
FOIA Electronic Reading Room

Document Coversheet

Document Description

Contract N68936-06-D- 0021

- This document has been released in its entirety.**
- Portions of this document have been excised pursuant to the Freedom of Information Act. The applicable portion(s) excised and the exemption(s) applied are indicated below.**
- Exemption (b)(1) Information excised is properly and currently classified in the interest of national defense or foreign policy.
- Exemption (b)(2) Information excised is related solely to the internal rules and practices of the Agency.
- Exemption (b)(3) Information excised is specifically exempt from disclosure by an Executive Order or Statute. Specifically:
- Exemption (b)(4) Information excised is commercial or financial information received from outside the Government and is likely to cause substantial harm to the competitive position of the source providing the information.
- Exemption (b)(5) Information excised is internal advice, recommendations, or subjective evaluations pertaining to the decision-making process of the Agency.
- Exemption (b)(6) Information excised is Personal information which if disclosed would result in an unwarranted invasion of personal privacy.
- Exemption (b)(7) Information excised is investigatory records or information compiled for law enforcement purposes.
- Exemption (b)(8) Information excised is records for the use of any agency responsible for the regulation or supervision of financial institutions.
- Exemption (b)(9) Information excised is records containing geological and geophysical information (including maps) concerning wells.

Please direct inquiries regarding this document to:

Commander (Code K00000D FOIA)
Naval Air Warfare Center Weapons Division
1 Administration Circle Stop 1009
China Lake, CA 93555-6100

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DO-C9	PAGE OF PAGES 1 32	
2. CONTRACT (Proc. Inst. Ident.) NO. N68936-06-C-0021		3. EFFECTIVE DATE 30 Nov 2005		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. SEE SCHEDULE		
5. ISSUED BY CDR NAWCWD CODE 210000D ATTN: L ALDRIDGE (760) 939-2799 429 E BOWEN RD - STOP 4015 CHINA LAKE CA 93555-6108		CODE N68936	6. ADMINISTERED BY (If other than Item 5) DCMA SANTA ANA 34 CIVIC CENTER PLAZA ROOM 5001 SANTA ANA CA 92701-4066		CODE S0513A	
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and zip code) RAYTHEON COMPANY GERALD L CRUCE 2000 EAST EL SEGUNDO BLVD EL SEGUNDO CA 90245				8. DELIVERY [] FOB ORIGIN [X] OTHER (See below)		
				9. DISCOUNT FOR PROMPT PAYMENT		
				10. SUBMIT INVOICES 1 (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN:		ITEM Section G
CODE 4U884		FACILITY CODE				
11. SHIP TO/MARK FOR See Schedule		CODE		12. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182381 COLUMBUS OH 43218-2381		CODE HQ0399
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [] 10 U.S.C. 2304(c)() [] 41 U.S.C. 253(c)()				14. ACCOUNTING AND APPROPRIATION DATA See Schedule		
15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT	
	SEE SCHEDULE					
15G. TOTAL AMOUNT OF CONTRACT						\$37,574,273.00
16. TABLE OF CONTENTS						
(X) SEC.	DESCRIPTION	PAGE(S)	(X) SEC.	DESCRIPTION	PAGE(S)	
PART I - THE SCHEDULE			PART II - CONTRACT CLAUSES			
X A	SOLICITATION/ CONTRACT FORM	1 - 3	X I	CONTRACT CLAUSES	27 - 31	
X B	SUPPLIES OR SERVICES AND PRICES/ COSTS	4 - 8	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS			
X C	DESCRIPTION/ SPECS/ WORK STATEMENT	9 - 14	X J	LIST OF ATTACHMENTS	32	
X D	PACKAGING AND MARKING	15	PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X E	INSPECTION AND ACCEPTANCE	16	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS		
X F	DELIVERIES OR PERFORMANCE	17 - 18		L	INSTRS., CONDS., AND NOTICES TO OFFERORS	
X G	CONTRACT ADMINISTRATION DATA	19 - 23	M	EVALUATION FACTORS FOR AWARD		
X H	SPECIAL CONTRACT REQUIREMENTS	24 - 26				
CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE						
17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				18. [] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.		
19A. NAME AND TITLE OF SIGNER (Type or print)				20A. NAME AND TITLE OF CONTRACTING OFFICER DIANE E FOUCHER / PROCUREMENT CONTRACTING OFFICE TEL: (760) 939-8160 EMAIL: diane.foucher@navy.mil		
19B. NAME OF CONTRACTOR		19C. DATE SIGNED	20B. UNITED STATES OF AMERICA BY <u>Diane E. Foucher</u> (Signature of Contracting Officer)		20C. DATE SIGNED 30-Nov-2005	
BY _____ (Signature of person authorized to sign)						

Section A - Solicitation/Contract Form

CLAUSES INCORPORATED BY FULL TEXT

FOR YOUR INFORMATION:

1. In order to correctly reflect the fiscal year in which this contract is awarded, the contract number has been changed from N68936-05-C-0038 to **N68936-06-C-0021**. All attachments have been updated where possible.

2. The following addresses and point of contacts are provided:

Name: Liz Aldridge
Title: Contract Specialist
Phone: (760) 939-2799
DSN: 437-2799
FAX: (760) 939-9651
Email address: _martha.aldridge@navy.mil

Name: Laurel Fletcher
Title: Contract Specialist
Phone: (760) 939-8484
DSN: 437-8484
FAX: (760) 939-9651
Email address: laurel.fletcher@navy.mil

U.S. Postal Service Mailing Address:
COMMANDER
CODE 210000D(L. Fletcher – 760-939-XXXX)
NAVAIRWARCENWPNDIV
429 E. BOWEN RD. MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):
COMMANDER
CODE 210000D (F. LAST)
NAVAIRWARCENWPNDIV
BLDG 982, MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Name: Diane Foucher
Title: Contracting Officer
Phone: (760) 939-8160
DSN: 437-8160
FAX: (760) 939-9651
Email address: diane.foucher@navy.mil

U.S. Postal Service Mailing Address:
COMMANDER
CODE 210000D (D. Foucher – 760-939-8160)
NAVAIRWARCENWPNDIV
429 E. BOWEN RD. MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):
COMMANDER

CODE 210000D (D. Foucher)
NAVAIRWARCENWPNDIV
BLDG 982, MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Name: Bill Marinelli
Title: Project Manager
Phone: (760) 939-939-4583
DSN: 437-4583
FAX: (760) 939-4513
Email address: william.marinelli1@navy.mil

U.S. Postal Service Mailing Address:
COMMANDER
CODE 452000D (B. Marinelli – 760-939-4583)
NAVAIRWARCENWPNDIV
429 E. BOWEN RD. MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Direct Delivery Address (UPS, FedEx, etc):
COMMANDER
CODE 452000D (B. Marinelli)
NAVAIRWARCENWPNDIV
BLDG 982, MAIL STOP 4015
CHINA LAKE, CA 93555-6108

Name: Dean Huebert
Title: Deputy Project Manager
Phone: (805) 989-7267
DSN: 351-7267
FAX: (805) 989-1920
Email address: dean.huebert@navy.mil

U.S. Postal Service Mailing Address:
COMMANDER
CODE 4.7 (D. Hueber – 760-989-7267)
NAVAIRWARCENWPNDIV
BLDG 506, FL 1, RM 109
POINT MUGU, CA 93042-5049

Direct Delivery Address (UPS, FedEx, etc):
COMMANDER
CODE 4.7 (D. Huebert)
NAVAIRWARCENWPNDIV
BLDG 506, FL 1, RM 109
POINT MUGU, CA 93042-5049

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	Mini-RF Sensor Research CPFF The Contractor shall perform all Section C requirements associated with the research, fabrication, testing and delivery of demonstration hardware/software in accordance with Section C Statement of Work FOB: Destination	1	Lot		
				ESTIMATED COST	
				FIXED FEE	
				TOTAL EST COST + FEE	\$35,231,788.00

b(4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000101	FOR NAVY ACCOUNTING PURPOSES ONLY CPFF -/- FOB: Destination PURCHASE REQUEST NUMBER: 0010149160-0004				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AA CIN: 001014916000003				\$40,000.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000102	FOR NAVY ACCOUNTING PURPOSES ONLY CPFF -/ FOB: Destination PURCHASE REQUEST NUMBER: 0010149160-0004				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AB CIN: 001014916000001				\$1,866,574.78

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000103	FOR NAVY ACCOUNTING PURPOSES ONLY CPFF -/ FOB: Destination PURCHASE REQUEST NUMBER: 0010149160-0004				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	\$0.00
	ACRN AB CIN: 001014916000005				\$305,374.03

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000104	FOR NAVY ACCOUNTING PURPOSES ONLY				
	CPFF				
	-/-				
	FOB: Destination				
	PURCHASE REQUEST NUMBER: 0010149160-0004				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	<u>\$0.00</u>
	ACRN AC				\$90,000.00
	CIN: 001014916000006				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
000105	FOR NAVY ACCOUNTING PURPOSES ONLY				
	CPFF				
	-/-				
	FOB: Destination				
				ESTIMATED COST	\$0.00
				FIXED FEE	\$0.00
				TOTAL EST COST + FEE	<u>\$0.00</u>
	ACRN AB				\$4,306.00
	CIN: 001014916000007				

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		b(4)	Labor Hours		

Demo - System Engineering & Integration
CPFF

Note: Performance under this CLIN is authorized on the basis of technical direction letters signed by the COR or the Contracting Officer only. The Contractor shall perform demonstration level system engineering and integration support of demonstration hardware/software in accordance with Section C Statement of Work.

FOB: Destination

PURCHASE REQUEST NUMBER: 0010149160-0001

ESTIMATED COST	b(4)
FIXED FEE	
TOTAL EST COST + FEE	\$2,342,485.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Lot		NSP

Mini-RF Sensor Demo - Data
CPFF

Contractor Data Requirements List (CDRL), Exhibit A-/-

FOB: Destination

PURCHASE REQUEST NUMBER: 0010149160-0001

ESTIMATED COST	\$0.00
FIXED FEE	\$0.00
TOTAL EST COST + FEE	\$0.00

CLAUSES INCORPORATED BY FULL TEXT

5252.211-9503 LEVEL OF EFFORT (COST REIMBURSEMENT) (NAVAIR) (SEP 1999) -ALT I (MAR 1999)

(a) The level of effort for the performance of this contract during the period from [date of award] to [contract end date] is based upon an anticipated total estimated level of effort of b(4) man-hours of direct labor. The level of effort is expected to occur evenly over the contract term. The estimated composition of the total man-hours of direct labor by classification is as follows:

(b) Either FAR Clause 52.232-20, "Limitation of Cost" or FAR Clause 52.232-2, "Limitation of Funds", depending upon whether the contract is fully funded, applies to the contract, and nothing in this clause amends the

rights or responsibilities of the parties hereto under either of those two clauses. In addition, the notifications required by this clause are separate and distinct from any specified in either FAR Clause 52.232-20 or FAR Clause 52.232-22.

(c) It is agreed that, while the contractor's performance during the period set forth in paragraph (a) above is based upon an anticipated level of effort consisting of man-hours of direct labor (as may be described or defined elsewhere herein), such level of effort may fluctuate in pursuit of assigned technical objectives, either upward or downward, by no more than ten (10%) percent of the total anticipated man-hours. This fixed fee is agreed to be paid for man-hours expended from ninety (90%) percent to one hundred ten (110%) percent of the total anticipated man-hours. The fixed fee shall not vary with the cost of the actual effort supplied within this range. In the event that less than ninety (90%) percent of the anticipated level of effort is actually expended by the expiration date of the contract, the Government shall have the option of:

(1) requiring the contractor to continue to perform (but not to exceed thirty days) until the level of effort expended equals ninety (90%) percent of the anticipated level of effort; or

(2) effecting a reduction in the fixed fee by the percentage by which the total of expended man-hours is less than ninety (90%) percent of the anticipated level of effort.

(d) The contractor agrees that effort performed in fulfillment of level of effort obligations under this contract shall include only verifiable effort in direct support of the work specified. It shall not include efforts such as work performed in transit to or from an employee's usual workplace, work during lunchtime activities, or effort performed at an employee's residence or other non-work location.

(e) The Contractor shall notify the Procuring Contracting Officer immediately in writing whenever it has reason to believe that:

(1) The level of effort the Contractor expects to incur under the contract in the next 60 days, when added to the level of effort previously expended in the performance of the contract, will exceed seventy-five (75%) percent of the level of effort established for the contract; or

(2) The level of effort required to perform under the contract will be greater than the level of effort established for the contract.

As part of the notification, the Contractor shall provide the Contracting Officer a revised estimate of the level of effort required to perform the contract. As part of the notification, the Contractor also shall submit any proposal for adjustment to the estimated cost and fixed fee that it deems would be equitable if the Government were to increase the level of effort as proposed by the Contractor. Any such upward adjustment shall be prospective only, i.e., will apply only to effort expended after a modification (if any) is issued. However, whether an increase in fixed fee is appropriate shall depend on the circumstances involved, and, except as otherwise provided in the contract, shall be entirely within the discretion of the Contracting Officer. In no event, however, shall the fixed fee be increased unless the revised level of effort exceeds the previously established level of effort by more than ten (10%) percent. Statutory limits as established in the Federal Acquisition Regulation shall be maintained.

(f) Within thirty days after completion of the contract, the Contractor shall submit the following information directly, in writing, to the ordering officer, with copies to the COR and the Defense Contract Audit Agency office to which vouchers are submitted:

(1) The total number of man-hours of direct labor, including subcontract labor, expended and a breakdown of this total showing the number of man-hours expended in each direct labor classification listed in the contract schedule, including the identification of the key employees utilized;

(2) The Contractor's estimate of the total allowable cost incurred under the contract; and

(3) In the case of a cost under run, the amount by which the estimated cost of the contract may be reduced to recover excess funds.

(g) In the event that the incurred level of effort exceeds by three (3%) percent or less the contract requirement, but does not exceed the estimated cost of the contract, the contractor shall be entitled to cost reimbursement for actual hours expended, not to exceed the ceiling cost. The contractor shall not be paid fixed fee, however, on level of effort in excess of one hundred (100%) percent without complying with subsection (e) above. This understanding does not supersede or change subsection (e) above, whereby the contractor and Government may agree on a change to the contract level of effort with an equitable adjustment for both cost and fee.

Section C - Descriptions and Specifications

SOW**STATEMENT OF WORK
MINIATURE RADIO FREQUENCY (RF) ADVANCED TECHNOLOGY PROGRAM****1. Scope**

The Contractor shall provide the personnel, facilities and equipment required to support the Mini-RF Advanced Technologies Program demonstrations. The Contractor shall support three mini-RF sensor demonstrations by researching mini-RF sensor concepts selected from a number of Raytheon generated white papers evaluated under Broad Agency Announcement N68936-05-R-0024. The advanced concepts to be researched include: an antenna and the following modules: transmitter, analog receiver, exciter/waveform generator, and digital receiver. The units being researched will be integrated into an antenna system. Research will culminate in three Government flight demonstrations. In performance of this contract the contractor shall perform the necessary program management, control, and reporting functions required to manage, direct and accomplish the efforts required under this SOW.

The Contractor shall also support future advanced technology demonstrations by providing technology studies, as the need for such studies is identified, and specifically authorized in writing by the Project Manager, or Deputy Project Manager.

The Contractor shall support the system engineering and systems integration activities required to incorporate all relevant sensor technology modules into one or more of the three demonstrations listed above, as required by written technical direction letters signed by the COR and/or the Contracting Officer. This support shall be provided at the Contractor's facilities.

2 Applicable Documents

2.1 All applicable Government Documents are found on the Mini-RF Advanced Technologies e-room website, or in Section J of this contract.

3. Requirements**3.1 General Requirements**

The Contractor shall design, fabricate, test and deliver brassboards and proto-flight units of the following technology concepts: mini-RF payload, including the S Band transmitter, antenna, analog receiver, exciter waveform generator, and digital receiver. The Contractor shall ensure the proto-flight units meet the government furnished critical item development specification. The Contractor shall use the initial critical item development specifications to begin work on each module. That initial critical item development specification will be updated through the preliminary and critical design review process. The Contractor shall support the Government's System Engineering integrated product team (IPT) to develop and review system requirements and trades. Upon Government approval of the designs, the Contractor shall insure that the approved designs are used in fabrication and testing of the deliverable hardware. The Contractor shall support the preliminary and critical design review process by submitting complete design review packages, which include the technical, cost and schedule specifics of each design. Each design review package must be approved by the Government in writing, before work on the proto-flight modules is authorized under this contract. The Contractor shall be responsible for maintaining the integrity of each approved design. Changes to the baseline design must be approved by the Government in writing, and the impact of each change must be traceable throughout the mini-RF payload system itself, and at the demonstration system level as well. The Contractor shall be responsible for ensuring that each mini-RF payload system it delivers operates within the limits established for the demonstration it supports.

The Contractor shall perform mini-RF advanced technology studies, when such studies are authorized in writing by the Contracting Officer, to support work under the current mini-RF technology demonstrations, as well as possible future demonstrations.

The Contractor shall perform all the testing required to ensure that deliverable hardware operates within the limits established by the critical item development specification for the three demonstrations supported by this contract. The Contractor shall submit its acceptance test plans and procedures for government approval prior to acceptance testing. The Contractor shall obtain government approval of proposed changes to the approved test plans and procedures prior to implementing them in the test program. Contractor shall deliver test plans and procedure packages in accordance with CDRLs A002 and A003 respectively.

3.2 Specific Hardware/Software Requirements

Note: All deliverables shall operate in accordance with the following Baseline functional requirements

a.

[REDACTED]

b.

b(4)

c.

[REDACTED]

3.2.1 Antenna Requirements

- The Contractor shall conduct the engineering required to design, fabricate, integrate, and test the two Lunar Antennas (Forerunner and LRO) and one DoD Antenna
- [REDACTED] b(4) The electrical design shall also encompass the RF components on the antenna such as the hybrid or RF switches.
- Mechanical design of the Lunar antennas shall include the mechanical layout and design for the radiators, the mechanical design for interconnects, and the mechanical and thermal design for the components in a spaceborne environment.
- Electrical design of the DoD antenna shall include the radiator design, the X-band RF balun, and the X band RF feed layers. The electrical design shall also encompass the RF components on the antenna such as the hybrid or RF switches. An electrical interconnection design shall be completed to provide the required signal and power distribution to the active modules.
- Mechanical design of the antenna shall include the mechanical layout and design for the radiators, the mechanical design for interconnection and integration, and the mechanical layout design for the die attach/chip

attach as well as the overall physical interconnection design. Mechanical design will include mechanical and thermal design for the spaceborne environment.

- **Fabrication and Assembly** – The Contractor shall support fabrication of the brassboard units in preparation for flight unit fabrication. Proto-flight grade modules shall be fabricated using approved fabrication facilities and processes in accordance with our approved Performance Assurance plan.
- **Performance Testing** – The Contractor shall perform testing on all key performance parameters to verify compliance with specifications.
- **Proto-Flight Acceptance Testing** – The Contractor shall perform module proto-flight level testing.

3.2.2 Digital Receiver (DRx) and Waveform Generator (WFG) Module Requirements

- **Design support** – The Contractor shall provide design support and coordination as required regarding the design of the LRO & DoD Digital Receiver (DRx) and Waveform Generator (WFG) with regards to packaging, and other issues affecting ability to fabricate the flight unit.
- **Fabrication and Assembly** – The Contractor shall support fabrication of the brassboard units in preparation for flight unit fabrication. Proto-flight grade modules shall be fabricated using approved fabrication facilities and processes in accordance with our approved Performance Assurance plan. [b(4)]
- **Performance Testing** – The Contractor shall perform testing on all key performance parameters to verify compliance with specifications.
- **Proto-Flight Acceptance Testing** – The Contractor shall perform module proto-flight level testing.

3.2.3 Transmitter Module Requirements

- **Requirements Update** – The Contractor shall maintain the approved Transmitter design requirements. Once the transmitter design is approved, it will remain unchanged until such time as Raytheon requests and receives approval for specific changes.
- **Design/Analysis** – The Contractor shall design a modular plug-in transmitter module as part of the overall Forerunner payload. The allocated system requirements will be analyzed, and from these requirements the Contractor shall design and simulate the transmitter. The Contractor shall breadboard and perform critical experiments to fully characterized component and lower level board features.
- [b(4)]
- **Fabrication and Assembly** – The Contractor shall support fabrication of the brassboard units in preparation for flight unit fabrication. Proto-flight grade modules shall be fabricated using approved fabrication facilities and processes in accordance with our approved Performance Assurance plan. The Contractor shall fabricate risk-reduction breadboards to optimize and dial-in RF design performance parameters as necessary. The Contractor shall fabricate a form-factored brass-board and proto-flight grade Transmitter Module, using approved fabrication facilities and processes. The Contractor shall use approved qualified parts where technically

feasible. If non-qualified parts, COTS, are used, The Contract shall ensure that the non-qualified components get up-screened at NAWC (APL) as needed to comply with PAIP quality requirements.

- Performance Testing – The Contractor shall perform testing on all key performance parameters to verify compliance with specifications.
- Proto-Flight Acceptance Testing – The Contractor shall perform module proto-flight level testing.

3.2.4 Analog Receiver Module Requirements

- Requirements Update – The Contractor shall capture and document the Analog Receiver design requirements and Key Performance Parameters for each payload. Where specification updates are needed, the Contractor shall derive specifications based on upper level requirements.
- Design – The Contractor shall design Analog Receiver modules for each of the three mission payloads; Forerunner, LRO, and DOD. The Contractor shall emphasize the use of low cost manufacturing technologies and mission assurance. The Contractor shall breadboard and perform critical experiments to characterize components and lower level board features.
- Trade Studies – The Contractor shall perform trade studies on components, thermal management, cost, weight and packaging approaches to support designs that meet specifications in a space environment.
- Fabrication & Assembly – The Contractor shall fabricate risk-reduction engineering breadboards as needed to optimize RF performance parameters. The Contractor shall fabricate deliverable form-factored brass-board modules to validate the design. The Contractor shall fabricate flight grade modules using approved fabrication facilities and processes in accordance with its approved Product Assurance plan. The Contractor shall use approved qualified parts where technically feasible. If non-qualified parts are used, components shall be up-spec screened in coordination with NAWC (APL) as needed to comply with PAIP quality requirements.
- Performance Testing – The Contractor shall perform testing on all key performance parameters to verify compliance with specifications.
- Proto-Flight Acceptance Testing – The Contractor shall perform module proto-flight level testing.
- Payload Integration and Test Support – The Contractor shall work to ensure a seamless hand-off during payload integration, test, and systems qualification.

3.2.5 Exciter Module Requirements

- Requirements Update – The Contractor shall document Exciter design requirements and Key Performance Parameters for each payload. Where specification updates are needed, The Contractor shall derive specifications based on upper level requirements.
- Design – The Contractor shall design Exciter modules for each of the three mission payloads; Forerunner, LRO, and DOD. The contractor shall emphasize the use of low cost manufacturing technologies and mission assurance. As part of the design process The Contractor shall breadboard and perform critical experiments to characterize components and lower level board features.
- Trade Studies – The Contractor shall perform trade studies on exciter components, thermal management, cost, weight and packaging approaches to support designs that meet specifications in a space environment.

- **Fabrication & Assembly** – The Contractor shall fabricate risk-reduction engineering breadboards as needed to optimize RF performance parameters. The Contractor shall fabricate deliverable form-factored brass-board modules to validate the design. The Contractor shall fabricate flight grade modules using approved fabrication facilities and processes in accordance with its approved Product Assurance plan. The Contractor shall use approved qualified parts where technically feasible. If non-qualified parts are used, components shall be up-spec screened in coordination with NAWC (APL) as needed to comply with PAIP quality requirements.
- **Performance Testing** – The Contractor shall perform testing on all key performance parameters to verify compliance with specifications.
- **Proto-Flight Acceptance Testing** – The Contractor shall perform module proto-flight level testing.
- **Payload Integration and Test Support** – The Contractor shall work to ensure a seamless hand-off during payload integration, test, and systems qualification.

3.2.6 Software

The Contractor shall develop and deliver all software and software manuals required to ensure operability of the deliverable hardware. The deliverable software shall be tested for use on both breadboard/brassboard and proto-flight hardware, prior to delivery. The Contractor shall provide the necessary software support to ensure operability at both the unit level and the payload level during integration and testing. The contractor shall ensure that software design and development is fully documented, and any changes to approved software designs are documented in the software data packages that the Contractor shall deliver in accordance with CDRL A005 through A009.

3.2.7 Flight Demonstration System Engineering and Integration

The Contractor shall provide system engineering and/or integration support for each flight demonstration payload on an as needed basis, as required in technical direction letters signed by the COR and/or the Contracting Officer.

3.3 Design Reviews

The Contractor shall support the preliminary and critical design reviews scheduled by the Government to establish the specifications/ cost/ schedule for the antenna and each module. For each review, the Contractor shall submit a full design review package including the Contractor's design specifications, a summary of the estimated costs of delivering hardware as designed, and a schedule of any further design, fabrication, integration and testing milestone dates required to support the design. Fabrication, integration and/ or testing of any unapproved design is not authorized under this contract. The Contractor shall obtain written Government approval of the design, and maintain the approval notice in its design package. Email approval of a design is acceptable as long as the email notice specifically identifies the design under review, and specifically approves it.

3.4 Configuration Control

The Contractor shall maintain the integrity of all approved designs. The Contractor shall ensure that any change to an approved design is authorized by the Government, in writing, prior to implementation of the change. Email notice of the approval is acceptable as long as it specifically identifies the change under review, and specifically approves it. The Contractor shall ensure that the impact of each change is traceable throughout the antenna system itself, and at the demonstration system level as well.

3.5 Meetings / Travel

The Contractor shall provide support through to program statuses, usually by phone, and by traveling to locations designated by the contract's technical point of contact. Contractor travel, which is not posted on the program schedule maintained in the Mini-RF Advanced Technologies Program E-room, must be authorized in writing by the technical point of contact. Email authorization is acceptable.

3.6 Earned Value, Financial and Schedule Reporting Performance Requirements

3.6.1 Earned Value Data Requirements

The Contractor shall provide the following earned value data, rather than finished reports, as specified in CDRL A00A:

Planning Data (Time Phased Budget Data by WBS) (details in CDRL A00A)

Status Data

Variance Analysis Reporting (VAR)

3.6.2 Financial Data Requirements

The Contractor shall prepare and deliver financial data regarding contract performance per CDRL A00B including:

(1) Actual Cost Report by CLIN,

Provide the actual costs, and the monthly ETC forecasts by the following categories :

- Labor
- Overhead/Fringe
- ODC
 - Material
 - Travel
 - CFE (customer furnished equipment)
 - Subcontracts
 - Other ODC's
- Material handling
- G&A
- COM
- Total Cost
- MR (Management Reserve)
- Fee
- Grand total

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

5252.247-9507 PACKAGING AND MARKING OF REPORTS (NAVAIR) (OCT 2005)

(a) All unclassified data shall be prepared for shipment in accordance with best commercial practice. Classified reports, data and documentation, if any, shall be prepared for shipment in accordance with the National Industry Security Program Operating Manual, DoD 5220.22-M.

(b) The contractor shall promptly display on the cover of each report the following information:

- (1) Name and business address of contractor.
- (2) Contract Number/Delivery/Task order number.
- (3) Contract/Delivery/Task order dollar amount.
- (4) Whether the contract was competitively or non-competitively awarded.
- (5) Name of sponsoring individual.
- (6) Name and address of requiring activity.

5252.247-9509 PRESERVATION, PACKAGING, PACKING AND MARKING (NAVAIR) (JUL 1998)

(a) Preservation, packaging and packing shall conform to prevailing industry standards for the type of commodity purchased under this contract.

(b) All packages will be clearly marked with applicable contract number/delivery order number, and will contain appropriate packing slip. All deliveries will be marked for and/or consigned as follows:

[Bill Marinelli (760 382-3983)]

(c) In the event of any discrepancy in material shipped (overage, technical rejection, damage), the contractor shall, immediately upon request of the Contracting Officer, furnish disposition instructions. Normally, such disposition instruction shall be a properly completed Commercial Bill of Lading, which includes, but is not limited to, the mode of shipment, routing, special handling, and so forth.

(d) If the contractor is required to install equipment upon delivery, then the contractor shall inform the Government of the date of shipment from the contractor's facilities and the anticipated date of arrival at the site. This report shall be made no later than the actual date that the shipment is made from the contractor's facilities. The report may be made by facsimile or e-mail, to the point of contact listed in Section G. All transportation, rigging, drayage, packing, unpacking, and handling necessary to accomplish the installation shall be the responsibility of the contractor.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Origin	Government	Origin	Government
000101	N/A	N/A	N/A	Government
000102	N/A	N/A	N/A	Government
000103	N/A	N/A	N/A	Government
0002	Origin	Government	Origin	Government
0003	Destination	Government	Destination	Government

CLAUSES INCORPORATED BY REFERENCE

52.246-8	Inspection Of Research And Development Cost Reimbursement	MAY 2001
252.246-7000	Material Inspection And Receiving Report	MAR 2003

Section F - Deliveries or Performance

F-TXT

The Contracting Officer may withhold payment to the Contractor of one percent (1%) of the total contract price if technical data specified to be delivered under this contract, is not delivered within the time specified by this contract or is deficient upon delivery (including having restrictive markings not identified in the list described in the clause at 252.227-7013 (e)(2) or 252.227-7014(e)(2) of this contract), until such data is accepted by the Government.

DELIVERY INFORMATION

Deliveries shall be made in accordance with the program schedule available in the Mini-RF Advanced Technologies Program E-room, Schedule folder, Mini-RF_Enterprise_(most current date), and Mini-RF_Enterprise_Milestones_(most current date). Deliverable Modules are identified in Attachment 1.

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	30-DEC-2009	1 Lot	N/A FOB: Origin	N68936
000101	N/A	N/A	N/A	N/A
000102	N/A	N/A	N/A	N/A
000103	N/A	N/A	N/A	N/A
0002	30-DEC-2009	15,541 Hours	N/A FOB: Origin	N68936
0003	30-DEC-2009	1 Lot	N/A FOB: Destination	N68936

CLAUSES INCORPORATED BY REFERENCE

52.242-15 Alt I	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.247-29	F.O.B. Origin	JUN 1988
52.247-34	F.O.B. Destination	NOV 1991

CLAUSES INCORPORATED BY FULL TEXT

5252.247-9505 TECHNICAL DATA AND INFORMATION (NAVAIR) (FEB 1995)

Technical Data and Information shall be delivered in accordance with the requirements of the Contract Data Requirements List, DD Form 1423, Exhibit [A], attached hereto, and the following:

(a) The contractor shall concurrently deliver technical data and information per DD Form 1423, Blocks 12 and 13 (date of first/subsequent submission) to all activities listed in Block 14 of the DD Form 1423 (distribution and addresses) for each item. Complete addresses for the abbreviations in Block 14 are shown in paragraph (g) below.

Additionally, the technical data shall be delivered to the following cognizant codes, who are listed in Block 6 of the DD Form 1423.

- (1) PCO, Code [210000D].
- (2) ACO, Code [S0513A].
- (3) Project, Code [452000D]

(b) Partial delivery of data is not acceptable unless specifically authorized on the DD Form 1423, or unless approved in writing by the PCO.

(c) The Government review period provided on the DD Form 1423 for each item commences upon receipt of all required data by the technical activity designated in Block 6.

(d) A copy of all other correspondence addressed to the Contracting Officer relating to data item requirements (i.e., status of delivery) shall also be provided to the codes reflected above and the technical activity responsible for the data item per Block 6, if not one of the activities listed above.

(e) The PCO reserves the right to issue unilateral modifications to change the destination codes and addresses for all technical data and information at no additional cost to the Government.

(f) Unless otherwise specified in writing, rejected data items shall be resubmitted within thirty (30) days after receipt of notice of rejection.

(g) DD Form 1423, Block 14 Mailing Addresses: [See Section A, text entitled "FOR YOUR INFORMATION"]

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 97X4930 NH2C 252 77777 0 054219 2F 000000
COST CODE: 011346400020
AMOUNT: \$40,000.00
CIN 001014916000003: \$40,000.00
Funding Doc: NNH05AA14I

AB: 5753600 0000 295 60016 7 120000 00 659901 F44827065990 1
AMOUNT: \$2,176,254.81
CIN 001014916000007: \$4,306.00
CIN 001014916000001: \$1,866,574.78
CIN 001014916000005: \$305,374.03
Funding Doc: F448270

AC: 97X4930 NH2C 252 77777 0 054219 2F 000000
COST CODE: 011415070010
AMOUNT: \$90,000.00
CIN 001014916000006: \$90,000.00

CLAUSES INCORPORATED BY FULL TEXT

5252.201-9500 POINTS OF CONTACT (SEP 1999)

(a) The Project Manager for this contract is Bill Marinelli, (See Section A "For Your Information" text for mailing address, code and telephone number].

(b) The Project Manager will provide technical direction and discussion, as relating, but not limited to the specification and/or statement of work, and will monitor the progress and quality of contractor performance.

(c) The Project Manager is not an Administrative Contracting Officer and does not have authority to take any action, either directly or indirectly, that would change the pricing, quantity, quality, place of performance, delivery schedule, or any other terms and conditions of the contract (or delivery/task order), or to direct the accomplishment of effort which goes beyond the scope of the statement of work in the contract (or delivery/task order). When, in the opinion of the contractor, the Project Manager requests any of the aforementioned changes, the contractor shall promptly notify the Contracting Officer (or ordering officer, for delivery/task orders) in writing. If the contractor believes or interprets any action by the TPOC to be a change to the contract, the contractor will promptly notify the Contracting Officer in writing. Any failure by the contractor to notify the Contracting Officer in writing of any changes is an admission that the contractor is working at its own risk on a voluntary basis. No action shall be taken by the contractor under such direction until the Contracting Officer (or ordering officer) has issued a modification to the contract (or delivery/task order) concerning the subject change(s) or has otherwise resolved the issue.

5252.232-9503 INVOICE INSTRUCTIONS (MAR 1999)

(a) General. Strict compliance with the invoice instructions will facilitate early payment of invoices. However, no payment can be made until the contract is returned, properly executed, to

COMMANDER

CODE 210000D (D. Foucher – 760-939-8160)
NAVAIRWARCENWPNDIV
429 E. BOWEN RD. MAIL STOP 4015
CHINA LAKE, CA 93555-6108

(b) Assignments. Notwithstanding an assignment of money claims pursuant to authority contained in the contract, the contractor - not the assignee - is required to prepare invoices. Where such an assignment has been made, the original copy of the invoice must refer to the assignment and must show that payment of the invoice is to be made directly to the assignee as follows: Pursuant to the instrument of assignment, dated _____, make payment of this invoice to [name and address of assignee].

(c) Contractor Request for Progress Payment. If the contract provides for progress payments, each contractor request for progress payment shall be submitted on Standard Form 1443, Contractor Request for Progress Payment, directly to the ACO with any additional information reasonably requested by the ACO. With regard to ceiling priced orders, each Contractor Progress Payment Request shall be made in accordance with paragraph (k) of the clause entitled "Ordering -Provisioned Items", if included in the contract, or paragraph (k) of the clause entitled "Orders (Fixed-Price)". If the contract includes Foreign Military Sales (FMS) requirements, request for progress payment shall be submitted in accordance with the procedures of DFARS Clause 252.232-7002, "Progress Payments for Foreign Military Sales Acquisitions".

Note: Paragraph (C) of this clause is not applicable to this contract.

5252.232-9510 PAYMENT OF FIXED FEE (NAVAIR) (AUG 2003)

(a) The fixed fee, as specified in Section B of this contract, subject to any adjustment required by other provisions of this contract, will be paid in installments. The fixed fee will be paid not more frequently than [bi-weekly] based on the allowable cost. For fee payable under CLIN 0001, the amount of each such installment shall be in the same ratio to the total CLIN 0001 fixed fee as the related provisional payment on account of allowable cost is to the total estimated cost of the contract or order. For fee payable under CLIN 0002, the amount of each such installment shall be in the same ratio to the total CLIN 0002 fixed fee as the net direct labor hours expended by prime contractor personnel and Intra Organization Transfer (IOT) personnel is to direct labor hours specified in the Section B text entitled CLIN 0002 Level of Effort, or \$13.52 per hour. Payment shall be made in accordance with FAR Clauses 52.216-7, "Allowable Cost and Payment", and 52.216-8, "Fixed Fee".

(b) In the event of discontinuance of the work in accordance with the FAR Clause 52.232-22, "Limitation of Funds", the fixed fee shall be redetermined by mutual agreement equitably to reflect the reduction of the work performed. The amount by which such fixed fee is less than or exceeds payments previously made on account of fee, shall be paid to (or repaid by) the contractor.

(c) The balance of the fixed fee shall be payable in accordance with other clauses of this contract.

(d) For indefinite delivery type contracts the terms of this clause apply to each delivery/task order there under.

(Paragraph (d) is not applicable to this contract.)

5252.232-9521 PAYMENT INQUIRIES (NAVAIR) (APR 2005)

Inquiries regarding payment should be referred to: the DFAS Vendor Pay Inquiry System (VPIS) at <http://www.dod.mil/dfas/money/vendor/>. Payment information can be traced using the contract number, check number, CAGE code, DUNS number, or invoice number. The information is available for 90 days after payment is made.

5252.242-9502 TECHNICAL DIRECTION (NAVAIR) (MAR 1999)

(a) When necessary, technical direction or clarification concerning the details of specific tasks set forth in the contract shall be given through issuance of Technical Direction Letters (TDLs) by the Contracting Officer's Representative (COR).

(b) Each TDL shall be in writing and shall include, as a minimum, the following information:

- (1) Date of TDL;
- (2) Contract and TDL number;
- (3) Reference to the relevant section or item in the statement of work;
- (4) Signature of COR.

(c) Each TDL issued hereunder is subject to the terms and conditions of this contract; and in no event shall technical directions constitute an assignment of new work or changes to such nature as to justify any adjustment to the fixed fee, estimated costs, or delivery terms under the contract. In the event of a conflict between a TDL and this contract, the contract shall control.

(d) When in the opinion of the contractor a technical direction calls for effort outside the contract statement of work, the contractor shall notify the Contracting Officer thereof in writing, with a copy to the COR, within two (2) working days of having received the technical direction in question. The contractor shall undertake no performance to comply with the technical direction until the matter has been resolved by the Contracting Officer through formal contract modification or other appropriate action.

(e) Oral technical directions may be given by the COR only in emergency circumstances, and provided that any oral technical direction given is reduced in writing by the COR within two (2) working days of its issuance.

(f) Amendments to a TDL shall be in writing and shall include the information set forth in paragraph (b) above. A TDL may be amended orally only by [the contracting officer] in emergencies; oral amendments shall be confirmed in writing within two (2) working days from the time of the oral communication amending the TDL by a TDL modification.

(g) Any effort undertaken by the contractor pursuant to oral or written technical directions issued other than in accordance with the provisions herein shall be at the contractor's risk of not recovering related costs incurred and corresponding proportionate amount of fixed fee, if any.

Note: Until such time as a COR is assigned to this contract, the Contracting Officer's signature is required on technical direction letters, to authorize work under CLIN 0002.

5252.242-9511 CONTRACT ADMINISTRATION DATA (NAVAIR) (MAY 1998)

(a) Contract Administration Office.

- (1) Contract administration functions (see FAR 42.302 and DFARS 242.302) are assigned to: DCMA See SF26, Block 6

(2) Contract administration functions withheld, additional contract administration functions assigned, or special instructions (see FAR 42.202) are: [none.]

(3) The Accounting Classification Reference Numbers (ACRN) assigned by the Naval Air Systems Command shall be used in applicable contract modifications or orders or modifications thereto issued by the cognizant contract administration office. If no ACRN is assigned by [Naval Air Systems Command], the contract administration office may assign a two-position ACRN that can be either alpha-numeric (A1 through B9 and continuing, if necessary through Z9, excluding the letters "I" and "O") or alpha (AA through ZZ, excluding the letters "I" and "O"), (see DFARS 204.7101).

(4) The cognizant contract administration office shall distribute to the U.S. Navy International Logistics Control Office (NAVILCO) (Code 20), 700 Robbins Avenue, Philadelphia, Pennsylvania 19111, a copy of any report or document which indicates an anticipated or actual delay in the delivery of supplies or services called for under the Navy International Logistics Program (ILP) Foreign Military Sales (FMS) (or Military Assistance Program (MAP)) Item(s) identified in Section B, if any. Copies of reports or documents distributed to NAVILCO shall include the applicable Item number, the FMS Case identifier and FMS country (or MAP record Control/Program Directive number identifier) and the requisition number and shall be in addition to any other distribution required by this contract or directives applicable to the cognizant contract administration office.

(b) PCO Quality Assurance Representative. Any quality assurance questions, comments, problems, recommendations, etc., which cannot be resolved at the Administrative Contracting Officer (ACO) Quality Assurance Representative (QAR) level should be communicated to the Procuring Contracting Officer (PCO) QAR designated below:

[Bill Marinelli]

(c) Paying Office. The disbursing office which will make payments is designated as follows:
[See SF26, Block 12]

(d) Remittance Address. The address to which payments should be mailed by the Government is: IAW CCR
[insert this address upon award]

For purposes of this contract, paragraph (4) does not apply.

G-TXT-01 ATTENTION! E-MAIL ADDRESS REQUIRED FOR DISTRIBUTION (APR 2002)

All Naval Air Warfare Center Weapons Division Contracts/ Purchase Orders and other related documents are now distributed by electronic mail.

Please provide the e-mail address to which distribution of contracts/purchase orders should be made.

E-Mail Address: Gerald.L.Cruce@raytheon.com

G-TXT-10 INVOICING INSTRUCTIONS AND PAYMENT (WAWF) (JUN 2005)

(a) Invoices under this Contract shall be submitted electronically through Wide Area Work Flow – Receipt and Acceptance (WAWF):

(1) The vendor shall self-register at the web site <https://wawf.eb.mil>. Vendor training is available on the internet at <http://www.wawftraining.com/>. Additional support can be accessed by calling the NAVY WAWF Assistance Line: 800-559-WAWF (9293).

(2) A separate invoice will be prepared [not more frequently than bi-weekly].

(3) Select the invoice type within WAWF as specified below. Back up documentation (such as timesheets, etc.) can be included and attached to the invoice in WAWF. Attachments created in any Microsoft Office product are acceptable.

(b) The following information regarding [Naval Air Warfare Center Weapons Division] is provided for completion of the invoice in WAWF:

WAWF Invoice Type:	Combo
Issuing Office DODAAC	N68936
Admin Office DODAAC:	S0514A
Inspector DODAAC (if applicable):	N68936
Acceptor DODAAC (if applicable):	N68936
Local Processing Office DODAAC:	N68936
Paying Office DODAAC:	HQ0339

(c) The contractor shall submit invoices for payment per contract terms.

(d) The Government shall process invoices for payment per contract terms.

(e) For Navy accounting purposes only:

Code 210000D, Name ___Laurel Fletcher_____

Phone:___(760) 939-8484___, Fax: ___laurel.fletcher@navy.mil___

G-TXT-21 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (APR 2002)

This contract has multiple accounting classification citations. When such segregation of costs by ACRN is not possible for invoices / vouchers, such as CLINS/SLINS with more than one ACRN, payment will be made using the following method:

Payment will be made from each ACRN in the order they are assigned. (i.e, pay from ACRN: AA then from ACRN: AB, etc.)

Payment will be made from ACRN with the earliest available fiscal year funding source and then in the order the ACRNs were assigned within the fiscal year funding. In the case of 97X____ appropriations, the notes under the line of accounting may indicate the fiscal year of the original source of the funding.

Payment will be made from ACRN with the earliest available fiscal year funding source and then on a proportional basis across all of accounting classification citations for the fiscal year. The allocation ratio shall be established in the same ratio as the obligations cited in the accounting data for each fiscal year. When there are adjustments to the funding, the payment office will have to recompute the ratio based on amount of unliquidated obligated funding available for payment. In the case of 97X____ appropriations, the notes under the line of accounting may indicate the fiscal year of the original source of the funding.

Payment will be made on a proportional basis across all of accounting classification citations. The allocation ratio shall be established in the same ratio as the obligations cited in the accounting data. When there are adjustments to the funding, the payment office will have to recompute the ratio based on amount of unliquidated obligated funding available for payment.

Section H - Special Contract Requirements

CLAUSES INCORPORATED BY REFERENCE

252.247-7023 Transportation of Supplies by Sea

MAY 2002

CLAUSES INCORPORATED BY FULL TEXT

5252.210-9501 AVAILABILITY OF UNIQUE DATA ITEM DESCRIPTIONS (UDIDs) AND DATA ITEM DESCRIPTIONS (DIDs) (NAVAIR) (OCT 2005)

Access Procedures for Acquisition Management System and Data Requirements Control List (AMSDDL), DoD 5010.12-L, and DIDs listed therein. The AMSDDL and all DIDs and UDIDs listed therein are available online via the Acquisition Streamlining and Standardization Information System located at <http://assist.daps.dla.mil>. To access these documents, select the Quick Search link on the site home page.

5252.227-9507 NOTICE REGARDING THE DISSEMINATION OF EXPORT-CONTROLLED TECHNICAL DATA (NAVAIR) (OCT 2005)

(a) Export of information contained herein, which includes release to foreign nationals within the United States, without first obtaining approval or license from the Department of State for items controlled by the International Traffic in Arms Regulations (ITARs), or the Department of Commerce for items controlled by the Export Administration Regulations (EAR), may constitute a violation of law.

(b) For violation of export laws, the contractor, its employees, officials or agents are subject to:

- (1) Imprisonment and/or imposition of criminal fines; and
- (2) Suspension or debarment from future Government contracting actions.

(c) The Government shall not be liable for any unauthorized use or release of export-controlled information, technical data or specifications in this contract.

(d) The contractor shall include the provisions or paragraphs (a) through (c) above in any subcontracts awarded under this contract.

5252.227-9511 DISCLOSURE, USE AND PROTECTION OF PROPRIETARY INFORMATION (NAVAIR) (OCT 1994)

(a) During the performance of this contract, the Government may use an independent services contractor (ISC), who is neither an agent nor employee of the Government. The ISC may be used to conduct reviews, evaluations, or independent verification and validations of technical documents submitted to the Government during performance.

(b) The use of an ISC is solely for the convenience of the Government. The ISC has no obligation to the prime contractor. The prime contractor is required to provide full cooperation, working facilities and access to the ISC for the purposes stated in paragraph (a) above.

(c) Since the ISC is neither an employee or agent of the Government, any findings, recommendations, analyses, or conclusions of such a contractor are not those of the Government.

(d) The prime contractor acknowledges that the Government has the right to use ISCs as stated in paragraph (a) above. It is possible that under such an arrangement the ISC may require access to or the use of information (other than restricted cost or pricing data), which is proprietary to the prime contractor.

(e) To protect any such proprietary information from disclosure or use, and to establish the respective rights and duties of both the ISC and prime contractor, the prime contractor agrees to enter into a direct agreement with any

ISC as the Government requires. A properly executed copy (per FAR 9.505-4) of the agreement will be provided to the Procuring Contracting Officer.

5252.231-9500 PRECONTRACT COSTS (MAR 1999)

The allowable cost of this contract shall include all costs which have been incurred by the contractor on and after September 30, 2005 in anticipation of the award of this contract, but prior to the effective date of this contract. Such costs shall be allowable only if they could have been considered as items of allowable cost if incurred after the effective date of the contract. Such anticipatory costs shall not exceed \$1,900,000.00.

5252.232-9509 REIMBURSEMENT OF TRAVEL, PER DIEM, AND SPECIAL MATERIAL COSTS (NAVAIR) (MAR 2000)

(a) Area of Travel. Performance under this contract may require travel by contractor personnel. If travel, domestic or overseas, is required, the contractor is responsible for making all necessary arrangements for its personnel. These include but are not limited to: medical examinations, immunizations, passports/visas/etc., and security clearances. All contractor personnel required to perform work on any U.S. Navy vessel shall obtain boarding authorization from the Commanding Officer of the vessel before boarding.

(b) Travel Policy. The Government will reimburse the contractor for allowable travel costs incurred by the contractor in performance of the contract in accordance with FAR Subpart 31.2. Travel required for tasks assigned under this contract shall be governed in accordance with: Federal Travel Regulations, prescribed by the General Services Administration for travel in the conterminous 48 United States, (hereinafter the FTR); Joint Travel Regulation, Volume 2, DoD Civilian Personnel, Appendix A, prescribed by the Department of Defense, for travel in Alaska, Hawaii, The Commonwealth of Puerto Rico, and territories and possessions of the United States (hereinafter JTR); and Standardized Regulations (Government Civilians, Foreign Areas), Section 925, "Maximum Travel Per Diem Allowances for Foreign Areas," prescribed by the Department of State, for travel in areas not covered in the FTR or JTR (hereinafter the SR).

(c) Travel. Travel and subsistence are authorized for travel beyond a fifty-mile radius of the contractor's office whenever a task assignment requires work to be accomplished at a temporary alternate worksite. No travel or subsistence shall be charged for work performed within a fifty-mile radius of the contractor's office. The contractor shall not be paid for travel or subsistence for contractor personnel who reside in the metropolitan area in which the tasks are being performed. Travel performed for personal convenience, in conjunction with personal recreation, or daily travel to and from work at the contractor's facility will not be reimbursed.

(1) For travel costs other than described in paragraph (c) above, the contractor shall be paid on the basis of actual amount paid to the extent that such travel is necessary for the performance of services under the contract and is authorized by the COR in writing.

(2) When transportation by privately owned conveyance is authorized, the contractor shall be paid on a mileage basis not to exceed the applicable Government transportation rate as contained in the FTR, JTR or SR. Authorization for the use of privately owned conveyance shall be indicated in the basic contract. Distances traveled between points shall be shown on invoices as listed in standard highway mileage guides. Reimbursement will not exceed the mileage shown in the standard highway mileage guides.

(3) The contractor agrees, in the performance of necessary travel, to use the lowest cost mode commensurate with the requirements of the mission as set forth in the basic contract and in accordance with food traffic management principles. When it is necessary to use air or rail travel, the contractor agrees to use coach, tourist class, or similar accommodations to the extent consistent with the successful and economical accomplishment of the mission for which the travel is being performed.

(4) The contractor's invoices shall include receipts or other evidence substantiating actual costs incurred for authorized travel. In no event will such payments exceed the rates of common carriers.

(d) Vehicle and/or Truck Rentals. The contractor shall be reimbursed for actual rental/lease of special vehicles and/or trucks (i.e., of a type not normally used by the contractor in the conduct of its business) only if authorized in

the basic contract or upon approval by the COR. Reimbursement of such rental shall be made based on actual amounts paid by the contractor. Use of rental/lease costs of vehicles and/or trucks that are of a type normally used by the contractor in the conduct of its business are not subject to reimbursement.

(e) Car Rental. The contractor shall be reimbursed for car rental, exclusive of mileage charges, as authorized in the basic contract or upon approval by the COR, when the services are required to be performed beyond the normal commuting distance from the contractor's facilities. Car rental for a team on TDY at one site will be allowed for a minimum of four (4) persons per car, provided that such number or greater comprise the TDY team.

(f) Per Diem. The contractor shall not be paid for per diem for contractor personnel who reside in the metropolitan areas in which the tasks are being performed. Per Diem shall not be paid on services performed within a fifty-mile radius of the contractor's home office or the contractor's local office. Per Diem is authorized for contractor personnel beyond a fifty-mile radius of the contractor's home or local offices whenever a task assigned requires work to be done at a temporary alternate worksite. Per Diem shall be paid to the contractor only to the extent that overnight stay is necessary and authorized under this contract. The authorized per diem rate shall be the same as the prevailing per diem in the worksite locality. These rates will be based on rates contained in the FTR, JTR or SR. The applicable rate is authorized at a flat seventy-five (75%) percent on the day of departure from contractor's home or local office, and on the day of return. Reimbursement to the contractor for per diem shall be limited to actual payments to per diem defined herein. The contractor shall provide actual payments of per diem defined herein. The contractor shall provide supporting documentation for per diem expenses as evidence of actual payment.

(g) Shipboard Stays. Whenever work assignments require temporary duty aboard a Government ship, the contractor will be reimbursed at the per diem rates identified in paragraph C8101.2C or C81181.3B(6) of the Department of Defense Joint Travel Regulations, Volume II.

(h) Special Material. "Special material" includes only the costs of material, supplies, or services which is peculiar to the ordered data and which is not suitable for use in the course of the contractor's normal business. It shall be furnished pursuant to specific authorization approved by the COR. The contractor will be required to support all material costs claimed by its costs less any applicable discounts. "Special materials" include, but are not limited to, graphic reproduction expenses, or technical illustrative or design requirements needing special processing.

5252.243-9504 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (NAVAIR) (JAN 1992)

(a) Except as specified in paragraph (b) below, no order, statement, or conduct of Government personnel who visit the contractor's facilities or in any other manner communicates with contractor personnel during the performance of this contract shall constitute a change under the "Changes" clause of this contract.

(b) The contractor shall not comply with any order, direction or request of Government personnel unless it is issued in writing and signed by the Contracting Officer, or is pursuant to specific authority otherwise included as a part of this contract.

(c) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in this contract, the said authority remains solely the Contracting Officer's. In the event the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority and no adjustment will be made in the contract price to cover any increase in charges incurred as a result thereof. The address and telephone number of the Contracting Officer is Diane Foucher, (See Section A "For Your Information" text for the mailing address and phone number).

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 2003
52.204-2	Security Requirements	AUG 1996
52.204-7	Central Contractor Registration	OCT 2003
52.211-5	Material Requirements	AUG 2000
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 1997
52.215-12	Subcontractor Cost or Pricing Data	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.215-15	Pension Adjustments and Asset Reversions	OCT 2004
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-19	Notification of Ownership Changes	OCT 1997
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.216-7	Allowable Cost And Payment	DEC 2002
52.216-8	Fixed Fee	MAR 1997
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-4	Contract Work Hours and Safety Standards Act - Overtime Compensation	JUL 2005
52.222-19	Child Labor -- Cooperation with Authorities and Remedies	JUN 2004
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.223-3	Hazardous Material Identification And Material Safety Data	JAN 1997
52.223-6	Drug-Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.227-1 Alt I	Authorization And Consent (Jul 1995) - Alternate I	APR 1984
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.227-10	Filing Of Patent Applications--Classified Subject Matter	APR 1984
52.227-12	Patent Rights--Retention By The Contractor (Long Form)	JAN 1997
52.228-7	Insurance--Liability To Third Persons	MAR 1996

52.230-2	Cost Accounting Standards	APR 1998
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-17	Interest	JUN 1996
52.232-20	Limitation Of Cost	APR 1984
52.232-22	Limitation Of Funds	APR 1984
52.232-23	Assignment Of Claims	JAN 1986
52.232-25	Prompt Payment	OCT 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-3	Penalties for Unallowable Costs	MAY 2001
52.242-4	Certification of Final Indirect Costs	JAN 1997
52.242-13	Bankruptcy	JUL 1995
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V	APR 1984
52.243-6	Change Order Accounting	APR 1984
52.244-2	Subcontracts	AUG 1998
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	DEC 2004
52.245-5	Government Property (Cost-Reimbursement Time-And- Materials, Or Labor Hour Contracts)	MAY 2004
52.245-18	Special Test Equipment	FEB 1993
52.245-19	Government Property Furnished "As Is"	APR 1984
52.246-24 Alt I	Limitation Of Liability--High Value Items (Feb 1997) - Alternate I	APR 1984
52.246-25	Limitation Of Liability--Services	FEB 1997
52.249-6	Termination (Cost Reimbursement)	MAY 2004
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense- Contract-Related Felonies	DEC 2004
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	NOV 2003
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.211-7000	Acquisition Streamlining	DEC 1991
252.211-7003	Item Identification and Valuation	JUN 2005
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	OCT 1998
252.219-7004	Small, Small Disadvantaged Women-Owned Business Subcontracting Plan (Test Program)	JUN 1997
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7001	Buy American Act And Balance Of Payments Program	JUN 2005
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7012	Preference For Certain Domestic Commodities	JUN 2004
252.225-7014	Preference For Domestic Specialty Metals	JUN 2005
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	JUN 2005
252.227-7000	Non-estoppel	OCT 1966
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation	JUN 1995

252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends	JUN 1995
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.232-7003	Electronic Submission of Payment Requests	JAN 2004
252.235-7010	Acknowledgment of Support and Disclaimer	MAY 1995
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 2000
252.247-7023	Transportation of Supplies by Sea	MAY 2002

CLAUSES INCORPORATED BY FULL TEXT

52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0.00, or the overtime premium is paid for work --

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) As required by 42 U.S.C. 7671j(b), (c), and (d) and 40 CFR Part 82, Subpart E, the Contractor shall label products which contain a class I or class II ozone-depleting substance or are manufactured with a process that uses class I or class II ozone-depleting substances, or containers of class I or class II ozone-depleting substances, as follows: "WARNING: Contains (or manufactured with, if applicable) _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

*The Contractor shall insert the name of the substance(s).

52.243-7 NOTIFICATION OF CHANGES (APR 1984)

(a) Definitions. "Contracting Officer," as used in this clause, does not include any representative of the Contracting Officer. "Specifically authorized representative (SAR)," as used in this clause, means any person the Contracting Officer has so designated by written notice (a copy of which shall be provided to the Contractor) which shall refer to this subparagraph and shall be issued to the designated representative before the SAR exercises such authority.

(b) Notice. The primary purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing, within 1 calendar days from the date that the Contractor identifies any Government conduct (including actions, inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state--

- (1) The date, nature, and circumstances of the conduct regarded as a change;
- (2) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such conduct;
- (3) The identification of any documents and the substance of any oral communication involved in such conduct;
- (4) In the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;
- (5) The particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including--
 - (i) What contract line items have been or may be affected by the alleged change;
 - (ii) What labor or materials or both have been or may be added, deleted, or wasted by the alleged change;
 - (iii) To the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;
 - (iv) What adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated; and

(6) The Contractor's estimate of the time by which the Government must respond to the Contractor's notice to minimize cost, delay or disruption of performance.

(c) Continued performance. Following submission of the notice required by (b) above, the Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless the notice reports a direction of the Contracting Officer or a communication from a SAR of the Contracting Officer, in either of which events the Contractor shall continue performance; provided, however, that if the Contractor regards the direction or communication as a change as described in (b) above, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall countermand any action which exceeds the authority of the SAR.

(d) Government response. The Contracting Officer shall promptly, within 3 calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either--

- (1) Confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;
- (2) Countermand any communication regarded as a change;
- (3) Deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance; or
- (4) In the event the Contractor's notice information is inadequate to make a decision under (1), (2), or (3) above, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(e) Equitable adjustments.

(1) If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and the conduct causes an increase or decrease in the Contractor's cost of, or the time required for, performance of

any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made--

- (i) In the contract price or delivery schedule or both; and
- (ii) In such other provisions of the contract as may be affected.

(2) The contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and for which the Government is responsible, the equitable adjustment shall include the cost and time extension for delay reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer under this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of the property. The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide notice or to continue performance as provided, respectively, in (b) and (c) above.

NOTE: The phrases "contract price" and "cost" wherever they appear in the clause, may be appropriately modified to apply to cost- reimbursement or incentive contracts, or to combinations thereof.

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): www.arnet.gov/far/ or www.farsite.hill.af.mil/

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

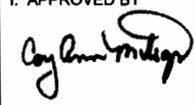
(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

Section J - List of Documents, Exhibits and Other Attachments

LIST OF ATTACHMENTS

Exhibit & Attachment Numbers	Description	Document Date
Exhibit A	Contract Data Requirements List	11-21-05
Exhibit B	Work Breakdown Structure	9-30-05
Exhibit C	Comprehensive Subcontracting Plan (extension)	11-14-05
Attachment 1	Module Delivery Schedule	11-21-05
Attachment 2	Ground Rules & Assumptions	11-14-05

CONTRACT DATA REQUIREMENTS LIST <i>(1 Data Item)</i>					Form Approved OMB No. 0704-0188						
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA, 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.											
A. CONTRACT LINE ITEM NO.		B. EXHIBIT		C. CATEGORY:							
		A		TDP TM OTHER: QCIC							
D. SYSTEM/ITEM			E. CONTRACT/PR NO.		F. CONTRACTOR						
Mini Radio Frequency Advance Technologies			N68936-06-C-0021		RAYTHEON						
1. DATA ITEM NO.	2. TITLE OF DATA ITEM			3. SUBTITLE							
A002	ACCEPTANCE TEST PLAN										
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE		6. REQUIRING OFFICE						
DI-QCIC-80553			SOW Para 3.1, 3.2		NAVAIRWD CODE 452400D						
7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION						
LT	SEE BLK 16	ASREQ	SEE BLK 16								
8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE		b. COPIES					
A	NA	SEE BLK 16				Draft Final					
<p>Block 16 Remarks</p> <p>Block 4: May be in contractor format as long as the DID is used for guidance.</p> <p>Block 9: Distribution Statement will be provided by the Government prior to 1st submittal.</p> <p>Block 12 & 13: Plans shall be submitted 30 DP to start of testing. Final plans shall be submitted with comments incorporated 15 DA receipt of Government comments.</p> <p>Block 14: Shall be delivered in an electronic format agreed upon by both the Government and Contractor prior to 1st submittal.</p>				Code 452400D		0	1	0			
				Code 210000D			LTR	ONLY			
				15. TOTAL				➔	0	1	0
				G. PREPARED BY			H. DATE	I. APPROVED BY		J. DATE	
Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100			051129	 DRRB Chairperson		051129					

CONTRACT DATA REQUIREMENTS LIST <i>(1 Data Item)</i>					Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA, 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.						
A. CONTRACT LINE ITEM NO.		B. EXHIBIT A	C. CATEGORY: TDP TM OTHER: NDTI			
D. SYSTEM/ITEM Mini Radio Frequency Advance Technologies		E. CONTRACT/PR NO. N68936-06-C-0021		F. CONTRACTOR RAYTHEON		
1. DATA ITEM NO. A003	2. TITLE OF DATA ITEM TEST PROCEDURE		3. SUBTITLE			
4. AUTHORITY (Data Acquisition Document No.) DI-NDTI-80603		5. CONTRACT REFERENCE SOW Para 3.1, 3.2		6. REQUIRING OFFICE NAVAIRWD CODE 452400D		
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED SEE BLK 16	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION		
8. APP CODE A	11. AS OF DATE NA	13. DATE OF SUBSEQUENT SUBMISSION SEE BLK 16	a. ADDRESSEE	Draft	b. COPIES	
					Reg	Final
					Repro	
Block 16 Remarks			Code 452400D	0	1	0
			Code 210000D		LTR	ONLY
Block 4: May be in contractor format as long as the DID is used for guidance.						
Block 9: Distribution Statement will be provided by the Government prior to 1st submittal.						
Block 12 & 13: Plans shall be submitted 30 DP to start of testing. Final plans shall be submitted with comments incorporated 15 DA receipt of Government comments.						
Block 14: Shall be delivered in an electronic format agreed upon by both the Government and Contractor prior to 1st submittal.						
			15. TOTAL	0	1	0
G. PREPARED BY Naval Air Warfare Center, Weapons Division, China Lake, CA 93555-6100		H. DATE 051129	I. APPROVED BY DRRB Chairperson		J. DATE 051129	

CONTRACT DATA REQUIREMENTS LIST <i>(1 Data Item)</i>					Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA, 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for Contract/PR No. listed in Block E.						
A. CONTRACT LINE ITEM NO.		B. EXHIBIT A	C. CATEGORY: TDP IPSC TM OTHER:			
D. SYSTEM/ITEM Mini Radio Frequency Advance Technologies		E. CONTRACT/PR NO. N68936-06-C-0021		F. CONTRACTOR RAYTHEON		
1. DATA ITEM NO. A007	2. TITLE OF DATA ITEM SOFTWARE VERSION DESCRIPTION (SVD)			3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.) DI-IPSC-81442A		5. CONTRACT REFERENCE SOW Para 3.2.6		6. REQUIRING OFFICE NAVAIRWD CODE 452400D		
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED SEE BLK 16	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION SEE BLK 16	14. DISTRIBUTION		
8. APP CODE A	11. AS OF DATE SEE BLK 16	13. DATE OF SUBSEQUENT SUBMISSION SEE BLK 16	a. ADDRESSEE	b. COPIES		
Block 16 Remarks				Draft	Final	
					Reg	Repro
Block 4: May be in contractor format as long as all requirements of SOW and TDP Optional Selection Worksheet (DD 2554) are met.				0	1	0
Block 9: Distribution Statement will be provided by the Government prior to 1st submittal.						LTR ONLY
Block 10 through 13: Submission shall be as described in the SOW. Government has 10 days to review. Updates due not later than 5 days after receipt of Government comments, if any.						
Block 14: The Design Review Data packages shall be submitted in an electronic format agreed upon by both the Government and Contractor prior to first delivery.						

CONTINUATION SHEET FOR A00A
SHEET 1 OF 2

CDRL A00A

Title: PERFORMANCE AND COST REPORT
 Subtitle: Schedule Reporting Requirements
 DID: DI-FNCL-80912

Block 16: Remarks

1. Block 4. Deliverable Items:

(1) Planning Data (Time Phased Budget Data by WBS)

- a. Provide a Comma Separated Value (CSV) file of time phased budget data.
- b. Provide Estimates-At-Completion (ETC) or Budget-To-Complete (BTC) by WBS element for each sub-CLIN in whole hours and whole dollars.
- c. The following CSV format shall be used for data delivery:

CLIN, WBS_ELEMENT, *TYPE_OF_COST, DATE, HOURS, DOLLARS (CR)

***TYPE_OF_COST = BUDGET_TO_COMPLETE (BTC) or ESTIMATE_TO_COMPLETE (ETC)**

Value	Value Type	Format or Value	Examples
CLIN	Alpha-Numeric	- Digits 1-4 = CLIN Number - Digits 5-6 = CLIN (Alpha or Number)	0001 0001AA
WBS_ELEMENT	Alpha/Numeric	WBS format	1.01.10.03
TYPE_OF_COST	Alpha	BTC or ETC	BTC ETC
DATE	Date	MM/DD/YY	12/05/99
HOURS	Numeric	- Whole Hours	1750 0045
DOLLARS	Dollar	- Whole Dollars - Do not precede by \$ - Do not Comma Delimit	123456789 12345000000

Continuation Sheet for A00A

- (2) Status Data
- a. Provide a Comma Separated Value (CSV) file of the cumulative to date:
 - Budgeted Cost for Work Performed (BCWP)
 - Actual Cost of Work Performed (ACWP)
 - b. Provide data of 2a by WBS element for each CLIN in hours and whole dollars.
 - c. The following CSV format shall be used for data delivery:

CLIN, WBS_ELEMENT, **TYPE_OF_COST, HOURS (ACWP only), DOLLARS (CR)
**** TYPE_OF_COST = Budgeted Cost for Work Performed (BCWP) or Actual Cost of Work Performed (ACWP)**

Value	Value Type	Format or Value	Examples
CLIN	Alpha-Numeric	- Digits 1-4 = CLIN Number - Digits 5-6 = Sub-CLIN (Alpha or Number)	0001 0001AA
WBS_ELEMENT	Alpha/Numeric	WBS format	1.01.10.03
TYPE_OF_COST	Alpha	BCWP or ACWP	BCWP ACWP
HOURS	Numeric	Whole Hours	1750 0045
DOLLARS	Dollar	- Whole Dollars - Do not precede by \$ - Do not Comma Delimit	123456789 12345000000

- (3) Variance Analysis Reporting (VAR)
- a. Provide a VAR by Sub-CLIN (Level 3) that exceed the thresholds of +/- \$100K and +/- 10% of BCWS with visibility into problem WBS elements.
 - b. VAR reporting shall use CPR Format 5.

2. Block 12:

1. Date of First Submission:

	CLIN	BASELINE	PLANNING DATA VAR	STATUS DATA
All	60 days after contract award	20 days after Baseline	20 days after first full month accounting period following Baseline	25 days after first full month accounting period following Baseline

3. Block 13:

2. Date of Subsequent Submissions:

CLIN	Planning Data	Status Data	VAR
All	Monthly -- 20 days after each full month accounting period	Monthly -- 20 days after each full month accounting period	Monthly -- 25 days after each full month accounting period

CONTINUATION SHEET FOR A00B
SHEET 1 OF 1

CDRL A00B

Title: Performance and Cost Report
Subtitle: Financial Data Requirements
DID: DI-FNCL-80912

Block 16: Remarks

1. Block 4:

Provide the following financial data (see below)

- CDRL A021 Cost and Performance Report
- Contractor shall provide monthly ITD labor hrs
- Contractor shall provide monthly ITD incurred cost by the following categories:
 - Labor
 - Overhead/Fringe
 - ODC
 - Material
 - Travel
 - CFE (customer furnished equipment)
 - Subcontracts
 - Other ODC's
 - Material handling
 - G&A
 - COM
 - Total Cost
 - MR (Management Reserve)
 - Fee
 - Grand total
- Contractor shall provide monthly ETC forecasts by the same categories listed above

DATA ITEM DESCRIPTION

Title: SOFTWARE USER MANUAL (SUM)

Number: DI-IPSC-81443A

Approval Date: 20000111

AMSC Number: N7378

Limitation: N/A

DTIC Applicable: No

GIDEP Applicable: No

Office of Primary Responsibility: N/SPAWAR

Applicable Forms: N/A

Use, Relationships:

The Software User Manual (SUM) tells a hands-on software user how to install and use a Computer Software Configuration Item (CSCI), a group of related CSCI's, or a software system or subsystem. It may also cover a particular aspect of software operation, such as instructions for a particular position or task.

The SUM is developed for software that is run by the user and has a user interface requiring on-line user input or interpretation of displayed output. If the software is embedded in a hardware-software system, user manuals or operating procedures for that system may make separate SUMs unnecessary.

This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

This DID is used when the developer is tasked to identify and record information needed by hands-on users of software.

The SUM is an alternative to the Software Input/Output Manual (SIOM) (DI-IPSC-81445A) and Software Center Operator Manual (SCOM) (DI-IPSC-81444A).

This DID supersedes DI-IPSC-81443.

Requirements:

1. Reference documents. None.

2. General instructions.

a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.

b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.

3. Format. Following are the format requirements.

The specification shall be in contractor format unless otherwise specified on the Contract Data Requirements List (CDRL)(DD 1423). The CDRL should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

4. Content. The specification shall contain the following:

a. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

b. Table of contents and index. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix, and an index providing an alphabetic listing of key terms and concepts covered in the document and the pages or paragraphs in which the terms or concepts are covered. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

c. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.

d. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.

e. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.

f. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.

g. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

The numbers shown designate the paragraph numbers to be used in the document.

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Software summary. This section shall be divided into the following paragraphs.

3.1 Software application. This paragraph shall provide a brief description of the intended uses of the software. Capabilities, operating improvements, and benefits expected from its use shall be described.

3.2 Software inventory. This paragraph shall identify all software files, including databases and data files, that must be installed for the software to operate. The identification shall include security and privacy considerations for each file and identification of the software necessary to continue or resume operation in case of an emergency.

3.3 Software environment. This paragraph shall identify the hardware, software, manual operations, and other resources needed for a user to install and run the software. Included, as applicable, shall be identification of:

a. Computer equipment that must be present, including amount of memory needed, amount of auxiliary storage needed, and peripheral equipment such as printers and other input/output devices

b. Communications equipment that must be present

c. Other software that must be present, such as operating systems, databases, data files, utilities, and other supporting systems

d. Forms, procedures, or other manual operations that must be present

e. Other facilities, equipment, or resources that must be present

3.4 Software organization and overview of operation. This paragraph shall provide a brief description of the organization and operation of the software from the user's point of view. The description shall include, as applicable:

a. Logical components of the software, from the user's point of view, and an overview of the purpose/operation of each component

b. Performance characteristics that can be expected by the user, such as:

1) Types, volumes, rate of inputs accepted

2) Types, volume, accuracy, rate of outputs that the software can produce

3) Typical response time and factors that affect it

4) Typical processing time and factors that affect it

5) Limitations, such as number of events that can be tracked

6) Error rate that can be expected

7) Reliability that can be expected

c. Relationship of the functions performed by the software with interfacing systems, organizations, or positions

d. Supervisory controls that can be implemented (such as passwords) to manage the software

3.5 Contingencies and alternate states and modes of operation. This paragraph shall explain differences in what the user will be able to do with the software at times of emergency and in various states and modes of operation, if applicable.

3.6 Security and privacy. This paragraph shall contain an overview of the security and privacy considerations associated with the software. A warning shall be included regarding making unauthorized copies of software or documents, if applicable.

3.7 Assistance and problem reporting. This paragraph shall identify points of contact and procedures to be followed to obtain assistance and report problems encountered in using the software.

4. Access to the software. This section shall contain step-by-step procedures oriented to the first time/occasional user. Enough detail shall be presented so that the user can reliably access the software before learning the details of its functional capabilities. Safety precautions, marked by WARNING or CAUTION, shall be included where applicable.

4.1 First-time user of the software. This paragraph shall be divided into the following subparagraphs.

4.1.1 Equipment familiarization. This paragraph shall describe the following as appropriate:

- a. Procedures for turning on power and making adjustments
- b. Dimensions and capabilities of the visual display screen
- c. Appearance of the cursor, how to identify an active cursor if more than one cursor can appear, how to position a cursor, and how to use a cursor
- d. Keyboard layout and role of different types of keys and pointing devices
- e. Procedures for turning power off if special sequencing of operations is needed

4.1.2 Access control. This paragraph shall present an overview of the access and security features of the software that are visible to the user. The following items shall be included, as applicable:

- a. How and from whom to obtain a password
- b. How to add, delete, or change passwords under user control
- c. Security and privacy considerations pertaining to the storage and marking of output reports and other media that the user will generate

4.1.3 Installation and setup. This paragraph shall describe any procedures that the user must perform to be identified or authorized to access or install software on the equipment, to perform the installation, to configure the software, to delete or overwrite former files or data, and to enter parameters for software operation.

4.2 Initiating a session. This paragraph shall provide step-by-step procedures for beginning work, including any options available. A checklist for problem determination shall be included in case difficulties are encountered.

4.3 Stopping and suspending work. This paragraph shall describe how the user can cease or interrupt use of the software and how to determine whether normal termination or cessation has occurred.

5. Processing reference guide. This section shall provide the user with procedures for using the software. If procedures are complicated or extensive, additional Sections 6, 7, ... may be added in the same paragraph structure as this section and with titles meaningful to the sections selected. The organization of the document will depend on the characteristics of the software being documented. For example, one approach is to base the sections on the organizations in which users work, their assigned positions, their work sites, or the tasks they must perform. For other software, it may be more appropriate to have Section 5 be a guide to menus, Section 6 be a guide to the command language used, and Section 7 be a guide to functions. Detailed procedures are intended to be presented in subparagraphs of paragraph 5.3. Depending on the design of the software, the subparagraphs might be organized on a function-by-function, menu-by-menu, transaction-by-transaction, or other basis. Safety precautions, marked by WARNING or CAUTION, shall be included where applicable.

5.1 Capabilities. This paragraph shall briefly describe the interrelationships of the transactions, menus, functions, or other processes in order to provide an overview of the use of the software.

5.2 Conventions. This paragraph shall describe any conventions used by the software, such as the use of colors in displays, the use of audible alarms, the use of abbreviated vocabulary, and the use of rules for assigning names or codes.

5.3 Processing procedures. This paragraph shall explain the organization of subsequent paragraphs, e.g., by function, by menu, by screen. Any necessary order in which procedures must be accomplished shall be described.

5.3.x (Aspect of software use). The title of this paragraph shall identify the function, menu, transaction, or other process being described. This paragraph shall describe and give options and examples, as applicable, of menus, graphical icons, data entry forms, user inputs, inputs from other software or hardware that may affect the software's interface with the user, outputs, diagnostic or error messages or alarms, and help facilities that can provide on-line descriptive or tutorial information. The format for presenting this information can be adapted to the particular characteristics of the software, but a consistent style of presentation shall be used, i.e., the descriptions of menus shall be consistent, the descriptions of transactions shall be consistent among themselves.

5.4 Related processing. This paragraph shall identify and describe any related batch, offline, or background processing performed by the software that is not invoked directly by the user and is not described in paragraph 5.3. Any user responsibilities to support this processing shall be specified.

5.5 Data backup. This paragraph shall describe procedures for creating and retaining backup data that can be used to replace primary copies of data in event of errors, defects, malfunctions, or accidents.

5.6 Recovery from errors, malfunctions, and emergencies. This paragraph shall present detailed procedures for restart or recovery from errors or malfunctions occurring during processing and for ensuring continuity of operations in the event of emergencies.

5.7 Messages. This paragraph shall list, or refer to an appendix that lists, all error messages, diagnostic messages, and information messages that can occur while accomplishing any of the user's functions. The meaning of each message and the action that should be taken after each such message shall be identified and described.

5.8 Quick-reference guide. If appropriate to the software, this paragraph shall provide or reference a quick-reference card or page for using the software. This quick-reference guide shall summarize, as applicable, frequently used function keys, control sequences, formats, commands, or other aspects of software use.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document. If Section 5 has been expanded into section(s) 6, ..., this section shall be numbered as the next section following section n.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

END OF DI-IPSC-81443A.

DATA ITEM DESCRIPTION

Title: SOFTWARE VERSION DESCRIPTION (SVD)

Number: DI-IPSC-81442A

Approval Date: 20000111

AMSC Number: N7377

Limitation: N/A

DTIC Applicable: No

GIDEP Applicable: No

Office of Primary Responsibility: N/SPAWAR

Applicable Forms: N/A

Use, Relationships:

The Software Version Description (SVD) identifies and describes a software version consisting of one or more Computer Software Configuration Items (CSCIs). It is used to release, track, and control software versions.

The term "version" may be applied to the initial release of the software, to a subsequent release of that software, or to one of multiple forms of the software released at approximately the same time (for example, to different sites).

This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

This DID is used when the developer is tasked to identify and record the exact version of software to be delivered to a user, support, or other site.

This DID supersedes DI-IPSC-81442.

Requirements:

1. Reference documents. None.
2. General instructions.
 - a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.
 - b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.
3. Format. Following are the format requirements.

The specification shall be in contractor format unless otherwise specified on the Contract Data Requirements List (CDRL)(DD 1423). The CDRL should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII,

CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

4. Content. The specification shall contain the following:

a. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

b. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

c. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.

d. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.

e. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.

f. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.

g. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

The numbers shown designate the paragraph numbers to be used in the document.

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s). It shall also identify the intended recipients of the SVD to the extent that this identification affects the contents of the software released (for example, source code may not be released to all recipients.)

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Version description. This section shall be divided into the following paragraphs.

3.1 Inventory of materials released. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all physical media (for example, listings, tapes, disks) and associated documentation that make up the software version being released. It shall include applicable security and privacy considerations for these items, safeguards for handling them, such as concerns for static and magnetic fields, and instructions and restrictions regarding duplication and license provisions.

3.2 Inventory of software contents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all computer files that make up the software version being released. Any applicable security and privacy considerations shall be included.

3.3 Changes installed. This paragraph shall contain a list of all changes incorporated into the software version since the previous version. If change classes have been used, such as the Class I/Class II changes in MIL-STD-973, the changes shall be separated into these classes. This paragraph shall identify, as applicable, the problem reports, change proposals, and change notices associated with each change and the effects, if any, of each change on system operation and on interfaces with other hardware and software. This paragraph does not apply to the initial software version.

3.4 Adaptation data. This paragraph shall identify or reference all unique-to-site data contained in the software version. For software versions after the first, this paragraph shall describe changes made to the adaptation data.

3.5 Related documents. This paragraph shall list by identifying numbers, titles, abbreviations, dates, version numbers, and release numbers, as applicable, all documents pertinent to the software version being released but not included in the release.

3.6 Installation instructions. This paragraph shall provide or reference the following information, as applicable:

- a. Instructions for installing the software version
- b. Identification of other changes that have to be installed for this version to be used, including site-unique adaptation data not included in the software version
- c. Security, privacy, or safety precautions relevant to the installation
- d. Procedures for determining whether the version has been installed properly
- e. A point of contact to be consulted if there are problems or questions with the installation

3.7 Possible problems and known errors. This paragraph shall identify any possible problems or known errors with the software version at the time of release, any steps being taken to resolve the problems or errors, and instructions (either directly or by reference) for recognizing, avoiding, correcting, or otherwise handling each one. The information presented shall be appropriate to the intended recipient of the SVD (for example, a user agency may need advice on avoiding errors, a support agency on correcting them).

4. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

END OF DI-IPSC-81442A.

DATA ITEM DESCRIPTION

Title: SOFTWARE DESIGN DESCRIPTION (SDD)

Number: DI-IPSC-81435A

Approval Date: 19991215

AMSC Number: N7360

Limitation:

DTIC Applicable:

GIDEP Applicable:

Office of Primary Responsibility: NAVY/EC

Applicable Forms:

Use, Relationships:

The Software Design Description (SDD) describes the design of a Computer Software Configuration Item (CSCI). It describes the CSCI-wide design decisions, the CSCI architectural design, and the detailed design needed to implement the software. The SDD may be supplemented by Interface Design Descriptions (IDDs) (DI-IPSC-81436) and Database Design Descriptions (DBDDs) (DI-ISC-81437) as described below.

The SDD, with its associated IDDs and DBDDs, is used as the basis for implementing the software. It provides the acquirer visibility into the design and provides information needed for software support.

This DID contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

This DID is used when the developer is tasked to define and record the design of a CSCI.

Design pertaining to interfaces may be presented in the SDD or in IDDs. Design pertaining to databases may be presented in the SDD or DBDDs.

This DID supersedes DI-IPSC-81435.

Requirements:

1. Reference documents. None.
2. General instructions.
 - a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.
 - b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.
3. Format. Following are the format requirements.

The description shall be in contractor format unless otherwise specified on the Contract Data Requirements List (CDRL)(DD 1423). The CDRL should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

4. Content. The description shall contain the following:

a. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

b. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

c. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.

d. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.

e. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.

f. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.

g. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

The numbers shown designate the paragraph numbers to be used in this document.

1. **Scope.** This section shall be divided into the following paragraphs.

1.1 **Identification.** This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 **System overview.** This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 **Document overview.** This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. **Referenced documents.** This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. **CSCI-wide design decisions.** This section shall be divided into paragraphs as needed to present CSCI-wide design decisions, that is, decisions about the CSCI's behavioral design (how it will behave, from a user's point of view, in meeting its requirements, ignoring internal implementation) and other decisions affecting the selection and design of the software units that make up the CSCI. If all such decisions are explicit in the CSCI requirements or are deferred to the design of the CSCI's software units, this section shall so state. Design decisions that respond to requirements designated critical, such as those for safety, security, or privacy, shall be placed in separate paragraphs. If a design decision depends upon system states or modes, this dependency shall be indicated. Design conventions needed to understand the design shall be presented or referenced. Examples of CSCI-wide design decisions are the following:

a. Design decisions regarding inputs the CSCI will accept and outputs it will produce, including interfaces with other systems, HWICs, CSCIs, and users (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Interface Design Descriptions (IDDs), they may be referenced.

b. Design decisions on CSCI behavior in response to each input or condition, including actions the CSCI will perform, response times and other performance characteristics, description of physical systems modeled, selected equations/algorithms/rules, and handling of unallowed inputs or conditions.

c. Design decisions on how databases/data files will appear to the user (4.3.x of this DID identifies topics to be considered in this description). If part or all of this information is given in Database Design Descriptions (DBDDs), they may be referenced.

d. Selected approach to meeting safety, security, and privacy requirements.

e. Other CSCI-wide design decisions made in response to requirements, such as selected approach to providing required flexibility, availability, and maintainability.

4. **CSCI architectural design.** This section shall be divided into the following paragraphs to describe the CSCI architectural design. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced.

4.1 **CSCI components.** This paragraph shall:

a. Identify the software units that make up the CSCI. Each software unit shall be assigned a project-unique identifier.

Note: A software unit is an element in the design of a CSCI; for example, a major subdivision of a CSCI, a component of that subdivision, a class, object, module, function, routine, or database. Software units may occur at different levels of a hierarchy and may consist of other software units. Software units in the design may or may not have a one-to-one relationship with the code and data entities (routines, procedures, databases, data files, etc.) that implement them or with the computer files containing those entities. A database may be treated as CSCI or as a software unit. The SDD may refer to software units by any name(s) consistent with the design methodology being used.

b. Show the static (such as “consists of”) relationship(s) of the software units. Multiple relationships may be presented, depending on the selected software design methodology (for example, in an object-oriented design, this paragraph may present the class and object structures as well as the module and process architectures of the CSCI).

c. State the purpose of each software unit and identify the CSCI requirements and CSCI-wide design decisions allocated to it. (Alternatively, the allocation of requirements may be provided in 6.a.)

d. Identify each software unit’s development status/type (such as new development, existing design or software to be reused as is, existing design or software to be reengineered, software to be developed for reuse, software planned for Build N, etc.) For existing design or software, the description shall provide identifying information, such as name, version, documentation references, library, etc.

e. Describe the CSCI’s (and as applicable, each software unit’s) planned utilization of computer hardware resources (such as processor capacity, memory capacity, input/output device capacity, auxiliary storage capacity, and communications/network equipment capacity). The description shall cover all computer hardware resources included in resource utilization requirements for the CSCI, in system-level resource allocations affecting the CSCI, and in resource utilization measurement planning in the Software Development Plan. If all utilization data for a given computer hardware resource are presented in a single location, such as in one

SDD, this paragraph may reference that source. Included for each computer hardware resource shall be:

- 1) The CSCI requirements or system-level resource allocations being satisfied
- 2) The assumptions and conditions on which the utilization data are based (for example, typical usage, worst-case usage, assumption of certain events)
- 3) Any special considerations affecting the utilization (such as use of virtual memory, overlays, or multiprocessors or the impacts of operating system overhead, library software, or other implementation overhead)
- 4) The units of measure used (such as percentage of processor capacity, cycles per second, bytes of memory, kilobytes per second)
- 5) The level(s) at which the estimates or measures will be made (such as software unit, CSCI, or executable program)

f. Identify the program library in which the software that implements each software unit is to be placed.

4.2 Concept of execution. This paragraph shall describe the concept of execution among the software units. It shall include diagrams and descriptions showing the dynamic relationship of the software units, that is, how they will interact during CSCI operation, including, as applicable, flow of execution control, data flow, dynamically controlled sequencing, state transition diagrams, priorities among units, handling of interrupts, timing/sequencing relationships, exception handling, concurrent execution, dynamic allocation/deallocation, dynamic creation/deletion of objects, processes, tasks, and other aspects of dynamic behavior.

4.3 Interface design. This paragraph shall be divided into the following subparagraphs to describe the interface characteristics of the software units. It shall include both interfaces among the software units and their interfaces with external entities such as systems, configuration items, and users. If part or all of this information is contained in Interface Design Descriptions (IDDs), in section 5 of the SDD, or elsewhere, these sources may be referenced.

4.3.1 Interface identification and diagrams. This paragraph shall state the project-unique identifier assigned to each interface and shall identify the interfacing entities (software units, systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided, as appropriate, to depict the interfaces.

4.3.x (Project-unique identifier of interface). This paragraph (beginning with 4.3.2) shall identify an interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to describe the interface

characteristics of one or both of the interfacing entities. If a given interfacing entity is not covered by this SDD (for example, an external system) but its interface characteristics need to be mentioned to describe interfacing entities that are, these characteristics shall be stated as assumptions or as “When [the entity not covered] does this, [the entity that is covered] will” This paragraph may reference other documents (such as data dictionaries, standards for protocols, and standards for user interfaces) in place of stating the information here. The design description shall include the following, as applicable, presented in any order suited to the information to be provided, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority assigned to the interface by the interfacing entity (ies)
- b. Type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Characteristics of individual data elements that the interfacing entity (ies) will provide, store, send, access, receive, etc., such as:

- 1) Names/identifiers

- a) Project-unique identifier
- b) Non-technical (natural-language) name
- c) DOD standard data element name
- d) Technical name (e.g., variable or field name in code or database)
- e) Abbreviation or synonymous names

- 2) Data type (alphanumeric, integer, etc.)

- 3) Size and format (such as length and punctuation of a character string)

- 4) Units of measurement (such as meters, dollars, nanoseconds)

- 5) Range or enumeration of possible values (such as 0-99)

- 6) Accuracy (how correct) and precision (number of significant digits)

- 7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply

- 8) Security and privacy constraints

9) Sources (setting/sending entities) and recipients (using/receiving entities)

d. Characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the interfacing entity (ies) will provide, store, send, access, receive, etc., such as:

1) Names/identifiers

- a) Project-unique identifier
- b) Non-technical (natural language) name
- c) Technical name (e.g., record or data structure name in code or database)
- d) Abbreviations or synonymous names

2) Data elements in the assembly and their structure (number, order, grouping)

3) Medium (such as disk) and structure of data elements/assemblies on the medium

4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)

5) Relationships among assemblies, such as sorting/access characteristics

6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply

7) Security and privacy constraints

8) Sources (setting/sending entities) and recipients (using/receiving entities)

e. Characteristics of communication methods that the interfacing entity (ies) will use for the interface such as:

1) Project-unique identifier(s)

2) Communication links/bands/frequencies/media and their characteristics

3) Message formatting

4) Flow control (such as sequence numbering and buffer allocation)

5) Data transfer rate, whether periodic/apperiodic, and interval between transfers

- 6) Routing, addressing, and naming conventions
- 7) Transmission services, including priority and grade
- 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing

f. Characteristics of protocols that the interfacing entity(ies) will use for the interface, such as:

- 1) Project-unique identifier(s)
- 2) Priority/layer of the protocol
- 3) Packeting, including fragmentation and reassembly, routing, and addressing
- 4) Legality checks, error control, and recovery procedures
- 5) Synchronization, including connection establishment, maintenance, termination
- 6) Status, identification, and any other reporting features

g. Other characteristics, such as physical compatibility of the interfacing entity (ies) (dimensions, tolerances, loads, voltages, plug compatibility, etc.)

5. CSCI detailed design. This section shall be divided into the following paragraphs to describe each software unit of the CSCI. If part or all of the design depends upon system states or modes, this dependency shall be indicated. If design information falls into more than one paragraph, it may be presented once and referenced from the other paragraphs. Design conventions needed to understand the design shall be presented or referenced. Interface characteristics of software units may be described here, in Section 4, or in Interface Design Descriptions (IDDs). Software units that are databases, or that are used to access or manipulate databases, may be described here or in Database Design Descriptions (DBDDs).

5.x (Project-unique identifier of a software unit, or designator of a group of software units). This paragraph shall identify a software unit by project-unique identifier and shall describe the unit. The description shall include the following information, as applicable. Alternatively, this paragraph may designate a group of software units and identify and describe the software units and identify and describe the software units in subparagraphs. Software units that contain other software units may reference the descriptions of those units rather than repeating information.

- a. Unit design decisions, if any, such as algorithms to be used, if not previously selected
- b. Any constraints, limitations, or unusual features in the design of the software unit

c. The programming language to be used and rationale for its use if other than the specified CSCI language

d. If the software unit consists of or contains procedural commands (such as menu selections in a database management system (DBMS) for defining forms and reports, on line DBMS queries for database access and manipulation, input to a graphical user interface (GUI) builder for automated code generation, commands to the operating system, or shell scripts), a list of the procedural commands and reference to user manuals or other documents that explain them

e. If the software unit contains, receives, or outputs data, a description of its inputs, outputs, and other data elements and data element assemblies, as applicable. Paragraph 4.3.x of this DID provides a list of topics to be covered, as applicable. Data local to the software unit shall be described separately from data input to or output from the software unit. If the software unit is a database, a corresponding Database Design Description (DBDD) shall be referenced; interface characteristics may be provided here or by referencing section 4 or the corresponding Interface Design Description(s).

f. If the software unit contains logic, the logic to be used by the software unit, including, as applicable:

- 1) Conditions in effect within the software unit when its execution is initiated
- 2) Conditions under which control is passed to other software units
- 3) Response and response time to each input, including data conversion, renaming, and data transfer operations
- 4) Sequence of operations and dynamically controlled sequencing during the software unit's operation, including:
 - a) The method for sequence control
 - b) The logic and input conditions of that method, such as timing variations, priority assignments
 - c) Data transfer in and out of memory
 - d) The sensing of discrete input signals, and timing relationships between interrupt operations within the software unit
- 5) Exception and error handling
6. Requirements traceability. This section shall contain:

DI-IPSC-81435A

a. Traceability from each software unit identified in this SDD to the CSCI requirements allocated to it. (Alternatively, this traceability may be provided in 4.1.)

b. Traceability from each CSCI requirement to the software units to which it is allocated.

7. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

END OF DI-IPSC-81435A

DATA ITEM DESCRIPTION

Title: SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

Number: DI-IPSC-81433A

Approval Date: 19991215

AMSC Number: N7358

Limitation:

DTIC Applicable:

GIDEP Applicable:

Office of Primary Responsibility: NAVY/EC

Applicable Forms:

Use/ Relationships:

The Software Requirements Specification (SRS) specifies the requirements for a Computer Software Configuration Item (CSCI) and the methods to be used to ensure that each requirement has been met. Requirements pertaining to the CSCI's external interfaces may be presented in the SRS or in one or more Interface Requirements Specifications (IRs) (DI-IPSC-81434A) referenced from the SRS.

The SRS, possibly supplemented by IRs, is used as the basis for design and qualification testing of a CSCI.

This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by specific and discrete task requirements as delineated in the contract.

This DID is used when the developer is tasked to define and record the software requirements to be met by a CSCI.

Requirements pertaining to CSCI interfaces may be presented in the SRS or in IRs.

This DID supersedes DI-IPSC-81433.

Requirements:

1. Reference documents. None.
2. General instructions.
 - a. Automated techniques. Use of automated techniques is encouraged. The term "document" in this DID means a collection of data regardless of its medium.
 - b. Alternate presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles.
3. Format. Following are the format requirements.

The specification shall be in contractor format unless otherwise specified on the Contract Data Requirements List (CDRL)(DD 1423). The CDRL should specify whether deliverable data are to be delivered on paper or electronic media; are to be in a given electronic form (such as ASCII, CALS, or compatible with a specified word processor or other support software); may be delivered in developer format rather than in the format specified herein; and may reside in a computer-aided software engineering (CASE) or other automated tool rather than in the form of a traditional document.

4. Content. The specification shall contain the following:

a. Title page or identifier. The document shall include a title page containing, as applicable: document number; volume number; version/revision indicator; security markings or other restrictions on the handling of the document; date; document title; name, abbreviation, and any other identifier for the system, subsystem, or item to which the document applies; contract number; CDRL item number; organization for which the document has been prepared; name and address of the preparing organization; and distribution statement. For data in a database or other alternative form, this information shall be included on external and internal labels or by equivalent identification methods.

b. Table of contents. The document shall contain a table of contents providing the number, title, and page number of each titled paragraph, figure, table, and appendix. For data in a database or other alternative form, this information shall consist of an internal or external table of contents containing pointers to, or instructions for accessing, each paragraph, figure, table, and appendix or their equivalents.

c. Page numbering/labeling. Each page shall contain a unique page number and display the document number, including version, volume, and date, as applicable. For data in a database or other alternative form, files, screens, or other entities shall be assigned names or numbers in such a way that desired data can be indexed and accessed.

d. Response to tailoring instructions. If a paragraph is tailored out of this DID, the resulting document shall contain the corresponding paragraph number and title, followed by "This paragraph has been tailored out." For data in a database or other alternative form, this representation need occur only in the table of contents or equivalent.

e. Multiple paragraphs and subparagraphs. Any section, paragraph, or subparagraph in this DID may be written as multiple paragraphs or subparagraphs to enhance readability.

f. Standard data descriptions. If a data description required by this DID has been published in a standard data element dictionary specified in the contract, reference to an entry in that dictionary is preferred over including the description itself.

g. Substitution of existing documents. Commercial or other existing documents may be substituted for all or part of the document if they contain the required data.

The numbers shown designate the paragraph numbers to be used in the document.

1. Scope. This section shall be divided into the following paragraphs.

1.1 Identification. This paragraph shall contain a full identification of the system and the software to which this document applies, including, as applicable, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

1.2 System overview. This paragraph shall briefly state the purpose of the system and the software to which this document applies. It shall describe the general nature of the system and software; summarize the history of system development, operation, and maintenance; identify the project sponsor, acquirer, user, developer, and support agencies; identify current and planned operating sites; and list other relevant documents.

1.3 Document overview. This paragraph shall summarize the purpose and contents of this document and shall describe any security or privacy considerations associated with its use.

2. Referenced documents. This section shall list the number, title, revision, and date of all documents referenced in this document. This section shall also identify the source for all documents not available through normal Government stocking activities.

3. Requirements. This section shall be divided into the following paragraphs to specify the CSCI requirements, that is, those characteristics of the CSCI that are conditions for its acceptance. CSCI requirements are software requirements generated to satisfy the system requirements allocated to this CSCI. Each requirement shall be assigned a project-unique identifier to support testing and traceability and shall be stated in such a way that an objective test can be defined for it. Each requirement shall be annotated with associated qualification method(s) (see section 4) and traceability to system (or subsystem, if applicable) requirements (see section 5.a) if not provided in those sections. The degree of detail to be provided shall be guided by the following rule: Include those characteristics of the CSCI that are conditions for CSCI acceptance; defer to design descriptions those characteristics that the acquirer is willing to leave up to the developer. If there are no requirements in a given paragraph, the paragraph shall so state. If a given requirement fits into more than one paragraph, it may be stated once and referenced from the other paragraphs.

3.1 Required states and modes. If the CSCI is required to operate in more than one state or mode having requirements distinct from other states or modes, this paragraph shall identify and define each state and mode. Examples of states and modes include idle, ready, active, post-use analysis, training, degraded, emergency, backup, wartime, peacetime. The distinction between states and modes is arbitrary. A CSCI may be described in terms of states only, modes only, states within modes, modes within states, or any other scheme that is useful. If no states or modes are required, this paragraph shall so state, without the need to create artificial distinctions. If states and/or modes are required, each requirement or group of requirements in this specification shall be correlated to the states and modes. The correlation may be indicated by a table or other method in this paragraph, in an appendix referenced from this paragraph or by annotation of the requirements in the paragraphs where they appear.

3.2 CSCI capability requirements. This paragraph shall be divided into subparagraphs to itemize the requirements associated with each capability of the CSCI. A “capability” is defined as a group of related requirements. The word “capability” may be replaced with “function,” “subject,” “object,” or other term useful for presenting the requirements.

3.2.x (CSCI capability). This paragraph shall identify a required CSCI capability and shall itemize the requirements associated with the capability. If the capability can be more clearly specified by dividing it into constituent capabilities, the constituent capabilities shall be specified in subparagraphs. The requirements shall specify required behavior of the CSCI and shall include applicable parameters, such as response times, throughput times, other timing constraints, sequencing, accuracy, capacities (how much/how many), priorities, continuous operation requirements, and allowable deviations based on operating conditions. The requirements shall include, as applicable, required behavior under unexpected, unallowed, or “out of bounds” conditions, requirements for error handling, and any provisions to be incorporated into the CSCI to provide continuity of operations in the event of emergencies. Paragraph 3.3.x of this DID provides a list of topics to be considered when specifying requirements regarding inputs the CSCI must accept and outputs it must produce.

3.3 CSCI external interface requirements. This paragraph shall be divided into subparagraphs to specify the requirements, if any, for the CSCI’s external interfaces. This paragraph may reference one or more Interface Requirements Specifications (IRSs) or other documents containing these requirements.

3.3.1 Interface identification and diagrams. This paragraph shall identify the required external interfaces of the CSCI (that is, relationships with other entities that involve sharing, providing or exchanging data). The identification of each interface shall include a project-unique identifier and shall designate the interfacing entities (systems, configuration items, users, etc.) by name, number, version, and documentation references, as applicable. The identification shall state which entities have fixed interface characteristics (and therefore impose interface requirements on interfacing entities) and which are being developed or modified (thus having interface requirements imposed on them). One or more interface diagrams shall be provided to depict the interfaces.

3.3.x (Project-unique identifier of interface). This paragraph (beginning with 3.3.2) shall identify a CSCI external interface by project-unique identifier, shall briefly identify the interfacing entities, and shall be divided into subparagraphs as needed to state the requirements imposed on the CSCI to achieve the interface. Interface characteristics of the other entities involved in the interface shall be stated as assumption or as “When [the entity not covered] does this, the CSCI shall . . .,” not as requirements on the other entities. This paragraph may reference other documents (such as data dictionaries, standards for communication protocols, and standards for user interfaces) in place of stating the information here. The requirements shall include the following, as applicable, presented in any order suited to the requirements, and shall note any differences in these characteristics from the point of view of the interfacing entities (such as different expectations about the size, frequency, or other characteristics of data elements):

- a. Priority that the CSCI must assign the interface
- b. Requirements on the type of interface (such as real-time data transfer, storage-and-retrieval of data, etc.) to be implemented
- c. Required characteristics of individual data elements that the CSCI must provide, store, send, access, receive, etc., such as:

1) Names/identifiers

- a) Project-unique identifier
- b) Non-technical (natural-language) name
- c) DOD standard data element name
- d) Technical name (e.g., variable or field name in code or database)
- e) Abbreviation or synonymous names

2) Data type (alphanumeric, integer, etc.)

3) Size and format (such as length and punctuation of a character string)

4) Units of measurement (such as meters, dollars, nanoseconds)

5) Range or enumeration of possible values (such as 0-99)

6) Accuracy (how correct) and precision (number of significant digits)

7) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the data element may be updated and whether business rules apply

8) Security and privacy constraints

9) Sources (setting/sending entities) and recipients (using/receiving entities)

- d. Required characteristics of data element assemblies (records, messages, files, arrays, displays, reports, etc.) that the CSCI must provide, store, send, access, receive, etc., such as:

1) Names/identifiers

- a) Project-unique identifier
- b) Non-technical (natural language) name

- c) Technical name (e.g., record or data structure name in code or database)
- d) Abbreviations or synonymous names
- 2) Data elements in the assembly and their structure (number, order, grouping)
- 3) Medium (such as disk) and structure of data elements/assemblies on the medium
- 4) Visual and auditory characteristics of displays and other outputs (such as colors, layouts, fonts, icons and other display elements, beeps, lights)
- 5) Relationships among assemblies, such as sorting/access characteristics
- 6) Priority, timing, frequency, volume, sequencing, and other constraints, such as whether the assembly may be updated and whether business rules apply
- 7) Security and privacy constraints
- 8) Sources (setting/sending entities) and recipients (using/receiving entities)
- e. Required characteristics of communication methods that the CSCI must use for the interface, such as:
 - 1) Project-unique identifier(s)
 - 2) Communication links/bands/frequencies/media and their characteristics
 - 3) Message formatting
 - 4) Flow control (such as sequence numbering and buffer allocation)
 - 5) Data transfer rate, whether periodic/aperiodic, and interval between transfers
 - 6) Routing, addressing, and naming conventions
 - 7) Transmission services, including priority and grade
 - 8) Safety/security/privacy considerations, such as encryption, user authentication, compartmentalization, and auditing
- f. Required characteristics of protocols the CSCI must use for the interface, such as:
 - 1) Project-unique identifier(s)

- 2) Priority/layer of the protocol
- 3) Packeting, including fragmentation and reassembly, routing, and addressing
- 4) Legality checks, error control, and recovery procedures
- 5) Synchronization, including connection establishment, maintenance, termination
- 6) Status, identification, and any other reporting features

g. Other required characteristics, such as physical compatibility of the interfacing entities (dimensions, tolerances, loads, plug compatibility, etc.), voltages, etc.

3.4 CSCI internal interface requirements. This paragraph shall specify the requirements, if any, imposed on interfaces internal to the CSCI. If all internal interfaces are left to the design, this fact shall be so stated. If such requirements are to be imposed, paragraph 3.3 of this DID provides a list of topics to be considered.

3.5 CSCI internal data requirements. This paragraph shall specify the requirements, if any, imposed on data internal to the CSCI. Included shall be requirements, if any, on databases and data files to be included in the CSCI. If all decisions about internal data are left to the design, this fact shall be so stated. If such requirements are to be imposed, paragraphs 3.3.x.c and 3.3.x.d of this DID provide a list of topics to be considered.

3.6 Adaptation requirements. This paragraph shall specify the requirements, if any, concerning installation-dependent data to be provided by the CSCI (such as site-dependent latitude and longitude or site-dependent state tax codes) and operational parameters that the CSCI is required to use that may vary according to operational needs (such as parameters indicating operation-dependent targeting constants or data recording).

3.7 Safety requirements. This paragraph shall specify the CSCI requirements, if any, concerned with preventing or minimizing unintended hazards to personnel, property, and the physical environment. Examples include safeguards the CSCI must provide to prevent inadvertent actions (such as accidentally issuing an “auto pilot off” command) and non-actions (such as failure to issue an intended “auto pilot off” command). This paragraph shall include the CSCI requirements, if any, regarding nuclear components of the system, including, as applicable, prevention of inadvertent detonation and compliance with nuclear safety rules.

3.8 Security and privacy requirements. This paragraph shall specify the CSCI requirements, if any, concerned with maintaining security and privacy. These requirements shall include, as applicable, the security/privacy environment in which the CSCI must operate, the type and degree of security or privacy to be provided, the security/privacy risks the CSCI must withstand, required safeguards to reduce those risks, the security/privacy policy that must be met, the security/privacy accountability the CSCI must provide, and the criteria that must be met for security/privacy certification/accreditation.

3.9 CSCI environment requirements. This paragraph shall specify the requirements, if any, regarding the environment in which the CSCI must operate. Examples include the computer hardware and operating system on which the CSCI must run. (Additional requirements concerning computer resources are given in the next paragraph.)

3.10 Computer resource requirements. This paragraph shall be divided into the following subparagraphs.

3.10.1 Computer hardware requirements. This paragraph shall specify the requirements, if any, regarding computer hardware that must be used by the CSCI. The requirements shall include, as applicable, number of each type of equipment, type, size, capacity, and other required characteristics of processors, memory, input/output devices, auxiliary storage, communications/network equipment, and other required equipment.

3.10.2 Computer hardware resource utilization requirements. This paragraph shall specify the requirements, if any, on the CSCI's computer hardware resource utilization, such as maximum allowable use of processor capacity, memory capacity, input/output device capacity, auxiliary storage device capacity, and communications/network equipment capacity. The requirements (stated, for example, as percentages of the capacity of each computer hardware resource) shall include the conditions, if any, under which the resource utilization is to be measured.

3.10.3 Computer software requirements. This paragraph shall specify the requirements, if any, regarding computer software that must be used by, or incorporated into, the CSCI. Example including operating systems, database management systems, communications/network software, utility software, input and equipment simulators, test software, and manufacturing software. The correct nomenclature, version, and documentation references of each such software item shall be provided.

3.10.4 Computer communications requirements. This paragraph shall specify the additional requirements, if any, concerning the computer communications that must be used by the CSCI. Examples include geographic locations to be linked; configuration and network topology; transmission techniques; data transfer rates; gateways; required system use times; type and volume of data to be transmitted/received; time boundaries for transmission/reception/response; peak volumes of data; and diagnostic features.

3.11 Software quality factors. This paragraph shall specify the CSCI requirements, if any, concerned with software quality factors identified in the contract or derived from a higher level specification. Examples include quantitative requirements regarding CSCI functionality (the ability to perform all required functions), reliability (the ability to perform with correct, consistent results), maintainability (the ability to be easily corrected), availability (the ability to be accessed and operated when needed), flexibility (the ability to be easily adapted to changing requirements), portability (the ability to be easily modified for a new environment), reusability (the ability to be used in multiple applications), testability (the ability to be easily and thoroughly tested), usability (the ability to be easily learned and used), and other attributes.

3.12 Design and implementation constraints. This paragraph shall specify the requirements, if any, that constrain the design and implementation of the CSCI. These requirements may be specified by reference to appropriate commercial or military standards and specifications. Examples include requirements concerning:

- a. Use of a particular CSCI architecture or requirements on the architecture, such as required databases or other software units; use of standard, military, or existing components; or use of Government/acquirer-furnished property (equipment, information, or software)
- b. Use of particular design or implementation standards; use of particular data standards; use of a particular programming language
- c. Flexibility and expandability that must be provided to support anticipated areas of growth or changes in technology, threat, or mission

3.13 Personnel-related requirements. This paragraph shall specify the CSCI requirements, if any, included to accommodate the number, skill levels, duty cycles, training needs, or other information about the personnel who will use or support the CSCI. Examples include requirements for number of simultaneous users and for built-up help or training features. Also included shall be the human factors engineering requirements, if any, imposed on the CSCI. These requirements shall include, as applicable, considerations for the capabilities and limitations of humans; foreseeable human errors under both normal and extreme conditions; and specific areas where the effects of human error would be particularly serious. Examples include requirements for color and duration of error messages, physical placement of critical indicators or keys, and use of auditory signals.

3.14 Training-related requirements. This paragraph shall specify the CSCI requirements, if any, pertaining to training. Examples include training software to be included in the CSCI.

3.15 Logistics-related requirements. This paragraph shall specify the CSCI requirements, if any, concerned with logistics considerations. These considerations may include: system maintenance, software support, system transportation modes, supply-system requirements, impact on existing facilities, and impact on existing equipment.

3.16 Other requirements. This paragraph shall specify additional CSCI requirements, if any, not covered in the previous paragraphs.

3.17 Packaging requirements. This section shall specify the requirements, if any, for packaging, labeling, and handling the CSCI for delivery (for example, delivery on 8 track magnetic tape labeled and packaging in a certain way). Applicable military specifications and standards may be referenced if appropriate.

3.18 Precedence and criticality of requirements. This paragraph shall specify, if applicable, the order of precedence, criticality, or assigned weights indicating the relative importance of the requirements in this specification. Examples include identifying those

requirements deemed critical to safety, to security, or to privacy for purposes of singling them out for special treatment. If all requirements have equal weight, this paragraph shall so state.

4. Qualification provisions. This section shall define a set of qualification methods and shall specify for each requirement in Section 3 the method(s) to be used to ensure that the requirement has been met. A table may be used to present this information, or each requirement in Section 3 may be annotated with the method(s) to be used. Qualification methods may include:

a. Demonstration: The operation of the CSCI, or a part of the CSCI that relies on observable functional operation not requiring the use of instrumentation, special test equipment, or subsequent analysis.

b. Test: The operation of the CSCI, or a part of the CSCI, using instrumentation or other special test equipment to collect data for later analysis.

c. Analysis: The processing of accumulated data obtained from other qualification methods. Examples are reduction, interpretation, or extrapolation of test results.

d. Inspection: The visual examination of CSCI code, documentation, etc.

e. Special qualification methods: Any special qualification methods for the CSCI, such as special tools, techniques, procedures, facilities, and acceptance limits.

5. Requirements traceability. This paragraph shall contain:

a. Traceability from each CSCI requirement in this specification to the system (or subsystem, if applicable) requirements it addresses. (Alternatively, this traceability may be provided by annotating each requirement in Section 3.)

Note: Each level of system refinement may result in requirements not directly traceable to higher-level requirements. For example, a system architectural design that creates multiple CSCIs may result in requirements about how the CSCIs will interface, even though these interfaces are not covered in system requirements. Such requirements may be traced to a general requirement such as "system implementation" or to the system design decisions that resulted in their generation.

b. Traceability from each system (or subsystem, if applicable) requirement allocated to this CSCI to the CSCI requirements that address it. All system (subsystem) requirements allocated to this CSCI shall be accounted for. Those that trace to CSCI requirements contained in IRSs shall reference those IRSs.

6. Notes. This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

DI-IPSC-81433A

Appendices. Appendices may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).

END OF DI-IPSC-81433A.

**TDP OPTION SELECTION WORKSHEET
DEVELOPMENTAL DESIGN DRAWINGS AND ASSOCIATED LISTS**

A. CONTRACT NO. N68936-05-C-0038	B. EXHIBIT/ATTACHMENT NO. A	C. CLIN. SOW Para 3.1	D. CDRL DATA ITEM NO. A004
--	---------------------------------------	---------------------------------	--------------------------------------

1. DELIVERABLE PRODUCT (X and complete as applicable)

<input type="checkbox"/>	a. ORIGINALS (Drawing masters) (Identify specification, type, grade and class, etc.)
<input type="checkbox"/>	b. REPRODUCTIONS (Identify specification, type, grade and class, etc., and quantity of each)
<input checked="" type="checkbox"/>	c. DIGITAL DATA (Identify specification, exchange media, etc.)

2. CAGE CODE AND DOCUMENT NUMBERS (X one)

<input type="checkbox"/>	a. CONTRACTOR	
<input checked="" type="checkbox"/>	b. GOVERNMENT (Complete (1) and (2) or (3))	
(1) Use CAGE Code	(2) Use Document Numbers	(3) To Be Assigned By:

3. DRAWING FORMATS AND DRAWING FORMS (X one and complete as applicable)

<input checked="" type="checkbox"/>	a. CONTRACTOR FORMATS. Forms to be supplied by contractor.
<input type="checkbox"/>	b. GOVERNMENT FORMATS. Forms to be supplied by contractor. Samples supplied by (Specify)
<input type="checkbox"/>	c. GOVERNMENT FORMATS. Forms to be supplied as Government Furnished Material by (Specify)

4. TYPES AND QUANTITY OF DRAWINGS SELECTION (X one)

<input checked="" type="checkbox"/>	a. CONTRACTOR SELECTS	<input type="checkbox"/>	b. GOVERNMENT SELECTS (Specify in Item 8)
-------------------------------------	-----------------------	--------------------------	---

5. ASSOCIATED LISTS (X and complete as applicable)

<input checked="" type="checkbox"/>	a. PARTS LISTS (X one)	<input type="checkbox"/>	(1) Integral	<input type="checkbox"/>	(2) Separate	<input checked="" type="checkbox"/>	(3) Contractor's Option
<input checked="" type="checkbox"/>	b. DATA LISTS (X one)	<input checked="" type="checkbox"/>	(1) Not Required	<input type="checkbox"/>	(2) Required (Specify levels of assembly)		
<input checked="" type="checkbox"/>	c. INDEX LISTS (X one)	<input checked="" type="checkbox"/>	(1) Not Required	<input type="checkbox"/>	(2) Required (Specify levels of assembly)		

6. DETAILS (X one)

<input checked="" type="checkbox"/>	a. MULTIDETAILED DRAWINGS PERMITTED	<input type="checkbox"/>	b. MONODETAILED DRAWINGS MANDATORY
-------------------------------------	-------------------------------------	--------------------------	------------------------------------

7. APPLICABILITY OF DOD-STD-100. The following chapters of DOD-STD-100 apply: (X as applicable)

<input type="checkbox"/>	a. CHAPTER 300, "DRAWING TITLES"	<input type="checkbox"/>	b. CHAPTER 400, "NUMBERING CODING AND IDENTIFICATION"	<input type="checkbox"/>	c. CHAPTER 500, "REVISION OF ENGINEERING DRAWINGS"
--------------------------	----------------------------------	--------------------------	---	--------------------------	--

8. OTHER TAILORING (Attach additional sheets as necessary)

Shall be submitted in an electronic format agreed upon by both Government and Contractor prior to 1st submittal.

DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1. TITLE

TEST PROCEDURE

2. IDENTIFICATION NUMBER

DI-NDTI-80603

3. DESCRIPTION / PURPOSE

3.1 The test procedure identifies the step-by-step testing operations to be performed on items under going developmental, qualification, or acceptance testing. It identifies items to be tested, the test equipment and support required, the test conditions to be imposed, the parameters to be measured, and the pass/fail criteria against which the test results
(continued on page 2)

4. APPROVAL DATE
(YYMMDD)

880601

5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)

G/T2137

6a. DTIC APPLICABLE

6b. GIDEP APPLICABLE

7. APPLICATION / INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract.

7.2 This DID is applicable to contracts requiring tests to be performed for the purpose of developmental or environmental evaluation, acceptance testing, and item qualification testing.

7.3 This DID supersedes DI-T-5248 and DI-T-5301

8. APPROVAL LIMITATION

9a. APPLICABLE FORMS

9b. AMSC NUMBER

G4428

10. PREPARATION INSTRUCTIONS

10.1 Format Requirements. The test procedure shall be in the contractor's format on 8 1/2 x 11 inch paper. It shall be bound in such a manner that pages may be removed or inserted without damage or mutilation.

10.2 Content requirements. The test procedure shall contain the following:

10.2.1 Front matter.

10.2.1.1 Cover and title page. The following information shall be included on the cover and title page:

- a. Date of issue.
- b. Revision date (If applicable).
- c. Procedure document identification number.
- d. Contract number.
- e. Contractor's name and address.
- f. Type of procedure, including purpose (e.g., first article test, developmental evaluation, qualification, environmental (specify), acceptance, or other).
- g. Identification of the system, subsystem, or equipment to be tested.
- h. Security classification (if applicable)

(continued on page 2)

11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release, distribution is unlimited.

Block 3. DESCRIPTION/PURPOSE

will be measured. The document is a compilation of individual test procedures for related elements of a system, subsystem, or equipment.

Block 10. PREPARATION INSTRUCTIONS (continued)

10.2.1.2 Record of changes. A record of change pages shall be included to provide for tracking of changes to the test procedures.

10.2.1.3 Table of contents. A table of contents is required when more than one test procedure is included in the test procedures document. It shall identify the page location of each procedure number, procedure title, and related equipment nomenclature.

10.2.2 Body of document. For each test procedure, the following information is required:

10.2.2.1 Procedure number. Each procedure shall have a unique number assigned to it.

10.2.2.2 Title of procedure. The title should relate to the purpose of the test.

10.2.2.3 Introduction. The following shall be addressed in the introduction:

10.2.2.3.1 Purpose of test. (As specified in the contract tasking document.)

10.2.2.3.2 System, subsystem, or equipment to be tested. The following identification information shall be provided:

- a. Nomenclature
- b. Model or part number.
- c. Type of test item (prototype, production item, laboratory model, etc.)
- d. Applicable specification.

10.2.2.3.3 Test requirements. Includes the following, each related to the prescribing contract requirement paragraph (specification, standard, plan, or work statement).

- a. Required tests, and parameters to be measured.
- b. Performance requirements, acceptance or compliance limits, and environmental criteria.

10.2.2.3.4 Referenced documents. A list by title, number, date, and source of those documents cited in the test procedure.

Block 10. PREPARATION INSTRUCTIONS

10.2.2.4 Required test equipment. Includes the following for each piece of test equipment required to perform the procedure:

- a. Nomenclature.
- b. Use of test equipment.
- c. Model Number (if applicable).
- d. Manufacturer (if mandatory).
- e. Accuracy and calibration requirements.
- f. Range or spectrum of measurements required.

10.2.2.5 Table of tests. This table lists each test performed under the procedure in the sequence it is to be performed, identified to the procedure paragraph and the related specification/contract requirement.

10.2.2.6 Step-by-step procedure. The following shall be included for each step of the test procedure:

- a. Test set-up diagrams, including test equipment connections.
- b. Input and output instrumentation points.
- c. Test item operating limits and test conditions to be imposed.
- d. Performance parameters to be measured.
- e. Step-by-step operations to obtain the required data.
- f. Caution and safety warnings as appropriate.

10.2.2.7 Data sheets. Data sheets shall be included with the procedure, or be separately attached at the end of all procedures. They shall provide for:

- a. Identification of item tested, including model and serial numbers.
- b. Recording of test measurements.
- c. Identification of required or objective performance values, with tolerances.
- d. Identification of applicable procedure paragraph.
- e. Date of test.
- f. Signature of technician or inspector performing the tests.

10.2.2.8 Support requirements. Any special support requirements would be included in this section, such as:

- a. Use of special facilities or test ranges.
- b. Personnel requirements (numbers, types, qualifications)..
- c. Unusual electrical, hydraulic, pneumatic, etc. requirements.
- d. Support equipment requirements.

DATA ITEM DESCRIPTION			Form Approved OASD No. 0704-0180	
2. TITLE Acceptance Test Plan		1. IDENTIFICATION NUMBER DI-QCIC- 80553		
3. DESCRIPTION /PURPOSE 3.1 The Acceptance Test Plan details the criteria, performance objectives and list of tests to be performed by the contractor for acceptance tests on systems and equipments.				
4. APPROVAL DATE (YYMMDD) 880325	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) G/T213	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE	
7. APPLICATION /INTERRELATIONSHIP 7.1 This data item description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract. 7.2 This DID is applicable to contracts requiring preparation of an acceptance test plan. 7.3 This DID supersedes DI-T-5147.				
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS		9b. AMSC NUMBER G4363
10. PREPARATION INSTRUCTIONS 10.1 <u>Format</u>. The plan shall be in contractor's format. 10.2 <u>Content</u>. The plan shall contain the following: 10.2.1 <u>Overview</u>. Consists of a brief description of the objectives of the acceptance test plan, including flow diagrams, milestones, personnel participation, and security requirements. This section shall include the following: 10.2.1.1 <u>Flow diagram</u>. A functional description of the acceptance test program using a block diagram portrayal of the functions that must be met to satisfy the total acceptance program. Functions shall be numbered 1.0, 2.0, 3.0 etc... 10.2.1.2 <u>Milestones</u>. Identifies the start and expected completion dates of each test to be performed. 10.2.1.3 <u>Participation</u>. Identifies the Government and Contractor participation roles and responsibilities. 10.2.1.4 <u>Security</u>. Identify and state briefly any security measures or guidelines to be observed. 10.3 <u>Master test list</u>. Lists all test to be accomplished in the order they are to be performed. Separate listings for each location shall be provided. This listing shall include the following: <p style="text-align: right;">(Continued on Page 2)</p>				
11. DISTRIBUTION STATEMENT <u>DISTRIBUTION STATEMENT A</u>: Approved for public release; distribution is unlimited.				

Block 10. Preparation Instructions (Continued)

10.3.1 Facility. Location where the acceptance test is to be performed.

10.3.2 Item number. Number for each piece of equipment or item, test will be performed on.

10.3.3 Test description. Name and brief description of test to be performed.

10.3.4 Parameters. The number of cycles the test will be performed and selected parameters to be observed.

10.3.5 Equipment location. Current location of equipment to be tested or used in the acceptance test.

10.3.6 Special tests. Provides a list of special or unusual tests and examinations necessary to verify satisfactory equipment performance to specifications.

10.4 Equipment list. The equipment list shall list all equipment to be used in the acceptance test. The listing shall include the following:

10.4.1 Test equipment. List all test equipment by:

- a. Description.
- b. Nomenclature.
- c. Serial Number

10.4.2 Support equipment. List of all support equipment by:

- a. Description.
- b. Nomenclature.
- c. Serial Number

10.4.3 Special test equipment. List all special test equipment required to be designed or constructed for use on the program by:

- a. Description.
- b. Nomenclature.
- c. Date required.

10.5 Validation procedure. An overview of the procedures that the contractor will use to validate the test results.

DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1. TITLE TEST PROCEDURE		2. IDENTIFICATION NUMBER DI-NDTI-80603	
3. DESCRIPTION / PURPOSE 3.1 The test procedure identifies the step-by-step testing operations to be performed on items under going developmental, qualification, or acceptance testing. It identifies items to be tested, the test equipment and support required, the test conditions to be imposed, the parameters to be measured, and the pass/fail criteria against which the test results (continued on page 2)			
4. APPROVAL DATE (YYMMDD) 880601	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) G/T2137	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
7. APPLICATION / INTERRELATIONSHIP 7.1 This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract. 7.2 This DID is applicable to contracts requiring tests to be performed for the purpose of developmental or environmental evaluation, acceptance testing, and item qualification testing. 7.3 This DID supersedes DI-T-5248 and DI-T-5301			
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS	9b. AMSC NUMBER G4428
10. PREPARATION INSTRUCTIONS 10.1 <u>Format Requirements.</u> The test procedure shall be in the contractor's format on 8 1/2 x 11 inch paper. It shall be bound in such a manner that pages may be removed or inserted without damage or mutilation. 10.2 <u>Content requirements.</u> The test procedure shall contain the following: 10.2.1 <u>Front matter.</u> 10.2.1.1 <u>Cover and title page.</u> The following information shall be included on the cover and title page: a. Date of issue. b. Revision date (If applicable). c. Procedure document identification number. d. Contract number. e. Contractor's name and address. f. Type of procedure, including purpose (e.g., first article test, developmental evaluation, qualification, environmental (specify), acceptance, or other). g. Identification of the system, subsystem, or equipment to be tested. h. Security classification (if applicable) (continued on page 2)			
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A: Approved for public release, distribution is unlimited.			

Block 3. DESCRIPTION/PURPOSE

will be measured. The document is a compilation of individual test procedures for related elements of a system, subsystem, or equipment.

Block 10. PREPARATION INSTRUCTIONS (continued)

10.2.1.2 Record of changes. A record of change pages shall be included to provide for tracking of changes to the test procedures.

10.2.1.3 Table of contents. A table of contents is required when more than one test procedure is included in the test procedures document. It shall identify the page location of each procedure number, procedure title, and related equipment nomenclature.

10.2.2 Body of document. For each test procedure, the following information is required:

10.2.2.1 Procedure number. Each procedure shall have a unique number assigned to it.

10.2.2.2 Title of procedure. The title should relate to the purpose of the test.

10.2.2.3 Introduction. The following shall be addressed in the introduction:

10.2.2.3.1 Purpose of test. (As specified in the contract tasking document.)

10.2.2.3.2 System, subsystem, or equipment to be tested. The following identification information shall be provided:

- a. Nomenclature
- b. Model or part number.
- c. Type of test item (prototype, production item, laboratory model, etc.)
- d. Applicable specification.

10.2.2.3.3 Test requirements. Includes the following, each related to the prescribing contract requirement paragraph (specification, standard, plan, or work statement).

- a. Required tests, and parameters to be measured.
- b. Performance requirements, acceptance or compliance limits, and environmental criteria.

10.2.2.3.4 Referenced documents. A list by title, number, date, and source of those documents cited in the test procedure.

Block 10. PREPARATION INSTRUCTIONS

10.2.2.4 Required test equipment. Includes the following for each piece of test equipment required to perform the procedure:

- a. Nomenclature.
- b. Use of test equipment.
- c. Model Number (if applicable).
- d. Manufacturer (if mandatory).
- e. Accuracy and calibration requirements.
- f. Range or spectrum of measurements required.

10.2.2.5 Table of tests. This table lists each test performed under the procedure in the sequence it is to be performed, identified to the procedure paragraph and the related specification/contract requirement.

10.2.2.6 Step-by-step procedure. The following shall be included for each step of the test procedure:

- a. Test set-up diagrams, including test equipment connections.
- b. Input and output instrumentation points.
- c. Test item operating limits and test conditions to be imposed.
- d. Performance parameters to be measured.
- e. Step-by-step operations to obtain the required data.
- f. Caution and safety warnings as appropriate.

10.2.2.7 Data sheets. Data sheets shall be included with the procedure, or be separately attached at the end of all procedures. They shall provide for:

- a. Identification of item tested, including model and serial numbers.
- b. Recording of test measurements.
- c. Identification of required or objective performance values, with tolerances.
- d. Identification of applicable procedure paragraph.
- e. Date of test.
- f. Signature of technician or inspector performing the tests.

10.2.2.8 Support requirements. Any special support requirements would be included in this section, such as:

- a. Use of special facilities or test ranges.
- b. Personnel requirements (numbers, types, qualifications)..
- c. Unusual electrical, hydraulic, pneumatic, etc. requirements.
- d. Support equipment requirements.