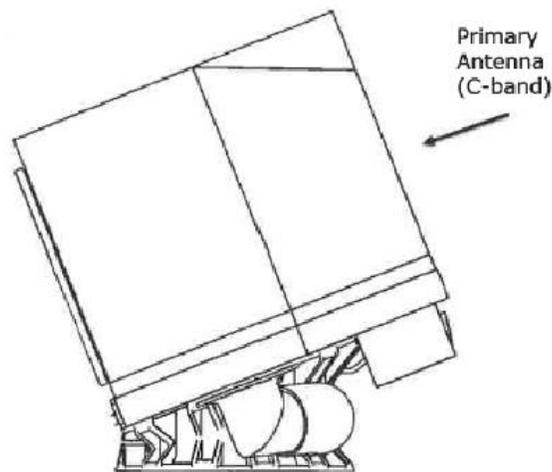


### **Requested Modification and Justification**

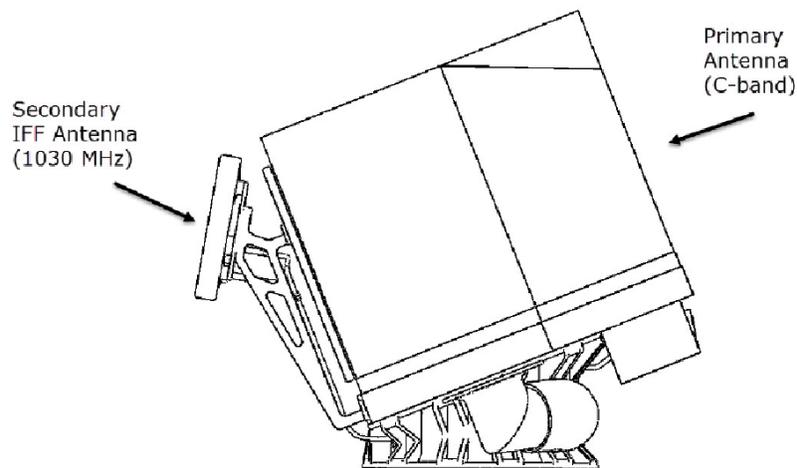
To fulfill contract obligations with our customer, the United States Navy (via General Dynamics – Mission Systems), Saab Defense and Security (SDAS) USA LLC is requesting a modification to our existing FCC Experimental License with call sign WF2XWD to include the addition of transmit frequency 1030 MHz to operate an IFF transponder. NOTE that as a subcontractor, SDAS does not have access to the contracting office's POC for this contract. Hence the John Doe information submitted was submitted in section 4a in order to complete this application.

SDAS is under contract to integrate, test and deliver several Sea GIRAFFE (SG) AMB (AN/SPS-77 V (2)) Radars equipped with an AN/UPX-37 interrogators and Secondary Surveillance Radar/Identification of Friend or Foe (SSR/IFF) antennas. This new configuration integrates the SSR/IFF antenna as part of the Primary Surveillance Radar (PSR) antenna and rotating pedestal assembly. The previous PSR antenna configuration for the radar is shown in Figure 1.



**Figure 1 – The original LCS Primary Surveillance Radar Antenna**

Figure 2 shows the new antenna configuration with the SSR/IFF antenna installed.



**Figure 2 – New configuration with SSR/IFF antenna UKY 401 08 installed**

The interrogator antenna is located behind the PSR antenna in a back-to-back orientation. This new antenna configuration simply adds the SSR/IFF antenna to the existing PSR antenna. Therefore, there are no changes to the PSR that would affect its electrical performance.

Testing with the SG-AMB system with the AN/UPX-37 and the SSR/IFF Antenna will consist of interrogating and collecting data from an assortment of “targets of opportunity”, including air targets, surface targets, stationary targets, and moving targets at various ranges, azimuths, and elevations. Interrogation waveforms will be complainant with DOD AIMS Specification 65-1000B definitions for the following mode designations: Mode 1, 2, 3/A, C, 4 and 5. The normal interrogation rate is 450 Hz and the surveillance range is up to 180 kilometers.

There has also been considerable changes to the SG-AMB radar-UPX37 interface/controls/processing that are customer driven and these software changes will need to be revalidated. Most of this integration effort can be performed at our Radar Test Facility to minimize the impact on the LCS schedule and budget for the Navy.