</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Kilometers</u>
Baton Rouge, LA	30.23.45N	91.03.02	Pascagoula, MS (Fed)	30.22N	88.29W	244.8
Chardon, Oh	41.34.29N	81.12.02W	Albright, WV	39.34.07N	79.34.45W	260.8
Dayton, Oh	39.48.53N	84.16.27W	Etam, WV	39.16.48N	79.44.14W	392
El Paso, TX	31.47.24N	106.20.03W	Desoto, TX	32.37.48N	96.50.32W	892.8