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June 26, 2000

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 0140-EX-PL-2000. 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 marine surveillance. We will observe vessel traffic and characterize vessel 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. The investigations are expected to have ultimate application to the use of radar for securing and monitoring harbors and inlets.

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 July 5, 2000 and ending before July 5, 2002. The radar will be mobile and will be tested in the following waters around:

The state of VA; Chesapeake Bay; Albemarle Sound, NC; Oceanside; Duck, NC; Charlotte Harbor, FL; Tampa Bay, FL; Cape Canaveral; Channel Island Harbor, CA; Oxnard, CA; San Diego, CA; Providence, RI; Newport, RI; San Francisco, CA; Seattle, WA; and Puget Sound, WA. We will exclude the waters in Washington that border with Canada.

The radar beam will be fixed (except for adjustment) for any specific experimental session. It is expected that the measurement sessions will last about 3 hours and occur on a weekly basis.

A solid state coherent X-band radar will be employed. The antenna is a 28.9 cm X 12.1 cm. linear array. The transmitted frequency will be 9250 MHz. The pulse width is approximately 200 ns. The peak transmitted pulse power will be 0.75 W. The effective radiated power will be 0.088 W. The nominal pulse repetition frequency is ~ 6 KHz.

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

Sincerely,

Eddie Hughes, Technical Manager
XonTech, Inc.
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Arlington, VA 22209