

PUBLIC INTEREST STATEMENT

1. Introduction

By the instant request (“STA Request”), General Dynamics Armament and Technical Products, Inc. (“GDATP”) requests that the Commission grant to GDATP Special Temporary Authority (“STA”) to operate the facilities (the “Facilities”) specified in the instant STA Request. A Start Date of January 31, 2009 is respectfully requested.

2. Purpose and Nature of the Operation

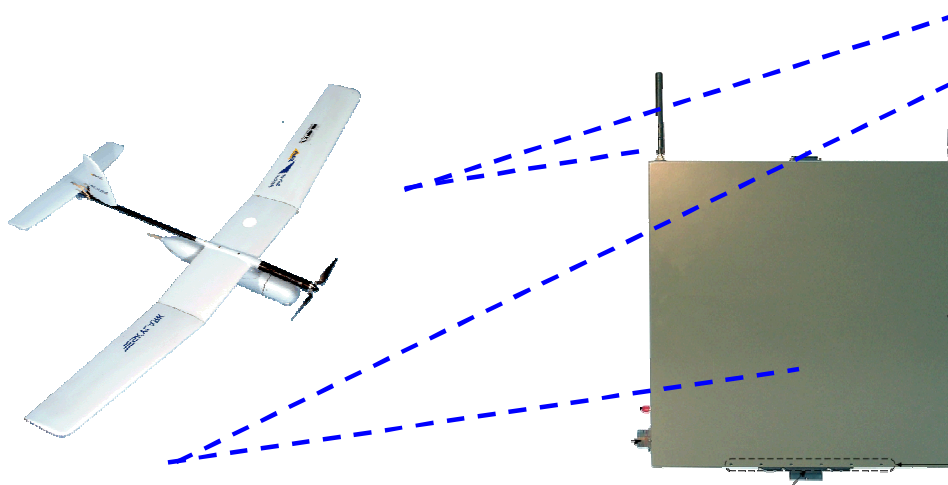
The testing specified in this STA Request will be conducted by General Dynamics Armament and Technical Products (GDATP), a business unit of General Dynamics. The purpose of this experiment is to assist in the continued development of next generation unmanned aerial surveillance technologies. Transmissions will originate from the ground and the air, as follows:

Ground-Based Transmissions:

Originating from a laptop/consul/tripod configuration, located at temporary-fixed locations within a 5 km radius around the centerpoint coordinates of: 33-49-29 N.Lat.; 080-28-07 W.Long. (NAD 83) (“Centerpoint Coordinates”) (Centerpoint Coordinates located at Shaw AFB, Sumter, SC)

Airborne Transmissions:

Mobile airborne transmissions originating from an unmanned aerial surveillance aircraft, within an 8 km radius around the Centerpoint Coordinates. Maximum flight planned is 3962.40 m above ground level. The Sumter Airport is 20.97 km away from the centerpoint coordinates. Ground elevation above sea level is 51.50 m at the test site.



The goal of this testing is to provide persistent, responsive battlefield surveillance at small unit echelons, and thereby provide warfighters the timely information they need to mitigate battlefield threats and reduce American casualties. Such goal is responsive to Defense Secretary Gates' recent comments seeking more rapid deployment of such surveillance technologies.¹

General Dynamics has entered into a Joint Venture to design, develop, and integrate a family of small and medium Unmanned Aerial Systems (UAS) to help fill the urgent need of the US military and other US Government agencies for these systems. This joint venture will be located in the greater Charlotte, NC area and Shaw Air Force Base is convenient to the JV facility. Shaw offers the open area and restricted air space to allow for test and evaluation of these air vehicles, payloads, and ground control equipment. Due to the nature of some of the payloads, DoD security regulations will apply and Shaw AFB can facilitate the security requirements. The six month STA period of performance request dates are concurrent with the development of the response to the US Navy's SMALL TACTICAL UNMANNED AIRCRAFT SYSTEM (STUAS)/TIER II UNMANNED AIRCRAFT SYSTEM (UAS) request for proposal. The Navy is calling for a high level of technical development maturity for this proposal and the planned flight tests at Shaw AFB is an integral part of demonstrating the TRL of the UAS for the GDATP proposal effort. Given the foregoing facts, the instant request for a 6 month STA is appropriate under Commission rules and policies.

3. **Stop Buzzer.** GDATP hereby advises that Mr. Richard Scheps will be available by wireless telephone at (802) 318-6561 and will act as a "stop buzzer" if any issues regarding interference arise during testing

4. **Directionality of Antennas**

a. **For 421-467 MHz and 4860-4954 MHz Ground-Based Transmissions**

The Antenna Registration for the ground-based transmissions specifies "Yes" in response to the question: "Is a directional antenna used?". This is to clarify that – for the above referenced bands - one of 4 different antennas may be used. Of those four potential antennas, two of the C-Band antennas are directional. Such directional antennas are characterized by the following:

Antenna	Gain (Nominal)	Width of Beam in Degrees at half-power point	Orientation in Vertical Plane	Orientation in Horizontal Plane
C-Band Tadiran Spectralink P/N 21770908700	28 dBi	5° in Horizontal Plane 5° in Vertical Plane	-20° to +60°	0° to 359°
C-Band Tadiran Spectralink P/N 21770908800	13 dBi	30° in Horizontal Plane 30° in Vertical Plane	-20° to +60°	0° to 359°

¹ Defense News, Published April 21, 2008 (<http://www.defensenews.com/story.php?i=3490138>).

b. For 2362 MHz, 2366 MHz, 2370 MHz, 2374 MHz, 2378 MHz, 2382 MHz, 2386 MHz and 2390 MHz Ground-Based Transmissions

The Antenna Registration for the ground-based transmissions specifies “Yes” in response to the question: “Is a directional antenna used?”. This is to clarify that – for the above referenced frequencies - one of 3 different antennas may be used. Of those three potential antennas, only one is directional. Such directional antenna is characterized by the following:

Gain (Nominal)	Width of Beam in Degrees at half-power point	Orientation in Vertical Plane	Orientation in Horizontal Plane
+18dBi	16° in Horizontal Plane 15° in Vertical Plane	0-90°	360°

For the foregoing reasons, GDATEP respectfully submits that approval of this STA Request is in the public interest, convenience and necessity.