

**Amended Exhibit 1 (to replace
Exhibit 1 originally Submitted
October 3, 2006)**

1. Introduction

By the instant application ("STA Request"), BAE Systems Information and Electronic Systems Integration Inc. ("BAE Systems") requests that the Commission grant special temporary authority ("STA") to permit BAE Systems to operate the facilities (the "Facilities") specified in the instant STA Request.

2. Purpose of the Operation

BAE Systems manufactures and tests antennas as well as RF systems for DOD as well as other governmental customers. The testing specified in this STA Request will be conducted by BAE Systems Information and Electronic Systems Integration Inc., which is a major producer of electronic warfare systems, protection systems, and tactical surveillance and intelligence systems for all branches of the armed forces. This unit's lines of business include Electronic Warfare/Electronic Protection, Electronic Warfare/Information Warfare, Integrated Defense Solutions, and Mission Electronics.

The specified experiment involves the use of a 24 GHz radar as part of its function to detect, track, and classify RPGs and similar targets. When originally submitted to the Commission, this STA Request and the associated experiment was not associated with a specific government contract. However, the experiment has now been associated with the following government contract:

Customer/Agency:	Army Research Laboratory, via subcontract with General Dynamics Robotic Systems
Contract No.:	Advanced Perception (AP-07-06-002) Next Generation Sensors for Unmanned Vehicles/Human and Obstacle Detection using Radar
Point of Contact:	Mike Langrehr (410-840-1029)

The contract requires operating and taking data from the VORAD (Vehicle Onboard RADar) front end. It operates in the band and with the waveform described in BAE Systems' original STA Request. This radar is designed for vehicle collision avoidance and is used extensively for commercial big rig trucks. BAE Systems' application is to use on unmanned ground vehicles for personnel safety. The applicant is analyzing the data to determine the time and frequency domain characteristics of personnel radar returns.

The testing at the Merrimack Antenna Test Facilities is a critical part of the manufacture and delivery of military systems provided to the Armed Forces in support of Homeland Security as well as war efforts.

3. Why STA is in the Public Interest

STA is being requested because the proposed experiment is currently expected to last no more than six months. Outdoor testing is necessary to validate the system in order to demonstrate to potential system users within the Army and Marine Corp. For the foregoing reasons, approval of this STA Request is in the public interest, convenience and necessity.

4. Note Regarding Power

The output power and ERP for the transmissions associated with the frequencies 24/24.001 GHz are proposed to be .5 W and the output power and ERP for the transmissions associated with the frequencies 24.72/24.7201 GHz are proposed to be .795 W. The power reported in the amplifier is the "Peak" power. The example transmission will be alternating between $f_1=24.0$ GHz and $f_2=24.0$ GHz + 1 MHz with the alternating time on f_1 for 4.8 uS, switch to f_2 for 4.8 uS, back to f_1 , with the system continuing for approximately 10 seconds of test time. This process will be used for both frequency sets.

5. Other Issues

A. The STA Request seeks authority for radar operation on two pairs of frequencies, namely 24/24.001 GHz and 24.72/24.7201 GHz, with the second set of frequencies operating at a higher power level due to a higher gain antenna. The radar antennas will be nominally pointed 20 degrees up. Azimuth direction will be variable, since it will depend on how BAE Systems points the radar. Upon integration of a complete system, there will be six faces (antennae), resulting in full 360 degree coverage. For each of the specified frequency pairs, BAE Systems intends to alternate transmissions rapidly between the frequencies in each pair for bursts of no more than 10 seconds at a time. This nominally results in the transmission for each frequency pair being characterized by two sinc waveforms centered at each of the two frequencies, with nulls every 208 kHz.

B. Antenna Data

BAE SYSTEMS have developed two sets of patch antennas for this system. The antenna gain for the 24.0 subsystem will have a 1.2 dB gain. The antenna gain for the 24.720 test hardware is 22 dB.

C. Prevention of Interference

BAE SYSTEMS hereby advises the Commission that the tests to be conducted under the requested Commission authorization are to be conducted near the center of BAE SYSTEMS' Merrimack, New Hampshire facilities. Such location will result in the separation of the test

facilities from other existing transmit or receive facilities. BAE SYSTEMS' Tracy Johnson will be the available as a stop buzzer. His cell phone number is (603) 689-8630 if any issues arise.