

QUESTION 7: PURPOSE OF EXPERIMENT

Section 5.63(a) of the Commission's rules requires that "[e]ach applicant for an authorization in the Experimental Radio Service must enclose with the application a narrative statement describing in detail the program of research and experimentation proposed, the specific objectives sought to be accomplished, and how the program of experimentation has a reasonable promise of contribution to the development, extension, or expansion, or utilization of the radio art, or is along lines not already investigated." 47 C.F.R. § 5.63(a). Accordingly, Microwave Networks, Incorporated ("MNI") submits the instant description of its proposed experimental system in response to Item 7 of the Form 442.

MNI specializes in the design, manufacture, and installation of wireless infrastructure transport and access products, including point-to-point microwave radio equipment. With this application, MNI seeks to obtain Commission authorization to establish temporary fixed point-to-point wireless microwave links within a five-mile radius of its headquarters in Stafford, Texas. The transmissions will be confined to frequencies in the 17.7 -19.7 GHz and 21.2 – 23.6 GHz bands. The purpose of the experimentation will be to demonstrate MNI's wireless products to potential customers, as contemplated under Section 5.3(f).

MNI requires experimental authority in order to demonstrate to potential customers the performance of such links over a variety of frequencies, distances, and configurations. These links will be used for limited periods of time and will not be interconnected to the public switched network or carry any common carrier traffic. MNI will be utilizing both experimental and authorized transmitting equipment, and will coordinate frequency usage prior to commencing operation.

In addition, the transmitters to be utilized in the proposed system are all QAM modulated at 4, 8, 16, or 32 states and will occupy bandwidths of between 3.5 and 56 MHz. All versions of the demonstrations will transmit two or more digital channels carrying digital information. Furthermore, the orientation and beamwidths of the operations will vary depending upon the demonstration given at any specific time, although the maximum beamwidth for the 18 GHz operations will be 3 degrees, and the maximum beamwidth for the 23 GHz operations will be 2.3 degrees.

The proposed program of experimentation has a reasonable promise of contribution to the development, extension, or expansion, or utilization of the radio art, by permitting interaction with and feedback from potential customers, which will ensure the development of point-to-point microwave radio equipment that best serves the needs of the end users.