



June 18, 2003

Federal Communications Commission
Office of Engineering and Technology
445 12th Street, SW
Washington, DC 20554

Dear Sir or Madam:

Systems Research and Applications Corporation (SRA) is a leading provider of information technology services and solutions to clients in national security, health care and public health, and civil government. SRA services include strategic consulting, systems design, and integration; and outsourcing and operations management. The Company also delivers business solutions for text and data mining, contingency and disaster response planning, information assurance, environmental strategies and technology, and enterprise systems management. SRA's Adroit C4ISR Center provides high-end information engineering solutions in C4ISR, logistics, knowledge management, intelligence analysis, and systems engineering and technical assistance for aircraft, software, radar, telecommunications, and unmanned aerial vehicle (UAV) programs; and a full range of program management support activities.

Our application for an experimental license to operate transmitters aboard the Aerosonde® UAV and on the ground is enclosed. The application requests permission to operate an analog video transmitter at 2.415 GHz and RF digital control links at 400 MHz. The Aerosonde® UAV is operated in compliance with federal government-sponsored experiments. Occasionally, it is operated to conduct state and local government experiments, the first of which is the upcoming program to assist the Intelligent Transportation Systems (ITS) Office of the Florida Department of Transportation (FDOT). SRA will work with a University of Florida (UF) research team and FDOT to determine whether video from the UAV can be successfully disseminated. The joint team will link the video to the FDOT statewide microwave system and evaluate whether UAV video is appropriate for traffic control, traffic incident management, disaster response and rapid assessment of damage. We also intend to test the concept of long range operations of UAVs for transportation systems monitoring and control, demonstrating handoff of video and data as the UAV flies along the interstate and microwave tower route.

We anticipate the FDOT experiment to be one of several to occur over the next two years. Therefore, we are seeking broad authority to operate the low power transmitters nationally, coordinated with local federal agencies using the same frequencies. Because we anticipate that most of SRA's efforts will be directed toward federal government experiments rather than those for the civil sector, we believe it will be much lower cost, more efficient and easier to assure non-interference if SRA continues to use federal government frequencies than to change the control links to civil sector.

The 2.4 GHz video link transmitter is anticipated to be used both along the flight path and over the video surveillance area, and can therefore be viewed as continuous mode during flights.

Except for takeoff and landings, the primary control link for the UAV is via Iridium® satellite, thus removing this licensing requirement and possible interference to ground-based systems. In normal operation, the 400 MHz control links transmit mainly during takeoff and landing, and then transmit intermittently during flight. If the satellite control link fails, the 400 MHz control link provides backup flight control for the UAV.

Technical parameters are as follows:

Video – 2.415 GHz center frequency, emission designator 20M0F3F, output power 1 Watt, effective isotropic radiated power 1.3 Watt.

Aircraft control transmitter – 400-403 MHz, emission designator 9K30F1D, output power 5 Watts, effective radiated power 5 Watts.

Ground control transmitter – 400-403 MHz, emission designator 9K30F1D, output power 5 Watts, effective radiated power 100 Watts.

Typical UAV flight altitude is 305 meters (1000 feet).

Area of operation requested is the US, including territories and possessions.

We request a waiver of the transmitter identification requirements for the video transmitter and the 400 MHz aircraft control link transmitters. The UAV's gross payload is approximately 5 pounds. The additional weight requirements for switching and keying circuitry could negatively affect the UAV's flight capability, and create a flight safety issue.

Attachments 2 and 3 to this application are a transmittal letter to the FAA requesting authority to fly the UAV for the FDOT experiment, and a description of the proposed operation. Attachment 4 is a map of the flight route.

This application is critical to enabling our UAV operations to occur as planned in the latter half of July. We would appreciate your support in helping us achieve this goal.

Please contact Roger Madden, telephone 850-410-5610, email roger.madden@dot.state.fl.us, if you have any questions.

Sincerely,

signed

Laurence R. Newcome
Director, UAV Activities