

**PUBLIC INTEREST STATEMENT**

**1. Introduction**

DRS ICAS, LLC (“DRS ICAS”) respectfully requests that the Commission grant a two year experimental license to permit DRS ICAS to operate the facilities specified in the attached application.

**2. Purpose and Nature of the Operation**

DRS ICAS performs research to develop technologies for analyzing signal characteristics across a wide spectral range. These efforts support the development of techniques and systems that are used by the military, law enforcement, and other government agencies to identify unknown transmitters of interest. Examples of current DRS ICAS products included the Redrock and Sandust Systems (see attachments). Collection of transmitted signals in a field environment is necessary to improve processing techniques to measure signal parameters. With respect to this Application, an experimental license will enable DRS ICAS to transmit from commercial radio transceivers and test equipment and collect data using specialized receiving equipment designed to capture and analyze the signal. For HF frequencies, a specialized waveform will be also be transmitted that will aid the ability to analyze atmospheric effects on transmitted HF signals. The license will support Internal Research and Development activity.

These mobile transmissions will occur within 3 different areas of operation in the Florida area, as listed below. To assist the Commission, maps of the areas of operation are depicted at Exhibits 2-4:

Location 1 - Melbourne, FL (see Exhibit 2 for map depicting area of operation defined by the following corner coordinates):

NL 28-07-27; WL 80-38-46 (NW corner)  
NL 28-08-25; WL 80-35-40 (NE corner)  
NL 28-05-21; WL 80-34-30 (SE corner)  
NL 28-04-47; WL 80-36-13 (SW corner)

Location 2 – Palm Bay, FL (see Exhibit 3 for map depicting area of operation defined by the following corner coordinates):

NL 27-57-18; WL 80-43-15 (NW corner)  
NL 27-57-16; WL 80-41-48 (NE corner)  
NL 27-54-37; WL 80-41-48 (SE corner)  
NL 27-54-37; WL 80-43-15 (SW corner)

Location 3 - West Melbourne, FL (see Exhibit 4 for map depicting area of operation defined by the following corner coordinates):

NL 28-07-39; WL 80-42-21 (NW corner)  
NL 28-07-43; WL 80-40-18 (NE corner)  
NL 28-04-43; WL 80-40-21 (SE corner)  
NL 28-04-43; WL 80-42-22 (SW corner)

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

**3. Modulation of the Requested Signals**

For emissions using 6K00A3E, 3K00J3E, 8K00F3E, 5K0F3W: These transmissions will use an audio signal to modulate the transmitted waveform.

For emissions using 65K0G1N: The transmission is a periodic, phase modulated waveform from a digitally synthesized signal.

For emissions using 5K00F3W: This transmission will use an analog signal to modulate the transmitted waveform.

For emissions using 5K00F1D: This transmission will use a digital data sequence to modulate the transmitted waveform.

**4. Transmitting Equipment**

The following table provides example transmitting equipment to be used that is commercially available.

<b>Manufacturer</b>	<b>Model Number</b>	<b>No. of Units</b>	<b>Experimental? Yes/No</b>
ICOM	IC-TC90A	2	No
Motorola	T5710 Talkabout	2	No
Cobra	CXT275 MicroTalk	2	No
Standard Horizon	GX1200	1	No
Yaesu	FT-857D	1	No
Rohde Schwartz	SMIQ02B	1	No
Rohde Schwartz	SMBV100A	1	No
Minicircuits	ZHL-5W-1	1	No
Minicircuits	ZHL-5W-422+	1	No

**5. Interference Mitigation**

DRS ICAS 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 ICAS advises that it will employ a monitor-before-send transmission scheme to ensure that the channels are free prior to operation under the requested license. In addition,

- A single continuous transmission will not exceed 5 seconds in duration. Transmission duty cycle will be no greater than 50%.
- Authority is requested for limited and sporadic operation. Transmissions will typically occur between the hours of 8:00am to 6:00pm. Transmissions are expected to be sporadic. Extended periods of non-operation lasting weeks and months are also expected.

6. **Stop Buzzer**

DRS ICAS 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:

Bill Farley – (321) 794-2455

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