

1. Introduction

By the instant application (“Application”), BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”) requests that the Commission grant special temporary authority (“STA”) to permit BAE Systems to operate the facilities (the “Facilities”) specified in the instant application. STA is requested for a very brief period of May 6-20, 2019.

2. Purpose of the Operation

This testing is a critical part of technology development for the DARPA Rapid Attack Detection, Isolation and Characterization Systems (RADICS) program. This program is investigating the use of the military standard Link16 radio technology to meet the nations critical infrastructure and power grid communications needs in case they come under cyberattack. The purpose of this test is to demonstrate communication network functionality using Link16. The STA will allow transmissions that support re-establishment of the nation’s utility communications grid at the test bed set up by DARPA on Plum Island NY during the test exercise being conducted by DARPA from May 6 until May 20.

Time permitting, initial testing will occur at BAE Systems’ RF test range in Merrimack, NH. We anticipate a 1 day ‘shakedown’ test to verify operation. Primary testing will occur at Plum Island, New York, on a temporary-fixed basis. Two terminals will be set up to form a link, and the ability to transmit utility-significant data over that link will be demonstrated. During the shakedown test, all equipment will be on BAE Systems’ test range (Figure 1). During the RADICS exercise, both stations will be located on Plum Island, with specific locations determined by the locations of other test infrastructure (see Figure 2 attached). BAE Systems may also locate both stations on Long Island, close to the Plum Island Animal Disease Center (PIADC) Reception Facility on Orient Point (see Figure 3 attached).

The experiment will support the following granted US government contract:

Customer/Agency: Defense Advanced Research Projects Administration (DARPA)
Contract Number: FA8750-16-C-0177
Government POC: Andrew Wonpat – (571) 218-4885, Andrew.wonpat.ctr@darpa.mil

3. Waiver of Station ID Requirements

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

4. Transmitting Equipment

Manufacturer	Model No.	No. of Units	Experimental Yes/No
Dynamic Link Systems	P600A096-34	2	No

5. Antenna Data

Manufacturer	Model No.	Type	No. of Units	Experimental Yes/No
Diamond Antenna	D130NJ	Omni	2	No

6. Prevention of Interference

BAE Systems is well aware of its obligation under Commission rules to immediately terminate operation in the event of interference to any other licensed emitter. BAE Systems is a long-standing Commission licensee and the company will take any and all actions to ensure that it complies with its obligations as a licensee of experimental facilities. The tests to be conducted under the requested Commission authorization are to be conducted at each location within the 3-mile radius of operation being requested. Link16 normally operates in the 960-1215 MHz band as a guest, avoiding harmful interference to Aeronautical Radionavigation Services (ARNS).

With respect to interference mitigation, it is noted that authority is requested for only limited and sporadic operation of the facilities. Specifically, operation of the facilities will occur only between 8 am – 7 pm (ET). In addition, during those hours, operation will be sporadic, not continuous. In fact, there may be extended periods of non-operation during the authorized period. It is expected that on each day, transmissions will not exceed 4 hours in cumulative duration. In addition, during the STA period, it is expected that transmissions will not occur for more than 12 hours in total cumulative transmitting time. In addition due to the relatively low height of the equipment the extent of possible interference will be greatly mitigated. The surrounding wooded areas on Plum Island and the buildings on Orient Point will also serve to significantly mitigate possible interference.

7. Stop Buzzers

Primary: Josh Mindler 862 377 5937
Alternate: James Dolan 202 580 5311

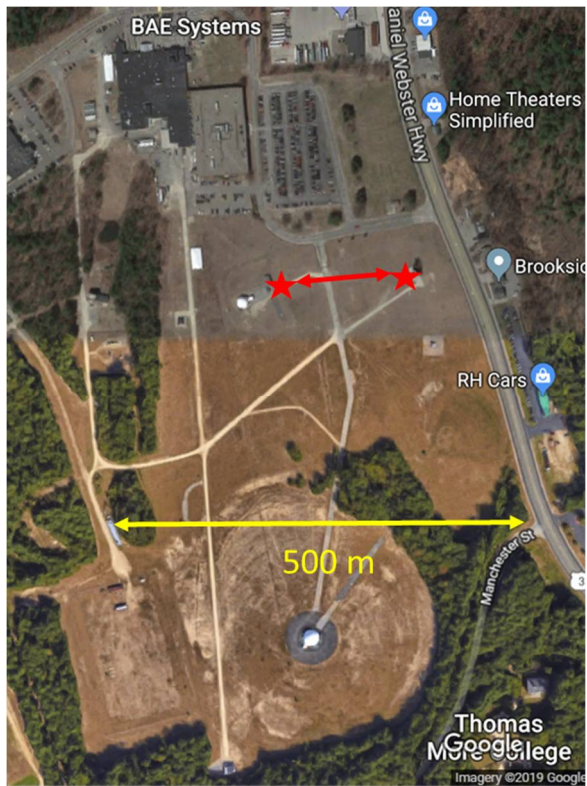


Figure 1



Figure 2

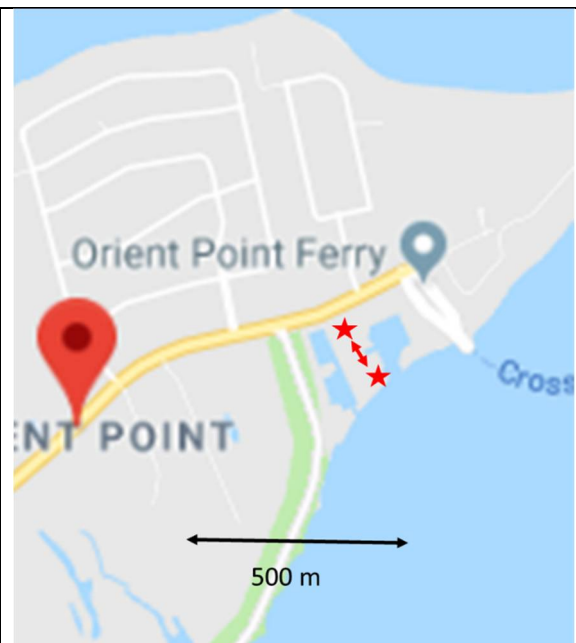


Figure 3