



METRATEK

METRATEK, Inc.

March 24, 1999

To: Douglas A. Young
FCC Experimental Licensing Branch
2000 M Street, Suite 230
Washington, D.C. 20554

Dear Mr. Young:

Metratek, Inc. requests permission to operate an experimental datalink from an aircraft to a ground/shipboard shelter which will be used to transmit synthetic aperture radar data from the aircraft to an equipment shelter for recording, processing and analysis and uplink sensor and UAV control data to the UAV.

We have been contracted by the Office of Naval Research to build and demonstrate a prototype system under a Department of Defense Program Solicitation Number 97.2, Small Business Innovative Research (SBIR) Program topic number N97-104. The title is called "Processing and Control Station and Datalink for Unmanned Aerial Vehicle Synthetic Aperture Radar.

We will be conducting our experimental transmissions at the Warrenton-Fauquier Airpark located in Midland, VA. We will then be conducting a demonstration of the prototype system to the Office of Naval Research while gathering data with our WINSAR system which will be in operation off shore at the mouth of the Delaware Bay and Chesapeake Bay areas and we will continue to collect data off the coasts of Virginia and North Carolina.

Metratek, Inc. would also like to request permission to operate the datalink system at two different integration sites. The first site will be located at Metratek, Inc., 9858 Main Street, Fairfax, Virginia 22031, and the other will be located at Skyworld Aviation, Inc., at the Warrenton-Fauquier Airport, 5060 Airport Road, Midland, VA 22728. Initial flight test will also be conducted at and around that airpark where we have a test field of targets laid out for detection and imaging research work we are conducting for the government.

The datalink will consists of a wideband, high-data-rate downlink for sensor and UAV position data and a low-data-rate uplink for control signals. The downlink will be multiple channels, each carrying multiplexed radar, GPS/INS, and control data. The uplink data will provide control of the airborne sensor and future flight control data/algorithms for control of the UAV.

We would be pleased to provide any further information you may require.

Thank you,

Richard Harris
Facilities Manager

**9858 Main Street
Fairfax, VA 22031-3908
Phone (703) 293-9040**