XonTech, Inc.

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September 7, 1999

To: Federal Communications Commission
Experimental Radio Service
P.O. Box 358320
Pittsburgh, PA 15251-5320

Gentlemen/Mesdames:

This exhibit will supply the information that was requested in question number 7 of the FCC form 442. The file number of our application is 0212-EX-PL-1999. We are requesting an experimental license for operating an experimental radar in order to conduct investigations under a research and development contract. The purpose of the experimental investigations is to observe civilian vehicular highway traffic and characterize vehicle scattering cross-sections, determine the extent of multipath and clutter effects, demonstrate the ability of solid state coherent radar reception to distinguish between moving traffic and wind-blown rain clutter, and explore any unanticipated phenomenological effects. Its secondary purpose is vessel traffic surveillance. The investigations are expected to have ultimate application to the use of radar for wide-area traffic surveillance and advanced traffic management systems.

A license is requested because we expect to be ready to conduct the experiments in the near future and because the duration of the experiments will be approximately 2 years, starting on or about October 1, 1999 and ending before October 1, 2001. The radar will be located at the following location:

The rooftop of the building located at the address below:
1501 Wilson Boulevard
Arlington, VA 22209
(Approximate height: 46 meters above ground)

The radar beam will be fixed (except for adjustment) for any specific experimental session and directed toward GW Parkway and the Potomac River with no part of the beam intersecting office buildings; these stretches may lie at a range between 5 to 19 km from the radar. It is expected that the measurement sessions will last about 3 hours and occur on a weekly basis during morning or afternoon peak traffic periods.

A solid state coherent L-band radar will be employed. The antenna is a 125 cm. linear array. The transmitted frequency will be 1500 MHz. The pulse width is approximately 10 – 100 ns. The

peak transmitted pulse power will be 10 W. The effective radiated power will be less than 0.394 W. The nominal pulse repetition frequency is ~ 2K to 15KHz.

Your favorable consideration of this application for an experimental license is requested. Thank you.

Sincerely,

Eddie Hughes, Technical Manager
XonTech, Inc.
1501 Wilson Blvd., Suite 902
Arlington, VA 22209