SUPPORTING STATEMENT

Pursuant to Sections 5.3(b), (d), (e), (f), and (i) and 5.61 of the Federal Communications Commission ("FCC") rules, 47 C.F.R. §§ 5.3(b)(d)(e), (f) & (i), 5.61 (2009), BAE Systems TSS Inc. ("BAE") respectfully requests special temporary authority (STA) for a limited period commencing **September 15, 2010,** to conduct design verification testing of Ultra High Frequency (UHF), C-Band, and X-Band Satellite Communications (SATCOM) systems at the company's land-based test facility in support of the United States Navy (USN) Littoral Combat Ship (LCS) program. The systems tested will subsequently be installed on the LCS-2, USS Independence, the lead ship of the Independence Class of Littoral Combat Ships.

This test will be conducted essentially for the same purpose and in the same manner as the test conducted under the previous authority granted by the FCC to BAE in 2007 under OET File No. 0814-EX-ST-2006. In support of this request, the following is shown:

1) Applicant's Name, Address, and FRN:

BAE Systems TSS Inc.
23481 Cottonwood Parkway
California, MD 20619-9517

FCC Registration Number (FRN): 0010674976

2) Need for STA:

BAE is engaged in testing new generation communications systems for the United States Navy (USN). It is acting as a subcontractor responsible for the integration of communications systems being designed and developed for the USN under United States Government Contract No. N00024-08-C-2307.

BAE requires an STA so that it may install and test a temporary land-based test facility for verification of LCS communications system operation for the lead ship of the USN's Independence Class prior to shipboard installation. Ship production schedules were recently expedited due to an adjustment of the Navy's build specification requirements for the LCS. To meet these changed schedules, BAE must commence operational testing prior to delivery to the USN. Moreover, the reduction in available shipboard test time has created a need to perform testing at land-based facilities sooner than originally anticipated.

3) Purpose and Description of Operation:

The experimental authority requested herein will allow BAE to: (a) test performance of the systems, (b) demonstrate system operation and functionality, and (c) determine the acceptability of the systems. Commencing such efforts as soon as possible will significantly enhance the company's ability to ensure the systems meet the needs of the USN.

UHF SATCOM system testing will be performed using: (a) PSC-5D (RT-1672D) multi-band multi-mission radio (MBMMR) equipment manufactured by Raytheon, and (b) AN/ARC-210 (RT-1794D) radio equipment manufactured by Rockwell Collins. This equipment has been type-certified for UHF SATCOM Demand Assigned Multiple Access (DAMA) and non-DAMA UHF SATCOM operations by the Joint Interoperability Test Center (JITC).

The UHF SATCOM system for the LCS also includes: (a) high power amplifiers (AM-7565/ARC) manufactured by Raytheon, (b) a SATCOM modem (MD-1324B) and a quad diversity combiner (QDC-100) manufactured by Viasat, (c) antennas (AV-2075-9) manufactured by Trivec Avant, and (d) a variety of switches, diplexers, and attenuators.

The integrated UHF SATCOM radio system will be deployed to access existing USN 5 kHz and 25 kHz DAMA and non-DAMA circuits for voice and data transmissions. The test will allow BAE to verify the design and integration of the SATCOM radios, amplifiers, diplexers, switches, receive diversity combiners, and antennas through operability testing.

The C-Band and X-Band test will be performed using the AN/WSC-6(V)9 Multi-Band Satellite Communications Terminal (MSCT) manufactured by Harris and provided to the LCS program as Government Furnished Equipment (GFE) by the Space and Naval Warfare Systems Center, San Diego (SPAWAR).

The MSCT will be deployed to access commercial Intelsat circuits over C-Band channels and military Defense Satellite Communication System (DSCS) circuits over X-Band channels. The manufacturer has already obtained Defense Information Systems Agency (DISA) terminal certification for DSCS satellite access capability. The test at BAE's land-based test facility will allow the company to verify the design and integration of the MSCT with LCS cryptographic systems, multiplexers, and routers, and interoperability of the integrated system with the Navy shore facilities.

4**) Dates of Proposed Operation:**

September 15, 2010 through March 15, 2011

5) Location(s) of Proposed Operations:

44411 Pecan Court
California, MD 20619

Coordinates (NAD 83):
Latitude: 38° 18' 31.2" N;
Longitude: 76° 32' 23.9" W

7) Equipment To Be Used:

V/UHF Radio	Raytheon	RT-1672D (Qty. 3)
UHF Amplifier	Raytheon	AM-7565/ARC (Qty. 4)
V/UHF Radio	Rockwell-Collins	RT-1794D (Qty. 1)
SATCOM Modem	Viasat	MD-1324B (Qty. 1)
C/X-band Satellite Terminal	Harris	AN/WSCV-6(V)9 (Qty. 1)

The company does not propose to use prototype equipment during this trial.

8) Frequencies Desired:

Frequency	Station Class	Emission Designator(s)	Proposed Peak Power
249-270 MHz	FX	7K20G1D	60.26 W (ERP)
		5K00G1D	
		25K0F1D	
		25K0G1D	
		25K9F1D	
292-312 MHz	FX	5K00G1D	60.26 W (ERP)
		7K20G1D	
		25K0F1D	
292-312 MHz	FX	25K0G1D	60.26 W (ERP)
		25K9F1D	
3.7-4.2 GHz	FX	2M64G7W	1.28 MW (ERP)
5.85-6.425 GHz	FX	2M64G7W	1.28 MW (ERP)
7.25-7.75 GHz	FX	3M98G7W	2.83 MW (ERP)
7.9-8.4 GHz	FX	3M98G7W	2.83 MW (ERP)

The following frequencies +/- 12.5 kHz are excluded to protect FAA and Coast Guard operations in the area: M251.050; M254.250; M254.350; M255.400; M255.400; M256.800; M257.200; M257.600; M257.700; M257.800; M257.875; M260.900; M263.025; M269.000, M269.425; M269.500; M269.525; M270.275; M291.625; M303.250; M306.300; M307.200; M307.900.

9) Power Levels:

UHF SATCOM:	C-Band:	X-Band:
TPO: 125 Watts (via HPA)	TPO: 800 Watts (via HPA)	TPO: 1000 Watts (via HPA)
EIRP: 20 dBW (Peak)	EIRP: 63.25 dBW (Peak)	EIRP: 66.69 dBW (Peak)
ERP: 60.26 Watts (Peak)	ERP: 1.28 MW (Peak)	ERP: 2.83 MW (Peak)

10) Type of Emission, Modulation Technique, and Bandwidth Required:

UHF SATCOM:	C-Band:	X-Band:
7K20G1D, 5K00G1D 25K0F1D, 25K0G1D 25K9F1D	2M64G7W	3M98G7W

Other emission modes and modulation techniques may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

11) Overall Height of Antenna(s) Above Ground:

HAAT: UHF SATCOM: 30 feet
HAAT: C/X-Band : 8 feet

12) Restrictions on Operation:

As noted above, BAE does not propose to use prototype equipment during this test. The STA will support testing to be conducted under United States Government Contract No. N00024-08-C-2307. BAE is acting as a subcontractor for the integration of communications systems into a ship to be built for the United States Navy under this contract. As such, the equipment will not be marketed to non-federal entities. BAE understands that: (a) permission to operate the units has been granted under experimental authority issued by the Federal Communications Commission, is strictly temporary, and may be cancelled at any time, and (b) operation is subject to the condition that it not cause harmful interference.

13) Interference Protection/Stop Buzzer Contact Information:

BAE recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. It therefore will coordinate its activities with any licensees in the proposed bands in accordance with FCC requirements. Should interference occur, the company will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation. In any event, BAE submits that its experimental operations are unlikely to cause interference. The company proposes to limit the power and transmitting times to the minimum necessary to evaluate the equipment.

BAE advises the Commission that Wayne Hubbard (BAE Systems - GD LCS Team, Communications IPT, Chief Engineer) will be personally responsible for the tests and will be available at his office at (301) 863-1566 or by mobile telephone at (240) 298 9920. Mr. Hubbard will act as a "stop buzzer" if any issues regarding interference arise during testing.

14) Compliance With Human Exposure Limits:

BAE certifies that it will operate under this STA in full compliance with IEEE C95.1 - 1991, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz".

15) Application Contact Information:

Company Contact:

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