

## **Exhibit 1**

### **1. Introduction**

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant a one month Special Temporary Authority to operate the facilities (the “Facilities”) specified in the instant application.

### **2. Purpose of the Operation**

The testing conducted by BAE Systems 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. In support of Internal Research and Development, a series of tests is planned to characterize the radar clutter environment on a representative airborne platform. Testing will also be done using threat simulators and RF transponders to demonstrate that this capability can achieve performance levels needed to support the aircraft mission.

Temporary-fixed ground operations and mobile airborne operations will occur as follows:

#### **Pembroke, NH - area operations:**

- Temporary-fixed ground operations within 5 km of the following specified center point coordinates: 43° 11' 44" N; 071° 28' 35" W
- Mobile airborne operations with the furthest waypoints lying on a radius of 16 km from the same specified centerpoint coordinates. The maximum flight ceiling planned is 3048 meters (10,000 ft.) above ground level (AGL).

Ground elevation above sea level at the center point coordinates is 106 m (348 ft.) at this location. The nearest airport to the center point coordinates is 2.5 km from the center point coordinates.

#### **Manchester, NH - area operations:**

- Mobile airborne operations with the furthest waypoints lying on a radius of 10 km from the following centerpoint coordinates: 42° 55' 12" N; 071° 28' 48" W
- The maximum flight ceiling planned is 3048 meters (10,000 ft.) above ground level (AGL). Ground elevation above sea level at the center point coordinates is 68 m (223 ft.) at this location. The nearest airport to the center point coordinates is 3.7 km from the center point coordinates.

A waiver of the Station ID requirements of 47 CFR §5.115(a) is respectfully requested.

### 3. Other Issues

#### A. Transmitting Equipment

| Manufacturer | Model No. | # Units | Modulating Signal(s)      | Experimental? Yes/No |
|--------------|-----------|---------|---------------------------|----------------------|
| BAE Systems  | N/A       | 2       | None<br>Differential QPSK | Y                    |

#### B. Antenna Data

| Manufacturer | Model No. | Width of Beam @ 1/2 Power Point | Orientation in Horiz Plane    | Orientation in Horiz Plane    |
|--------------|-----------|---------------------------------|-------------------------------|-------------------------------|
| Echodyne     | MESA-HPA  | 4° az<br>4° el                  | Electronically Scanned +/-60° | Electronically Scanned +/-40° |

### 4. Interference Mitigation

The antenna under test has a narrow, electronically steerable beam with -16 dB average side lobes. Mobile testing will typically consist of pointing this beam towards ground targets with fixed locations. Testing will typically only occur between the hours of 8AM and 6PM EST on week days. During testing, targets will primarily be located on the ground and emission will be typically limited to no more than 20 degrees above the horizon.

Ground testing will limit the emitting antenna to generally no higher than 10 feet from the ground. The emissions will be directed at other near-ground targets with the elevation of the main beam not exceeding +10 degrees elevation.

Total testing will be limited to several days over the duration of the requested time period. The longest duration of outdoor testing will not likely exceed more than 5 consecutive days and testing will generally occur for four hours up to a full typical work-day (9AM to 5PM).

### 5. Stop Buzzers

Primary: Austin Dionne 603-540-1620  
Alternate: Jacob Freedman 603-867-1028