

**REQUEST FOR STA
AND PUBLIC INTEREST STATEMENT**

1. Introduction

Advanced Acoustic Concepts, LLC (“AAC”) respectfully requests that the Commission grant Special Temporary Authority (“STA”) to permit AAC to operate the facilities specified in the attached application.

Operation of the requested facilities is anticipated at this time to be required only from 10/10/2014 – 4/10/2015. Accordingly, issuance of an STA is appropriate pursuant to Commission rules and policies.

2. Purpose and Nature of the Operation

AAC, headquartered in Hauppauge, NY, is a provider of innovative solutions for sonar detection and classification, mine countermeasures, torpedo defense, anti-submarine warfare, advanced distributed training, learning and knowledge management systems, software engineering and systems integration. With extensive experience in both Under Sea Warfare (“USW”) sensor signal processing and training applications, AAC is able to provide a synergistic approach to producing high fidelity, innovative signal processing and training products for the Navy. Through the installation of common technology across several Navy warfighting platforms, the company has emerged as a leading supplier of Commercial Off the Shelf (“COTS”) automated, real time processing systems and provider of tactical training support to the U.S. Navy.

The purpose of this research and development experiment is to integrate the RT-1944/U (SeaLancet Digital Network Radio), the US Navy’s prescribed physical data link for communications between the Littoral Combat Ship and its offboard assets, with T-SAS Mine Countermeasures Sonar. The T-SAS is a TRL-9 system, in service with the French Navy designed to detect, classify and localize underwater mines and IEDs, in real time, at best-in-breed Area Coverage Rates (“ACR”). Integration will allow the T-SAS to be controlled and monitored remotely. This will help the U.S. Navy evaluate the T-SAS for operation from the Common Unmanned Surface Vessel (“CUSV”). Integration is planned to occur in several phases at various locations throughout the U.S. leading up to a demonstration tentatively scheduled to begin in January 2015.

Waiver of the Station ID rules set forth at Section 5.115 is respectfully requested.

Experimentation at the various sites under the requested STA will generally involve the following:

Columbia, MD:

Initial experimentation at AAC's Advanced Technology Center, involving laboratory testing at low power to assess the radios general network characteristics such as latency and throughput.

Matapeake State Park, MD and Chesapeake Bay, MD:

Repeating of experiments at full power in operational-representative maritime environments. A T-SAS or simulator and one or two radios will be loaded onto a CUSV while the other equipment is setup on shore. In addition to characterizing network performance, the experiment will attempt to estimate operational limitations of the radio link under T-SAS network loading.

3. Modulating Signals

For the emission designator 20M0D2D, the associated modulating signals are: 16-QAM and 64-QAM. For the emission designator 20M0G2D, the associated modulating signals are: BPSK and QPSK.

4. Interference Mitigation

AAC is well aware of its obligations under Part 5 of the Commission's rules to avoid interference to co-channel licensees in non-experimental services, and will take all steps to ensure compliance with this obligation. With respect to interference mitigation, authority is requested for only limited and sporadic operation of the facilities. There will be extended periods at each facility of non-operation during the authorized period.

- At the Columbia, MD facility, operation will occur only on weekdays between 7 am - 6 pm (ET). It is expected that on each day, transmissions will not exceed 6 hours in cumulative duration. All transmissions will be at low power.
- At the Matapeake State Park, MD and Chesapeake Bay sites, operation will occur only between 7 am - 7 pm (ET). It is expected that on each day, transmissions will not exceed 6 hours in cumulative duration. Operation will occur for not more than 14 days at this location.

5. Stop Buzzer

AAC advises that the following will be available by wireless telephone and will act as "stop buzzers" if any issues regarding interference arise during testing:

Primary: Benjamin Conaway (240) 401-7272
Alternate: Steve Tomaszewski (443) 812-8765

For the foregoing reasons, AAC respectfully submits that approval of this application is in the public interest, convenience and a necessity.