

Exhibit 1, Experimental Description

Exhibit 1
20/20 Communications
Ann Arbor, MI

20/20 Communications is a Wireless Internet Service Provider (WISP). 20/20 provides wireless broadband Internet service via license-exempt spectrums in the 902-928MHz, 2.4GHz and 5GHz bands to rural and underserved communities.

20/20 Communications 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, 20/20 is requesting an authorization to conduct system performance trials. Using new high-speed non-line of sight (NLOS) wireless broadband technology. The trials are to determine the relationship between theoretical performance predictions and actual system performance of the new technology. The test will take place in the urban, suburban and rural areas of Washtenaw County, MI. Particular attention will be paid to the signal propagation conditions typical in the Washtenaw and Jackson counties of MI suburban and rural areas.

The objective of the system trials is to determine the feasibility and optimum equipment configurations for utilization of the 3650 – 3700 MHz band. 20/20 will deploy high-speed NLOS wireless data services to indoor and outdoor installations in urban, suburban and rural areas of Washtenaw and Jackson Counties of MI using Time Division Duplex (TDD) technology. Additionally, these system trials will ascertain the interference impact of transmissions on existing co-channel and adjacent channel Fixed Satellite Service (FSS) facilities. The trial will also determine the impact with various interference-mitigating protocols used in the modulation. 20/20 will use the results to establish the minimum system parameters and hardware required to provide reliable, affordable high-speed wireless data services without adversely impacting existing FSS operations and additional band users as outlined in the Commissions' Report and Order (ET Docket No. 04-151).

20/20 proposes to utilize 14 MHz-wide channels in 14 MHz steps utilizing Quadrature Amplitude Modulation with an EIRP not to exceed 40dBm (10 Watts). All transmission devices will be mobile in a 50km area from the coordinates listed in the application. Primary base and remote equipment for these trials will be Redline Communications AN-100U configured by the manufacturer for transmissions in the 4650MHz band. All base, mobile and remote devices utilized by 20/20 will be professionally installed. They 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 2**.

As demonstrated by the database search, the nearest facilities were found to be more than 180km distant, well outside the protection zones identified in the Report and Order. Due to the distance separation of the proposed operations to 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 for 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 avoid adjacent channel interference problems. From these tests, 20/20 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, 20/20 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 20/20 wireless communications systems to both indoor and outdoor user installations. The results will be used to establish the minimum system design specifications to achieve reliable coverage in the typical rural and suburban areas of the United States under Part 90 of the Commissions rules.

Parameters for the system tests are:

- Maximum coverage area from a single hub site
- Signal reliability over time
- Signal penetration losses through foliage and building walls
- Changes in the 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.

20/20 may utilize up to 25 test sites at various distances from a hub site. 20/20 will use current 20/20 locations utilizing service on the other spectrum for test transmissions. By using 20/20's customer base for these tests, the impact on 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.

20/20 already holds significant experience providing wireless high-speed two-way data services to customers in other frequency bands in a variety of markets. 20/20 currently provides License Exempt Wireless Broadband to over 200 customers in the Washtenaw and Jackson counties of Michigan. 20/20 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, 20/20 has also learned the business and communications demands of its customers within its service areas. From this technical and market experience, 20/20 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.

With regards to 20/20's selected trial area, the Commission is advised these markets represent a typical rural/suburban area of planned deployment by typical WISPs across the United States. The rural and suburban areas of Washtenaw and Jackson counties has unique hot and cold weather, rain, fog, ice and extreme humidity along with downtown areas, commercial and industrial districts that span more than 25 miles.

Exhibits

1. Experimental Description
2. FSS Facilities Considered
3. Towair Search