

Section C - Descriptions and Specifications

STATEMENT OF WORK

**STATEMENT OF WORK (SOW)  
AIRBORNE ELECTRONIC ATTACK TASK ORDER  
ELECTRONIC WARFARE DATA SYSTEMS (EWDS) LABORATORY SUPPORT  
15 November 2018**

**1. BACKGROUND AND SCOPE**

The scope of this SOW establishes the requirements for Engineering, Technical and Programmatic support services for development of Electronic Attack and Electronic Warfare products within the Airborne Electronic Attack (AEA) Integrated Program Team (IPT) located at the Naval Air Warfare Center Weapons Division (NAWCWD), Point Mugu, California.

This effort consists of providing technical expertise to Electronic Warfare Data Systems (EWDS) Laboratory for Electronic Attack and Surveillance Platforms. This effort includes providing intelligence data reduction and analysis including Department of Defense (DOD) message response; requirements analysis, definition, and documentation; test and evaluation support; EWDS computer system support; software design, development, and documentation; database management, development, and documentation; system Quality Assurance; systems engineering; threat analysis; and fleet help desk and training support in support of EWDS. These tasks are required to support the development and release of: the EWDS databases which are released to the EA-6B, F/A-18, EA-18G, E-2C/D, MH-60R, AV-8B, BAMS, HARM/AARGM, F-35 JSF, NGJ, Intrepid Tiger, and P-8A fleet and community on a periodic and as needed basis by the US and approved Foreign governments; for use on the Joint Mission Planning System (JMPS) and to support Electronic Warfare (EW) reprogramming and intelligence systems in the joint environment. The scope of this effort is to develop and assist in delivering Baseloads, Transactions, and Rapid Reaction database files for release to the fleet, test community and software developers by the government. This includes:

- General Engineering Support
- EWDS Database
- Software Development Support

**2. APPLICABLE DOCUMENTS**

The following documents are applicable to this SOW.

**2.1. Military Standards**

Identifier	Document Name	Date
MIL-STD-961E	Defense and program-unique specifications format and content	04/01/2008
ANSI/EIA-649-B	Configuration Management Standard	06/17/2011
GEIA-STD-0007B	Logistics Product Data Handbook	02/10/2014
MIL-HDBK-61A	Configuration Management Handbook	02/07/2001
ANSI/EIA-748-C	Earned Value Management Systems	04/29/2014

**2.2. Instructions and Guides**

Identifier	Document Name	Date
DoDI 5000.02	Operation of the Defense Acquisition System	01/07/2015
NAVAIR 00-25-300-B	Technical directives system	01/01/2009
NAVAIR 00-25-100	Technical manual program	12/30/2006
NAWCWD 5500.1	Command Security Program Regulation	02/13/2012

NAVAIRINST 4355.19D	Systems Engineering Technical Review Process	01/01/2008
7 CFR 300.1	Manual of Regulations and Procedures for Federal Radio Frequency Management	05/01/2014
	Naval Systems Engineering Guide; (located at <a href="https://nserc.nswc.navy.mil/nseg/default.aspx">https://nserc.nswc.navy.mil/nseg/default.aspx</a> )	01/01/2004
	AEA IPT Processes and Procedures, (located at: <a href="https://share.navair.navy.mil/aeaipt/Pages/IPTHome.aspx">https://share.navair.navy.mil/aeaipt/Pages/IPTHome.aspx</a> )	05/01/2015
	DoD 5220.22-M, National Industrial Security Program Operating Manual (NISPOM)	02/28/2006
	DoDM 5200.01, Information Security Program Manual (Volume 4)	04/24/2012

Identifier`	Document Name	Date
	ETIRMS Online Help	
	ETIRMS Functional Requirements Document	
	ETIRMS Software Requirements Document	
	ETIRMS Database Design Document	
	AEA System Subsystem Specification	
	AEA Software Requirement Specification	
	AEA Interface Design Document	
	AEA Online Help	
NAVAIR 01-85ADC-1	EA-6B NATOPS Flight Manual	01/15/2000
NWP 3-22.5-EA6B	EA-6B Tactical Manual (TACMAN)	04/02/2013
NAVAIR 01-85ADC-1L	EA-6B WSOM	
	Data Requirements Specification (DRS)	
	Database Design Description (DBDD)	
	Version Description Document (VDD)	
	Quality Assurance Test Report (QATR)	
	EWDS Work Breakdown Structure (WBS)	

### 2.3. Industry Standards

Identifier	Document Name	Date
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IEEE 12207-2008	ISO/IEC/IEEE Standard for Systems and Software Engineering - Software Life Cycle Processes	01/31/2008
CMMI V1.3	Capability Maturity Model Integration (CMMI), Carnegie Mellon University	11/01/2010

The Government will provide all necessary reference obsolete documents not generally available to the contractor as required.

The Contractor shall not purchase information technology (IT) equipment on behalf of NAVAIR in support of this order, which reports to Program Budget Information System-IT (PBIS-IT), without a NAVAIR Command Information Officer approved NAV-IDAS ITPR.

### 3. REQUIREMENTS

#### 3.1. General Management and Engineering Support

- 3.1.1. The contractor shall execute the efforts described herein as a member of the AEA IPT. In support of this effort, the contractor shall utilize the IPT's development system, software baselines, databases, processes and procedures identified in 2.2 **Instructions and Guides** (AEA IPT processes and Procedures).
- 3.1.2. The contractor shall prepare and deliver a Monthly Progress, Status and Management Report. The contractor shall track and report hours and associated burdened cost for each of the SOW tasks described herein with CDRL A003. In addition, the contractor shall provide project tasking information in Work Breakdown Structure (WBS) format; including hours, cost and percentage of tasks completed, and associated project. Utilizing a government provided WBS, the contractor shall deliver a bi-weekly report which provides a by-WBS task breakout of the hours expended for the respective reporting period and cumulative to date. The contractor shall include the status of deliverables required herein in CDRL A002.
- 3.1.3. The contractor shall develop, collect and analyze metric data as defined within the AEA IPT Processes and Procedures. This includes: development of plans, procedures and forms for the collection of those measurements identified within the AEA IPT Processes and Procedures (see section 2.2 **Instructions and Guides** above). The results of the metrics support shall be reported in the Contractor's Progress, Status and Management Report. (CDRL A002)
- 3.1.4. The contractor shall host and/or attend engineering and program reviews and meetings for the purpose of gathering data required to perform the efforts as stated herein. The Technical Assistant (TA) or the Contracting Officer's Representative (COR) will provide times/dates for meetings to be hosted or attended by the contractor and those dates will be provided (two weeks prior to event). The government anticipates that 12 events will be conducted during a fiscal year, four of those events being hosted by the contractor. The contractor shall provide recommendations and conclusions based on evaluation of data acquired (action items, change requests and customer feedback) during these events. (CDRLs A001 & A002)
- 3.1.5. The contractor shall develop and maintain plans, milestone charts, perform reviews, conduct analyses, complete evaluations and make recommendations, which will provide the technical and scientific evidence necessary to facilitate program development decisions. The contractor shall develop and maintain earned value tracking. (CDRL A001)
- 3.1.6. The contractor shall provide presentation materials such as PowerPoint presentations and printed media in the form of reports, instructions, and other materials in support of reviews and meetings identified in paragraph 3.1.4 above. The contractor shall, upon written Government approval, develop technical, engineering, and presentation graphics, and other visual aid requirements, to reflect the status of assigned tasks under this SOW. These materials will be provided in support of system engineering, and collection of software requirements efforts, specifically the presentation of the technical analyses,

studies, designs and recommendations to resolve identified action items, change requests and customer feedback. (CDRL A004)

### 3.1.7. Technical Analysis and Study

3.1.7.1. The contractor shall provide estimates, design trade-off, and risk assessment studies. In each study, the contractor shall include analysis of operations, organization, software, and support requirements. System analysis will include time and sensitivity analyses. Technology validation experiments and/or prototyping software support will be identified as appropriate. The contractor shall provide recommendations on the most cost-effective approach to systems development and maintenance through its life cycle. Those areas for application of state-of-the-art methodologies, including Commercial-off-the-Shelf (COTS) and Non-Developmental Item (NDI) will be identified which will provide the highest payoff in system performance, cost, and schedule. (CDRL A001)

3.1.7.2. The contractor shall review, evaluate, and verify that developed system, subsystem, configuration item, and support equipment specifications meet the required technical adequacy.

## 3.2. EWDS Database

3.2.1. The contractor shall support development in delivering the EWDS Database releases. In addition, the contractor shall support development in delivering Rapid Reaction Update files (RRF), Transaction Files, Jamming Technique Optimizing (JATO) Tactics Analysis and Techniques (JTAT) documents, and respond to fleet requests for information (RFI).

3.2.2. In support of the design and development of each EWDS Database release, RRF, Transaction file, JTAT, or fleet RFI, the contractor shall: (CDRL A001)

- Update the EWDS database to include analyzed:
  - Radar intelligence data
  - Communications intelligence data
  - Platform and weapon system intelligence data
  - EA tactics and operations data
- Flight data
  - Mission planning system effectiveness
  - Emitter analysis for terrain impact
  - Jammer and post-flight electronic intelligence data
  - High-speed Anti-Radiation Missile (HARM)
  - Overhead and broadcast data
  - Order of battle and locations

3.2.3. The contractor shall attend Operational Software Review Boards (OSRB), Technical Review Boards (TRB), Software Change Review Boards (SCRB), Design Reviews, JATO Conferences, Intelligence Requirements Working Groups, and Intelligence conferences for the purpose of gathering information and defining requirements related to delivering the EWDS database. The contractor shall travel to other technical meetings in support of the information and intelligence data requirements for use in developing the EWDS database and in designing and implementing software analysis algorithms at the request of the TA. (CDRL A001)

3.2.4. The contractor shall provide EWDS Database services such as database administration, database system architecture and system acquisition support.

## 3.3. Software Development

3.3.1. The contractor shall design, develop, integrate, unit test, fix, and document software to improve EWDS database capability. The contractor will be tasked by the TA or COR via written communication (which may include electronic mail or in basket) on which problems and requirements to investigate and analyze. The contractor shall report the results in the analysis. The contractor shall propose engineering solutions for assigned problems. (CDRL A001)

# 4. DELIVERABLES

Specific items of reports, test plans, procedures, technical support documents, meeting minutes, and progress reports will be provided in accordance with the applicable CDRLs.

CDRL ITEM	DESCRIPTION
A001	Technical Report – Study/Services
A002	Contractor’s Progress, Status and Management Report (Weekly/Monthly)
A003	Performance and Cost Report (Task Order Expense Status Report)
A004	Presentation Materials
A005	Operations Security (OPSEC) Plan

## 5. PERSONNEL QUALIFICATIONS.

- 5.1. The contractor shall be responsible for employing personnel having at least the minimum level of education and training, experience, and security clearance, as stated under each key labor category specified herein.
- 5.2. Key Personnel are those who will be performing in Key Labor Categories specified below.
- 5.3. College Degree: All degrees shall be obtained from an “accredited college or university” as recognized by the U.S. Department of Education. This includes Associates, Bachelor’s, Master’s, or Doctorate degrees.
- 5.4. Degree Majors: All labor category degree major requirements are specified below.
- 5.5. Experience and Education Level Definitions:

**JUNIOR:** A Junior level person within a labor category has less than 3 years’ experience and a BA/BS degree. A Junior level person is responsible for assisting more senior positions and/or performing functional duties under the oversight of more senior positions.

**JOURNEYMAN:** A Journeyman level person within a labor category has 3 to 10 years of experience and a BA/BS degree. A Journeyman level person typically performs all functional duties independently.

**SENIOR:** A Senior level person within a labor category has over 10 years of experience and a MA/MS degree. A Senior level person typically works on high-visibility or mission critical aspects of a given program and performs all functional duties independently. A Senior level person may oversee the efforts of less senior staff and/or be responsible for the efforts of all staff assigned to a specific job.

Additionally, the following qualification substitution chart provides standard experience/education substitutions:

Bachelor’s Degree	10 years additional work experience may be substituted for a Bachelor’s Degree	Associate’s Degree plus 4 years additional work experience may be substituted for a Bachelor’s Degree
Master’s Degree	Bachelor’s Degree plus 4 years additional work experience may be substituted for a Master’s Degree	Associate’s Degree plus 8 years additional work experience may be substituted for a Master’s Degree

“Years of experience” shall mean full, productive years of participation.

“Productive years” shall mean 52 weeks of work reduced by reasonable amounts of time for holidays, annual and sick leave.

If participation was part-time, or if less than one-half of the standard work week was spent performing qualifying functions, the actual time spent performing qualifying functions may be accumulated to arrive at full years of experience.

Contractor key personnel must have performed these functions for at least five years within the last seven years.

- 5.6. **Labor Qualifications:** The following chart lists the minimum education, experience, and security clearance requirements (**Note: the minimum security clearance level for all personnel is a secret unless otherwise indicated in the table below**), the Bureau of Labor Statistics (BLS) Standard Occupational Classifications (SOCs), and the functional descriptions for each labor category.

Key Labor Category	Level	BLS SOC Code	Functional Description	Key Personnel	Top Secret Clearance Required
<b>Program Manager</b>	Journeyman	11-1021	Manager/Operations Managers Acts as the overall lead, manager and administrator for the contracted effort. Serves as the primary interface and point of contact with Government program authorities on technical and program/project issues. Oversees contractor execution of the contract requirements. Manages acquisition and employment of program/project resources.	Yes	No
<b>Engineer</b>	Senior	17-2071	Electrical Engineers - Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Excludes "Computer Hardware Engineers" (17-2061).	Yes	Minimum of (1)
<b>Software Engineer</b>	Senior	15-1252	Software Developers - Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, develop specifications, and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.	Yes	Minimum of (1)
<b>Computer Specialist</b>	Senior	15-1221	Computer and Information Research Scientists – Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in	Yes	Minimum of (1)

			the field of computer hardware and software.		
<b>Project Analyst</b>	Junior	13-1111	Program/Project/Management Analyst Applies analytic techniques in the evaluation of program/project objectives. Analyzes requirements, status, budget and schedules. Performs management, technical, or business case analyses. Collects, completes, organizes and interprets data relating to aircraft/weapon/project acquisition and product programs. Tracks program/project status and schedules. Applies government-instituted processes for documentation, change control management and data management.	No	No
<b>Engineer</b>	Journeyman	17-2071	Electrical Engineers - Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Excludes "Computer Hardware Engineers" (17-2061).	No	No
<b>Software Engineer</b>	Journeyman	15-1252	Software Developers - Research, design, and develop computer and network software or specialized utility programs. Analyze user needs and develop software solutions, applying principles and techniques of computer science, engineering, and mathematical analysis. Update software or enhance existing software capabilities. May work with computer hardware engineers to integrate hardware and software systems, develop specifications, and performance requirements. May maintain databases within an application area, working individually or coordinating database development as part of a team.	No	No
<b>Computer Specialist</b>	Journeyman	15-1221	Computer and Information Research Scientists – Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in the field of computer hardware and software.	No	No

**6. SPECIAL CONSIDERATIONS**

6.1. **Travel:** During performance of a TO, the contractor may be required to perform local and non-local travel to support the tasking. The contractor shall submit a request for travel in support of this contract. Each request shall be submitted in advance (a minimum of 1 week) to the COR for approval. The contractor shall submit a trip report in CDRL A001. The estimated travel for the performance period of five (5) years is documented below:

Total estimated # of trips	Estimated # of days per trip	Estimated # of personnel per trip	From	To
80	5	3	Pt. Mugu, CA	Patuxent River, MD
10	5	3	Pt. Mugu, CA	China Lake, CA
25	5	3	Whidbey Island, WA	Pt. Mugu, CA

6.2. Each travel request will minimally consist of:

- Date of Request
  - TO number
  - Employee(s)
  - Date and duration of proposed travel
  - Purpose of travel
  - Destination
  - Cost estimate (airfare, per diem, car rental, miscellaneous expenses)
  - Total travel allowance on the TO
  - Total travel cost expended to date
  - Approval signatures
- 6.3. Upon completion of each trip, the contractor shall submit a trip report IAW CDRL A001.
- 6.4. **Access to Government Property, Equipment, Information, and Facilities:** During performance of a task order, the contractor may require access to Government Property, Equipment, Information, and Facilities. The contractor shall identify and request approval from the technical point of contact (TPOC) cited in the task order, for each person expected to require access to a Government facility.
- 6.4.1. Government furnished information, as listed in 2.2 **Instructions and Guides**, is required for the accomplishment of this task and shall be provided to the contractor upon issuance of this order. Government personnel shall provide written guidance for task completion in the event that applicable program documentation is not available for shipment to contractor. The contractor shall be furnished with existing AEA IPT software management documents.
- 6.4.1.1. The contractor shall be allowed access to the Engineering Document Accountability Center (EDAC) during normal working hours. The contractor shall provide to the government a list of personnel with “need to know” access to EDAC controlled data. Contractor personnel performing these tasks shall require access to classified NAWCWD facilities and government documents, and must have the appropriate clearances on file with NAWCWD security office. Upon completion of this effort, the contractor shall return all documents to the government.
- 6.4.1.2. The contractor will require access to classified material up to and including TOP SECRET Special Intelligence – Special Background Investigations, NATO SECRET, SECRET/NOFORN and SECRET. The contractor will be required access to classified material up to Sensitive Compartmented Information (SCI) level for this task order.
- 6.4.1.2.1. SCI efforts will include contractor participation in Fleet debriefings on current threats and operations in US Areas of Responsibility (AORs). It may also include briefings from technical leads on new jamming capabilities against new threats. Briefings are expected to occur in authorized SCI secure locations at NAWCWD Pt. Mugu, CA, and other SCI Authorized locations.
- 6.4.2. GFF. The government shall furnish access to the EA-6B, EA-18G, and MH-60R SIL, EWDS Laboratory and other development and test laboratories on an as-needed basis. However, the government reserves the right to control the laboratory schedule and use of documentation required for performance of this contract.
- 6.5. **Place of Performance:** Approximately 90% of performance is expected to take place at Point Mugu, CA at a Government facility, Whidbey Island NAS, WA at a Government facility, the contractor’s facility, or contractor facility that supports the AEA IPT within 30 miles to support 3.1.4. The other 10% will take place at other Government installations identified in section 6.1. Support for these sites, including direct Fleet services that require TOP SECRET clearance will be required.
- 6.6. **Contract Work Environment:** The contractor shall execute the efforts described herein as a member of the AEA IPT. In support of this effort, the contractor shall utilize AEA IPT processes and procedures, including but not limited to IPT’s development system, software baselines, software tools, and databases. The contractor shall interface with other Government and contractor team members, use existing NAWCWD special AEA laboratory hardware and facilities, and access NAWCWD test aircraft located at VX-31 China Lake, CA and VX-23 Patuxent River, MD, on an as needed basis.



- 6.7. **Navy Marines Corps Intranet (NMCI):** Any tools developed that will be hosted by NMCI or run on NMCI workstations will be certified for NMCI and comply with NMCI policy. Additionally, any servers supporting this effort will be transitioned to meet the requirements of the current NAVAIR Server Consolidation effort.

## 7. MATERIAL AND PURCHASING

The contractor may be required to purchase incidental material in support of this TO. The contractor must obtain prior approval from the COR for any purchases valued over \$10,000. The contractor must obtain COR concurrence and Contracting Officer approval prior to any purchases valued over \$25,000. To receive approval for purchases the contractor will submit a consent package providing a description, price, evidence of adequate price competition, or if unavailable, a justification for a single source and determination that the price is fair and reasonable. These requirements apply to all contractor purchases.

## 8. QUALITY SURVEILLANCE AND PERFORMANCE STANDARDS:

- 8.1. A Contract Surveillance Plan (CSP) will be used by the Government to perform surveillance. A copy of the CSP is provided as attachment 2, in Section J, for informational purposes only.

## 9. SECURITY:

- 9.1. The contractor shall provide personnel with the appropriate personnel security clearance levels for the work to be performed. Access to TOP SECRET/SCI information is required in the performance of this contract and shall be in accordance with the DoD 5220.22-M, National Industrial Security Program Operating Manual (NISPOM), applicable DoD personnel security regulations, and DoD Contract Security Classification Specification (DD Form 254). The contractor shall maintain sufficiently cleared personnel to perform the tasks required by this SOW IAW the DD Form 254 and the contract. All contractor personnel shall possess the requisite security clearance, accesses, and need-to-know commensurate with the requirements of their positions.

Overarching contract security requirements, and Contractor access to classified information, shall be as specified in the basic DD Form 254 for this task order. All contractor personnel with access to unclassified IS, including e-mail, shall have at a minimum a favorable National Agency Check with Inquiries (NACI).

For Official Use Only information generated and/or provided under this contract shall be marked and safeguarded as specified in DoDM 5200.01, Information Security Program Manual (Volume 4) available at [http://www.dtic.mil/whs/directives/corres/pdf/520001\\_vol4.pdf](http://www.dtic.mil/whs/directives/corres/pdf/520001_vol4.pdf). Contractor shall not store or transmit CUI on personal IT systems or via personal e-mail. Unclassified e-mail containing any DoD CUI shall be encrypted. Prior to sending CUI to any non-Navy Marine Corps Internet (NMCI) addressees, the sender must first positively verify all recipients are authorized access to CUI and have need-to-know. Non-NMCI recipients must have a DoD compliant Private Key Infrastructure (PKI) certificate that enables electronic transmission via unclassified networks while protecting the CUI with a digital signature and encryption.

### 9.2. **Communications Security (COMSEC):**

The contractor will require access to COMSEC at Government locations. U.S. cryptographic equipment inventory information, as well as the systems and manner in which each particular equipment is used, is for official use only. Publication or release of any related COMSEC information by any means, by the contractor, without prior written approval of the contracting officer is prohibited. The contractor must be a U.S. citizen, have a final Government security clearance with the appropriate personnel security background investigation for the level of classification involved, have strict need-to-know, have the appropriate COMSEC briefing before access is granted, and granted access only in conformance with procedures established for the particular type of COMSEC information involved. The contractor shall adhere to the DD Form 254 COMSEC security requirements, facility COMSEC material control and operating procedures, and all applicable COMSEC regulations, instructions, and policies. Prior approval from the Government Contracting Activity is required in order for a prime contractor to grant COMSEC access to a subcontractor.

### 9.3. **Operations Security (OPSEC):**

The contractor shall develop, implement, and maintain an OPSEC program to protect controlled unclassified and classified activities, information, equipment, and material used or developed by the contractor and any subcontractor during performance of the contract. The contractor shall be responsible for the subcontractor implementation of the OPSEC requirements. The OPSEC program shall be in accordance with National Security Decision Directive (NSDD) 298, and at a minimum shall include:

- Assignment of responsibility for OPSEC direction and implementation.
- Issuance of procedures and planning guidance for the use of OPSEC techniques to identify vulnerabilities and apply applicable countermeasures.
- Establishment of OPSEC education and awareness training.
- Provisions for management, annual review, and evaluation of OPSEC programs.
- Flow down of OPSEC requirements to subcontractors when applicable.

The contractor shall prepare an Operations Security Plan in accordance with MIL-HDBK-254D for Government review. (CDRL A005)

- 9.4.1 The Contractor shall implement and maintain security procedures and controls to prevent unauthorized disclosure of controlled unclassified and classified information and to control distribution of controlled unclassified and classified information in accordance with the National Industrial Security Program Operating Manual (NISPOM) and DoDM 5200.01, Information Security Manual. The DoD Contract Security Classification Specification, DD Form 254, defines program specific security requirements. All Contractor facilities shall provide an appropriate means of storage for controlled unclassified and classified documents, classified equipment and materials and other equipment and materials.

9.4. **Public Release:**

Disclosure of information is covered by DFARS 252.204-7000 Disclosure of Information, incorporated in Section I of the contract.