

PUBLIC INTEREST STATEMENT

1. Introduction

DRS C3 & Aviation Company (DRS C3&A) respectfully requests that the Commission grant Special Temporary Authority (“STA”) to permit DRS C3&A to operate the facilities specified in the attached application.

NOTE: The requested STA seeks to replace and supersede the previously granted STA issued under File No. 0341-EX-ST-2012, in light of the following changes to the experiment that are intended to be implemented by mid-August 2012:

<u>Antenna</u>	<u>Change from File No. 0341-EX-ST-2012</u>
Antenna #1 (32-5-32 N.Lat.; 110-48-33 W.Long.):	- Change Emission Designator to “28M7D1D”
Antenna #2 (32-5-25 N.Lat.; 110-49-13 W.Long.):	- Increase Radius of Operation to 20km - Correct Distance to Landing area to: 8km - Change Emission Designator to “28M7D1D”
Antenna #3 (32-5-21 N.Lat.; 110-57-24 W.Long.):	- Increase Radius of Operation to 28km - Change Emission Designator to “28M7D1D”
New Antenna #4 (32-0-59 N.Lat.; 110-41-47 W.Long.):	- New Site Added to the Experiment
Revise Number of Transmitters:	- Revise to 6 Transmitters
Modify Horizontal Orientation for Antennas #1-3:	- Slight Revisions to Better Protect Airports

NOTE: DRS C3A requests that the Commission issue a new STA for the facilities in the attached application, with the same Special Conditions as previously imposed for File No. 0341-EX-ST-2012:

Special Conditions:

- (1) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) The designated point-of-contact to terminate transmissions if interference occurs is Mr. Dave C. Breitreitz at (520) 240-2471.
- (4) The equipment being used use pair frequencies in accordance with chapter 4 of the NTIA manual if this equipment is to be sold for federal use.
- (5) The applicant must only use the following pairs of frequencies: M4445/M4745, M4475/M4775, M4565/M4865, and M4595/M4895.

NOTE: The applicant intends to operate on only the following paired frequencies in accordance with the NTIA 4400-4940 MHz bandplan (within 30 MHz bandwidth):

- 4445/4745 MHz (NTIA Channel B2/B2’)
- 4475/ 4775 MHz (NTIA Channel B3/B3’)
- 4565/4865 MHz (NTIA Channel B6/B6’)
- 4595/4895 MHz (NTIA Channel B7/B7’)

2. Purpose and Nature of the Operation

DRS C3&A is a world leader in Naval display consoles and is a leading supplier of networked and integrated sensor control systems for military and homeland security missions. DRS C3&A incorporates dynamic technologies in command, control, computing, and communications to provide new approaches for seamless homeland security, homeland defense, and military operations. The company's solutions for force protection, undersea warfare and ship self-defense incorporate virtually undetectable radar, day/night video and a multi-sensor tracking system to provide highly accurate detections and tracking of targets. Designed and built for border, coastal/port defense, and surveillance the systems automatically identify and classify moving ground and shallow-water targets, contributing to national security objectives to safeguard borders, littoral regions and valuable assets from terrorist acts.

The purpose of this research and development experiment is to verify and demonstrate the functionality of a prototype border security system currently being developed in support of DRS' response to the Department of Homeland Security, U.S. Customs and Border Protection (CBP) Request for Proposal Solicitation Number HSBP1012R0024. The experiment will verify and demonstrate the ability to pass sensor data between remote sensor sites and a monitoring station via communications links.

3. Transmitting Equipment

Description/Manufacturer	Model	Quantity	Experimental? Yes/No
Cambium Networks	PTP 45600	6	N

4. Directionality of Radiowaves Antenna

Antenna	Width of Beam in Degrees at Half- Power Point	Orientation in Horizontal Plane	Orientation in Vertical Plan
#1 Antenna (Centerpoint at 32-5-32 N.Lat.; 110-48-33 W.Long.)	3.6°	336° to 271° wrt True North	-5° to 20° wrt horizon
#2 Antenna (Centerpoint at 32-5-32 N.Lat.; 110-48-33 W.Long.)	3.6°	330° to 273° wrt True North	-5° to 20° wrt horizon
#3 Antenna (Centerpoint at 32-5-21 N.Lat.; 110-57-24 W.Long.)	3.6°	75° to 180° wrt True North	-5° to 20° wrt horizon
#4 Antenna (Centerpoint at 32-0-59 N.Lat.; 110-41-47 W.Long.)	3.6°	300° to 309° wrt True North	-5° to 20° wrt horizon

5. Interference Mitigation

DRS C3&A 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, DRS C3&A advises as follows:

- The applicant intends to operate on only the following frequencies in accordance with the NTIA 4400-4940 MHz bandplan (as defined in Chapter 4 of the NTIA Manual) during the experiment, within the specified 30 MHz channel bandwidth:
 - 4445/4745 MHz (NTIA Channel B2/B2')
 - 4475/ 4775 MHz (NTIA Channel B3/B3')
 - 4565/4865 MHz (NTIA Channel B6/B6')
 - 4595/4895 MHz (NTIA Channel B7/B7')
- DRS understands that FAA (or other stakeholders) may require certain limited azimuth and/or elevation blanking in order to ensure that the proposed Facilities do not pose a threat of interference to adjacent emitters. Accordingly, the communication link design will employ narrow beamwidth antennas. The antennas will be aligned to allow data transmission between the discrete locations identified in this filing. The narrow beamwidth of the antennas will minimize the amount of radio frequency energy spreading outside the desired link paths. In addition, the applicant has carefully chosen limits with respect to pointing directions of the antennas so as to effectively place a blanking region over the nearby Tucson International Airport and Davis Monthan Air Force Base.

6. Stop Buzzer

DRS C3&A advises that the following will be available by wireless telephone and will act as a "stop buzzer" if any issues regarding interference arise during testing:

Dave C. Breitkreitz - Cell: (520) 240-2471

For the foregoing reasons, DRS C3&A respectfully submits that approval of this application is in the public interest, convenience and a necessity.