

From: Robert Newton

To: Leann Nguyen

Date: June 03, 2009

Subject: FCC File# 0206-EX-ST-2009

Message:

File No. 0206-EX-ST-2009

EL977036

Ref. No. 8678

Ms. Nguyen:

In response to your inquiry to Mr. Bob Newton today, the following is provided:

Transmit Antenna Characteristics

- A. See PDF file titled RevisedExhibit.PDF (sent to you by e-mail directly).

BAE Systems acknowledges that the original Exhibit submitted to the FCC with the application stated that For the S-band Airborne transmissions (2010-2100 MHz), the antenna will be located on the aircraft strut, pointing up. In this regard, BAE Systems notes that it has amended the Exhibit to specify that the 2010-2100 MHz antenna will actually point down for this experiment. See revised Exhibit 1 - page 2. This clarification should help address potential concerns regarding interference from this experiment.

- B. See PDF file titled TransmitAntenna.PDF (sent to you by e-mail directly)
In the PDF file, the following is demonstrated:

1. Due to:

- (i) the fact that the antenna will actually point down from the aircraft strut, and
- (ii) the significant shielding resulting from the aircraft wing and fuselage,

- The elevation of the 3 dB beamwidth of the signal in the 2010-2100 MHz band will be approximately +/- 10° (Azimuth 360°).
- Such configuration and signal characteristics will substantially mitigate stray emissions upwards.

2. The Output Power of the 2010-2100 MHz transmissions will be 14W. The gain of the signal will be 5.5 dBi, resulting in an ERP of 48.5W (max).

3. Polarization = Vertical.

Location of Receive Antennas

See PDF titled ReceiveLocations. (sent to you by e-mail directly).

In the PDF file, the following is demonstrated:

The receive antennas for the experiment will be located in 2 possible specific ground locations:

Antenna Registration No. 1 - Hansen Airfield - 34-38-17 N.Lat.; 117-39-59 W.Long. (.5 km radius)

Antenna Registration No. 2 - Alternate Location - 34-40-23 N.Lat.; 117-31-23 W.Long. (1 km radius)

Respectfully submitted.

Jeffrey Rummel
Attorney for BAE Systems Controls Inc.