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 2 year experimental license to permit BAE Systems to operate the facilities (the "Facilities") specified in the instant application.

2. Purpose of the Operation/Program of Research/Objectives/Contributions

The testing to be conducted under the requested experimental authority at BAE Systems' Nashua and Hudson, NH campus locations is a critical part of the development, manufacture and delivery of military systems provided to the Armed Forces in support of Homeland Security as well as war efforts. Specifically, the experiment involves the use of a GPS re-radiation system to test GPS navigation systems inside BAE Systems' manufacturing facility, an engineering prototype lab, and a product development lab.

This GPS re-radiation system permits BAE Systems to verify the proper installation and operation of the internal navigation system for a military target location system product. Without the system, BAE Systems engineers must leave the facility to test products under development. Often these prototypes are not robust enough to allow exposure to weather; this greatly limits the testing operations and severely impacts the product development schedule. Additionally, outside testing is greatly limited due to restrictions in lab equipment that may be operated in that environment. By operating the system, BAE Systems' engineers and technicians can work more efficiently. A wired repeater system would not be a feasible alternative as the receiver antenna is an integral part of the system under test.

Various commercial manufacturing operations are using in-building repeaters to streamline navigation system diagnosis and repair times. BAE Systems seeks to realize similar benefits and quickly provide products to the United States military forces.

At this time, there is currently no government contract information specifically associated with the requested frequency request. If and when the facilities are to be used to implement the requirements of a specific government contract, BAE Systems will notify the Commission.

3. Compliance with NTIA GPS Re-Radiation Criteria – Section 8.3.28 of NTIA Regulations

The system BAE Systems seeks to operate will re-radiate the GPS L1 (1575.42 MHz) and L2 (1227.60 MHz) signals. A common system (dual band) consisting of one active antenna, one passive antenna, and one amplifier will be used for both frequencies at each site. BAE Systems hereby confirms that the proposed operations are in full compliance with Section 8.3.28 of the NTIA regulations governing re-radiation of GPS signals. See Attachment 1 for the calculations demonstrating compliance with the NTIA criteria.

4. Mitigation of Interference

The manufacturing site is located in the basement level of an existing facility and the other two sites are located inside metal buildings. These buildings attenuate the already low power of GPS signals to a level below the useable threshold of its navigation systems.

5. Other Issues

A. Directional Antenna Data. The following is provided with respect to the directional antennas to be used in this experiment.

Width of Beam at Half-Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plane
114°	0° (horizontally flat)	-180° (antennas will face downward)

B. Stop Buzzers.

Listed below are the "Stop Buzzer" 24/7 points of contact for the application of GPS re-radiation devices. *See Manual of Regulations and Procedures for Federal Radio Frequency Management* § 8.3.28(9) (rev. Sept. 2006)

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Attachment 1

Compliance with NTIA GPS Re-Radiation Criteria – Section 8.3.28 of NTIA Regulations Maximum Equivalent Isotropically Radiated Power

The system re-radiates the GPS L1 (1575.42 MHz) and L2 (1227.60 MHz) signals. A common system (dual band) consisting of one ȧctive antenna, one passive antenna, and one amplifier is used for both frequencies at each site. Calculations are performed based on Section 8.3.28 of the NTIA regulations1, wherein item 6 states "the maximum equivalent isotropically radiated power must be such that the calculated emissions are no greater than -140dBm/24 MHz at a distance of 100 feet (30 meters) from the building where the test is being conducted." Additionally, building attenuation has been ignored. This calculation shows that the re-radiated signal strength in compliance with NTIA requirements. The calculations are performed for each of the repeater sites in parts A, B, and C below.

(1) $P_{sig} = P_{Rec} + G_{rant} + G_{ramp} - L_l + G_{rramp} + G_{rrant} - L_s + 2.148$

Where: P_{sig} = Re-radiated signal strength 100ft outside the building (EIRP)
P_{Rec} = Received power from GPS Satellites (-130 dBm)
G_{rant} = Roof active antenna, (Antcom PN: 2.3G1215A-XRS-4) = 4.7dB (L1) And 3.3 dB (L2)
G_{ramp} = Roof active antenna amplifier gain = 33dB (L1) and 35dB (L2)
L_l = Coaxial cable attenuation, roof antenna to re-radiating amplifier
= (L1) 9.1dB/100ft x cable length
= (L2) 8.6 dB/100ft x cable length
G_{rramp} = Re-radiating amplifier, (Minicircuits PN: ZX60-2522M) = 23.5dB
G_{rrant} = Re-radiating antenna gain (Antcom PN: 2.3G1215P-XRS-4) = 5.36dB
L_s = Free space loss (equation 2 below)
2.148 = conversion from ERP to EIRP

(2) $L_s = 36.6 + 20Log_{10}((D/5280)*1575)$ - free space loss for L1
$L_s = 36.6 + 20Log_{10}((D/5280)*1227)$ - free space loss for L2

Where: D = Distance (d) from antenna to outer wall in feet + 100ft

1 *See Manual of Regulations and Procedures for Federal Radio Frequency Management P 8.3.28(6)* (Rev. Sept 2006).

Part A

Determination of the signal strength at 100 feet from Building 2 in the south Nashua, NH facility;

Determination of the free space loss-

D = 80ft + 100ft

=180ft

Inserting the values for D into equation (2) yields:

$L_s = 36.6 + 20\text{Log}_{10}((180/5280)*1575)$ - for L1

= 70.18 dBm

and

$L_s = 36.6 + 20\text{Log}_{10}((180/5280)*1227)$ - for L2

= 68.01 dBm

Determination of the cable loss for Building 2–

Ll = 80ft * (9.1/100) -for L1

= 5.46dB

Ll = 80ft * (8.6/100) -for L2

= 5.16dB

Inserting these values into equation 1 yields

$P_{sig\ (EIRP)}$ = -130 + 4.7 + 33 – 5.46 + 23.5 + 4.7 – 70.18 +2.147 - for L1

= -137.59 dBm – L1 signal strength at 100ft excluding building attenuation

This value does not meet the requirements, so a 3dB attenuator will be included in this system to reduce the signal strength to below the required -140dBm

= -137.59 – 3

= -140.59 dBm at 100 feet from the building for L1

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

For Ll -

$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$

= -140.59 – 2.148 – (-70.18)

= -72.56 dBm ERP

And

$P_{sig\ (EIRP)}$ = -130 + 3.3 + 33 -5.16 + 23.5 + 3.3 – 68.01+ 2.147 - for L2

= -137.92 dBm – L2 signal strength at 100ft excluding building attenuation

This value does not meet the requirements, applying the 3 dB of attenuation added to the system for L1 above yields:

= -137.92 – 3

= -140.92 dBm EIRP at 100 feet from the building

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

For L2 -

$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$
$= -140.92 - 2.148 - (-70.18)$
$= -75.06$ dBm ERP

We will now convert dBm to pW (Pico-Watts) units using this formula:

$$pW = 10^{((dBm+30)/10)} * (10^{12})$$

Where $10^{((dBm+30)/10)}$ converts the dBm value to watts by raising ten to the exponential value of the power in dBm (milliwatts) and the + 30 factor converts to Watts and then multiplying the value of the power in watts by 10^{12} changes the units from watts to pico-watts. (pico = 10^{-12})

Applying the conversion for each frequency we get-

$$pW = 10^{((-71.38-30)/10)} * (10^{12})$$

= 55.46 pW for L1

and

$$pW = 10^{((-75.06-30)/10)} * (10^{12})$$

= 31.19 pW for L2

Part B

Determination of signal strength at 100 feet from Building 6 at the south Nashua facility:

Determination of the free space loss-

D = 120 ft + 100ft

= 220 feet

Inserting the values for D into equation (2) yields:

$L_s = 36.6 + 20Log_{10}((220/5280)*1575)$ - for L1

= 72.94 dBm

and

$L_s = 36.6 + 20Log_{10}((220/5280)*1227)$ - for L2

= 70.77 dBm

Determination of the cable loss for Building 6–

Ll = 120ft * (9.1/100) -for L1

= 10.92dB

Ll = 120ft * (8.6/100) -for L2

= 10.32dB

Inserting these values into equation 1 yields

$P_{sig\ (EIRP)} = -130 + 4.7 + 33 - 10.92 + 23.5 + 4.7 - 72.94 + 2.147$ - for L1

= -145.81 dBm – L1 signal strength at 100ft excluding building attenuation

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

For Ll -

$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$

= -145.81 – 2.148 – (-72.94)

= -75.02 dBm ERP

And equation 1 computed for L2:

$P_{sig\ (EIRP)} = -130 + 3.3 + 33 -10.32 + 23.5 + 3.3 - 70.77+ 2.147$ - for L2

= -145.84 dBm – L2 signal strength at 100ft excluding building attenuation

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

For L2-

$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$

= -145.84 – 2.148 – (-70.77)

= -77.22 dBm ERP

We will now convert dBm to pW (Pico-Watts) units using this formula:

$$pW = 10^{((dBm+30)/10)} * (10^{12})$$

Where $10^{((dBm+30)/10)}$ converts the dBm value to watts by raising ten to the exponential value of the power in dBm (milliwatts) and the + 30 factor converts to Watts and then multiplying the value of the power in watts by 10^{12} changes the units from watts to pico-watts. (pico = 10^{-12})

Applying the conversion for each frequency we get-

$$pW = 10^{((-75.02 - 30)/10)} * (10^{12})$$

$= 31.48$ pW for L1

and

$$pW = 10^{((-77.22 - 30)/10)} * (10^{12})$$

$= 18.97$ pW for L2

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Part C

Determination of signal strength at 100 feet from Building 2 at the Hudson, NH (Pope Technical Park) facility:

Determination of the free space loss-

D = 80 ft + 100ft

= 180 feet

Inserting the values for D into equation (2) yields:

$L_s = 36.6 + 20Log_{10}((180/5280)*1575)$ - for L1

$= 71.20$ dBm

and

$L_s = 36.6 + 20Log_{10}((180/5280)*1227)$ - for L2

$= 69.03$ dBm

Determination of the cable loss for Building 6–

Ll = 80ft * (9.1/100) -for L1

= 7.28dB

Ll = 120ft * (8.6/100) -for L2

= 6.88dB

Inserting these values into equation 1 yields

$P_{sig\,(EIRP)} = -130 + 4.7 + 33 - 10.92 + 23.5 + 4.7 - 72.94 + 2.147$ - for L1

= -145.81 dBm – L1 signal strength at 100ft excluding building attenuation

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$

For L2-

$= -140.43 - 2.148 - (-71.20)$

$= -71.38$ dBm ERP

And equation 1 computed for L2:

$P_{sig\,(EIRP)} = -130 + 3.3 + 33 - 10.32 + 23.5 + 3.3 - 70.77 + 2.147$ - for L2

= -145.84 dBm – L2 signal strength at 100ft excluding building attenuation

Since the equation above determines the signal strength at a distance from the building and is based on EIRP (Equivalent isotropically radiated power) we will now convert this value to ERP (Effective Radiated Power) at the systems transmit antenna by removing the free space loss and the conversion factor of 2.148 dB applied above using the formula below

$$P_{ERP} = P_{sig(ERIP)} - 2.148 - L_s$$

For L2-

$$= -140.66 - 2.148 - (-70.77)$$
$$= -73.78 \text{ dBm ERP}$$

We will now convert dBm to pW (Pico-Watts) units using this formula:

$$pW = 10^{((dBm+30)/10)} * (10^{12})$$

Where $10^{((dBm+30)/10)}$ converts the dBm value to watts by raising ten to the exponential value of the power in dBm (milliwatts) and the + 30 factor converts to Watts and then multiplying the value of the power in watts by 10^{12} changes the units from watts to pico-watts. (pico = 10^{-12})

Applying the conversion for each frequency we get-

$$pW = 10^{((-71.38 - 30)/10)} * (10^{12})$$

= 72.78 pW for L1

and

$$pW = 10^{((-73.78 - 30)/10)} * (10^{12})$$

= 41.88 pW for L2