

October 10, 2002

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

Dear Mr. Huie,

Rockwell Collins is submitting the attached experimental license application for Federal Communication ("FCC") review. Rockwell Collins plans to outfit numerous aircraft with Rockwell Collins equipment to gather a wide variety of user feedback and to expose the equipment to various installation options. The specific type of equipment under evaluation is the Rockwell Collins HST-900. This product allows access to the Inmarsat satellite 64000 baud internet connection service (trademarked by Inmarsat as "Swift64"). The HST-900 is intended for installation onboard aircraft. The experiment will consist of the HST-900 interfacing with the FCC-certified Rockwell Collins SAT-906 Inmarsat communication system by utilizing the SAT-906's high power amplifier and the current airplane's antenna system used to support the SAT-906.

The HST-900 transmits using a 134400 bps 16-QAM (16 point Quadrature Amplitude Modulation) modulating scheme. This modulation scheme introduces an emission type and occupied bandwidth not presently accommodated in the Part 87 regulations. The HST-900 does NOT alter the modulation of the already certified SAT-906 communication methods.

The specific objectives sought to be accomplished are an evaluation of HST-900 operation in multiple aircraft environments, specifically:

- 1.) evaluation of unit's physical ability to withstand the environments;
- 2.) evaluation of Doppler Compensation capability during flight;
- 3.) evaluation of human factors with non-technical people utilizing the equipment in its intended environment;
- 4.) evaluation of system performance over multiple geographical regions resulting in use of different satellite beams and causing beam handoffs and log on/off attempts; and
- 5.) evaluation of market acceptance of overall features and limitations in the equipment's intended environment.

Success of this program will usher in a new phase of datalink capability for aircraft. Current capability is limited by coverage, data rate, and/or equipment size compared to the Inmarsat 64000 baud service and the aircraft equipment necessary to support that service.

Thank you for your consideration of this matter. If you have any questions, please feel free to contact me at 703-516-8213.

Sincerely,

Joseph Cramer