

**U.S. General Services Administration** 

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## ASSISTED ACQUISITION SERVICES DIVISION

GSA's Assisted Acquisition Services Uses Alliant Contract to Satisfy Navy's Critical Need for the F-35 Joint Strike Fighter

Challenge: The F-35 Lightning II Joint Strike Fighter combines modern fighter aircraft characteristics with the most powerful and comprehensive integrated sensor package of any fighter aircraft in history. The Navy's F-35 Reprogramming Center West Reprogramming Laboratory (RC West), based in Point Mugu, California, needed a radio frequency (RF) threat simulator to mimic enemy radio, radar, and electronic warfare (EW) signals to help refine the airborne targeting sensor suite. The simulator needed to be compatible with existing F-35 systems at the Reprogramming Lab at Eglin Air Force Base, Florida and the Mission Systems Integration Lab at Lockheed Martin Aero in Ft. Worth, Texas. Both locations are equipped with Northrop Grumman Amherst System's (NG-Amherst) Combat Electromagnetic Environment Simulator (CEESIM) Electronic Warfare EW Simulators. The manufacturer of the F-35 radar warning receiver (RWR) owns and uses CEESIMs for the verification and validation of all F-35 RWRs.

Action: The General Services Administration's (GSA) Assisted Acquisition Services Division (AASD) received a requirement from RC West to manufacture, deliver, install, test, and document a threat simulator that would provide realistic simulations of electronic warfare systems located around the world and be compatible with existing F-35 systems.

GSA worked with RC West officials at Point Mugu to fully define their requirements. They conducted market research to confirm and evaluate the capabilities of all available RF simulators in conjunction with Electronic Combat Simulation and Evaluation Laboratory (ECSEL) personnel. The team compared specifications of RF simulators that were presented on their manufactures' websites, searched for symposiums dealing with electronic warfare testing and reviewed presentations dealing with RF simulator capabilities. ECSEL personnel contacted RF simulator experts at six electronic warfare test facilities and discussed hardware they are using or planning to procure to test electronic warfare systems to find a compatible RF threat simulator with the existing Northrop Grumman Amherst System's (NG-Amherst) Combat Electromagnetic Environment Simulator (CEESIM).

**Solution:** After extensively researching all options, GSA AASD determined that a sole source procurement was necessary due to there being only one known source that could fulfill the Navy's compatibility requirement. The GSA's Government Wide Acquisition Contract (GWAC) referred to as Alliant was the best solution to satisfy RC West's requirements. A GWAC is an indefinite delivery, indefinite quantity (IDIQ) contract, meaning that federal agencies can purchase an unlimited number of products or service hours under a single GWAC during a specified period of time. Alliant provides flexible access to customized IT solutions from a large, diverse pool of industry partners. Alliant allows for long-term planning of large-scale program requirements.

Research showed that the Navy's minimum needs for an RF threat simulator could only be satisfied by the unique capabilities of the NG-Amherst CEESIM on the Alliant GWAC. Utilizing a different EW simulator product would mean the RC West facility would be working with emitter and scenario formats that differ from the other reprogramming labs and all existing simulations would have to be re-entered into the new simulator and revalidated. Due to the proprietary data that NG-Amherst possessed, they were the only EW simulator that satisfied the Navy's requirements.

**Result** AASD used GSA's Alliant GWAC to award RC West's radio frequency threat simulator in November 2015 for approximately \$35 million with delivery taking place in February of 2018.

The threat simulator is the most sophisticated threat simulator created to date and will be used to execute, verify and validate radar emitter simulations for F-35 development and to provide RF stimulus to EW systems located in the RC West. Navy experts now have the ability to simulate rapidly changing threats that F-35 sensors detect to refine and update the plane's onboard threat libraries necessary to evaluate the F-35 in a realistic mission scenario.

## **Reference:**

Lucretia Vicuna Contracting Officer Representative Multi-Spectral Electronic Warfare System Support Activity Integrated Product Team 805-989-3708 Lucretia.vicuna@navy.mil Contract number: ID0415012