SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS:

ADD THE FOLLOWING CONTRACT LINE ITEMS (CLINs) AND SUB-CONTRACT LINE ITEMS (SLINS) TO SECTION B:

The following CLINs and SLINs may be ordered under individual delivery orders under this contract:

CLIN/SLIN	Contract Type	Description	Unit of Issue	Total Price or Ceiling Amount	Notes
3000	CPIF	Design, Development, and Qualification of Multifunctional Information Distribution System Joint Tactical Radio System (MIDS JTRS), includes 15 first articles (US Configuration – 10 "Master", 5 "Slave") and 15 first articles (European Configuration – 15 "Master")	1 LO	$	(e)
3001	FFP	Fabrication, Assembly, Acceptance Testing, and Delivery of MIDS JTRS (US Configuration)			
3001AA	FFP	US "Master" Configuration	20 EA	$NTE	Represents an NTE Unit Price per MIDS JTRS
3001AB	FFP	"Slave" Configuration	5 EA	$NTE	Represents an NTE Unit Price per MIDS JTRS
3002	CPIF	Data in accordance with Contract Data Requirements List (CDRL), DD Form 1423, Exhibit "J"	1 LO	$Not Separately Priced (NSP)	
3003	FFP	Support for a Government Physical Configuration Audit	1 LOT	$	
3004	FFP	Technical Data Rights, Computer Software Rights, and Computer Software Documentation Rights	1 LO	$See Table 3	
3005	CPFF	Design, Development and Qualification of MIDS JTRS Computer Software Operating Environment	1 LO	$	(f)

Notes:

CHANGE THE "GENERAL NOTES" AS FOLLOWS:

(a) See Clause G-8 ("Type of Contract") for a summary of the contract structure utilized for this effort. CLINs 0001 through 0708, 1000, and 2700 through 2901, and CLINs 3001, 3003, and 3004 are firm-fixed-price requirements provided via an indefinite-delivery-indefinite-quantity (IDIQ) arrangement. CLINs 0800 & 0801 are for fixed-price efforts. CLINs 0900-0905 are for cost-reimbursement services provided via an IDIQ arrangement. CLIN 3000 is a cost-plus-incentive-fee requirement provided via an IDIQ arrangement. CLIN 3002 is Not Separately Priced provided via an IDIQ arrangement; the cost and fee associated with CLIN 3002 is included in the cost-plus-incentive-fee amount for CLIN 3000. Please note that a firm fixed price for CLIN 3001 will be negotiated and placed on contract during the ordering period for this CLIN. The "NTE" for this CLIN represents a unit price place holder for the MIDS JTRS that will not be exceeded during future negotiations.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS:

(b) This contract is for the procurement of MIDS-LVT(1), MIDS-LVT(2), and MIDS JTRS variants only. If the term "MIDS-LVT" is stated in this contract without a variant identification [e.g., MIDS-LVT(1) or MIDS-LVT(2)], then the term "MIDS-LVT" applies to both MIDS-LVT(1) and , MIDS-LVT(2) variants and all configurations under such variants.
(c) No change to Note (c)
(d) No change to Note (d)
(e) The following Cost Plus Incentive Fee (CPIF) Arrangement and Schedule Incentive Fees are applicable to CLIN 3000:

TARGET COST	$ TBD in delivery order
TARGET FEE (7% of Target Cost)	$ TBD in delivery order
COST PLUS INCENTIVE FEE	$ TBD in delivery order
INCENTIVE ON COST	
INCENTIVE ON COST (NTE 7% of Target Cost)	$ TBD in delivery order
MAXIMUM FEE (NTE 10% of Target Cost)	$ TBD in delivery order
MINIMUM FEE	$ 1,000,000
SHARE RATIO:	
Government Share Above Target	40%
Contractor Share Above Target	60%
Government Share Below Target	20%
Contractor Share Below Target	80%
INCENTIVE ON SCHEDULE (See Clause B-5)	NTE $3,000,000 if all milestone events are met in accordance with Clause B-5 Negative incentive of $1,000,000 if all milestone events are late IAW Clause B-5
TOTAL FEE EARNABLE	
Maximum Fee on Cost Incentive	10% of Target Cost
Incentive on Schedule	$3,000,000
Total Fee Earnable	10% of Target Cost Plus $3,000,000

(f) If the Government does not provide the Computer Software Operating Environment by 4 months after the date of the order for CLIN 3000 in accordance with Clause H-26 and SOW paragraph 3.2.8.b., this CLIN may be ordered. However, the Government reserves the right to order this CLIN anytime after contract award through 6 months thereafter.

CHANGE TO EXISTING CLAUSE

B-3. 5252.232-9200 ALLOTMENT OF FUNDS (JAN 1989) (Applicable to cost-plus-fixed-fee CLINs only)

(a) This contract is incrementally funded with respect to both cost and fee.

(b) The amounts presently available and allotted to this contract for payment of fee, as provided in the Section I clause of this contract entitled "Fixed Fee", are as follows:

[*Contracting officer under "Items" insert the item numbers for which incremental funding is provided and under "Allotted to Fixed Fee" insert the amount of incremental funding allocated to fixed fee*]

ITEM(S)	ALLOTTED TO FIXED FEE
*	*

(c) The amounts presently available and allotted to this contract for payment of cost, subject to the Section I "Limitation of Funds" clause, the items covered thereby and the period of performance which it is estimated the allotted amount will cover are as follows:

[*Contracting officer under "Items" insert the item numbers for which incremental funding is provided, under "Allotment of Cost" insert the amount of incremental funding allocated to total estimated cost, and under "Period of Performance" insert date by which funding expended*]

ITEM(S)	ALLOTTED TO COST	PERIOD OF PERFORMANCE
__*_____	$ _____*_____	_____*_____

(d) The parties contemplate that the Government will allot additional amounts to this contract from time to time by unilateral contract modification, and any such modification shall state separately the amounts allotted for cost and for fee, the items covered thereby, and the period of performance the amounts are expected to cover.

* To be completed on individual delivery orders as applicable.

NEW CLAUSE
B-5. INCENTIVE ON SCHEDULE (Applicable to CLIN 3000)

The contractor will receive fees in the following amounts if the following delivery events are achieved by the dates specified below:

Event	Date	Fee Amount
A	4 M ARO	$ 500K
B	13 M ARO	$ 1.0M
C	24 M ARO	$ 1.5M

Event Definitions

Event A: A complete allocated baseline is presented to the Government at PDR. In order for the contractor to be eligible for payment of this event, this complete allocated baseline presented at PDR must subsequently be authenticated by the Government.

Event B: Joint approval by all participating MIDS JTRS contractors (i.e., DLS, ViaSat, Thales, Marconi, Indra, EADS) that the product baseline is ready for release to manufacturing. This joint approval shall be in writing and submitted to the Government PCO on or before the date listed above.

Event C: All required U.S. test articles are provided to the U.S. Government for Government FAQT. In order for the contractor to be eligible for payment of this event, these test articles must subsequently successfully pass Government FAQT.

If the actual cost amount incurred by the contractor under CLIN 3000 exceeds five percent of the target cost amount for CLIN 3000, but is equal to or less than 10% of the target cost amount for CLIN 3000, the contractor will only be eligible for 80% of the above schedule incentive fee amounts if the event dates specified above are achieved.

If the actual cost amount incurred by the contractor under CLIN 3000 exceeds ten percent of the target cost amount for CLIN 3000, but is equal to or less than 15% of the target cost amount for CLIN 3000, the contractor will only be eligible for 50% of the above schedule incentive fee amounts if the event dates specified above are achieved.

If the actual cost amount incurred by the contractor under CLIN 3000 exceeds fifteen percent of the target cost amount for CLIN 3000, the contractor will not be eligible for any of the above schedule incentive fees, even if the event dates specified above are achieved.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS:

NEW CLAUSE
B-6. 5252.232-9400 LIMITATION OF LIABILITY--INCREMENTAL FUNDING (JAN 1992)

This _____*_____ is incrementally funded and the amount currently available for payment hereunder is limited to $_____*_____ inclusive of fee. It is estimated that these funds will cover the cost of performance through _____*_____. Subject to the provisions of the FAR 52.232-22 "Limitation of Funds" clause of this contract, no legal liability on the part of the Government for payment in excess of $_____*_____ shall arise unless additional funds are made available and are incorporated as modifications to this contract.

* To be completed in individual delivery orders as applicable.

ADD TABLE
TABLE 3

Table 3 – This table identifies the prices for which the U.S. Government may acquire rights for itself and MIDS Participating Nations to all MIDS/JTRS technical data, noncommercial computer software, and computer software documentation applied or created during performance of this contract (CLIN 3004). If any of the technical data or computer software listed below is updated after it has been ordered under the contract, the Contractor shall deliver the rights to the updated technical data or computer software at no additional cost to the Government. The following symbol ("—") indicates the U.S. Government is not entitled to purchase the technical data/computer software rights for itself and the MIDS Participating Nations associated with that CDRL. A $0 (zero) indicates that the rights associated with that CDRL are available to the U.S. Government and the MIDS Participating Nations at no cost.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS:

TABLE 3 – TECHNICAL DATA AND COMPUTER SOFTWARE RIGHTS

CDRL	Description	Technical Data/ Computer Software Rights Classification	Price
JA01	SYSTEM ENGINEERING MANAGEMENT PLAN (SEMP)	Unlimited	$0
JA02	PROGRAM UNIQUE SPECIFICATION DOCUMENTS - ITEM PERFORMANCE SPECS (SUBTITLE)	Unlimited	$0
JA03	SOFTWARE REQUIREMENTS SPECIFICATIONS	Unlimited	$0
JA04	PROGRAM UNIQUE SPECIFICATION DOCUMENTS - ITEM DETAIL SPECIFICATIONS (SUBTITLE)	Offeror to Complete	$Offeror to Complete
JA05	SOFTWARE PRODUCT SPECIFICATIONS	Unlimited	$0
JA06	INTERFACE CONTROL DOCUMENT (ICD) – INTERNAL ICD (SUBTITLE)	Unlimited	$0
JA07	INTERFACE REQUIREMENTS SPECIFICATIONS	Unlimited	$0
JA08	INTERFACE DESIGN DESCRIPTION – APPLICATION PROGRAM INTERFACE (SUBTITLE)	Unlimited	$0
JA09	SYSTEM SAFETY PROGRAM PLAN	Unlimited	$0
JA0A	SYSTEM SAFETY HAZARD ANALYSIS REPORT	Unlimited	$0
JA0B	HAZARDOUS MATERIAL SUMMARY REPORT (SUBTITLE)	Unlimited	$0
JA0C	RELIABILITY AND MAINTAINABILITY PROGRAM PLAN	Unlimited	$0
JA0D	PARTS MANAGEMENT PLAN	Unlimited	$0
JA0E	RELIABILITY BLOCK DIAGRAMS & MATHEMATICAL MODELS REPORT	Unlimited	$0
JA0F	RELIABILITY PREDICTIONS & DOCUMENTATION OF SUPPORTING DATA	Unlimited	$0
JA0G	FAILURE MODES, EFFECTS, AND CRITICALITY ANALYSIS REPORT	Unlimited	$0
JA0H	FAILURE ANALYSIS AND CORRECTIVE ACTION REPORT	Unlimited	$0
JA0J	RELIABILITY TEST PLAN	Unlimited	$0
JA0K	RELIABILITY DEVELOPMENT GROWTH TEST REPORT	Unlimited	$0
JA0L	BIT DEVELOPMENT STUDY	Unlimited	$0
JA0M	BIT REPORT (SUBTITLE)	Unlimited	$0
JA0N	STRUCTURAL ANALYSIS & MODELS REPORT (SUBTITLE)	Unlimited	$0
JA0P	THERMAL DESIGN ANALYSIS (SUBTITLE)	Unlimited	$0
JA0Q	THERMAL SURVEY REPORT	Unlimited	$0
JA0R	ELECTROMAGNETIC INTERFERENCE CONTROL PROCEDURE	Unlimited	$0
JA0S	DESIGN PRODUCIBILITY ANALYSIS REPORT (SUBTITLE)	Unlimited	$0
JA0T	RESERVED	Unlimited	$0
JA0U	SOFTWARE DEVELOPMENT PLAN	Unlimited	$0
JA0V	RESERVED	Unlimited	$0
JA0W	SOFTWARE DESIGN DESCRIPTION	Unlimited	$0
JA0X	SIZING AND TIMING ANALYSIS	Unlimited	$0

JA0Y	COMPUTER SOFTWARE PRODUCT END ITEMS – SOFTWARE EXECUTABLES (SUBTITLE)	Offeror to Complete	$Offeror to Complete
JA0Z	SOFTWARE VERSION DESCRIPTION (SVD)	Unlimited	$0
JA10	SOFTWARE USER MANUAL	Unlimited	$0
JA11	SOFTWARE PROGRAMMER'S GUIDE	Unlimited	$0
JA12	NUCLEAR SURVIVABILITY PROGRAM PLAN	Unlimited	$0
JA13	NUCLEAR SURVIVABILITY DESIGN PARAMETERS REPORT	Unlimited	$0
JA14	NUCLEAR SURVIVABILITY TEST PLAN	Unlimited	$0
JA15	NUCLEAR SURVIVABILITY TEST REPORT	Unlimited	$0
JA16	NUCLEAR SURVIVABILITY ASSURANCE PLAN	Unlimited	$0
JA17	NUCLEAR HARDNESS AND SURVIVABILITY DESIGN ANALYSIS REPORT	Unlimited	$0
JB01	TEST PLAN - SYSTEM TEST PLAN (SUBTITLE)	Unlimited	$0
JB02	TEST PLAN - QUALIFICATION TEST PLAN (SUBTITLE)	Unlimited	$0
JB03	TEST PROCEDURE - QUALIFICATION TEST PROCEDURE (SUBTITLE)	Unlimited	$0
JB04	TEST/INSPECTION REPORT - QUALIFICATION TEST REPORT(SUBTITLE)	Unlimited	$0
JB05	SCIENTIFIC AND TECHNICAL REPORT - FAQT ANALYSIS (SUBTITLE)	Unlimited	$0
JB06	SOFTWARE TEST PLAN – SOFTWARE FORMAL QUALIFICATION TEST PLAN (SUBTITLE)	Unlimited	$0
JB07	SOFTWARE TEST DESCRIPTION	Unlimited	$0
JB08	SOFTWARE TEST REPORT	Unlimited	$0
JB09	TEST PLAN – QUALIFICATION INTERCHANGEABILITY TEST PLAN (SUBTITLE)	Unlimited	$0
JB0A	TEST PROCEDURE – QUALIFICATION INTERCHANGEABILITY TEST PROCEDURE (SUBTITLE)	Unlimited	$0
JB0B	TEST/INSPECTION REPORT – QUALIFICATION INTERCHANGEABILITY TEST REPORT (SUBTITLE)	Unlimited	$0
JB0C	TEST PROCEDURES - EMC FEATURES TEST PROCEDURE (SUBTITLE)	Unlimited	$0
JB0D	TEST/INSPECTION REPORT - EMC FEATURES TEST REPORT (SUBTITLE)	Unlimited	$0
JC01	CONTRACTOR'S CONFIGURATION MANAGEMENT PLAN	Unlimited	$0
JC02	BASELINE DESCRIPTION DOCUMENT	Unlimited	$0
JC03	REFERENCE DESIGNATION ASSIGNMENT PLAN	Unlimited	$0
JC04	REQUEST FOR NOMENCLATURE	Unlimited	$0
JC05	ENGINEERING CHANGE PROPOSAL	Unlimited	$0
JC06	NOTICE OF REVISION	Unlimited	$0
JC07	REGRESSION VERIFICATION PROCEDURE (RVP) (SUBTITLE)	Unlimited	$0
JC08	REGRESSION VERIFICATION REPORT (RVR) (SUBTITLE)	Unlimited	$0
JC09	REQUEST FOR DEVIATION	Unlimited	$0
JC0A	INVESTIGATION REQUESTS (IR)	Unlimited	$0
JC0B	CONFIGURATION AUDIT SUMMARY REPORT	Unlimited	$0

JC0C	CONFIGURATION MANGEMENT ACCOUNTING REPORT (SUBTITLE)	Unlimited	$0
JC0D	AS-BUILT CONFIGURATION LIST (ABCL)	Unlimited	$0
JC0E	DATA ACCESSION LIST	Unlimited	$0
JC0F	CONFIGURATION AUDIT SUMMARY REPORT	Unlimited	$0
JC0G	TECHNICAL DATA PACKAGE	Offeror to Complete	$Offeror to Complete
JD01	PROGRAM SCHEDULES	Unlimited	$0
JD02	COST PERFORMANCE REPORT	Unlimited	$0
JD03	CONTRACT FUNDS STATUS REPORT, (CFSR)	Unlimited	$0
JD04	COST DATA SUMMARY REPORT, (DD FORM 1921)	Unlimited	$0
JD05	FUNCTIONAL COST HOUR AND PROGRESS CURVE REPORT (DD FORM 1921-1)	Unlimited	$0
JD06	RESERVED	Unlimited	$0
JD07	CONTRACT WORK BREAKDOWN STRUCTURE (CWBS)	Unlimited	$0
JD08	CONFERENCE AGENDA	Unlimited	$0
JD09	PRESENTATION MATERIALS	Unlimited	$0
JD0A	CONFERENCE MINUTES	Unlimited	$0
JE01	INTEGRATED SUPPORT PLAN (ISP)	Unlimited	$0
JE02	RESERVED	RESERVED	RESERVED
JE03	CONTRACTOR DATABASE	Unlimited	$0
JE04	LOGISTIC SUPPORT ANALYSIS PLAN	Unlimited	$0
JE05	LSAR DATA TABLE EXCHANGE/DELIVERY	Unlimited	$0
JE06	PROVISIONING LISTS (SUBTITLE)	Unlimited	$0
JF01	METRICS REPORT	Unlimited	$0
JF02	RESERVED	Unlimited	$0
JF03	RESERVED	Unlimited	$0
JF04	ACCEPTANCE TEST PLAN	Unlimited	$0
JF05	ACCEPTANCE TEST PROCEDURE (SUBTITLE)	Unlimited	$0
JF06	ACCEPTANCE TEST REPORT (SUBTITLE)	Unlimited	$0
JF07	EMC FEATURES ACCEPTANCE TEST PLAN (SUBTITLE)	Unlimited	$0
JF08	EMC FEATURES ACCEPTANCE TEST PROCEDURE (SUBTITLE)	Unlimited	$0
JF09	EMC FEATURES ACCEPTANCE TEST REPORT (SUBTITLE)	Unlimited	$0
JG01	QUALITY SYSTEM PLAN	Unlimited	$0
JG02	MATERIAL IMPROVEMENT PROJECT REPORT	Unlimited	$0
JH01	INTERCHANGEABILITY TEST PLAN	Unlimited	$0
JH02	INTERCHANGEABILITY TEST PROCEDURE	Unlimited	$0
JH03	INTERCHANGEABILITY TEST REPORT	Unlimited	$0
JJ01	CONCEPTUAL DESIGN DRAWINGS AND ASSOCIATED LISTS	Offeror to Complete	$Offeror to Complete
JJ02	DEVELOPMENTAL DESIGN DRAWINGS AND ASSOCIATED LISTS	Offeror to Complete	$Offeror to Complete
JS01	CONTRACTOR'S TARGET PROGRAM SCHEDULE REPORT	Unlimited	$0
JS02	FAIL SAFE DESIGN ANALYSIS DOCUMENTATION	Unlimited	$0
JS03	THEORY OF DESIGN AND OPERATION	Unlimited	$0

	DOCUMENTATION		
JS04	THEORY OF COMPLIANCE	Unlimited	$0
JS05	SECURITY VERIFICATION PLAN	Unlimited	$0
JS06	SECURITY VERIFICATION REPORT	Unlimited	$0
JS07	SECURITY VERIFICATION TEST PROCEDURE	Unlimited	$0
JS08	TEMPEST CONTROL PLAN	Unlimited	$0
JS09	TEMPEST TEST PLAN	Unlimited	$0
JS0A	TEMPEST TEST REPORT	Unlimited	$0
JS0B	CONFIGURATION CONTROL DOCUMENTATION	Unlimited	$0
JS0C	ENGINEERING DRAWINGS, SOFTWARE & CONFIGURATION IITEM DATABASE	Unlimited	$0
JS0D	PHYSICAL CONFIGURATION AUDIT PLAN AND REPORT	Unlimited	$0
JS0E	IN-PROCESS ACCOUNTING PROCEDURES DOCUMENTATION	Unlimited	$0
JS0F	KEY MANAGEMENT PLAN & KEY SPECIFICATION	Unlimited	$0
JS0G	INTERFACE AND OPERATOR'S GUIDE	Unlimited	$0
JS0H	MAINTENANCE TRAINING PLAN AND COURSE OF INSTRUCTION	Unlimited	$0
JS0J	MAINTENANCE MANUALS	Unlimited	$0
JS0K	SECURITY PRODUCTION ASSURANCE	Unlimited	$0
JS0L	SOFTWARE REQUIREMENTS SPECIFICATIONS	Unlimited	$0
JS0M	SOFTWARE TEST PLAN	Unlimited	$0
JS0N	SOFTWARE TEST REPORT	Unlimited	$0
JS0P	SOFTWARE DEVELOPMENT PLAN	Unlimited	$0
JS0Q	SOFTWARE PRODUCT SPECIFICATIONS	Unlimited	$0
JS0R	SOFTWARE TEST DESCRIPTION	Unlimited	$0
JS0S	SOFTWARE DESIGN DESCRIPTION	Unlimited	$0
JS0T	SOFTWARE VERSION DESCRIPTION	Unlimited	$0

SECTION C – DESCRIPTION/SPECIFICATIONS/WORK STATEMENTS:

(CHANGE TO EXISTING CLAUSE)
C-1. SPECIFICATIONS/STATEMENT OF WORK (DEC 1998)

SLINs 0001AA, 0001AB, 0001AC and, if exercised, options SLINs 0001AD, 0001AE, and CLIN 0003 shall be performed in accordance with the First Article Qualification Statement of Work (SOW) (Attachment "B"), paragraphs 3.3, 3.3.1, 3.4 (all inclusive), 3.7 (all inclusive) and 3.10 of the Production SOW, the Configuration Management SOW (Attachment "E"), the Index & Data Lists (Attachment "N"), the Joint Interchangeability Plan (Attachment “S”), and the First Article Qualification Test Plan (Attachment "T").

CLIN 0005 (and any SLINs thereunder) and, if exercised, option CLIN 0006 shall be performed in accordance with the Non-Recurring Engineering SOW (Attachment “P”).

If exercised, Option CLINs 0010 and 0011 shall be performed in accordance with the Enhanced Throughput SOW (Attachment “H”), the Enhanced Throughput Standard (Attachment “J”), and the Army User Interface Requirements for MIDS-LVT(2) (Attachment “G”).

If exercised, Option CLIN 0015 shall be performed in accordance with the Configuration Management SOW (Attachment “E”).

If exercised, Option CLIN 0016 shall be performed in accordance with the MIDS-LVT(1) Avionics and Ground Muxes Modifications SOW (Attachment “R”).

CLIN 0100, SLIN 0101AA, and, if and to the extent exercised, Option CLINs 0150-0151, 0200-0251, 0300-0351, 0400-0451, 0500-0551, & 0600-0651 shall be performed in accordance with the Production SOW (Attachment "C"), the Configuration Management SOW (Attachment "E"), the Index & Data Lists (Attachment "N"), the Joint Interchangeability Plan (Attachment “S”), the Acceptance Test Requirements (Attachment "U”), and, if option CLIN 0010 is exercised and to the extent Enhanced Throughput is required in terminals, the Enhanced Throughput SOW (Attachment “H”) and Standard (Attachment “J”).

If and to the extent exercised, Option CLINs 0700, 0702-0707, and 0800-0801 shall be performed in accordance with the Configuration Management SOW (Attachment "E"), the Supportability SOW (Attachment "F"), the Index and Data Lists (Attachment "N"), and the Acceptance Test Requirements (Attachment "U").

If and to the extent exercised, option CLINs 0900, 0902, 0903, 0905, 1100, 1102, 1200, and 1202 shall be performed in accordance with the Engineering Services SOW (Attachment "D").

If and to the extent exercised, Option CLIN 1000 shall be performed in accordance with Section 3.7 of the Supportability SOW (Attachment "F") and clause H.39.

If and to the extent exercised, Option CLINs 2701, 2800, and 2900 shall be performed in accordance with the Configuration Management SOW (Attachment “E”), clause H.36, and Attachment K of the contract.

CLIN 0002 and, if exercised, CLIN 0004 shall be performed in accordance with Exhibit "B".

If exercised, Option CLINs 0011 and 0013 shall be performed in accordance with Exhibit “H”.

If exercised, Option CLIN 0017 shall be performed in accordance with Exhibit “E”.

CLIN 0152, and, if and to the extent exercised, Option CLINs 0252, 0352, 0452, 0552, and 0652 shall be performed in accordance with Exhibits "C" and "E".

If and to the extent option is exercised, CLINs 0701 and 0708 shall be performed in accordance with Exhibit "F".

If and to the extent option is exercised, CLIN 0801 shall be performed in accordance with Exhibit "F".

SECTION C – DESCRIPTION/SPECIFICATIONS/WORK STATEMENTS:

If and to the extent exercised, option CLINs 0901, 0904, 1101 and 1201 shall be performed in accordance with Exhibit "D".

If and to the extent exercised, option CLIN 1001 shall be performed in accordance with Exhibit "F".

If and to the extent options are exercised, CLINs 2700, 2801, and 2901 shall be performed in accordance with Exhibit "I".

CLINs 3000, 3001, 3003 and 3005, shall be performed in accordance Attachment Y, Statement of Work for MIDS JTRS.

CLIN 3002 shall be performed in accordance with Exhibit "J."

(CHANGE TO EXISTING CLAUSE) (Applicability)
C-2 REQUIREMENT FOR INTERCHANGEABILITY OF PARTS (APPLICABLE TO ALL MIDS LVT LRUs AND SRUs SUPPLIED OR REPAIRED UNDER THIS CONTRACT)

1) Interchangeable LRUs and SRUs

The LRUs and SRUs required to be interchangeable under this contract are the following:

LVT(1) LRUs are defined as the following

Main Terminal
Remote Power Supply
High-Power Amplifier Group (HPAG) Interface Adapter
AC Adapter
DC Adapter

LVT(1) SRUs are defined as the following:

Data Processor/Avionics MUX
Data Processor/Avionics MUX-without the 3910 interface
Tailored Processor/Ground MUX
Tailored Processor
Voice Processor
Signal Message Processor with Enhanced Throughput
Signal Message Processor without Enhanced Throughput
RT Interface/Discretes
Receiver-Synthesizers
Exciter/Interference Protection Features
Power Amplifier/Antenna Interface Unit
TACAN
Internal Power Supply
Chassis/Harness/Motherboard-(LVT(1))

LVT(2) LRUs are defined as the following:

Main Terminal
Cooling Unit
Mounting Base
Power Supply Assembly

LVT(2) SRUs are defined as the following:

Data Processor /ADDSI with Enhanced Throughput
Data Processor /ADDSI without Enhanced Throughput
Chassis/Harness/Motherboard-(LVT(2))
Voice Processor
Signal Message Processor
RT Interface/Discretes
Receiver-Synthesizer
Exciter/Interference Protection Features
Power Amplifier/Antenna Interface Unit
Internal Power Supply
SEPIC
AB Converter
DC

2) Interchangeability Definition

(a) For the purposes of this contract, one-way interchangeability is defined as the replacement of any LRU, SRU or any combination or permutation of LRUs and SRUs from a terminal A into terminal B with no degradation of system, LRU or SRU performance, where terminal B is the reference terminal and terminal A is the terminal demonstrating one-way interchangeability.

(b) For the purposes of this contract, two-way interchangeability is defined as the replacement of any LRU, SRU or any combination or permutation of LRUs and SRUs from a terminal A into terminal B or from terminal B into terminal A with no degradation of system, LRU or SRU performance, where terminal A is from one vendor and terminal B is from another vendor or the EMD terminal.

3) Interchangeability among LRUs and SRUs of a single manufacturer

(a) SRUs delivered for Government acceptance shall be two-way interchangeable (backward and forward compatible) to SRUs previously accepted by the Government under this contract, within the limits of the previous Functional and Allocated baselines.

(b) LRUs delivered for Government acceptance shall be two-way interchangeable (backward and forward compatible) to LRUs previously accepted by the Government under this contract, within the limits of the previous Functional and Allocated baselines.

4) Interchangeability with the EMD terminal

(a) All SRUs procured and repaired under this contract shall be at a minimum one-way interchangeable (i.e. backward compatible) to the EMD terminal provided as GFE to the contractor.

(b) All LRUs procured and repaired under this contract shall be at a minimum two-way interchangeable (i.e. backward and forward compatible) to the EMD terminal provided as GFE to the contractor.

5) Vendor to Vendor Interchangeability

(a) All LRUs and SRUs manufactured under Contracts N00039-00-D-2100 and N00039-00-D-2101 shall be two-way interchangeable with the LRUs and SRUs of any other awardees of MIDS production contracts under this solicitation. The offeror shall be responsible for any and all retrofit activities resulting from contractor demonstration of vendor-to-vendor interchangeability or Government verification of vendor-to-vendor interchangeability.

(NEW CLAUSE)
C-2.1 REQUIREMENT FOR INTERCHANGEABILITY OF PARTS (APPLICABLE TO ALL MIDS JTRS LRUS AND SRUS SUPPLIED OR REPAIRED UNDER THIS CONTRACT)

1) Interchangeability with the MIDS LVT terminal

The MIDS JTRS procured and repaired under this contract shall be one-way interchangeable (i.e. backward compatible) to the MIDS LVT terminal. Interchangeability with the MIDS LVT terminal is defined as the replacement of MIDS LVT with the MIDS JTRS that results in no degradation of the system performance and that requires no changes to the LVT host platforms installation kit.

2) Interchangeable LRUs and SRUs

The LRUs and SRUs required to be interchangeable under this contract are the following:

MIDS JTRS LRUs:

Receiver Transmitter (RT)
Remote Power Supply (RPS)

MIDS JTRS SRUs:

Internal Power Supply (IPS)
US Master Chassis/Harness
Slave Chassis/Harness
European Master Chassis/Harness
Black Core/COMSEC
Red Processor/IO (with 1553B/Ethernet/2 Voice/Discretes)
Red Processor/IO (with 1553B/3910/2 Voice/Discretes)
Red Processor/IO (with 1553B/Ethernet/1 Voice/Discretes)
Red Processor/IO (Ethernet only)
RFA/AIU/IPF
L-16 Modem/Xcvr
TACAN/GPS
2-2000 Modem/Xcvr

Interchangeability is defined as the replacement of any LRU, SRU or any combination or permutation of LRUs and SRUs from a MIDS JTRS from vendor A into a MIDS JTRS from vendor B with no degradation of system, LRU or SRU performance.

3) Interchangeability among LRUs and SRUs of a single manufacturer

LRUs and SRUs delivered for Government acceptance shall be interchangeable with LRUs and SRUs previously accepted by the Government under this contract, within the limits of the previous Functional and Allocated baselines.

4) Vendor to Vendor Interchangeability

All LRUs and SRUs manufactured under this contract shall be interchangeable with the LRUs and SRUs produced by all other MIDS JTRS contractors. The contractor shall be responsible for any and all retrofit activities resulting from contractor testing of vendor-to-vendor interchangeability or Government verification of vendor-to-vendor interchangeability.

(NEW CLAUSE)
C-8. EXEMPTION FROM ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY REQUIREMENTS (JUN 2001)

(a) The Government has determined that the following exemption(s) to the Electronic and Information Technology (EIT) Accessibility Standards (36 C.F.R. § 1194) are applicable to this procurement:

__X__ The EIT to be provided under this contract has been designated as a National Security System.
____ The EIT acquired by the contractor is incidental to this contract.
____ The EIT to be provided under this contract would require a fundamental alteration in the nature of the product or its components in order to comply with the EIT Accessibility Standards.
____ The EIT to be provided under this contract will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment.
____ Compliance with the EIT Accessibility Standards would impose an undue burden on the agency.
____ The EIT to be provided under this contract is purchased in accordance with FAR Subpart 13.2 prior to January 1, 2003.

(b) Notwithstanding that an exemption exists, the Contractor may furnish supplies or services provided under this contract that comply with the EIT Accessibility Standards (36 C.F.R. § 1194).

SECTION D – PACKAGING AND MARKING

(NEW CLAUSE)
D-2. 252.235-7010 ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER (MAY 1995)

(a) The Contractor shall include an acknowledgment of the Government's support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the Space and Naval Warfare Systems Command (SPAWAR) and Program Executive Office Tactical Air Systems (PEO-T) under Contract No. *.

(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the SPAWAR or PEO (T).

* To be completed at time of award.

SECTION E – INSPECTION AND ACCEPTANCE

(NEW CLAUSE)
E-1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

REFERENCE	TITLE	DATE
52.246-8	Inspection of Research and Development--Cost-Reimbursement	May 2001

(CHANGE TO EXISTING CLAUSE) (Applicability)
E-3 INSPECTION AND ACCEPTANCE - ORIGIN (APPLICABLE TO CLINS 0001, 0003, 0005-0012, 0016, 0100-0151, 0200-0251, 0300-0351, 0400-0451, 0500-0551, 0600-0651, 0700, 0702-0705, 0800, 0900, 0903, 1000, 1100, 1200, 3000, 3001, 3003, 3005)

FOR DLS

(a) Inspection and acceptance of the supplies or services to be furnished hereunder shall be made by representatives of the Government (normally the Defense Contract Management Area Operations (DCMAO)) at the contractor's or subcontractor's plant. The cognizant inspector shall be notified when material is ready for inspection. When the contract provides for Government procurement quality assurance actions at source, the place or places designated for such actions may not be changed without authorization of the Contracting Officer.

(b) When off-the-shelf items (items already produced) are presented by the contractor, the Government inspector is authorized to limit inspection to those procurement quality assurance (PQA) actions which can be performed.

(c) GOVERNMENT REPRESENTATIVE:

DCMC Twin Cities-Rockwell Cedar Rapids
1231 Park Place, N.E.
Cedar Rapids, IA 52402-2023
POC: James Close (319/378-2027)

DCMC Springfield BAE SYSTEMS/Kearfott
164 Totowa Road
Wayne, NJ 07474-0932
POC: Beth Goldberg (973/633-4510)

(d) PLACE OF INSPECTION/ACCEPTANCE:

Rockwell Collins, Inc
Government Systems Division
350 Collins Road N.E.
Cedar Rapids, IA 52498
POC: Mike Kach (319/295-3214)
Cage Code: 13499

BAE Systems Information and Electronic Systems Inc., Communication, Navigation, Identification and Reconnaisance (CNIR)
150 Parish Drive
Wayne, NJ 07474-0932
POC: Fred Morrison (973/633-6027)
Cage Code: Q98656

SECTION E – INSPECTION AND ACCEPTANCE

(CHANGE TO EXISTING CLAUSE) (Applicability)
E-3 INSPECTION AND ACCEPTANCE - ORIGIN (APPLICABLE TO CLINS 0001, 0003, 0005-0012, 0016, 0100-0151, 0200-0251, 0300-0351, 0400-0451, 0500-0551, 0600-0651, 0700, 0702-0705, 0800, 0900, 0903, 1000, 1100, 1200, 3000, 3001, 3003, 3005)

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(a) Inspection and acceptance of the supplies or services to be furnished hereunder shall be made by representatives of the Government (normally the Defense Contract Management Area Operations (DCMAO)) at the contractor's or subcontractor's plant. The cognizant inspector shall be notified when material is ready for inspection. When the contract provides for Government procurement quality assurance actions at source, the place or places designated for such actions may not be changed without authorization of the Contracting Officer.

(b) When off-the-shelf items (items already produced) are presented by the contractor, the Government inspector is authorized to limit inspection to those procurement quality assurance (PQA) actions which can be performed.

(c) GOVERNMENT REPRESENTATIVE:

DCMA San Diego Administrative Contracting Officer
7675 Dagget Street, Suite 200
San Diego, CA 92111-2241
(858) 495-7498

(d) PLACE OF INSPECTION/ACCEPTANCE:
ViaSat, Incorporated
6155 El Camino Real
Carlsbad, CA 92009-1699
Point of Conact: Mr. Jim Keller, 760-476-2200

(CHANGE TO EXISTING CLAUSE) (Applicability)
E-4 INSPECTION AND ACCEPTANCE OF CONTRACT DATA REQUIREMENTS (JAN 89) (SPAWAR 5252.246-9203) (APPLICABLE TO CLINS 0002, 0004, 0011, 0013, 0017, 0152, 0252, 0352, 0452, 0552, 0652, 0701, 0706, 0801, 0901, 0904, 1001, 1101, 1201, 2700, 2801, 2901, and 3002)

Data items submitted shall be the responsibility of the initial addressee under Block 14 of DD-1423 as to review for adequacy and contract compliance. Where deficiencies or inadequacies are noted, the initial addressee should so advise the contractor by letter within a reasonable period of time with copies to the ACO and the cognizant Technical Office indicated in Block 6 of DD-1423.

The initial addressee shall advise the contractor with copy to ACO and the cognizant technical code in Block 6 of DD-1423 at such time as each data submission submitted has been satisfactorily accomplished.

Inspection and acceptance of Data Items requiring shipment under DD Form 250 shall be made in accordance with Block 7 of DD-1423. Where acceptance is at destination and more than one addressee is shown in Block 14 of DD-1423, acceptance shall be the responsibility of the initial addressee.

Addressees other than the initial addressee, shall be considered informational.

SECTION E – INSPECTION AND ACCEPTANCE

(CHANGE TO EXISTING CLAUSE)
E-5 INSPECTION AND ACCEPTANCE—DESTINATION (Applicable to CLINs 0002, 0004, 0011, 0013, 0017, 0901, 0904, 1001, 0152, 0252, 0352, 0452, 0552, 0652, 0701, 0706, 0801, 1101, 1201, 2700-2701, 2800-2801, 2900-2091, and 3002)

Inspection and acceptance of CDRLs will be at destination in accordance with the CDRL General Instructions of the Contract (Exhibit A) and specific instructions contained in the CDRLs.

SECTION F – DELIVERIES OR PERFORMANCE

(CHANGE TO EXISTING CLAUSE)
F-2 PERIODS OF PERFORMANCE FOR ORDERING AND ORDERS:

(a) The periods of performance of the contract, for the purpose of issuing delivery or task orders are as follows:

CLIN(S)	PERIOD(S) OF PERFORMANCE FOR ISSUING ORDERS
0001–0002	UPON CONTRACT AWARD
0003-0004	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0005	UPON CONTRACT AWARD
0006	RESERVED
0010-0011	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0012-0013	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0015	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0016-0017	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0020	FROM THE DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2004
0100-0152	FROM DATE OF CONTRACT AWARD THROUGH 30 SEPTEMBER 2000
0200-0252	FROM DATE OF OPTION EXERCISE THROUGH 30 JUNE 2002
0300-0352	FROM DATE OF OPTION EXERCISE THROUGH 30 MAY 2003
0400-0452	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2003
0500-0552	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
0600-0652	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
0700-0701	FROM DATE OF OPTION EXERCISE THROUGH 31 DECEMBER 2002
0702	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2002
0703	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2003
0704	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
0705	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2005
0706	UPON EXERCISE OF OPTION CLIN 0702 THROUGH 30 SEPTEMBER 2005
0900-0902	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
0903-0905	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
1000-1001	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
1100-1102	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
1200-1202	FROM DATE OF OPTION EXERCISE THROUGH 30 SEPTEMBER 2004
2700-2901	FROM DATE OF CONTRACT AWARD THROUGH NINE YEARS AFTER EFFECTIVE DATE OF AWARD
3000	UPON EXECUTION OF THE MODIFICATION THAT INCORPORATES THIS CLIN
3001	FROM 1 OCTOBER 2004 THROUGH 30 SEPTEMBER 2005
3002	UPON EXECUTION OF THE MODIFICATION THAT INCORPORATES THIS CLIN THROUGH NINE YEARS THEREAFTER.
3003	FROM DATE OF AWARD OF THE MODIFICATION THAT INCORPORATES THESE CLINS THROUGH NINE YEARS THEREAFTER
3004	FROM DATE OF AWARD OF THE MODIFICATION THAT INCORPORATES THIS CLIN THROUGH NINE YEARS THEREAFTER
3005	FROM DATE OF AWARD OF THE MODIFICATION THAT INCORPORATES THIS CLIN THROUGH 6 MONTHS THEREAFTER

(b) The units provided under CLINs 0001and 0003 shall be delivered in accordance with the schedule provided in clause F-3.

(c) The delivery rate for MIDS-LVT LRU systems provided under CLINs 0100-0652 shall be four (4) per month until July 2002. The delivery rate for MIDS-LVT LRU systems provided under CLINs 0100-0652 shall be twelve (12) per month beginning 01 August 2002. The delivery capacity shall increase to twenty (20) per month beginning 20 March 2003 and will increase to thirty (30) per month upon completion of the FDL contract N00039-96-C-0038. The delivery rate may exceed this rate provided that the contractor and the Government sign a bilateral modification to the basic delivery order contract to increase the rate for the contract or a bilateral delivery order to increase the rate for that particular delivery order.

SECTION F – DELIVERIES OR PERFORMANCE

The delivery requirements for CLINs 0100-0151, 0200-0251, 0300-0351, 0400-0451, 0500-0551, & 0600-0651 are stated below:

CLINs 0100-0151& all FY00 orders against CLINs 0600-0651: The Contractor shall commence delivery of terminals (excluding those referenced above) and related spares ordered no later than 18 months after the issuance of delivery order, in accordance with the delivery schedule established in the order.

CLINs 0200-0251 & all FY01 orders against CLINs 0600-0651: The Contractor shall commence delivery of terminals and related spares ordered no later than 15 months after issuance of delivery order, in accordance with the delivery schedule established in the order.

CLINs 0300*-0351, 0400-0451, 0500-0551, and all FY02 through FY04 orders against CLINs 0600-0651: The Contractor shall commence delivery of terminals and related spares ordered no later than 12 months after issuance of delivery order, in accordance with the delivery schedule established in the order.

The specific periods of performance for these CLINs under each order shall be stated within such order but shall not extend beyond the delivery requirement dates stated above.

*If the initial award of terminals is greater than or equal to 120 terminals, then delivery of terminals ordered under CLIN 0300 shall commence no later than 10 months after issuance of delivery order.

(d) The periods of performance for non-ordering CLINs or for orders issued against all other ordering CLINs not stated in paragraph (c) above are delineated in the next two clauses of Section F: "TIME AND PLACE OF DELIVERY - F.O.B. ORIGIN" and "TIME AND PLACE OF DELIVERY - F.O.B. DESTINATION".

SECTION F – DELIVERIES OR PERFORMANCE

(CHANGE TO EXISTING CLAUSE)
F.3. TIME AND PLACE OF DELIVERY--F.O.B. ORIGIN (DEC 1999)

All supplies to be furnished hereunder shall be delivered free of expense to the government in accordance with instructions specified in the clause hereof entitled "F.O.B. Origin, Contractor's Facility" FAR 52.247-30, at the Contractor's plant.

ITEM(S)	QTY/UNIT	DELIVERY SCHEDULE/PERIOD OF PERFORMANCE
0001AA 0001AB/ 0001AC	1 LOT 15 MIDS LVT SETS	In Accordance with (IAW) Delivery Order (D.O.) IAW D.O. Note: See Clause H23, paragraph (e).
0003	11 MIDS LVT SETS	Not Later Than 18 months after issuance of delivery order. Note: See Clause H.23, paragraph (e).
0005	1 LOT	IAW Option Exercise D.O.
0006	1 LOT	IAW Option Exercise D.O.
0010	1 LOT	24 months after issuance of delivery order.
0012	1 LOT	24 months after issuance of delivery order.
0015	1 LOT	From option exercise until first terminal delivery under CLIN 0001.
0016-0017	1 LOT	IAW Option Exercise D.O.
0020-0029	1 LOT Per CLIN	IAW Option Exercise D.O.
0100-0151, 0200-0251, 0300-0351, 0400-0451, 0500-0551, 0600-0651	IAW each D.O.	IAW each D.O. and within the requirements stated in clause F-2. In the sequence established in Section F of each delivery order.
0700	1 LOT	From issuance of D.O. through first MIDS-LVT LRU system delivery (excluding CLINs 0001 & 0003).
0702-0705	1 LOT per CLIN	From issuance of D.O. through twelve months thereafter.
0800	IAW each Technical Direction Letter (TDL)	IAW each TDL. No TDL's period of performance shall extend beyond 30 September 2004.
1000	IAW D.O.	Per Clause H.39, 800hrs/4yrs from date of each item acceptance.
3000	1 LOT	NLT 31 Months after delivery order award**
3001	IAW D.O.	NLT 23 Months after delivery order award***
3003	1 LOT.	NLT 1 Month after delivery order award
3004	1 LOT*	Upon issuance of delivery order
3005	1 LOT	From award of delivery order to the start of contractor FAQT****

* The Government may order Data Rights under CLIN 3004 on an individual CDRL basis in accordance with Clause F-2, Period of Performance for Ordering and Orders. For those CDRLs identified in Clause B-2 with a price of $0, the Government automatically obtains the rights in those CDRLs identified in Clause B-2 without issuing a delivery order.

SECTION F – DELIVERIES OR PERFORMANCE

** All deliveries shall be completed NLT 31 months after delivery order award. The detailed delivery schedule is as follows:

U.S. Configuration	European Configuration
2 in month 26	2 in month 26
2 in month 27	2 in month 27
3 in month 28	3 in month 28
4 in month 29	4 in month 29
4 in month 30	4 in month 30

*** All deliveries shall be completed NLT 23 months after delivery order award. A detailed delivery schedule for each individual terminal will be provided in the delivery order.

**** The Government's decision to order this CLIN does not relieve the contractor of its obligations to comply with the delivery schedule for CLIN 3000 identified in this clause.

SECTION F – DELIVERIES OR PERFORMANCE

(CHANGE TO EXISTING CLAUSE)
F-4. TIME AND PLACE OF DELIVERY--F.O.B. DESTINATION

Destination and delivery schedule are set forth below:

ITEM(S)	DESTINATION	QUANTITY	DELIVERY SCHEDULE/ PERIOD OF PERFORMANCE
0002	In accordance with (IAW) CDRL, Exhibit B	1 LOT	In accordance with (IAW) CDRL, Exhibit B
0004	IAW CDRL, Exhibit B	1 LOT	IAW CDRL, Exhibit B
0011	IAW CDRL, Exhibit H	1 LOT	IAW CDRL, Exhibit H
0016	IAW CDRL, Exhibit G	1 LOT	IAW CDRL, Exhibit G
0152, 0252, 0352, 0452, 0552, 0652	IAW CDRL, Exhibits C & E	1 LOT	IAW CDRL, Exhibit C & E
0701, 0706	IAW CDRL, Exhibit F	1 LOT	IAW CDRL, Exhibit F
0801	IAW CDRL, Exhibit F	1 LOT	IAW CDRL, Exhibit F
0900, 0902, 0903, 0905 1100, 1102 1200, 1202	IAW each D.O.	1 LOT	IAW each D.O.
0901, 0904 1101, 1201	IAW CDRL, Exhibit D	1 LOT	IAW CDRL, Exhibit D
1001	IAW CDRL, Exhibit F	1 LOT	IAW CDRL, Exhibit F
2700	IAW CDRL, Exhibit I	1 LOT	IAW CDRL, Exhibit I
2801	IAW CDRL, Exhibit I	1 LOT	IAW CDRL, Exhibit I
2901	IAW CDRL, Exhibit I	1 LOT	IAW CDRL, Exhibit I
3002	IAW CDRL, Exhibit J	1 LOT	IAW CDRL, Exhibit J

SECTION G – CONTRACT ADMINISTRATION DATA

(CHANGE TO EXISTING CLAUSE) (Applicability)
G-1. 5252.232-9000 SUBMISSION OF INVOICES (FIXED PRICE) (JUL 1992) (APPLICABLE TO CLINS 0001-0801, 1000, 1100, 1200, 2700-2901, 3001, 3003, and 3004)

(a) "Invoice" as used in this clause does not include contractor's requests for progress payments.

(b) The contractor shall submit original invoices with _____ copies to the address identified in the solicitation/contract award form (SF 26-Block 10; SF 33-Block 23; SF 1447-Block 14, SF1449-Block 18a), unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order (DD 1155-Block 13 or SF 26-Block 10).

(c) The use of copies of the Material Inspection and Receiving Report (MIRR), DD Form 250, as an invoice is encouraged. DFARS Appendix F-306 provides instructions for such use. Copies of the MIRR used as an invoice are in addition to the standard distribution stated in DFARS F-401.

(d) In addition to the requirements of the Prompt Payment clause of this contract, the contractor shall cite on each invoice the contract line item number (CLIN); the contract subline item number (SLIN), if applicable; the accounting classification reference number (ACRN) as identified on the financial accounting data sheets, and the payment terms.

(e) The contractor shall prepare:

* a separate invoice for each activity designated to receive the supplies or services.
__a consolidated invoice covering all shipments delivered under an individual order.
__ either of the above.

(f) If acceptance is at origin, the contractor shall submit the MIRR or other acceptance verification directly to the designated payment office. If acceptance is at destination, the consignee will forward acceptance verification to the designated payment office.

(CHANGE TO EXISTING CLAUSE) (Applicability)
G-2 SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE) ALT I (JUL 92) (NAPS 5252.232-9001) (APPLICABLE TO CLINS 0900, 0902, 1102, 1202, 3000 and 3005)

(a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF-1034) but does not include contractor requests for progress payments under fixed price incentive contracts.

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and ___two copies, to the contract auditor* at the following address:
_____ unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to the COR, **MR. GREG ROPP, MIDS-LVT INTERNATIONAL PROGRAM OFFICE, PMW 101/159, CODE PMW101/159-15 (for DLS) or MR. KIRK RYAN, MID-LVT INTERNATIONAL PROGRAM OFFICE, PMW 101/159, CODE PMW101-17 (for ViaSat).** Following verification, the contract auditor* will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery order. There shall be a lapse of no more than 90 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

(1) Contract line item number (CLIN)
(2) Subline item number (SLIN)
(3) Accounting Classification Reference Number (ACRN)
(4) Payment terms
(5) Procuring activity
(6) Date supplies provided or services performed
(7) Costs incurred and allowable under the contract
(8) Vessel (e.g., ship, submarine or other craft) or system for which supply/services is provided

(e) A DD Form 250, "Material Inspection and Receiving Report",

X is required with each invoice submittal.
__is required only with the final invoice.
__ is not required.

(f) A Certificate of Performance

__ shall be provided with each invoice submittal.
X is not required.

(g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.

(h) Costs of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLINS/SLINS with more than on ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

(i) When a vendor invoice for a foreign currency is provided as supporting documentation, the Contractor shall identify the foreign currency and indicate on the vendor invoice the rate of exchange on the date of payment by the Contractor. The Contractor shall also attach a copy of the bank draft or other suitable documents showing the rate of exchange. The contractor shall provide an English translation if the vendor invoice is written in a foreign language.

(CHANGE TO EXISTING CLAUSE)
G-5 DESIGNATION OF PROCUREMENT CONTRACTING OFFICER AND APPOINTMENT OF ORDERING OFFICER(S)

The Procurement Contracting Officer is listed below and is the sole ordering officer for this contract:

Commander, Space & Naval Warfare Systems Command
4301 Pacific Highway
Attention: Ms. Melissa L. Hawkins, Code 02-21E, Bldg. OT4, Rm. 1035B
San Diego, CA 92110-3127

Phone: (858)537-0346
Facsimile: (619)524-3180
E-mail: melissa.hawkins@navy.mil

(CHANGE TO EXISTING CLAUSE) (APPLICABILITY)
G-7 PROGRESS PAYMENTS INVOICING INSTRUCTION (APPLICABLE TO CLINS 0001-0801, 1100, 1200, 3001, and 3003)

SECTION G – CONTRACT ADMINISTRATION DATA

All contractor requests for progress payments shall be submitted on Standard Form 1443, "Contractor's Request for Progress Payment," in lieu of an invoice, in accordance with instructions contained on the reverse side of the Standard Form 1443 to the cognizant administration office for certification of progress payments. Final invoices are to be submitted in accordance with vouchering and paying instructions contained in Section G.

(CHANGE TO EXISTING CLAUSE)
G-8 TYPE OF CONTRACT

The type of contract for this action is as follows:

CLIN	Contract Type by CLIN	Type of Contract Instrument (see DFARS 204.7003(a)(3))
0001 through 0706	Firm-fixed-price	D
0800-0801	Firm-fixed-price	C
0900, 0901, 0903, 0904,	Cost-Reimbursement with Fixed Fee	D
0902, 0905, 1102, 1202	Cost-Reimbursement with No Fee	D
1000-1001,1100, 1101, 1200, 1201	Firm-fixed-price	D
2700-2901	Firm-fixed-price	D
3000	Cost-Plus-Incentive-Fee	D
3001	Firm Fixed Price	D
3002	Not-Separately-Priced	D
3003-3004	Firm-fixed price	D
3005	Cost-Plus-Fixed-Fee	D

(NEW CLAUSE)
G-9 CONTRACTOR PERFORMANCE APPRAISAL REPORTING SYSTEM (OCT 2002)

(a) Past performance information will be collected and maintained under this contract using the Department of Defense Contractor Performance Appraisal Reporting System (CPARS). CPARS is a web-enabled application that collects and manages the contractor's performance information on a given contract during a specific period of time. Additional information is available at http://www.cpars.navy.mil/.

(b) After contract award, the contractor will be given access authorization by the respective SPAWAR Focal Point, to review and comment on any element of the proposed rating before that rating becomes final. Within 60 days after contract award, the contractor shall provide in writing (or via e-mail) to the contracting officer the name, title, e-mail address and telephone number of the company individual or individuals who will have the responsibility of reviewing and approving any Contractor Performance Appraisal Report (CPAR) developed under the contract. If, during the life of this contract these company individual(s) are replaced by the contractor, the name, title, e-mail

address and telephone number of the substitute individuals will be provided to the contracting officer within 60 days of the replacement.

SECTION H- SPECIAL CONTRACT REQUIREMENTS

NEW CLAUSE

H-1.2 ORDER OF PRECEDENCE (Applicable to 3000-series CLINs Only) (The following is a clarified version of FAR 52.215-8 ("Order of Precedence") applicable only to this Contract.)

Any inconsistency in this Solicitation or Contract shall be resolved by giving precedence in the following order:

(a) the schedule (Sections A through H) (excluding the specifications);

(b) representations and other instructions (Section K);

(c) contract clauses (Section I);

(d) attachments (including Statements of Work) (in order, except attachment N, which is (e) below)

(e) the specifications*

* Any inconsistencies between specifications shall be resolved by giving precedence in the following order:

1. Functional Baseline consisting of the:
   System Specification for the MIDS JTRS (SS-J-10001) with all SS errata thereto
   System/Segment Interface Control Specification (ICS-J-10002) with all errata thereto
2. Allocated Baseline consisting of LRU and SRU Item Performance Specifications (IPSs); the internal ICD for the Receiver Transmitter LRU; the CSCI Software Requirements Specifications (SRSs); and the Software Interface Requirements Specifications (IRSs).
3. Other documentation referenced in the specifications (STANAG 4175, STANAG 5516, other NATO, military, and federal standards; other Government documents and non-Government documents).

CHANGE TO EXISTING CLAUSE

H-2. INDEFINITE QUANTITY

Pursuant to FAR 52.216-22 entitled "INDEFINITE QUANTITY" (OCT 95) found in Section I of this contract, the minimum and maximum quantities are hereby established as follows. CLIN 0001 shall represent the minimum for the entire contract. The minimums and maximums per CLIN as stated below apply only if the option is exercised.

CLIN(Including any SLINs Thereunder)	MINIMUM	MAXIMUM
0001	15 MIDS-LVT SETS	15 MIDS LVT SETS
0006	1 LOT	1 LOT
0010	1 LOT	1 LOT
0012	1 LOT	1 LOT
0015	1 LOT	1 LOT
0016	1 LOT	1 LOT
0017	1 LOT	1 LOT
0100	1 MIDS LVT SETS	24 MIDS LVT SETS
0150	1 SRU or LRU	1185 EACH
0151	1 SRU or LRU	212 EACH
0200	20 SETS	150 EACH
0250	1 SRU or LRU	1721 EACH
0251	1 SRU or LRU	393 EACH
0300	39 SETS	281 SETS
0350	1 SRU or LRU	1463 EACH
0351	1 SRU or LRU	368 EACH
0400	56 SETS	407 SETS
0450	1 SRU or LRU	1313 EACH
0451	1 SRU or LRU	327 EACH
0500	58 SETS	404 SETS
0550	1 SRU or LRU	1342 EACH

0551	1 SRU or LRU	327 EACH
0600	13 SETS	90 SETS
0651	1 SRU or LRU	112 EACH
0900	100 hours	10,000 hours
0903*	100 hours	40,000 hours
1000	Warranty for one MIDS-LVT LRU system	Warranty for 441
1100*	100 hours	40,000 hours
1200*	100 hours	40,000 hours
2700	1 LOT	1 LOT
2701	Release from limited rights for one SRU	Release from limited rights for every SRU
2801	Release from restricted rights for one SRU	Release from restricted rights for every SRU
2901	Government Purpose Rights for one SRU	Government Purpose Rights for every SRU
3000	1 LOT	1 LOT
3001	0	25 EACH
3002	0	1 LOT
3003	0	1 LOT
3004	0	1 LOT
3005	0	1 LOT

***See Specific Notes 11C & 11D on page B-22 of the contract for Minimum and Maximum limits.**

(CHANGE TO EXISTING CLAUSE)

H-3. TYPES OF TASK OR DELIVERY ORDERS (DEC 1999)

The following types of task or delivery orders may be issued under this contract: (a) Firm-fixed-price under CLINs 0001 through 0706, 1000-1001, 1100, 1101, 1200, 1201, 2700-2901, 3001, 3003, and 3004; (b) Cost-plus-fixed-fee under CLINs 0900-0901 and 3005; (c) Cost-plus-incentive-fee under CLIN 3000 and 3002*; and (d) Cost-plus-no-fee under CLIN 0902, 1102, and 1202.

SECTION H- SPECIAL CONTRACT REQUIREMENTS

***CLIN 3002 is not separately priced; any cost and incentive fee associated with CLIN 3002 is included in the cost plus incentive fee arrangement for CLIN 3000.**

CHANGE TO EXISTING CLAUSE (Applicability)
H-4 METHOD OF SELECTION FOR ISSUANCE OF ORDERS (APPLICABLE TO ALL CLINS EXCEPT THE 3000-SERIES CLINS)

(A) Individual orders exceeding $2,500 shall be placed using one of the following selection procedures:

(1) The ordering officer may request technical proposals and price proposals from each awardee and make award(s) to the contractor(s) whose proposal(s), in the judgment of the ordering officer, represents the best value to the government. The contractor is permitted to propose improvements (e.g., performance, schedule, prices contained in Section B of this contract) in its quotation. "Best value" is defined as the expected outcome of an acquisition that, in the Government's estimation, provides the greatest overall benefit in response to the requirement (FAR 2.101).

(2) The ordering officer may utilize existing contract prices determined in accordance with clause B-4. The contractor may propose price improvements to clause B-4 at any time after contract award.

(B) The Government desires continuous improvements in terminal & spares pricing via updates to the pricing structure contained in clause B-4. The Government considers a price improvement to be an updated pricing structure (e.g., learning curve in clause B-4) that results in a lower, overall MIDS-LVT system LRU price. If the contractor proposes terminal and spares pricing independent of clause B-4, the Government may elect to disregard such prices even if they may be lower than prices derived from clause B-4. If determined to be the best value to the Government, the ordering officer may utilize an offeror's higher prices from an existing clause B-4 or a proposed updated clause B-4.

(C) Regardless of the selection procedures utilized, the ordering officer will consider existing prices from Section B (including clause B-4) and any proposed price improvements to clause B-4, and may consider any of the following technical factors:

(a) information received from the contractor(s) in response to the contracting officer's request for cost/technical proposals, if requested;
(b) past performance under this contract including all outstanding and previous delivery orders (including frequency of warranty repairs as well as frequency & expenses of non-warranty repairs);
(c) warranty prices;
(d) successful interchangeability with the EMD MIDS-LVT;
(e) successful demonstration of vendor-to-vendor interchangeability requirements; and
(f) Proposed Special Test Equipment to meet Government's required delivery rate(s).

If the ordering officer utilizes selection procedure (A)(1), the RFP will specify instructions for submitting a proposal, identify the technical factors that will be used in the evaluation, along with their relative order of importance, and will state the relative importance of the

technical factors to price. The technical factors in the RFP may not include all of those identified in paragraph (C) above, and may include other technical factors more appropriate for the particular requirement.

(D) The ordering officer may elect to not compete the award of any particular order if one or more of the following conditions exist:

(a) The agency need for such supplies or services is so urgent that providing the opportunity would result in unacceptable delays;
(b) Only one contractor is capable of providing such supplies or services at the level of quality required because the supplies or services are unique or highly specialized;
(c) The order should be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under the contract, provided that all awardees were given a fair opportunity to be considered for the original order;
(d) It is necessary to place an order to satisfy a minimum guarantee; or
(e) If the Government utilizes existing prices in Section B (Clause B-4) provided such prices were based on adequate price competition.

CHANGE TO EXISTING CLAUSE (applicability)
H-5. CONTRACT DATA REQUIREMENTS – DELIVERY ORDERS (APPLICABLE TO CLINS 0002, 0004, 0011, 0152, 0252, 0352, 0452, 0552, 0652, 0701, 0706, 0801, 0901, 0904, 1001, 1101, 1201, 2700, 2801, 2901, and 3002)

The data items shown on the DD 1423, Contract Data Requirements List, or included in the Statement of Work are either known data requirements or a general description of the data to be clarified or restated on each delivery order.

DELETE CLAUSE H-7 FROM CONTRACT
~~**H-7. LIMITATION OF LIABILITY – HIGH-VALUE ITEMS (APPLICABLE TO CLINS 0001, 0003, 0100, 0200, 0300, 0400, 0500, 0600, AND MAIN TERMINAL LRUs REPAIRED UNDER CLINs 0800)**~~

~~In consonance with FAR 46.805(a)(3) and FAR 52.246-24 ("Limitation of Liability – High-Value Items"), all Items and Subline Items deliverable hereunder are identified as High-Value Items.~~

CHANGE TO EXISTING CLAUSE (applicability)
H-10. SEGREGATION OF COSTS (AUG 92) (SPAWAR 5252.232-9206) (APPLICABLE TO CLINs 0900, 0902, 0903, 0905, 1102, 1202, 3000 and 3005)

The Contractor agrees to segregate costs incurred under this contract at the lowest level of performance, either task or subtask, rather than on a total contract basis, and to submit invoices reflecting costs incurred at that level. Invoices shall contain summaries of work charged during

the period covered, as well as overall cumulative summaries by labor category for all work invoiced to date, by line item, task or subtask.

Where multiple lines of accounting are present, the ACRN preceding the accounting citation will be found in Section B and/or Section G of the contract or in the technical direction letter or delivery order which authorizes work. Payment of Contractor invoices shall be accomplished only by charging the ACRN which corresponds to the work invoiced. One (1) copy of each invoice will be provided to the COR, designated herein, and the PCO at the time of submission to DCAA.

CHANGE TO EXISTING CLAUSE (Applicability)
H-11 TRAVEL REIMBURSEMENT, COST CONTRACTS (APPLICABLE TO ALL COST-TYPE CLINS)

Costs for travel, subsistence, and lodging shall be reimbursed to the contractor only to the extent that it is necessary and authorized for performance of the services under this contract. Reimbursement for the costs of subsistence and lodging shall be considered to be reasonable and allowable daily charges as compared to the maximum rates set forth in the following:

a. Federal Travel Regulations dated 1 January 1999 prescribed by the General Services Administration for travel in the contiguous 48 United States;

b. Joint Travel Regulations Volume 2, DoD Civilian Personnel, Appendix A, prescribed by the Department of Defense for travel in Alaska, Hawaii, The Commonwealth of Puerto Rico, and the territories and possessions of the United States;

c. Standardized Regulations, (Government Civilians, Foreign Areas), Section 925, "Maximum Travel Per Diem Allowances in Foreign Areas" prescribed by the Department of State, for travel in areas not covered in (a) and (b) above.

The application of the rates described above would not constitute a reasonable charge (1) when no lodging costs are incurred; (2) more than one person/employee uses the same room for lodging; and/or (3) on partial travel days (e.g., day of departure and return). Appropriate downward adjustments from the maximum per diem rates shall be required under these circumstances.

When authorized, per diem shall be paid by the Contractor to his employees at a rate not to exceed the prevailing locality per diem rate. Fractional parts of a day shall be payable on a prorated basis for purposes of billing for per diem charges attributed to subsistence on days of travel. Fractional billing shall be on a 1/4, 1/2, and 3/4 basis.

Reimbursement to the contractor for per diem shall be limited to payments to employees for authorized per diem, as described above, not to exceed the authorized per diem. The contractor

shall retain supporting documentation for per diem paid to employees as evidence of actual payments, as required by the "Allowable Cost and Payment" clause of the contract.

The contractor shall not be paid for travel for contractor personnel who reside in the metropolitan area in which the services are being performed. Travel shall not be paid for services performed at the contractor's home facility or at any location within a 50 mile driving radius of the contractor's home facility.

Travel costs/personnel transportation other than described in the above paragraph, shall be allowed only to the extent that such transportation is necessary for the performance of services under the contract.

The contractor agrees, in the performance of necessary travel, to use the lowest cost mode commensurate with the requirements of the mission and in accordance with good 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. Documentation must be provided to substantiate non-availability of coach or tourist if business or first class is proposed to accomplish travel requirements.

CHANGE TO EXISTING CLAUSE
H-13. 5252.243-9400 AUTHORIZED CHANGES ONLY BY THE CONTRACTING OFFICER (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:

NAME	Melissa L. Hawkins
ADDRESS	4301 Pacific Highway San Diego, CA 92110-3127

TELEPHONE (858) 537-0346

E-MAIL melissa.hawkins@navy.mil

CHANGE TO EXISTING CLAUSE (Applicability)
H-15. AIRWORTHINESS CERTIFICATE (APPLICABLE TO ALL MIDS-LVT(1)s AND MIDS JTRS DELIVERED UNDER THIS CONTRACT)

(a) The Contractor shall certify that the delivered Terminals are safe for intended use. The certificate shall be based on successful completion of Contractor testing and analysis. Safe-For-Intended Use (SFIU) tests shall consist of (1) Crash Safety, (2) Random Vibration, (3) Electronic Field Radiated Emission (RE02) Test, (4) Power Line and signal Line Conducted Emission (CE03) and explosive atmosphere.

(b) The Contractor shall provide a completed AFMC Form 3, Component Airworthiness Certificate, prior to First Article Approval. The AFMC Form 3 is considered "completed" once the contractor has completed the necessary testing and analysis and the responsible contractor system safety engineer/officer/ manager has signed the form. The Government expects to review the test data and analyses upon which the Contractor based the airworthiness certificate.

(c) The Contractor shall maintain the Terminal's airworthiness certificate until the period of performance for the entire contract is completed.

NEW CLAUSE
H-16.1. ELECTROMAGNETIC COMPATIBILITY (EMC) FEATURES APPROVAL (APPLICABLE TO ALL US MIDS JTRS DELIVERED UNDER THIS CONTRACT)

The Contractor is required to obtain EMC features approval in accordance with the DoD EMC Features Certification Performance Specification prior to First Article Approval and to maintain such approval until the period of performance for the entire contract is completed. Any waivers or deviations against the DoD EMC Features Certification Performance Specification shall be submitted to NTIA via the DoD Certification Authority for approval. The certification effort may require technical interchange meetings with the DoD Certification Authority, currently designated as PEO C4I&S, or with members of their designated EMC Features Certification execution activity. Accordingly, it is the sole responsibility of the Contractor to determine and to provide all information, briefings, test procedures, test conduct, test reports and analysis that may be required to document and obtain certification from the DoD Certification Authority and final EMC features approval from NTIA.

CHANGE TO EXISTING CLAUSE (Applicability)
H-17. COMMUNICATIONS SECURITY (COMSEC) APPROVAL FOR USE (APPLICABLE TO ALL MIDS LVT(1)s, MIDS-LVT(2)s, and US MIDS JTRS DELIVERED UNDER THIS CONTRACT)

The Contractor is required to develop and obtain National Security Agency (NSA) Approval for Use of the MIDS LVT(1), MIDS LVT(2), and MIDS JTRS together with NSA approval of the

associated documentation prior to First Article Approval and to maintain such COMSEC Approval for Use until the period of performance for the entire contract is completed. This effort will require technical interchange meetings with NSA, or a designated agency.

For all MIDS-LVTs and MIDS JTRSs produced or MIDS-LVT and MIDS JTRS repairs performed for U.S. requirements, the COMSEC portions of terminals must be manufactured and integrated in the U.S. by a U.S. company holding a U.S. COMSEC account.

Accordingly, it is the sole responsibility of the Contractor to determine and to provide all information, briefings, test procedures, test conduct, test reports and analysis that may be required to document and obtain such approval by NSA. The schedule will not be extended for reasons related to meeting NSA's requirements. The NSA Program Manager for MIDS can be reached at (410) 854-6841.

For the purposes of this procurement, the term "COMSEC" and the term "Telecommunications Security" shall be considered equivalent.

NEW CLAUSE
H-17.1. SOFTWARE COMMUNICATIONS ARCHITECTURE (SCA) CERTIFICATION (Applicable to MIDS JTRS)

The Contractor shall provide support to the JTRS Joint Program Office (JPO) and its designated agencies in performing SCA-compliance testing for certification of the MIDS JTRS and its components, including waveform applications, radio systems applications, and operational environment applications. The contractor shall prepare and submit an SCA certification and demonstration plan as part of the Contractor FAQT test plan (CDRL JB02) and test procedures (CDRL JB03). The contractor shall demonstrate SCA compliance to the Government prior to First Article delivery.

NEW CLAUSE (Applicability)
H-17.2 COMMUNICATIONS SECURITY (COMSEC) APPROVAL FOR USE (APPLICABLE TO ALL European MIDS JTRS DELIVERED UNDER THIS CONTRACT)

The Contractor shall obtain COMSEC approval for use from the European INFOSEC agencies associated with the country of delivery.

CHANGE TO EXISTING CLAUSE
H-21 RESTRICTED ACCESS TO COMSEC INFORMATION (Applicable to all CLINs except the 3000-series CLINs)

(a) The Contractor agrees to obtain written approval from the National Security Agency (NSA) through the PCO on behalf of the MIDS IPO/PMW 101 before assigning work or granting access to any foreign national or foreign representative to data related to the following items/subject matter, whether such data is provided by the Government or generated under this Contract in accordance with DD Form 254, Contract Security Classification Specification:

1. U-TVB CTIC/DS-101 Hybrid;
2. AN/CYZ-10 Data Transfer Device;
3. AN/KOI-18 Paper Tape Reader;
4. Cryptographic Keys; and
5. Related software, interface specifications, and interface documents.

(b) For purposes of this clause, a foreign national is anyone who is not a citizen of the United States. A foreign representative is anyone (regardless of nationality) who is acting as an official, agent, or employee of (i) a foreign owned/controlled/influenced firm, corporation, or person or (ii) a foreign government. Nothing in this clause is intended to waive any requirement imposed by any other US Government agency with respect to employment of either foreign nationals or foreign representatives or to export control.

(c) The Contract assumes that the NSA through the PCO on behalf of the MIDS IPO/PMW 101 will grant approval for access of the items/subject matter listed in paragraph (a) of Clause "Restricted Access To COMSEC Information", as defined herein by the clauses H-25 and H-26, to the Contractor.

NEW CLAUSE

H-21.1 RESTRICTED ACCESS TO COMSEC INFORMATION (Applicable to the 3000-series CLINs only)

(a) The Contractor agrees to obtain written approval from the National Security Agency (NSA) through the PCO on behalf of the Tactical Links IPO – PMW 101/159 before assigning work or granting access to any foreign national or foreign representative to data related to the following items/subject matter, whether such data is provided by the Government or generated under this Contract in accordance with DD Form 254, Contract Security Classification Specification:

1. U-TVB CTIC/DS-101 Hybrid;
2. AN/CYZ-10 Data Transfer Device;
3. AN/KOI-18 Paper Tape Reader;
4. AN/KOV-21, COMSEC CCA
5. Secure DTD 2000 System
6. Electronic Key Management System
7. AN/KOK-13, Key Processor
8. KG-40A Crypto Unit
9. HAIPE, High Assurance Internet Protocol Encryption
10. KG-84 Crypto Unit
11. KYK-13, Common Fill Device
12. Common Tier 3 DTD UAS
13. AIM Crypto Device
14. JCE Crypto Device
15. PEIP II Crypto Device
16. MIDS/JTRS COMSEC Test docs
17. JTRS COMSEC Specs
18. JTRS Security APIs & SPCIs
19. Cryptographic Keys; and
20. E-HVM, MIDS SMP & docs
21. UIC, TEO, TOC, FSRS
22. Key Management Infrastructure
23. Simple Key Loader
24. AN/KOK-22, Key Processor
25. KGV-11 Crypto Unit
26. KGV-8A/B/C Crypto Unit
27. STE & STU-3
28. KOI-18, Paper Tape Reader
29. CUAS, Common User App SW
30. Sierra Crypto Device
31. PSIAM Crypto Device
32. KIV-21 LLC, Link Level Crypto
33. Crypto Modernization Initiative
34. Key Materials
35. Suite A & Suite B Algorithms

(b) For purposes of this clause, a foreign national is anyone who is not a citizen of the United States. A foreign representative is anyone (regardless of nationality) who is acting as an official, agent, or employee of (i) a foreign owned/controlled/influenced firm, corporation, or person or (ii) a foreign government. Nothing in this clause is intended to waive any requirement imposed by any other US Government agency with respect to employment of either foreign nationals or foreign representatives or to export control.

(c) The Contract assumes that the NSA through the PCO on behalf of the Tactical Links IPO – PMW 101/159 will grant approval for access of the items/subject matter listed in paragraph (a) of Clause "Restricted Access To COMSEC Information", as defined herein by the clauses H-25 and H-26, to the Contractor.

CHANGE TO EXISTING CLAUSE (to delete Software from the title and Applicability)
H-22. DATA/~~SOFTWARE~~ ACCESSION LIST (Applicable to all CLINs under the contract except the 3000-series CLINs)

The Data Accession List (DAL) provides a listing of information generated by the Contractor as required by **Attachment "E"** under CDRL **"JC0E."** The Contracting Officer may order copies of any data, documentation or computer software identified in the DAL. If requested, electronic copies of the data shall be made available to the Government on-line via the Contractor's Web site or secure encrypted electronic file transfer within 5 working days from the date of the request. The cost of furnishing such data or software shall be subject to payment pursuant to DFARS 252.227-7027 ("Deferred Ordering of Technical Data or Computer Software") under Section I.

NEW CLAUSE
H-22.1 DATA ACCESSION LIST (Applicable to 3000-series CLINs)
The Data Accession List (DAL) provides a listing of information generated by the Contractor as required by **Attachment "Y"** under CDRL **"JC0E."** The Contracting Officer may order copies of any data, documentation or computer software identified in the DAL. If requested, electronic copies of the data shall be made available to the Government on-line via the Contractor's Web site or secure encrypted electronic file transfer within 5 working days from the date of the request. The cost of furnishing such data or software shall be subject to payment pursuant to DFARS 252.227-7027 ("Deferred Ordering of Technical Data or Computer Software") under Section I.

(NEW CLAUSE)
H-23.2 FIRST ARTICLE APPROVAL (APPLICABLE TO CLIN 3000)

(a) US First Article Approval Criteria. The Government will approve the US first articles if all of the following conditions have been satisfied:

(1) The Contractor has submitted the Airworthiness Certification required by Clause H-15 ("Airworthiness Certification"),

(2) The Contractor has submitted the EMC Features Approval required by Clause H-16.1 ("Electromagnetic Compatibility (EMC) Features Approval"),

(3) The Contractor has submitted the COMSEC Approval for Use required by Clause H-17 ("Communications Security (COMSEC) Approval for Use"),

(4) The Contractor has successfully completed First Article Qualification Testing and submitted its FAQT Report (CDRL JB04) to the Government and the Government has approved the report.

(5) The contractor's First Articles submitted to the Government for Government FAQT Testing in accordance with subsection (e) of this clause have successfully passed Government FAQT testing (see subparagraph e below).

(6) The contractor has successfully demonstrated SCA compliance (Clause H-17.1).

When the contractor has met the conditions above the Government shall notify the contractor in writing of the approval, disapproval or conditional approval of the contractor's First Article and permission to commence deliveries to the Government. A notice of conditional approval shall state any further action required of the contractor. A notice of disapproval shall cite reasons for the disapproval.

The Contractor shall incorporate all modifications required by any conditional approval and correct any damage or deterioration resulting from testing . As so modified and corrected the approved first article shall serve as the approved product baseline for production. All the formal Product Baseline configuration management requirements for Government oversight shall commence at that time.

(b) European First Article Approval Criteria. The Government will approve the European first articles if all of the following conditions have been satisfied:

(1) The Contractor has submitted the Airworthiness Certification required by Clause H-15 ("Airworthiness Certification"),

(2) The Contractor has submitted the COMSEC Approval for Use required by Clause H-17.2 ("Communications Security (COMSEC) Approval for Use"),

(3) The Contractor has successfully completed First Article Qualification Testing and submitted its FAQT Report (CDRL JB04) to the Government and the Government has approved the report.

(4) The contractor's First Articles submitted to the Government for Government FAQT Testing in accordance with subsection (e) of this clause have successfully passed Government FAQT testing (see subparagraph e below).

(5) The contractor has successfully demonstrated SCA compliance (Clause H-17.1).

When the contractor has met the conditions above the Government shall notify the contractor in writing of the approval, disapproval or conditional approval of the contractor's First Article and permission to commence deliveries to the Government. A notice of conditional approval shall state any further action required of the contractor. A notice of disapproval shall cite reasons for the disapproval.

The Contractor shall incorporate all modifications required by any conditional approval and correct any damage or deterioration resulting from testing . As so modified and corrected the approved first article shall serve as the approved product baseline for production. All the formal Product Baseline configuration management requirements for Government oversight shall commence at that time.

(c) Disposition of First Articles After First Article Approval.

1) The Contractor shall deliver for Government acceptance via DD250 30 MIDS JTRS. The contractor may use these 30 MIDS-JTRS to conduct FAQT. However, if any of these first articles are used for FAQT, the Contractor shall refurbish and retrofit these MIDS-JTRS to a functional state meeting requirements of the contract prior to delivery to the Government.

(d) Contractor Testing of First Articles.

(1) At least 60 calendar days before the beginning of the contractor's first article testing, the Contractor shall notify the Contracting Officer, in writing, of the time and location of the testing so that the Government may witness the tests.

(2) The contractor shall not commence any formal contractor FAQT testing without Government approval of the contractor's FAQT test plans and procedures (CDRL JB02 and JB03).

(3) The Contractor shall submit the First Article Qualification Test report in accordance with CDRL JB04.

(e) Government Testing of First Articles.

(1) The Contractor shall submit 2 US Master, 2 US Slave and 5 European configurations of the 30 MIDS JTRS terminals under CLIN 3000 to the Government not later than 24 months after effective date of delivery order under which CLIN 3000 option is exercised to the following address for US terminal configuration(s):

Commanding Officer
Attention: COMSEC Custodian
SPAWAR Systems Center – San Diego
Code D03531
49590 Lassing Road
Bldg. 1, Rm. A206
San Diego, CA 92152-6121
COMSEC Account #/UIC

And two European terminal configurations to each of the following addresses: **TBD**

(2) The shipping documentation shall contain this contract number and the Lot/Item Identification. The requirements that the first articles must meet are specified elsewhere in this contract. The Contractor shall not submit first articles for Government testing until after all Contractor first article testing has been completed by the Contractor to determine compliance with said requirements and the first articles have been inspected by the Contract Administration Office.

(3) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, repair of the first article during Government first article testing. If first article tests reveal deviations from contract requirements, the Contractor shall, at the location designated by the Government, make the required corrections at no change in the contract price.
(4) The Government reserves the right to conduct any additional testing not exceeding the requirements of this contract if it deems it necessary to ensure that the first articles conform to all requirements of the contract.

(4) (a) Within 60 calendar days after the Government receives the 2 US Master, 2 US Slaves MIDS JTRS terminals for Government FAQT, the Contracting Officer shall notify the Contractor, in writing, of the successful completion or unsuccessful completion of the Government FAQT testing. However, for every day that a terminal delivered for Government first article testing is unavailable for that testing due to terminal malfunctions, the Government shall be entitled to an additional day to notify the Contractor in writing of the successful completion or unsuccessful completion of the Government FAQT testing. The notice of successful completion or unsuccessful completion of the Government FAQT testing shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. If the Government does not notify the Contractor, in writing, of the successful completion or unsuccessful completion of the Government FAQT testing within sixty calendar days after receipt of the contractors First Articles, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates or the contract price, and any other contractual term affected by the delay.

(4) (b) Within 60 calendar days after the Government receives the 5 European MIDS JTRS terminals for European Government FAQT, the Contracting Officer shall notify the Contractor, in writing, of the successful completion or unsuccessful completion of the Government FAQT testing. However, for every day that a terminal delivered for Government first article testing is unavailable for that testing due to terminal malfunctions, the Government shall be entitled to an additional day to notify the Contractor in writing of the successful completion or unsuccessful completion of the Government FAQT testing. The notice of successful completion or unsuccessful completion of the Government FAQT testing shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. If the Government does not notify the Contractor, in writing, of the successful completion or unsuccessful completion of the Government FAQT testing within sixty calendar days after receipt of the contractors First Articles, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates or the contract price, and any other contractual term affected by the delay.

(5) If the Government notifies the contractor of an unsuccessful US and/or European Government FAQT due to nonconformities discovered during testing, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or select another first article for testing. All costs related to these tests are to be borne by the Contractor, including any and all costs for additional test following disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in subsection (d)(4) above. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs incurred by the Government.

(e) Requalification Requirements. . The Government reserves the right to require the Contractor to re-qualify his product if:(1) the Contractor has modified its product, or changed the material or its manufacturing processes such that, in the opinion of the Government, the validity of the previous qualification is questionable, or

(2) it is otherwise necessary to determine that the quality of the product is maintained in conformance with the specification.

Any expenses incurred by the Contractor associated with requalification (including but not limited to regressive testing) shall be borne by the Contractor.

(f) First Article Manufacturing Requirements.

(1) The prime contractor shall produce both the US first articles and the US production quantity at the same facility on the same production line.

(2) The European integrator shall produce first articles using the same facility and assembly line that it intends to use for production.

(3) The first articles shall conform in every respect with the requirements set forth for the production equipment and shall be manufactured with tools, materials and methods which are the same as, or representative of, the tools, materials and methods which will be used to manufacture the equipment to be furnished under CLIN 3001.

(4) Acceptance tests on the first articles shall be conducted on STE and its resident software that is at least 98% complete.

(g) Termination for Default. If the Contractor fails to deliver any first article report on time or fails to deliver any first article on time the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(CHANGE TO EXISTING CLAUSE)

H-26. 5252.245-9200 GOVERNMENT FURNISHED MATERIAL (JAN 1989)

The Government, via Management Control Activity (MCA) Distribution Code N00039, will furnish to the contractor for use in connection with this contract, only the Government Furnished Material set forth below:

SOURCE	DESCRIPTION	QTY	DATE	DESTINATION	NOTES
IPO	MIDS CORE	1 EA	11 MACA.	Contractor's Plant	See clauses

	Software MIDS TIO Software MIDS ADDSI Software MIDS SIA Software	1 EA 1 EA 1 EA	Updated versions provided as required.		H.21. Version Description Documents will be provided with the software.
IPO	IP Encryption Device	2 EA	6 MACA	Contractor's Plant	See Clause H.21.
NSA	U-TVB CTIC/DS-101 Hybrid	1 per SMP SRU ordered, plus 2 spares for every 100 SMP SRUs ordered.	8 months after effective date of each production order	Contractor's Plant	If less than 100 SMP SRUs are ordered, then an additional 2 spares should be provided.
IPO (JTRS JPO)	SINCGARS/ESIP Waveform (WF) Link 16 WF Have Quick WF UHF DAMA WF EPLRS WF WNW WF	1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	6 MADO 6 MADO 18 MADO 18 MADO 18 MADO 18 MADO	Contractor's Plant	Design document and source code will be provided "as is"

SOURCE	DESCRIPTION	QTY	DATE	DESTINATION	NOTES
IPO (JTRS JPO)	CF Applications (CF) SPCI	1 EA	4 MADO	Contractor's Plant	Design document and source code will be provided "as is"
	Radio Devices (RD) SPCI	1 EA	4 MADO		
	Radio Services (RS) SPCI	1 EA	4 MADO		
	Radio Security Services (RSS) SPCI	1 EA	4 MADO		
	Red Switch Policy SPCI	1 EA	4 MADO		
	Cryptographic Subsystem Applications SPCI	1 EA	4 MADO		
	Software Loader Verifer (SLV) Application SPCI	1 EA	4 MADO		
	JTRS WNW Network Manager (JWNW) SPCI	1 EA	4 MADO		

Only the material listed above in the quantities shown will be furnished by the Government notwithstanding any provisions of the specification(s) to the contrary. Government Furnished Material will be delivered, all transportation charges paid, to the cognizant contract administration office specified herein, in care of the contractor's plant. If the Government determines that such software does not successfully operate on the MIDS EMD LVT, then the clause at FAR 52.245-2 "Government Property (Fixed Price Contracts)" shall apply.

UPDATE TO EXISTING CLAUSE

H-31.1 WAIVER AND RELEASE FROM CLAIMS RELATED TO THE MIDS JTRS FUNCTIONAL AND ALLOCATED BASELINE

(a) Delivery Order No. 0020 (DLS), 0033 (Euromids), and D.O. 0027 (ViaSat) issued under this contract required the Contractor to develop the MIDS/JTRS Functional and Allocated Baselines (i.e., CDRL E00K entitled "Program-Unique Specification Documents," and subtitled "Performance Specification System Specification;" CDRL E00L entitled "System/Segment Interface Control Specification, and subtitled "MIDS JTR Platform Interfaces;" CDRL E00M entitled "Program Unique Specification Documents," and subtitled "Performance Specification Item Specification;" CDRL E00N entitled "Software Requirements Specification (SRS);" CDRL E00P entitled "Interface Requirements Specification (IRS);" and CDRL E00Q entitled "Interface Control Document (ICD)," and subtitled "Configuration Item ICD;" CDRL E00R entitled "Software Development Plan;" and CDRL E00S entitled "Program Unique Specification Documents" and subtitled "Performance Specification Item Specification"). The Government anticipates that it will issue a delivery order under CLIN 3000 of this contract that will require the Contractor to use those CDRLs in performing that/those delivery orders. Accordingly, the

Contractor agrees that it, its subcontractors, successors, and assignees shall not be entitled to an equitable adjustment of the price, delivery schedule, or any other provision of this contract for any nonconformity, unsuitability, or defects of any kind contained in CDRLs E00K, E00L, E00M, E00N, E00P, E00Q, E00R and E00S delivered to the Government under delivery order 0020 (DLS), 0033 (Euromids), and D.O. 0027 (ViaSat).

(b) In addition, the Contractor for itself, its subcontractors, its successors, and assignees, hereby remises, releases, and forever discharges the Government, its officers, agents, and employees from any and all entitlement of the Contractor to changes to the price, delivery schedule, or both, for any nonconforming, unsuitable, or defective data of any kind contained in CDRLs E00K, E00L, E00M, E00N, E00P, E00Q, E00R and E00S. This release covers all costs that may be incurred by the Contractor as a result of such alleged defects, errors, omissions, or nonconformities (including but not limited to labor, material, overhead, G&A, profit, interest, and proposal preparation expenses) whether or not such costs are known or unknown or foreseeable or unforeseeable to either or both of the parties as of the effective date of the contract modification that incorporates this clause, without regard to whether such costs were, or are, incurred before or after the date of said events, actions or omissions, or after the effective date of the contract modification that incorporates this clause, and whether or not such costs have been discussed with, or for any reason reserved for future discussion with the Government or made the basis for other assertion of claims. This release by the Contractor includes but is not limited to, any and all delay (direct and cumulative) and the costs thereof, all costs of dislocations, disruptions (local and cumulative), accelerations (direct and cumulative), proposal preparation and efficiencies in performance, and all overhead costs (including but not limited to unabsorbed overhead) regardless of whether any such costs are or were caused directly by, indirectly by, cumulatively by or in consequence of the impact of alleged defects, errors, omissions, or nonconformities in CDRLs E00K, E00L, E00M, E00N, E00P, E00Q, E00R and E00S.

(c) The rights granted to the Government under this clause are in addition to, and do not affects its rights under any other provisions of this contract, including but not limited to, FAR § 52.245-19 (Government Property Furnished "As Is")(APR 1984) and DFARS § 252.2246-7001 (Warranty of Data)(DEC 1991).

UPDATE TO EXISTING CLAUSE (Applicability)

H-38. DELIVERY ORDER LIMITATIONS OF COST/FUNDS (APPLICABLE TO CLINs 0900-0902, 1102, 1202, 3000 and 3005)

In accordance with the FAR Clause 52.232-20, "Limitation of Cost," or 52.232-22 "Limitation of Funds," the Government shall not be obligated to reimburse the Contractor for work performed, items delivered, or any costs incurred under orders issued under the resultant contract, except as authorized by the contracting officer.

The cost factors utilized in determining the estimated costs under any order placed hereunder shall be the applicable rates current at the time of issuance of the task or delivery order, not to exceed, however, any ceilings established by the terms of this contract.

If at any time 75% of either the estimated cost or estimated level of effort specified in the task or delivery order is reached and it appears that additional funds and/or level of effort is required to complete performance, the Contractor shall promptly notify the Ordering Officer in writing. Such notification shall include the cost and level of effort expended and that which will be required to complete performance. The Government shall have the right to modify the task or delivery order accordingly.

If the Contractor exceeds the estimated costs authorized by task or delivery order placed hereunder, the Government will be responsible only for reimbursement of the cost and payment of fee in an amount up to that established by the task or delivery order.

The total amount of all task or delivery orders issued shall not exceed the estimated costs and fixed fee or level of effort set forth in this contract.

NEW CLAUSE (Applicability))

H-41.1 ACCESS TO GOVERNMENT TEST FACILITIES (Applicable to 3000-series CLINs)

(a) Space and Naval Warfare Systems Center San Diego (SPAWARSYSCEN-SD) Systems Integration
Facility (SIF) is the designated facility for US Government First Article Qualification Test (FAQT).

(b) Prior to completion of contractor FAQT, the Government will permit two periods in the SIF for each
manufacturer to support verifications that manufacturers may want to conduct in the SIF. Each of the
optional test periods shall not exceed a total of 40 SIF operating hours. SIF operating hours are defined as
any time the SIF test bed is in use, including remote access.

(c) Written objectives and scheduling requests for the use of the SIF shall be submitted to the SIF Test Director at least two weeks in advance of proposed activities. Contact 1-619-553-4986(Mr. Dave Roth) or send requests to
ctbsched@spawar.navy.mil.

(d) All visitors to SPAWARSYSCEN are required to submit visit requests. Degree of access required is NATO Secret. Request for after-hours-access is also recommended. Information for visitor requests is available at the following website: http://www.spawar.navy.mil/sandiego

(e) CELAR is the designated facility for European Government First Article Qualification Test (FAQT).

(f) Prior to completion of contractor FAQT, the Government will permit two periods in the CELAR for each
manufacturer to support verifications that manufacturers may want to conduct in the CELAR. Each of the

optional test periods shall not exceed a total of 40 CELAR operating hours. CELAR operating hours are defined as
any time the CELAR test bed is in use, including remote access.

(g) Written objectives and scheduling requests for the use of the CELAR shall be submitted to the CELAR Test Director at least two weeks in advance of proposed activities. Contact XXX or send request to CELAR at;

Anne Marie Pinel
Telephone: 33-29-94-29188

(h) All visitors to CELAR are required to submit visit requests. Degree of access required is NATO Secret. Request for after-hours-access is also recommended.

(CHANGE TO EXISTING CLAUSE (Applicability))
H-44 ASSOCIATE CONTRACTOR AGREEMENT (ACA) (Applicable to all CLINs except the 3000-series CLINs)

The offeror shall enter into an associate contractor agreement with _____ (fill in for each), a MIDS LVT ((1)& (2)) U.S. Production contractor. The offeror shall ensure that the ACA remains in effect through the period of performance of this contract, which will include the periods of performance for any and all options exercised. Although the Government will attempt to facilitate the exchange of information, the Contractors shall be solely responsible for obtaining and providing all information necessary to successfully perform the requirements of the contract. This ACA shall at a minimum but not limited to, include the following requirements:

- Vendor to Vendor interchangeability as defined in Section C-2
- Joint Interchangeability Plan
- Statement of Work (SOW) for First Article Qualifications as defined in Paragraph 3.4.
- Statement of Work for Production as defined in Paragraph 3.11. and 3.9
- Statement of Work for Non-Recurring Engineering as defined in paragraph 3.1.2
- Statement of Work for Configuration and Data Management as defined in Paragraphs 3.1, 3.2.3.6 and 3.2.3.7.
- MIDS Configuration and Data Management Integrated Process/Product Team (IPPT) functions
- MIDS Configuration and Data Management Interface Control Working Group (ICWG)functions

The ACA shall be executed and delivered to the Procurement Contracting Officer (PCO) within 30 calendar days after award of the letter contract. Any subsequent modifications to the ACA shall be submitted to the PCO within 30 calendar after execution. Execution of this requirement shall be considered a “material requirement” of the contract within the meaning of FAR Clause 52.232-16, “Progress Payment” incorporated by reference under Section I of this contract. In the event that a copy of the ACA is not provided to the PCO within 30 calendar days after award of

this letter contract the PCO shall reduce or suspend progress payments for both Contractors as a result of the offeror's failure to comply with this material requirement.

(NEW CLAUSE)
H-44.1 ASSOCIATE CONTRACTOR CLAUSE FOR MIDS-JTRS ACTIVITIES (Applicable to the 3000-series CLINs)

The MIDS JTRS prime contractors (DLS, ViaSat) shall enter into an associate contractor agreement which shall include as signatories the following European contractors: Thales, Indra, Marconi and EADS. The contractor shall ensure that the ACA remains in effect through the period of performance of the MIDS-JTRS delivery order(s). Although the Government will attempt to facilitate the exchange of information, the contractor shall be solely responsible for obtaining and providing all information necessary to successfully perform the requirements of the contract. The ACA shall at a minimum include the following requirements:

- Multi-Vendor to Vendor interchangeability as defined in Section C-2.1 and in the MIDS-JTRS Phase 2B delivery order Statement of Work.

- Development, design and configuration management of the MIDS-JTRS as defined in the MIDS-JTRS Phase 2B delivery order, including the submittal of joint CDRLs when required.

- Participation, as required in the MIDS-JTRS Phase 2B delivery order, in the Technical Working Group (TWG), Problem Review Board (PRB) and Interface Control Working Group (ICWG).

The ACA shall be executed and delivered to the Procurement Contracting Officer (PCO) within 60 calendar days after award of the MIDS-JTRS Phase 2B delivery order. Any subsequent modifications to the ACA shall be submitted to the PCO within 30 calendar days after execution.

(NEW CLAUSE)
H-349 REIMBURSEMENTS UNDER COST REIMBURSEMENT OR TIME-AND-MATERIAL OR LABOR-HOUR CONTRACTS (MAR 2000)

(a) Office Equipment

The costs for acquisition, usage or rental of General Purpose Office Equipment including, but not limited to, typewriters, word processing machines, computers, computer time, printers, reprographic and xerographic copying machines, telecopiers, telephone equipment, and postage machines are considered overhead expenses and shall not be directly reimbursable under this contract. Such costs shall be included in the hourly rates payable under paragraph (a)(1) of the FAR 52.232-7 "Payments under Time-and-Material and Labor-Hour Contracts" clause, if this is a time-and-material or labor-hour contract. These overhead expenses will be reimbursed to the contractor as indirect costs under the FAR 52.216-7 "Allowable Cost and Payment" clause, if this is a cost-reimbursement contract.

(b) Overtime

Overtime is contemplated only on an emergency basis. However, if the need for overtime arises, such overtime shall not be worked without written authorization from the Contracting Officer.

(c) Overtime/Holiday Rate

(1) Overtime is defined as time worked in one workweek in excess of 40 hours in such workweek. Holiday time is defined as any time worked on a legal Federal Holiday. Legal Federal holidays for the purpose of this contract are listed below:

New Year's Day
Martin Luther King's Birthday
Washington's Birthday
Memorial Day
Independence Day
Labor Day
Columbus Day
Veteran's Day
Thanksgiving Day
Christmas Day

(2) Overtime and/or holiday work may be worked by the Contractor only to the extent it is specifically authorized in writing, by the ordering activity on individual orders placed under the contract. No additional hours of overtime may be worked without additional written authorization.

(3) Unless the contractor states otherwise in contractor's proposal it will be deemed that the contractor shall observe the same holidays as the Government and shall otherwise be open for business Monday through Friday during the performance of the contract.

(d) Expendable Material

Expendable materials, such as clerical supplies and materials which are considered to be a normal cost of doing business, are considered to be overhead expenses and must be included in hourly labor rates shown in Section B and payable under paragraph (a)(1) of the FAR 52.232-7 "Payments under Time-and-Material and Labor-Hour Contracts" clause. They shall not be billed as a separate material cost.

(f) Other Material

Material, other than expendable material, shall be furnished pursuant to specific authorization in a task/delivery order issued under this contract. The contractor will be required to support all material costs claimed by submission of paid subcontractor invoices. Contractor will be reimbursed at the contractor's cost less any applicable discount, plus material handling costs, if

any, are specified in Section B of this contract. Material handling charge shall be shown in Section B only if the contractor's accounting system segregates that particular cost.

(NEW CLAUSE)
H-354 PROCEDURES FOR ISSUING ORDERS (DEC 1999) (Applicable to 3000-series CLINs)

(a) *Ordering*. This is an indefinite quantity/indefinite delivery contract for the design, development, qualification, fabrication, assembly, acceptance testing, and delivery of MIDS JTRS. Ordering for any other customer is prohibited without authority of the Contracting Officer or his/her representative. All orders issued hereunder are subject to the terms and conditions of this contract. This contract shall control in the event of conflict with any order. When mailed, a delivery/task order shall be "issued" for purpose of this contract at the time the Government deposits the order in the mail, or, if transmitted by other means, when physically delivered to the contractor. Supplies or services to be furnished under this contract shall be furnished by the issuance of delivery/task orders on DD Form 1155. Orders shall be placed by the Contracting Officer or his/her representative. Delivery/task orders shall contain the information in paragraph (b) below:

(b) *Ordering Procedures*.

(1) Delivery/task orders issued shall include, but not be limited to, the following information:

(a) Date of Order
(b) Contract, order number and requisition number
(c) Appropriation and accounting data
(d) Description of the services to be performed
(e) Description of end item(s) to be delivered
(f) DD Form 254 (Contract Security Classification Specification), if applicable
(g) DD Form 1423 (Contract Data Requirements List), if data to be delivered under the order is not listed on the DD Form 1423 included in this contract
(h) Exact place of pickup and delivery
(i) The inspecting and accepting codes (as applicable)
(j) Period of time in which the services are to be performed
(k) For each applicable labor category, estimated number of labor hours required to perform the order
(l) The estimated cost plus fixed fee or ceiling price for the order
(m) List of Government-furnished material and the estimated value thereof, if applicable
(n) Delivery date

(c) *Modification of Delivery/Task Orders*. Delivery/Task orders may be modified by the ordering officer. Modifications to delivery/task orders shall include the information set forth in paragraph (b) above, as applicable. Delivery/Task orders may be modified orally by the ordering officers in emergency circumstances. Oral modifications shall be confirmed by issuance of a written modification within two working days from the time of the oral communication

modifying the order. The Contractor shall acknowledge receipt of any delivery/task order within one working day after receipt thereof.

(d) The cost plus fixed fee or ceiling amount for each delivery/task order will be the ceiling price stated therein and may not be increased except when authorized by a modification to the delivery/task order.

(e) *Unilateral Orders*. Delivery/Task orders under this contract will ordinarily be issued after both parties agree on all terms. If the parties fail to agree, the Ordering Officer may require the contractor to perform and any disagreement shall be deemed a dispute within the meaning of the "Disputes" clause.

NEW CLAUSE

H-53. 5252.215-9210 INCORPORATION OF REPRESENTATIONS AND CERTIFICATIONS BY REFERENCE (NOV 1991)

All representations and certifications and other written statements made by the contractor in response to Section K of the solicitation or at the request of the contracting officer which are incident to the award of the contract or modification of this contract, are hereby incorporated by reference with the same force and effect as if they were given in full text.

NEW CLAUSE

H-54. 5252.227-9402 QUALIFIED U.S. CONTRACTORS FOR EXPORT-CONTROLLED TECHNICAL DATA (JAN 1992)

(a) By Department of Defense (DoD) Directive 5230.25 (hereinafter referred to as "the Directive"), a program was established to allow Qualified U.S. Contractors to obtain export-controlled technical data under certain conditions. A "Qualified U.S. Contractor" is a private individual or enterprise (hereinafter described as a U.S. Contractor") that, in accordance with procedures established by the Under Secretary of Defense for Research and Engineering, certifies, as a condition of obtaining export-controlled technical data subject to the Directive from the Department of Defense, that:

(1) The individual who will act as recipient of the export-controlled technical data on behalf of the U.S. contract is a U.S. citizen or a person admitted lawfully into the United States for permanent residence and is located in the United States.

(2) Such data are needed to bid or perform on a contract with the Department of Defense, or other U.S. Government agency, or for other legitimate business purposes in which the U.S. contractor is engaged, or plans to engage. The purpose for which the data is needed shall be described sufficiently in such certification to permit an evaluation of whether subsequent requests for data are related properly to such business purpose.

(3) The U.S. contractor acknowledges its responsibilities under U.S. export control laws and regulations (including the license prior to the release of technical data within the United States) and agrees that it will not disseminate any export-controlled technical data subject to the Directive in a manner that would violate applicable export control laws and regulations.

(4) The U.S. contractor also agrees that, unless dissemination is permitted by the Directive, it will not provide access to export-controlled technical data subject to the Directive to

persons other than its employees or persons acting on its behalf, without the permission of the DoD component that provided the technical data.

(5) To the best of its knowledge and belief, the U.S. contractor knows of no person employed by it, or acting on its behalf, who will have access to such data, who is debarred, suspended or otherwise ineligible to perform under U.S. Government contracts; or has violated U.S. export control laws or a certification previously made to the Department of Defense under the provisions of the Directive.

(b) Private individuals or enterprises are certified as Qualified U.S. Contractors by submitting a DD Form 2345 (attached hereto) to Commander, Defense Logistics Services Center (DLSC), ATTN: DLSC-FEB, Federal Center, Battle Creek, Michigan 49017-3084.

(c) Canadian contractors may be qualified in accordance with the Directive for technical data that do not require a license for export to Canada under section 125.12 of the International Traffic in Arms Regulations and sections 379.4(d) and 379.5(e) of the Export Administration Regulations, by submitting an equivalent certification to the DLSC.

NEW CLAUSE

H-55. WAIVER AND RELEASE OF DEFECTIVE TECHNICAL DATA PACKAGE CLAIMS

(a) CLIN 3002 requires the Contractor to deliver to the Government various items of technical data and computer software listed in Exhibit "J" to this contract. The Government intends to use that technical data and computer software for follow-on acquisitions for MIDS JTRS and MIDS JTRS RPS Adapter LRUs. Accordingly, if the Contractor is awarded a follow-on contract for MIDS JTRS or MIDS JTRS RPS Adapter LRUs, the Contractor agrees that it shall not submit any claim or request for equitable adjustment of the price, delivery schedule, or both, under any such follow-on contract based upon any alleged defects, errors, omissions, or nonconformities in CDRLs JC0G.

(b) Except as otherwise stated in paragraph (a) above, the Contractor for itself, its successors, and assignees, hereby remises, releases, and forever discharges the Government, its officers, agents, and employees from any and all entitlement of the Contractor to changes to the price, delivery schedule, or both, of any follow-on acquisitions for MIDS JTRS arising out of or relating to any alleged defects, errors, omissions, or nonconformities in CDRLs JC0G delivered under this contract. This release covers all costs that may be incurred by the Contractor as a result of such alleged defects, errors, omissions, or nonconformities (including but not limited to labor, material, overhead, G&A, profit, interest, and proposal preparation expenses) whether or not such costs are known or unknown or foreseeable or unforeseeable to either or both of the parties as of the effective date of this contract modification, without regard to whether such costs were, or are, incurred before or after the date of said events, actions or omissions, or after the effective date of this contract modification, and whether or not such costs have been discussed with, or for any reason reserved for future discussion with the Government or made the basis for other assertion of claims. This release by the Contractor includes but is not limited to, any and all delay (direct and cumulative) and the costs thereof, all costs of dislocations, disruptions (local and cumulative), accelerations (direct and cumulative), proposal preparation and efficiencies in

performance, and all overhead costs (including but not limited to unabsorbed overhead) regardless of whether any such costs are or were caused directly by, indirectly by, cumulatively by or in consequence of the impact of alleged defects, errors, omissions, or nonconformities in CDRL JC0G.

(c) The rights granted to the Government under this clause are in addition to, and do not affects its rights under any other provisions of this contract, including but not limited to, FAR § 52.245-19 (Government Property Furnished "As Is")(APR 1984) and DFARS § 252.2246-7001 (Warranty of Data)(DEC 1991).

(NEW CLAUSE)
H-56. CONTRACTOR VERIFICATION OF APPROVAL OF COMMON PRODUCT BASELINE FOR RELEASE TO MANUFACTURING

The contractor shall certify in writing to the Government that it has approved the common Product Baseline suitable for release to its manufacturing organization. This certification shall be provided to the Government when the last of the Product Baseline is approved for release to manufacturing (in the event that the release is done in a progressive manner). This certification shall document to the Government that the contractor has, in conjunction with all other participating contractors, released a Product Baseline to its manufacturing group that it agrees is complete and at an acceptable level of detail to initiate production. This certification shall be signed by DLS, ViaSat, Indra, Thales, Marconi and EADS and shall be included as part of the CDR exit criteria.

(NEW CLAUSE)
H-57. LIMITED RELEASE OF CONTRACTOR CONFIDENTIAL BUSINESS INFORMATION (NOV 2003)

(a) *Definition*.
"Confidential business information," as used in this clause, is defined as all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if -- (1) the owner thereof has taken reasonable measures to keep such information secret, and (2) the information derives independent economic value, actual or potential from not being generally known to, and not being readily ascertainable through proper means by, the public. Confidential business information may include technical data as that term is defined in DFARS §§ 252.227-7013(a)(14), 252.227-7015(a)(4), and 252.227-7018(a)(19). It may also include computer software as that term is defined in DFARS §§ 252.227-7014(a)(4) and 252.227-7018(a)(4).

(b) The Space and Naval Warfare Systems Command (SPAWAR) may release to individuals employed by SPAWAR support contractors and their subcontractors confidential business information submitted by the contractor or its subcontractors pursuant to the provisions of this contract. Business information that would ordinarily be entitled to confidential treatment may be

included in the information released to these individuals. Accordingly, by submission of a proposal or execution of this contract, the offeror or contractor and its subcontractors consent to a limited release of its confidential business information.

(c) Circumstances where SPAWAR may release the contractor's or subcontractors' confidential business information include the following:

(1) To other SPAWAR contractors and subcontractors, and their employees tasked with assisting SPAWAR in handling and processing information and documents in the administration of SPAWAR contracts, such as file room management and contract closeout.

(2) To SPAWAR contractors and subcontractors, and their employees tasked with assisting SPAWAR in accounting support services, including access to cost-reimbursement vouchers.

(d) SPAWAR recognizes its obligation to protect the contractor and its subcontractors from competitive harm that could result from the release of such information. SPAWAR will permit the limited release of confidential business information under paragraphs (c)(1) and (c)(2) only under the following conditions:

(1) SPAWAR determines that access is required by other SPAWAR contractors and their subcontractors to perform the tasks described in paragraphs (c)(1) and (c)(2),

(2) Access to confidential business information is restricted to individuals with a bona fide need to possess,

(3) Contractors, their subcontractors, and their employees who are granted access to confidential business information have signed an appropriate non-disclosure agreement requiring them to provide the same level of protection to confidential business information that would be provided by SPAWAR employees,

(4) Contractors and their subcontractors having access to confidential business information have agreed under their contract or a separate corporate non-disclosure agreement to provide the same level of protection to confidential business information that would be provided by SPAWAR employees, and

(5) SPAWAR contractors and their subcontractors performing the tasks described in paragraphs (c)(1) or (c)(2) have agreed under their contract or a separate non-disclosure agreement to not use confidential business information for any purpose other than performing the tasks described in paragraphs (c)(1) and (c)(2).

(e) SPAWAR's responsibilities under the Freedom of Information Act are not affected by this clause.

(f) If SPAWAR satisfies the conditions listed in paragraph (d), the contractor and its subcontractors agree to indemnify and hold harmless the Government, its agents, and employees from every claim or liability, including attorneys fees, court costs, and expenses, arising out of, or in any way related to, the misuse or unauthorized modification, reproduction, release, display, or disclosure of confidential business information provided by the contractor to the Government.

(g) The contractor agrees to include, and require inclusion of, this clause in all subcontracts at any tier that requires the furnishing of confidential business information.

SECTION I- CONTRACT CLAUSES

CHANGE TO EXISTING CLAUSES

I-1. 52.252 CLAUSES INCORPORATED BY REFERENCE (FEB 98

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): "**http://farsite/hill.af.mil/**".

NOTICE: The following contract clauses are hereby incorporated by reference.

I-1 FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES:

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES & RELATED NOTES
52.202-1	Definitions	DEC 01	All
52.203-3	Gratuities	APR 84	All
52.203-5	Covenant Against Contingent Fees	APR 84	All
52.203-6	Restrictions on Subcontractor Sales to the Government	JUL 95	All
52.203-7	Anti-Kickback Procedures	JUL 95	All
52.203-8	Cancellation, Rescission & Recovery of Funds for Illegal or Improper Activity	JAN 97	All
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity	JAN 97	All
52.203-12	Limitation on Payments to Influence Certain Federal Transactions	JUN 03	All
52.204-2	Security Requirements	AUG 96	All. See H. 19.
52.204-4	Printing/Copying Double-Sided on Recycled Paper	JUN 96	All
52.209-6	Protecting the Government's Interest when Subcontracting with Contractors Debarred, Suspended or Proposed for Debarment	JUL 95	All
52.211-5	Material Requirements	AUG 00	All
52.211-15	Defense Priority and Allocation Requirements	SEP 90	All
52.215-2	Audit and Records – Negotiation	JUN 99	All
52.215-8	Order of Precedence – Uniform Contract Format	OCT 97	All
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 97	All CLINs for which the Govt. required cost or pricing data.
52.215-12	Subcontract Cost or Pricing Data	OCT 97	All CLINs for which the Govt. required cost or pricing data.
52.215-14	Integrity of Unit Prices	OCT 97	All
52.215-15	Pension Adjustments and Asset Reversions	DEC 98	All CLINs for which the Govt. required cost or pricing data.
52.215-16	Facilities Capital Cost of Money	OCT 97	All
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions	OCT 97	All CLINs for which the Govt. required cost or pricing data.
52.215-19	Notification of Ownership Changes	OCT 97	All CLINs for which the Govt. required cost or pricing data.

SECTION I- CONTRACT CLAUSES

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES & RELATED NOTES
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data -- Modifications	OCT 97	All
52.216-7	Allowable Cost and Payment	APR 98	All Cost-Reimbursement CLINs
52.216-8	Fixed Fee	MAR 97	All Cost Plus Fixed Fee CLINs
52.216-11	Cost Contract – No Fee *fill-in: $100,000.00	APR 84	All Cost Plus No-Fee CLINs
52.216-18	*Ordering	OCT 95	All
*paragraph (a) fill-in: See Clause F-2.			
52.216-26	Payments of Allowable Costs Before Definitization	APR 84	0900-0902
52.219-4	Notice of Price Evaluation for HUBZone Small Business Concerns	JAN 99	All
52.219-8	Utilization of Small Business Concerns	OCT 00	All
52.219-9	Small Business Subcontracting Plan (ALT II)	JAN 02	All
(Note: Not applicable to Small Business prime contractors.)			
52.219-16	Liquidated Damages-Subcontracting Plan	OCT 99	All
52.219-25	Small Disadvantaged Business Participation Program – Disadvantaged Status and Reporting	OCT 99	All
52.222-2	Payment for Overtime Premiums *paragraph (a) insert is "zero"	JUL 90	All Cost-Reimbursement CLINs
52.222-19	Child Labor – Cooperation with Authorities and Remedies	DEC 01	All
52.222-20	Walsh-Healey Public Contracts Act	DEC 96	All
52.222-21	Prohibition of Segregated Facilities	FEB 99	All
52.222-26	Equal Opportunity	APR 02	All
52.222-29	Notification of Visa Denial	JUN 03	All
52.222-35	Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era	DEC 01	All
52.222-36	Affirmative Action for Workers With Disabilities	JUN 98	All
52.222-37	Employment Reports on Disabled Veterans and Veterans of the Vietnam Era	DEC 01	All
52.223-3	Hazardous Material Identification and Material Safety Data	JAN 97	All. See D-301.
52.223-5	Pollution Prevention & Right to Know Information	AUG 03	All
52.223-6	Drug-Free Workplace	MAY 01	All
52.223-11	Ozone-Depleting Substances	MAR 01	All
52.223-14	Toxic Chemical Release Reporting	AUG 03	All
52.225-8	Duty Free Entry	FEB 00	All. See H.32.
52.225-13	Restrictions on Certain Foreign Purchases	JUN 03	All
52.225-14	Inconsistency Between English Version and Translation of Contract	FEB 00	All. See H.36, DFARS 252.225-7041
52.226-1	Utilization of Indian Organizations and Indian-Owned Economic Enterprises	JUN 00	All
52.227-1	Authorization and Consent	JUL 95	All
52.227-2	Notice and Assistance Regarding	AUG 96	All

SECTION I- CONTRACT CLAUSES

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES & RELATED NOTES
	Patent and Copyright Infringement		
52.227-3	Patent Indemnity	APR 84	All
52.227-10	Filing of Patent Applications-Classified Subject Matter	APR 84	All
52.228-5	Insurance-Work on a Government Installation	JAN 97	All Fixed Price CLINs
52.228-7	Insurance -- Liability to Third Persons	MAR 96	All Cost-Reimburement CLINs
52.229-3	Federal, State and Local Taxes	APR 03	All Fixed-Price CLINs
52.229-5	Taxes-Contracts Performed in U.S. Possessions or Puerto Rico	APR 84	All
52.229-6	Taxes -- Foreign Fixed-Price Contracts	JAN 91	All fixed price CLINs
52.229-8	Taxes -- Foreign Cost-Reimbursement Contracts	MAR 90	All Cost Reimbursement CLINS
	Paragraph (a) insert: France, Italy, Germany, Spain		
52.230-2	Cost Accounting Standards	APR 98	All
52.230-6	Administration of CAS	NOV 99	All
(Note: Not applicable to Small Business prime contractors.)			
52.232-1	Payments	APR 84	All fixed price CLINs
52.232-8	Discounts for Prompt Payment	FEB 02	All fixed price CLINs
52.232-9	Limitation on Withholding of Payments	APR 84	All
52.232-11	Extras	APR 84	All fixed price CLINs
52.232-16	Progress Payments	DEC 02	All fixed price CLINs
Note: Alternate I (AUG 87) applies if prime contractor is a small business.			
52.232-17	Interest	JUN 96	All
52.232-20	Limitation of Cost	APR 84	All Fully funded cost reimbursement CLINs
52.232-22	Limitation of Funds	APR 84	All Incrementally funded cost reimbursement CLINs
52.232-23	Assignment of Claims ALT I (APR 84)	JAN 86	All
52.232-25	Prompt Payment	FEB 02	All
52.232-33	Payment By Electronic Funds Transfer -- Central Contractor Registration	MAY 99	All. See G.04, 252.204-7004.
52.233-1	Disputes ALT I (DEC 91)*	JUL 02	All. See DFARS 252.233-7001.
	*Paragraph (d)(1) is hereby modified to required that a claim by the Contractor shall be submitted within 180 days after accrual of the claim.		
52.233-3	Protest After Award	AUG 96	All
52.233-3	Protest After Award (ALT I)	JUN 95	All cost-reimburement CLINs
52.237-2	Protection of Government Buildings, Equipment, and Vegetation	APR 84	All CLINs that require services on a Government installation
52.237-3	Continuity of Services	JAN 91	All CLINs for services
52.239-1	Privacy or Security Safeguards	AUG 96	All
52.242-1	Notice of Intent to Disallow Costs	APR 84	All cost reimbursement CLINs
52.242-2	Production Progress Reports	APR 91	All
52.242-3	Penalties for Unallowable Costs	MAY 01	All cost reimbursement CLINs
52.242-4	Certification of Final Indirect Costs	JAN 97	All cost reimbursement CLINs
52.242-13	Bankruptcy	JUL 95	All
52.243-2	Changes – Cost-Reimbursement (ALT II - APR 84)	AUG 87	All cost reimbursement CLINs

SECTION I- CONTRACT CLAUSES

CLIN(S) FOR WHICH CLAUSE CLAUSE	TITLE	DATE	APPLIES & RELATED NOTES
52.243-7	Notification of Changes Paragraph (b) insert: 15 days Paragraph (d) insert: 30 days	APR 84	All
52.243-1	Changes – Fixed Price	AUG 87	All CLINs for fixed price supplies and services (for services, Alt II also applies)
52.243-1	Changes-Fixed Price (ALT II - APR 84)	AUG 87	All CLINs for fixed price and services
52.243-6	Change Order Accounting	APR 84	All Fixed Price Supply and R&D CLINs
52.244-2	Subcontracts, ALT I and II	AUG 98	All
52.244-5	Competition in Subcontracting	DEC 96	All cost-reimbursable CLINs
52.244-6	Subcontracts for Commercial Items	APR 03	All
52.245-2	Government Property (Fixed-Price Contracts)	JUN 03	All FFP CLINs
52.245-5	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts)	JUN 03	All Cost Reimbursement CLINS
52.245-18	Special Test Equipment	FEB 93	All CLINs
52.245-19	Government Property Furnished "As Is"	APR 84	All CLINs which utilize GFP provided "As Is", See H.25.
52.247-63	Preference for U.S. Flag Air Carriers	JUN 03	All
52.248-1	Value Engineering	FEB 00	All
52.249-2	Termination for Convenience of the Government (Fixed-Price)	SEP 96	All fixed price CLINs
52.249-6	Termination (Cost-Reimbursement)	SEP 96	All Cost Reimbursement CLINs
52.249-8	Default (Fixed Price Supply or Service)	APR 84	All fixed price CLINs
52.249-14	Excusable Delays	APR 84	All Cost Reimbursement CLINs
52.251-1	Government Supply Sources	APR 84	All Cost Reimbursement CLINs
52.253-1	Computer Generated Forms	JAN 91	All

II. DOD FEDERAL ACQUISITION REGULATION SUPPLEMENT 948 CFR CHAPTER 2) CLAUSES:

CLAUSE APPLIES	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE
252.201-7000	Contracting Officer's Representative	DEC 91	All. See G-306.
252.203-7001	Prohibition on Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	MAR 99	All
252.203-7002	Display of DoD Hotline Poster	DEC 91	All
252.204-7000	Disclosure of Information	DEC 91	All
252.204-7002	Payment for Subline Items Not Separately Priced	DEC 91	For all CLINs that are Not Separately Priced
252.204-7003	Control of Government Personnel Work Product	APR 92	All
252.204-7004	Required Central Contractor Registration	NOV 01	See G.04, FAR 52.232-33

SECTION I- CONTRACT CLAUSES

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES
252.204-7005	Oral Attestation of Security Responsibilities	NOV 01	All
252.205-7000	Provision of Information to Cooperative Agreement Holders	DEC 91	All
252.209-7000	Acquisition from Subcontractors Subject to On-Site Inspection Under the Intermediate-Range Nuclear Forces (INF) Treaty	NOV 95	All
252.209-7004	Subcontracting with Firms That Are Owned or Controlled by the Government Of a Terrorist Country	MAR 98	All
252.211-7000	Acquisition Streamlining	DEC 91	All
252.211-7005	Substitutions for Military or Federal Specifications and Standards	OCT 01	All
252.215-7000	Pricing Adjustments	DEC 91	All
252.215-7002	Cost Estimating System Requirements	OCT 98	All CLINs for which the Govt. required cost or pricing data.
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DoD Contracts)	APR 96	All, not applicable to small business prime contractors
252.219-7004	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Test Program)	JUN 97	All, not applicable to small business prime contractors
252.222-7002	Compliance With Local Labor Laws (Overseas)	JUN 97	All
252.223-7004	Drug-Free Work Force	SEP 88	All
252.223-7006	Prohibition on Storage and Disposal of Toxic and Hazardous Materials	APR 93	All
252.225-7001	Buy America Act and Balance of Payments Program	APR 03	All
252.225-7002	Qualifying Country Source as Subcontractors	APR 03	All
252.225-7004	Reporting of Contract Performance Outside the United States	APR 03	All
252.225-7005	Identification of Expenditures in the United States	APR 02	All
252.225-7012	Preference for Certain Domestic Commodities	FEB 03	All
252.225-7014	Preference for Domestic Specialty Metals ALT I	APR 03	All
252.225-7016	Restriction on Acquisition of Ball and Roller Bearings	APR 03	All
252.225-7021	Trade Agreements Act	AUG 03	All
252.225-7022	Restriction on Acquisition of Polyacrylonitrile (PAN) Carbon Fiber	APR 03	All
252.225-7027	Restriction on Contingent Fees for Foreign Military Sales	APR 03	All if supply or service provided for FMS. Contracting Officer will identify the applicable Governments when FMS cases occur on this contract.

SECTION I- CONTRACT CLAUSES

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES
252.225-7028	Exclusionary Policies & Practices of	APR 03	All if supply or service provided for FMS. Foreign Governments Contracting Officer will identify the applicable Governments when FMS cases occur on this contract.
252.225-7031	Secondary Arab Boycott of Israel	JUN 92	All
252.225-7033	Waiver of United Kingdom Levies	OCT 92	All
252.225-7041	Correspondence in English	JUN 97	All. See H.36, 52.225-14.
252.225-7042	Authorization To Perform	JUN 97	All
252.225-7043	Antiterrorism/Force Protection Policy for For Defense Contractors Outside the United States	JUN 98	All
252.227-7000	Non-Estoppel	OCT 66	All
252.227-7001	Release of Past Infringement	AUG 84	All.
252.227-7002	Readjustment of Payments	OCT 66	All
252.227-7013	Rights in Technical Data - Noncommercial Items	NOV 95	All
252.227-7014	Rights in Noncommercial Computer Software Noncommercial Computer Software Documentation	JUN 95	All
252.227-7016	Rights in Bid or Proposal Information	JUN 95	All
252.227-7019	Validation of Asserted Restrictions Rights Computer Software	JUN 95	All
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends	JUN 95	All
252.227-7027	Deferred Ordering of Technical or Computer Software	APR 88	All
252.227-7030	**Technical Data – Withholding of Payment ** 1% OF CONTRACT VALUE	OCT 88	All
252.227-7032	Rights in Technical Data and Computer Software (Foreign)	JUN 75	All
252.227-7036	Declaration of Technical Data Conformity	JAN 97	All
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 99	All
252-228-7006	Compliance with Spanish Laws & Insurance	DEC 98	All

SECTION I- CONTRACT CLAUSES

CLAUSE	TITLE	DATE	CLIN(S) FOR WHICH CLAUSE APPLIES
252.229-7002	Customs Exemptions (Germany)	JUN 97	All
252.229-7003	Tax Exemptions (Italy)	JAN 02	All
252.229-7005	Tax Exemptions (Spain)	JUN 97	All
252.229-7006	Value Added Tax Exclusion (United Kingdom)	JUN 97	All
252.229-7007	Verification of United States Receipt of Goods	JUN 97	All
252.231-7000	Supplemental Cost Principles	DEC 91	All Cost Reimbursement CLINs
252.232-7002	Progress Payments for Foreign Sales Acquisitions	DEC 91	All if supply or service provided for FMS. Contracting Officer will identify the applicable Governments when FMS cases occur on this contract
252.232-7004	DOD Progress Payment Rates	OCT 01	All.
252.232-7008	Assignment of Claims (Overseas)	JUN 97	All.
252.233-7001	Choice of Law (Overseas)	JUN 97	All.
252.234-7001	Earned Value Management System	MAR 98	CLINs 3000-3001
252.235-7003	Frequency Authorization	DEC 91	All.
252.242-7000	Postaward Conference	DEC 91	All.
252.242-7004	Material Management & Accounting System	DEC 00	All.
252.243-7001	Pricing of Contract Modifications	DEC 91	All firm fixed price CLINs
252.243-7002	Requests for Equitable Adjustment	MAR 98	All.
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 00	All.
252.245-7001	Reports of Government Property	MAY 94	All. See H.31.
252.246-7000	Material Inspection and Receiving Report	MAR 03	All. See G-302, G-303.1, and G.04
252.246-7001	Warranty of Data	DEC 91	0002, 0004, 0011, 0016, 0152, 0252, 0352, 0452, 0552, 0652, 0701, 0708, 0801, 0901, 1001, 1101, 1201, 2701, 2801, 2901, 3002, 3004
252.249-7002	Notification of Anticipated Contract Termination or Reduction	DEC 96	All.
252.251-7000	Ordering From Government Supply Sources	OCT 02	All.

CHANGE TO EXISTING CLAUSE
I-2 ORDER LIMITATIONS (OCT 1995) (FAR 52.216-19)

(Changed paragraph (b)(1)(ii) to exempt JTRS from Clause F-2, capacity for MIDS LVT)

(a) *Minimum order*. When the Government requires supplies or services covered by this contract in an amount of less than **the minimums stated per CLIN (excluding unexercised option CLINS) in clause H.2 Indefinite Quantity**, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) *Maximum order*. The Contractor is not obligated to honor--

(1) Any order for a single item in excess of:

(i) **the quantity ceiling for that CLIN; or**

(ii) **if the item is a MIDS-LVT LRU system other than MIDS JTRS, the delivery rate specified in paragraph (c) of clause F-2.**

(2) Any order for a combination of items in excess of: **(TO BE DETERMINED)**

or

(3) A series of orders from the same ordering office that together call for quantities exceeding the limitation in subparagraph (1) or (2) of this section.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.

(d) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within **seven (7)** days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

CHANGE TO EXISTING CLAUSE (Applicability)
I-3 INDEFINITE QUANTITY (OCT 1995) (FAR 52.216-22)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; *provided*, that

the Contractor shall not be required to make any deliveries under this contract after **twenty-eight (28) months beyond the respective ordering periods for CLINs 0100-0652, thirty (30) months beyond the respective ordering periods for CLINs 0900-0905, and 12 months beyond the respective ordering periods for CLINs 3000-3005.**

NEW CLAUSE
I-13. 52.216-10 INCENTIVE FEE (MAR 1997)

(a) *General*. The Government shall pay the Contractor for performing this contract a fee determined as provided in this contract.

(b) *Target cost and target fee*. The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with paragraph (d) below.
(1) "Target cost" as used in this contract, means the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d) below.
(2) "Target fee," as used in this contract, means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with paragraph (d) below.

(c) *Withholding of payment*. Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee. After payment of 85 percent of the applicable fee, the Contracting Officer may withhold further payment of fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the applicable fee or $100,000, whichever is less. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) *Equitable adjustments*. When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) *Fee payable*. (1) The fee payable under this contract shall be the target fee increased by **80 cents** for every dollar that the total allowable cost is less than the target cost or decreased by **60 cents** for every dollar that the total allowable cost exceeds the target cost. In no event shall the

fee be greater than 10% percent of target cost plus $3,000,000 for schedule incentive fees in accordance with Clause B-5 of this contract or less than zero percent of the target cost.
(2) The fee shall be subject to adjustment, to the extent provided in paragraph (d) above, and within the minimum and maximum fee limitations in subparagraph (1) above, when the total allowable cost is increased or decreased as a consequence of (i) payments made under assignments or (ii) claims excepted from the release as required by paragraph (h)(2) of the Allowable Cost and Payment clause.
(3) If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.
(4) For the purpose of fee adjustment, "total allowable cost" shall not include allowable costs arising out of--
(i) Any of the causes covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault or negligence of the Contractor or any subcontractor;
(ii) The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;
(iii) Any direct cost attributed to the Contractor's involvement in litigation as required by the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;
(iv) The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance--Liability to Third Persons clause;
(v) Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or
(vi) Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.
(5) All other allowable costs are included in "total allowable cost" for fee adjustment in accordance with this paragraph (e), unless otherwise specifically provided in this contract.

(f) *Contract modification*. The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.

(g) *Inconsistencies*. In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause.

SECTION J- LIST OF ATTACHMENTS

THE FOLLOWING ATTACHMENTS EXHIBITS WILL BE INCORPORATED INTO THE CONTRACT:

ATTACHMENT "Y"	Statement of Work (SOW) Phase 2B Development MIDS Joint Tactical Radio System
Exhibit "J"	CDRLs for MIDS JTRS

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

K-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions 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. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://farsite.hill.af.mil/
http://www.arnet.gov/far/

NOTICE. The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) SOLICITATION PROVISIONS

REFERENCE	TITLE	DATE
52.203-11	Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions	Apr 1991
52.222-38	Compliance with Veterans' Employment Reporting Requirements	Dec 01
52.223-4	Recovered Material Certification	Oct 1997

DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT (48 CFR CHAPTER 2) SOLICITATION PROVISIONS

REFERENCE	TITLE	DATE
252.209-7001	Disclosure of Ownership or Control by the Government of a Terrorist Country	Mar 1998
252.209-7002	Disclosure of Ownership or Control by a Foreign Government	Sep 1994
252.225-7042	Authorization to Perform	Apr 2003

K-2. FAR 52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that--

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory--

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above _____ (*insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization):*

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

K-3. 52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) *Definitions*.
"Common parent," as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.
"Taxpayer Identification Number (TIN)," as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the IRS. If the resulting contract is subject to the reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) *Taxpayer Identification Number (TIN).*

☐ TIN: _____.
☐ TIN has been applied for.
☐ TIN is not required because:
☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;
☐ Offeror is an agency or instrumentality of a foreign government;
☐ Offeror is an agency or instrumentality of a Federal Government;
☐ Other. State basis._____

(e) *Type of organization.*

☐ Sole proprietorship;

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

☐ Partnership;
☐ Corporate entity (not tax-exempt):
☐ Corporate entity (tax-exempt):
☐ Government entity (Federal, State, or local);
☐ Foreign government;
☐ International organization per 26 CFR 1.6049-4;
☐ Other _____.

(f) *Common Parent*.
☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.
☐ Name and TIN of common parent:

Name_____
TIN_____

K-4. 52.204-5 WOMEN-OWNED BUSINESS (OTHER THAN SMALL BUSINESS) (MAY 1999)

(a) *Definition*. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) *Representation*. [*Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representation, of this solicitation.*] The offeror represents that it ☐ is, ☐ is not a women-owned business concern.

K-5. 52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (DEC 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are ☐ are not ☐ presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have ☐ have not ☐ within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C) Are ☐ are not ☐ presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror has ☐ has not ☐, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

K-6. 52.215-6 PLACE OF PERFORMANCE (OCT 1997)

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation, ☐ intends, ☐ does not intend (check applicable block) to use one or more plants or facilities located at a different address from the address of the offeror or quoter as indicated in this proposal or quotation.

(b) If the offeror or respondent checks "intends" in paragraph (a) above, it shall insert in the spaces provided below the required information:

PLACE OF PERFORMANCE (STREET ADDRESS, CITY, STATE, COUNTY, ZIP CODE)	NAME AND ADDRESS OF OWNER AND OPERATOR OF THE PLANT OR FACILITY IF OTHER THAN OFFEROR OR RESPONDENT
_____	_____
_____	_____

K-7. 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is _____ [*insert NAICS code*].
(2) The small business size standard is _____ [*insert size standard*].
(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) *Representations*. (1) The offeror represents as part of its offer that it ☐ is, ☐ is not a small business concern.
(2) [*Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents, for general statistical purposes, that it ☐ is, ☐ is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.
(3) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.*] The offeror represents as part of its offer that it ☐ is, ☐ is not a women-owned small business concern.
(4) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents as part of its offer that it ☐ is, is ☐ not a veteran-owned small business concern.
(5) [*Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision*.] The offeror represents as part of its offer that it ☐ is, ☐ is not a service-disabled veteran-owned small business concern.

(6) [*Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision*.] The offeror represents, as part of its offer, that--

(i) It ☐ is, ☐ is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It ☐ is, ☐ is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. [*The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture*:_____.] Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) *Definitions*. As used in this provision--

"Service-disabled veteran-owned small business concern"--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Veteran-owned small business concern" means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Woman-owned small business concern," as used in this provision, means a small business concern--

(1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) *Notice*. (1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

K-8. 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (APR 2002)--ALTERNATE I (APR 2002)

As prescribed in 19.307(a)(2), add the following paragraph (b)(7) to the basic provision:

(7) [*Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.*] [The offeror shall check the category in which its ownership falls]:

____ Black American.
____ Hispanic American.
____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).
____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).
____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).
____ Individual/concern, other than one of the preceding.

K-9. 52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that--
(a) It ☐ has, ☐ has not participated in a previous contract or subcontract subject the Equal Opportunity clause of this solicitation;
(b) It ☐ has, ☐ has not filed all required compliance reports; and
(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

K-10. 52.222-25 AFFIRMATIVE ACTION COMPLIANCE (APR 1984)

The offeror represents that (a) it ☐ has developed and has on file, ☐ has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it ☐ has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

K-11. 52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in section 313(a) and (g) of EPCRA and Section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at last one of the following reasons: *(Check each block that is applicable.)*

☐ (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

☐ (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A);

☐ (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

☐ (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33, or

☐ (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

K-12. 52.222-18 - CERTIFICATION REGARDING KNOWLEDGE OF CHILD LABOR FOR LISTED END PRODUCTS (FEB 2001)

(a) *Definition*. Forced of indentured child labor means all work or service--
(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or
(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.
(b) *Listed end products*. The following end product(s) being acquired under this solicitation is (are) included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, identified by their country of origin. There is a reasonable basis to believe that listed endproducts from the listed countries of origin may have been mined, produced, or manufactured by forced or indentured child labor.

Listed End Product:	Listed Countreis of Origin:

(c) *Certification*. The Government will not make award to an offeror unless the offeror, by checking the appropriate block, certifies to either paragraph (c)(1) or paragraph (c)(2) of this provision.
[ ] (1) The offeror will not supply any end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in a corresponding country as listed for that end product.
[ ] (2) The offeror may supply an end product listed in paragraph (b) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that is has made a good faith effort to determine whether forced or indentured child labaor was used to mine, produce, or manufacture such end product. On the basis of those efforts, the offeror certifies that it is not award of any such use of child labor.

K-13. 52.222-22 -- PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) It * has, * has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) It * has, * has not filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

K-14. 52.227-6 ROYALTY INFORMATION (APR 1984)

(a) *Cost or charges for royalties.* When the response to this solicitation contains costs or charges for royalties totaling more than $250, the following information shall be included in the response relating to each separate item of royalty or license fee:

(1) Name and address of licensor.
(2) Date of license agreement.
(3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
(4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
(5) Percentage or dollar rate of royalty per unit.
(6) Unit Price of contract item.
(7) Number of units.
(8) Total dollar amount of royalties.

(b) *Copies of current licenses*. In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

K-15. 52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUN 2000)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. DISCLOSURE STATEMENT--COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of $500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:
☐ (1) *Certificate of Concurrent Submission of Disclosure Statement*. The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and
(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____
Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

☐ (2) *Certificate of Previously Submitted Disclosure Statement*. The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____
Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

☐ (3) *Certificate of Monetary Exemption*. The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling $50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

☐ (4) *Certificate of Interim Exemption*. The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of $50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS--ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

☐ The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than $50 million in awards of CAS-covered prime contracts and subcontracts. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of $50 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of $50 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

☐ YES ☐ NO

K-16. 252.225-7000 BUY AMERICAN ACT--BALANCE OF PAYMENTS PROGRAM CERTIFICATE (APR 2003)

(a) *Definitions*. Domestic end product, foreign end product, qualifying country, and qualifying country end product have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) *Evaluation*. The Government --
(1) Will evaluate offers in accordance with the policies and procedures of Part 225 of the Defense Federal Acquisition Regulation Supplement; and
(2) Will evaluate offers of qualifying country end products without regard to the restrictions of the Buy American Act or the Balance of Payments Program.

(c) *Certifications and identification of country of origin*.
(1) For all line items subject to the Buy American Act and Balance of Payments Program clause of this solicitation, the offeror certifies that --
(i) Each end product, except those listed in paragraph (c)(2) or (3) of this provision, is a domestic end product; and
(ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.
(2) The offeror certifies that the following end products are qualifying country end products:

_____
(Line Item Number)

_____
(Country of Origin)

(3) The following end products are other foreign end products:

_____
(Line Item Number)

_____
(Country of Origin) (If known)

K-17. 252.225-7020 TRADE AGREEMENTS CERTIFICATE (APR 2003)

(a) *Definitions.* "Caribbean Basin country end product," "designated country end product," "NAFTA country end product," "nondesignated country end product," "qualifying country end product," and "U.S.-made end product" have the meanings given in the Trade Agreements clause of this solicitation.
(b) *Evaluation.* The Government-
(1) Will evaluate offers in accordance with the policies and procedures of Part 225 of the Defense Federal Acquisition Regulation Supplement; and
(2) Will consider only offers of end products that are U.S.-made, qualifying country, designated country, Caribbean Basin country, or NAFTA country end products, unless the Government determines that-
(i) There are no offers of such end products;

(ii) The offers of such end products are insufficient to fulfill the Government's requirements; or
(iii) A national interest exception to the Trade Agreements Act applies.
(c) *Certification and identification of country of origin.*
(1) For all line items subject to the Trade Agreements clause of this solicitation, the offeror certifies that each end product to be delivered under this contract, except those listed in paragraph (c)(2) of this provision, is a U.S.-made, qualifying country, designated country, Caribbean Basin country, or NAFTA country end product.
(2) The following supplies are other nondesignated country end products:

(Line Item Number) (Country of Origin)

K-18. 252.225-7031 SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)

(a) *Definitions*. As used in this provision --
(1) *Foreign person means* any person (including any individual, partnership, corporation, or other form of association) other than a United States person.
(2) *United States person* is defined in 50 U.S.C. App. 2415(2) and means --
(i) Any United States resident or national (other than an individual resident outside the United States who is employed by other than a United States person);
(ii) Any domestic concern (including any permanent domestic establishment of any foreign concern); and
(iii) Any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern that is controlled in fact by such domestic concern.

(b) *Certification*. If the offeror is a foreign person, the offeror certifies, by submission of an offer, that it --
(1) Does not comply with the Secondary Arab Boycott of Israel; and
(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. 2407(a) prohibits a United States person from taking.

K-19. 252.227-7017 IDENTIFICATION AND ASSERTION OF USE, RELEASE OR DISCLOSURE RESTRICTIONS (JUN 1995)

(a) The terms used in this provision are defined in following clause or clauses contained in this solicitation--
(1) If the successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
(2) If the successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

(b) The identification and assertion requirements in this provision apply only to technical data, including computer software documentation, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification and identification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.

(c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release or disclosure.

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR QUOTERS

(d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers, shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions*	Basis of Assertion**	Asserted Rights Category***	Name of Person Asserting Restrictions****
(LIST)*****	(LIST)	(LIST)	(LIST)

* For technical data (other than computer software documentation) pertaining to items, components or processes developed at private expense, identify both the deliverable technical data and each item, component or process. For computer software or computer software documentation identify the software or documentation.

** Generally development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

*** Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specifically negotiated licenses).

**** Corporation, individual, or other person, as appropriate.

***** Enter "None" when all data or software will be submitted without restrictions.

Date _____

Printed Name and Title _____
_____

Signature _____

(End of identification and assertion)

(e) An offeror's failure to submit complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.

(f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request, by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

K-20. 252.227-7028 TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify--

(a) The contract number under which the data or software were produced;

(b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and

(c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

K-21. 252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) *Representation.*

The Offeror represents that it--

___ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

___ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

SECTION L INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR QUOTERS

L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions 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. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://farsite.hill.af.mil/
http://www.arnet.gov/far/

NOTICE. The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) SOLICITATION PROVISIONS

REFERENCE	TITLE	DATE
52.204-6	Data Universal Numbering System (DUNS) Number	JUN 1999
52.214-35	Submission of Offers in US Currency	APR 1991
52.215-16	Facilities Capital Cost of Money	JUN 2003
52.215-20	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data	OCT 1997
52.222-24	Preaward On-site Equal Opportunity Compliance Evaluation	FEB 1999
52.232-13	Notice of Progress Payments	APR 1984

DOD FEDERAL ACQUISITION REGULATION SUPPLEMENT 948 CFR CHAPTER 2) PROVISIONS:

REFERENCE	TITLE	DATE
252.234-7000	Notice of Earned Value Management Systems	MAR 1997

L-2. RECEIPT OF OFFERS/VALIDITY OF PROPOSALS

(a) Receipt of Offers. Proposals are due no later than 2:00PM Pacific Standard Time on 4 February 2004.

(b) Validity of Proposals. Proposals submitted in response to this solicitation shall be valid for 180 calendar days from the solicitation closing date.

L-3. 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)

(a) *Exceptions from cost or pricing data.* (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. Access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data.* If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 52.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

L-4. 52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be ___ DX rated order; _X_ DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

L-5. 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government intends to award one or more Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts resulting from this RFP. Under the ID/IQ contract(s), the Government may issue cost-plus-incentive-fee, cost-plus-fixed-fee and firm fixed-priced delivery order(s).

L-6. 52.216-27 SINGLE OR MULTIPLE AWARDS (OCT 1995)

The Government may elect to award a single or multiple contracts for the same or similar supplies or services as a result of this solicitation.

L-7. 52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment

of receipt from Space and Naval Warfare Systems Command, 4301 Pacific Highway, San Diego, CA 92110-3127, Attn: Code 02-21A, Bldg OT4, Rm 1035.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L-8. 52.252-5 AUTHORIZED DEVIATIONS IN PROVISIONS (APR 1984)

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

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

L-9. 252.217-7026 IDENTIFICATION OF SOURCES OF SUPPLY (NOV 1995)

(a) The Government is required under 10 U.S.C. 2384 to obtain certain information on the actual manufacturer or sources of supplies is acquires.

(b) The apparently successful Offeror agrees to complete and submit the following table before award:

SOURCES OF SUPPLY

Line Items	National Stock Number	Commercial Item (Y or N)	Company	Address	Part No.	Actual Mfg?

(1) List each deliverable item of supply and item of technical data.
(2) If there is no national stock number, list "none."
(3) Use "Y" if the item is commercial item; otherwise use "N," if "Y" is listed, the Offeror need not complete the remaining columns in the table.
(4) For items of supply, list all sources. For technical data, list the source.
(5) For items of supply, list each source's part number for the item.
(6) Use "Y" if the source of supply is the actual manufacturer; "N" if it is not; and "U" if unknown

L-10. 252.225-7003 REPORT OF INTENDED PERFORMANCE OUTSIDE THE UNITED STATES (APR 2003)

(a) The offeror shall submit a Report of Contract Performance Outside the United States, with its offer, if --
(1) The offer exceeds $10 million in value; and
(2) The offeror is aware that the offeror or a first-tier subcontractor intends to perform any part of the contract outside the United States and Canada that --
(i) Exceeds $500,000 in value; and
(ii) Could be performed inside the United States or Canada.

(b) Information to be reported includes that for --
(1) Subcontracts;
(2) Purchases; and
(3) Intracompany transfers when transfers originate in a foreign location.

(c) The offeror shall submit the report using --
(1) DD Form 2139, Report of Contract Performance Outside the United States; or

(2) A computer-generated report that contains all information required by DD Form 2139.
(d) The offeror may obtain a copy of DD Form 2139 from the Contracting Officer.

L-11. ALTERNATIVES TO MILITARY AND FEDERAL SPECIFICATIONS AND STANDARDS (JUL 1999)

(a) The Department of Defense is--

(1) committed to minimizing the use of military and federal specifications and standards; and
(2) seeking to use non-government specifications and standards to the maximum extent practicable to satisfy its requirements.

(b) The offeror--

(1) is encouraged to identify and propose alternatives to specifications and standards cited in this solicitation;
(2) may submit a proposal to the Contracting Officer that, as a minimum, consists of--
(i) a copy of the proposed alternatives;
(ii) a comparison of the proposed alternatives to the specification or standards cited in the solicitation; and
(iii) an analysis supporting the feasibility and cost-effectiveness of the proposed alternatives.

(c) The government will, to the extent practicable, evaluate the acceptability of any proposed alternative. If an alternative proposal is not considered for the instant procurement, it will be considered for future procurements. If the Contracting Officer does not accept the offeror's proposed alternative, the offeror agrees to perform in accordance with the specified requirements.

L-12. 5252.211-9000 NOTICE TO OFFERORS--USE OF OZONE DEPLETING SUBSTANCES (AUG 1993)

(a) In accordance with section 326 of Pub L.102-484, the Department of Defense is prohibited from awarding any contract which includes a DoD-directed specification or standard that requires the use of a Class I ozone depleting substance (ODS) or that can be met only through the use of such a substance unless such use has been approved by a senior acquisition official (SAO). The SAO approval is based on a technical certification that no suitable substitute for the ODS is currently available.

(b) To comply with this statute, the Navy has screened the specifications and standards associated with this solicitation. To the extent that ODS requirements were revealed by this review they are identified below:

Class I ODS Identified	Specification/Standard

[*Contracting officer is to identify and insert screened ODS requirements*]

(c) If offerors possess knowledge about any other Class I ODS required directly or indirectly by the specification or standards, the Navy would appreciate such information in your response to this solicitation. Offerors are under no obligation to comply with this request and no compensation can be provided for doing so.

L-13. 5252.215-9200 CERTIFICATE OF CURRENT COST OR PRICING DATA (OCT 1997)

Certification of cost or pricing date is required in accordance with FAR 15.403-4 and shall be prepared in the format specified in FAR 15.406-2. The Contractor shall be required to submit the certificate as soon as practicable after agreement is reached on the contract price.

L-14. ESTIMATED EFFECTIVE AWARD DATE

For Bidding/Proposal purposes the estimated effective date of contract award is 15 April 2004.

L-15. SUBCONTRACTOR COMPETITION (JUN 1999)

(a) When another division of a potential offeror might be a competitor for a particular subsystem, the offeror shall submit a plan that addresses the following:

(1) how the offeror will ensure the subcontractor selection process results in the best value (e.g., the subcontractor selection criteria or evaluation process should not provide any benefit to a company merely because it is another division of the same company as the offeror);

(2) how the offeror will protect intellectual property rights of unaffiliated companies competing for a specified subcontract;

(3) whether any independent advisors will be used in the subcontractor selection process;

(4) whether any measures (commonly referred to as firewalls) will be implemented to isolate the source selection personnel from any other personnel in the company that could influence a subcontractor selection for reasons other than obtaining the best value; and

(5) an assessment of whether the benefits of having two sources for a specified subsystem outweigh the costs.

(b) This Plan shall be submitted in the price volume of the offeror's proposal.

L-16. USE OF GOVERNMENT PROPERTY IN OFFEROR'S POSSESSION (DEC 1999)

If the offeror intends to use in the performance of the work required hereunder any Government-owned facilities, special test equipment, or special tooling, it shall so advise in its response hereto and shall include in such response the value of such property, the number of the contract(s) under which such property was acquired, the rental provisions of such contract(s) and such other information as may be relevant. In addition to the above, the offeror shall obtain and then include in its proposal, the written concurrence in its proposed use of the property from the Contracting Officer having cognizance of such property.

L-17. FACILITIES CAPITAL COST OF MONEY (MAY 1999)

If the offeror proposes facilities capital cost of money as part of their proposed costs, the offeror shall submit with their proposal a completed DD Form 1861 "Contract Facilities Capital and Cost of Money." with supporting documentation.

L-18. SUBMISSION OF ELECTRONIC PROPOSALS (MAR 2001)

(a) Offerors shall submit their proposals electronically to SPAWAR under the instructions contained in this provision. Offerors shall submit their signed proposals as either scanned ("TIFF") or "PDF" documents. Electronic copies shall be submitted via the SPAWAR E-Commerce Central (SPAWAR E-CC). Offerors submitting electronic proposals (e-Proposals) shall register in the SPAWAR E-CC and select their own password in order to submit a proposal. Offerors are required to read the "Submitting a Proposal?" web page found in the SPAWAR E-CC. For information about "e-Proposal" submission, please visit the SPAWAR E-CC. The URL for the SPAWAR E-Commerce Central is https://e-commerce.spawar.navy.mil.

(b) Each electronic file shall also be clearly marked to show the proposal volume number, solicitation number and offeror's name. E-Proposal files shall not contain classified data. The offeror's e-proposal shall be in accordance with the requirements set forth below:

(1) Adobe Acrobat version 4.01 or greater shall be used to create the "PDF" files.

(2) The proposal submission files may be compressed (zipped) into one, self-extracting file entitled "PROPOSAL.EXE" using WinZip version 6.3 or greater.

(3) Cost or Pricing Type Data: All information relating to cost and pricing type data shall be included only in the section of the proposal designated by the Contracting Officer as the Cost Proposal. Under no circumstances shall cost and pricing type data be included elsewhere in the proposal. Paragraph cross-referencing between Cost Proposal paragraphs and technical/management proposal paragraphs is requested to provide clarity.

(c) Bids and proposals submitted electronically will be considered "late" unless the bidder or offeror completes the entire transmission of the bid or proposal prior to the due date and time for receipt of bids or proposals. This paragraph (c) supplements the submission, modification and withdrawal of bids and proposals coverage in the FAR 52.212-1 "Instructions to Offerors--Commercial Items", FAR 52.214-7 "Late Submissions, Modifications, and Withdrawals of Bids", FAR 52.214-23 "Late Submissions, Modifications, Revisions, and Withdrawals of Technical Proposals under Two-Step Sealed Bidding", or the FAR 52.215-1 "Instructions to Offerors--Competitive Acquisition" provision contained in the solicitation.

L-19. GOVERNMENT-FURNISHED PROPERTY (OCT 1998)

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

L-20. TECHNICAL DATA AND COMPUTER SOFTWARE RIGHTS

(a) In order that the Government may compete follow-on procurements for MIDS JTRS, the Government has determined that, in accordance with 10 U.S.C. § 2320(a)(2)(B,C,D), its minimum needs for this acquisition include Unlimited Rights to all technical data labeled as such in Column 3 of Table B-1 of Section B, and Government Purpose Rights to all remaining technical data and computer software delivered under this contract, thereby permitting competitive follow-on acquisitions of MIDS JTRS.

(b) CLINS 3000-3005 are cost-reimbursable CLINS that require the awardee to conduct research and development to deliver MIDS JTRS required under this contract. As such, the Government will be reimbursing the contractor its allocable, allowable, and reasonable costs of performing such research and development work and thus assumes that an offeror need not use any technical data or computer software developed completely at private expense to perform this contract. Accordingly, the Government does not envision any circumstance where, in completing the Section K clause entitled "Identification and Assertion of Use, Release, or Disclosure Restrictions" (DFARS 252.227-7017), an offeror will deliver less than Unlimited Rights to the Government for any technical data or computer software delivered under this RFP. If this assumption is correct, offerors shall:

(1) complete the Section K clause entitled "Identification and Assertion of Use, Release, or Disclosure Restrictions" (DFARS 252.227-7017) and Column 3 of Table 3 of Section B consistent with that assumption, (i.e., insert the word "Unlimited" into each cell of that Column labeled as "Offeror to Complete" and leave the remaining cells in that column unchanged).

(2) highlight the offeror's intent to provide the Government with Unlimited Rights to all technical data and computer software delivered under this contract in its proposal, and

(3) fill-in a proposed price of $0 in the cell associated with each and every item listed in Table 3 of Section B associated with a particular item of technical data or computer software in its Cost/Price Volume. The Government notes that it is entitled to Unlimited Rights in technical data and computer software associated with certain items delivered under this contract in certain situations, even where those items were not developed exclusively with Government funding (see DFARS 252.227-7013(b)(1)(ii, iv-ix), and DFARS 252.227-7014(b)(1)(ii-vi)).

(c) Where the Government's assumption as described in subsection (b) above is incorrect and there are valid reasons why an offeror must develop entirely at private expense or provide previously developed technical data or computer software under this contract the offerors may not be required, either as a condition of being responsive to this RFP or as a condition for award, to sell or otherwise relinquish to the Government any proprietary rights in technical data or computer software developed at private expense, except for the items identified at DFARS 227.7103-5(a)(2) and (a)(4) through (a)(9) and DFARS 227.7203-5(a)(3) through (6). Accordingly, if an offeror believes the Government's assumption is incorrect, offerors shall so indicate by:

(1) completing the Section K clause entitled "Identification and Assertion of Use, Release, or Disclosure Restrictions" (DFARS 252.227-7017) and Column 3 of Table 3 of Section B by identifying the CDRL item and the specific type of technical data/computer software rights the offeror asserts it will retain,

(2) filling out Table 3 of section B of its Cost/Price volume in the following manner:

(i) For those items of technical data or computer software that the Government has labeled "Unlimited" in column 3 and inserted a price of "$0" in column 4, leave those columns as is. If, however, the offeror has indicated in its completed DFARS 252.227-7017 clause that it will deliver some or all of those items with less than Unlimited Rights (either Government Purpose, Limited, or Restricted Rights), the offeror shall modify those cells as follows:*

A) for those items of technical data or computer software that the offeror has identified that it will deliver with Government Purpose Rights, insert "Government Purpose" in column 3 and keep the price of "$0" in column 4.

B) for those items of technical data or computer software that the offeror has identified that it will deliver with Restricted or Limited Rights, the offeror shall insert "Government Purpose" in column 3 and insert a proposed price in column 4. If the contractor is unwilling to sell Government Purpose Rights in any of those items, the offeror shall place the character "—" in column 4 for those items for which it is not willing to sell Government Purpose Rights.

(ii) For those items of technical data or computer software that the Government has labeled "Offeror to Complete" in columns 3 and 4, the offeror shall:

A) place "Unlimited" in column 3 and "$0" in column 4 for those items that the contractor has not identified in its completed DFARS 252.227-7017 clause,

B) place "Government Purpose" in column 3 and "$0" in column 4 for any item that the contractor has identified in its completed DFARS 252.227-7017 clause that it will deliver with Government Purpose Rights, and

C) place "Government Purpose" in column 3 and enter a proposed price in column 4 for any item that the contractor has identified in its completed DFARS 252.227-7017 clause that it will deliver with Limited or Restricted Rights. If the contractor is unwilling to sell Government Purpose Rights in any of those items, the offeror shall place the character "—" in column 4 for those items for which it is not willing to sell Government Purpose Rights.

* the Government notes that it is entitled to Unlimited Rights in technical data and computer software delivered under this contract in certain situations, even where those items were not developed exclusively with Government funding (see DFARS 252.227-7013(b)(1)(ii, iv-ix) and DFARS 252.227-7014(b)(1)(ii-vi).

L-21. SMALL BUSINESS SUBCONTRACTING PLAN

Large businesses are required to submit a Subcontracting Plan in accordance with FAR Clause 52.219-9, Small Business Subcontracting Plan, FAR Clause 52.219-8, Utilization of Small Business Concerns and DFARS 252.219-7003, Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan which have been included in this solicitation and will be included in the resultant contract.

Offerors are encouraged to include first tier small business subcontractor goals that **meet or exceed** the following Department of Navy subcontracting goals:

Small Business Category	**DoN Goal** (Based upon % of Subcontracted Amount)
Small Business	49.3%
Small Disadvantaged Business	8.8%
Woman-Owned Small Business	8.3%
HUBZone	3.0%
Veteran Owned Small Business	3.0%
Service-Disabled Veteran Owned Small Business	3.0%

Offerors must include within the subcontract plan itself, a detailed explanation regarding the extenuating circumstances to support any plans submitted with less than 5.0% small disadvantaged business goal or a 0% goal in ***any*** category.

The plan must be approved prior to award and will be made a part of the contract.

L-22. CONTENT OF VOLUME I, TECHNICAL PROPOSAL

(a) The offeror, in conjunction with the other offeror(s), shall submit one combined technical proposal that clearly describes the offerors' management and technical approach to satisfy the Government's requirements. The joint technical proposal shall enable technical personnel to make a thorough evaluation and a determination as to whether the product proposed and described will satisfy the requirements of the Government. The technical proposal shall be specific, detailed and complete and fully demonstrate that the prospective offerors have a thorough understanding of the Government's requirements. The joint technical proposal shall also address inherent technical problems, the achievement of the specifications and work program and have a valid and practical solution for any foreseen problem(s). Data previously submitted will not be considered; therefore such data shall not be incorporated in the technical proposal by reference. Statements that the prospective offeror understands, can or will comply with all specifications, statements paraphrasing the specifications or parts thereof, and phrases such as "standard procedures will be employed" or "well known techniques will be used," etc., will be considered insufficient.

(b) The combined technical proposal shall clearly delineate the tasks required to develop the MIDS-JTRS; define the agreed-to leadership, support roles and workshare for each task; and demonstrate how the participating MIDS JTRS vendors (DLS, ViaSat, Marconi, EADS, Indra and Thales) will work with each other to achieve a common design. The combined technical proposal shall include a program management plan that addresses how the program will be managed as a joint effort among the participating MIDS JTRS vendors. This joint program management plan shall provide a comprehensive and concise description of the offerors' planned approach to effectively manage the MIDS-JTRS cooperative development program. The program management plan shall describe to the Government how the companies will manage the joint development program, determine workshare, resolve disputes, and manage risks and schedule. The combined management plan shall clearly identify the participating contractors and each contractor's role and responsibilities. In accordance with the Government's CDRL requirements, the offeror shall submit joint CDRLs in conjunction with the other offerors or individually. The offeror, in conjunction with the other offerors, shall identify and describe how it will ensure issues relating to export control licenses,

transportation plans, technical data exchanges/agreements are minimized. The proposal shall identify which participating contractor will host the post-award conference. The combined technical proposal shall address the following elements;

L22-1.1 Program Management

The offerors shall demonstrate their capability for managing all aspects of the program. The offeror shall describe its understanding of the program requirements, scope of effort, and schedule dependencies required to meet the requirements. The offeror shall describe its understanding of manpower and skill resources needed to execute all phases of the MIDS JTRS program. The offerors, in their joint proposal, shall describe their approach to developing and executing a program management plan, clearly identifying the program management structure and roles and responsibilities of each participating offeror, their relationships with each other from contract award through the completion of design and design reviews, delivery of required documentation, and performance of required tests. With regard to the program management plan, describe:

a. The organizational structure through a detailed program organization chart, identifying the key program management and technical personnel, from each participating company and their particular roles and functions.
b. The program master schedule, including critical path, in PERT chart format, identifying key program events and milestones.
c. Whether or not the organizations proposed were responsible for performance under the Phase 2A activities relevant to this solicitation and if those organizations have relocated since the accomplishment of previous cited efforts, including a description of any changes to key personnel, facilities and equipment.
d. How the European subcontractors will be employed and what the planned US/European workshare will be.
e. How the offerors plan to cooperatively resolve programmatic and technical issues that arise during the development program.
f. How the offerors plan to manage and share data to ensure documents, which are jointly developed, meet CDRL requirements and delivery schedules
g. How the offerors plan to cooperatively manage and share risk. Specifically, the offerors shall describe in detail how they will maintain schedule if one of the participating contractors falls behind schedule.
h. How the offerors would bring other companies into the cooperative development program in the event such companies' participation is desired after contract award.
i. How the offeror will manage the unique security aspects of the MIDS JTRS cooperative development program, including COMSEC and TEMPEST.
j. How the offeror will demonstrate compliance with SCA version 2.2.
k. How the offerors will ensure timely and accurate reporting of program status to the Government, including any issues that impact cost, schedule or performance. The offerors will describe how they will notify the Government, in a timely manner, of any MIDS JTRS deficiencies, system anomalies, deviations, configuration changes, CDRL submittals, etc. to ensure the Government has sufficient lead time to assess and evaluate the issues at hand and provide direction.

L22-1.2 Systems Engineering

The offerors, in their joint proposal, shall describe their proposed systems engineering approach. The offerors shall describe how they intend to achieve a minimum-investment system. The offerors shall demonstrate how the SSPS, S/SICD and interchangeability requirements shall be met. The offerors, in their joint proposal, shall describe its approach to developing and executing a joint systems engineering management plan, clearly identifying the systems engineering activities to be performed by each contractor, through the completion of design and design reviews, delivery of required documentation, and performance of required tests. With regard to systems engineering management, the proposal shall describe:

a. The current technical risks and how they will be mitigated.
b. How the systems requirements will be allocated, tracked and maintained.
c. How specification issues will be communicated to the Government and resolved.
d. How Key Performance Parameters (KPPs) will be met and evaluated.
e. What design trade studies will be conducted and what factors will be used to evaluate such design trade-offs.

f. How technical progress in meeting all system-level requirements, including mechanical, reliability, maintainability, Built-In test (BIT) and false alarms will be tracked, maintained and monitored throughout the program.
g. How logistics considerations and planning will be integrated into the system engineering process
h. What processes will be used to ensure that a production representative and producible MIDS JTRS is achieved.
i. The entrance and exit criteria for the PDR, CDR and TRR.
j. Any known or potential platform interface, system safety and human engineering issues and ways to reduce or eliminate such issues.
k. How the technical data package will be maintained and controlled.
l. How the interchangeability requirements of Clause C-2.1 will be met, including the configurations that will be tested and the process to be used to plan the test activities, conduct tests, resolve issues and incorporate design changes among the participating offerors.

L22-1.3 System Design
The offerors in their joint proposal shall describe in detail the design processes to be used for the MIDS JTRS. The joint proposal shall demonstrate how the offerors plan to design, synthesize and optimize the MIDS JTRS design. Discuss design features that enable the MIDS JTRS to satisfy integration on current LVT platforms and how additional capabilities could be integrated with minimal impact to host platforms. The offerors shall describe their common hardware design that meets the functional and allocated baseline specifications. Describe the design ground rules and features that shall enable each participating contractor to produce the MIDS-JTRS on their own and the process that shall be used to review and approve the module designs by all participating contractors. The offeror shall describe the process to resolve technical design issues. In addition, the offerors' joint proposal shall address the following areas:
l. The joint proposal shall describe the offeror's hardware architecture of the MIDS JTRS. The description of the architecture shall identify each module by name, function and design authority. The architecture shall include functional partitioning, allocation of requirements to each function, traceability of system-level requirements, internal interfaces, external interfaces and relationships to MIDS JTRS software modules.
m. The joint proposal shall describe the offeror's software, middleware, and firmware architecture of the MIDS JTRS and support systems. The description of architecture shall identify Category I, II, and III software components by name, function and design authority. The proposed software/middleware/ firmware architecture for the MIDS JTRS and its support systems shall include functional partitioning, allocation of requirements to each function, traceability to system-level requirements, internal interfaces, and external interfaces. The offeror shall describe how the MIDS JTRS meets the JTRS Software Communications Architecture (SCA).
n. The joint proposal shall describe and demonstrate the proposed software, middleware, and firmware design processes to be used for the MIDS JTRS and support systems. .
o. The joint proposal shall describe and demonstrate the proposed process to develop, verify, and field MIDS JTRS and support system software, middleware, and firmware. The process shall discuss development of the software/middleware/firmware architecture, allocation of system requirements, requirements derivation, design, unit verification, integration and test, system verification, updates, reviews (e.g., requirements, design, program, readiness). The process shall describe how the MIDS JTRS shall port, rehost and adapt GFE software. The offeror shall describe how they will develop the delta software to full satisfy the MIDS SSS.
p. The joint proposal shall describe and demonstrate how the MIDS JTRS and proposed support system software/middleware/firmware effort shall be managed in accordance with the workshare allocation described in the program management plan and how progress shall be measured including schedule and cost tracking tools, metrics, frequency of updates, reporting to the government, highlighting and resolving cost and schedule perturbations, and program reviews.

(c) Each offeror shall submit a separate addendum to the combined technical proposal that addresses the following elements for both the US integrator and European integrator;

L22-1.4 First Article Approval

The offeror shall describe its approach to qualify the MIDS JTRS and demonstrate that the MIDS-JTRS meets the Government requirements. The offeror shall describe how it intends to meet the contractor FAQT verification requirements and support Government FAQT. The offeror shall describe how system anomalies will be documented, monitored, resolved and reported to the Government. The offeror shall describe how it will maintain a consistent configuration of first articles throughout the contractor FAQT effort. . The offeror shall describe how it will achieve all the approvals listed in Clause H-23.1. The offeror shall describe the level of Government assistance, if any, to obtain the required approvals.

L22-1.5 Manufacturing
The offeror shall describe how the MIDS JTRS first articles will be fabricated and manufactured. The offeror shall describe the facilities, tools and special test equipment, if any, to be used to fabricate, test and manufacture the MIDS JTRS first articles. If any special tools or test equipment are proposed that are unique to the MIDS JTRS program, the offeror shall describe the equipment in detail, including its intended functions, and explain why other available test equipment and commercial off the shelf equipment can not be used. The offeror shall describe the manufacturing processes to be used for the MIDS JTRS.

L22-1.6 Logistics/Training
The offeror shall describe how it intends to support the fielding of the MIDS JTRS. The proposal shall identify the how the current MIDS LVT systems will be used to support MIDS JTRS. The offeror shall describe in detail any modifications necessary to the current LVT systems to meet the MIDS JTRS. Justification shall include an explicit reference to a unique MIDS JTRS requirement (e.g., SS requirement or SOW reference). The offeror shall describe the proposed support equipment that will be used to support the MIDS JTRS operationally.

L22-1.7 Reserved.

L22-1.8 Integration/Production
The offeror shall describe how it intends to integrate and produce MIDS JTRS. The offeror shall describe the facilities, tools and special test equipment, if any, to be used to manufacture and test the MIDS JTRS. If any special tools or test equipment are proposed that are unique to the MIDS JTRS program, the offeror shall describe the equipment in detail, including its intended functions, and explain why other available test equipment and commercial-off-the-shelf equipment can not be used. The offeror shall describe and explain any long lead items, including critical items that the offeror plans to use for MIDS JTRS production. The offeror shall describe its anticipated monthly production rate and demonstrate how it intends to meet that anticipated rate.

L-23. CONTENT OF VOLUME II PRICE/COST PROPOSAL

This volume shall contain cost/price information only. The guidelines and requirements in this section are provided to (1) aid the offeror in preparing its cost/price volume, and (2) aid the Government in reviewing and evaluating the offeror's cost/price volume. The Government's intent is to provide instructions that will allow the offeror to develop clear, concise and comprehensible proposals and to minimize data requests by the Government during the evaluation process.

Data contained in the cost/price proposal shall be consistent with data contained in the Technical and Management Sections of the offeror's proposal.

L23-1.1 General Information

On the first page of this section, the Offeror shall state that the Cost Proposal has been prepared completely in accordance with the terms and conditions of the solicitation. However, if the Offeror takes any exceptions to the terms and conditions of the solicitation, these exceptions shall be clearly set forth in the cover letter and shall be explained by the Offeror with the understanding that such exceptions may not be acceptable to the Government.

The Offeror shall state the beginning and end of its fiscal year for the purposes of cost estimating.

It is the Government's intention to award a first delivery order for the MIDS JTRS Phase 2B concurrently with the modification to the MIDS production contract(s) that will incorporate the changes described in this solicitation. This delivery order will most likely include all of the effort under CLINs 3000 and 3002. CLINs 3001, 3003, 3004, and 3005 may be awarded at a later date in accordance with the terms of the contract and the changes to the contract presented in this solicitation.

The Offeror shall ensure, at a minimum, that all of its foreign subcontractors submit a separate cost proposal that is in accordance with the requirements of this provision. For example, the subcontractors' cost proposal must utilize the common CWBS requirements outlined below and the various Templates at the end of this Section L. Subcontractor cost proposals may be submitted directly to the Government.

L23-1.2 Proposed Cost-Plus-Incentive-Fee, Cost-Plus-Fixed-Fee or Prices (CLINs 3000, 3001, 3003, 3004, 3005)

Offerors shall complete Section B and provide it in this volume. This Section B shall include:

(a) an estimated cost and target fee for CLINs 3000;
(b) a not-to-exceed unit price amount for CLIN 3001*;
(c) a firm fixed price for CLIN 3003;
(d) firm fixed prices for each CDRL item identified in Table 3 of Section B (CLIN 3004); and
(e) A cost-plus-fixed-fee for CLIN 3005**

* A price for CLIN 3001 will be negotiated under an individual delivery order. This price shall not exceed the unit price provided by the offeror in response to this RFP (see L23-1.2(b)). The Government estimates that a request for proposal for CLIN 3001 will be sent to the offeror on or about 15 December 2004 so that a definitive price may be negotiated. The Government estimates that any award of CLIN 3001 will be on or about 15 April 2005.

** If the Government does not provide the Computer Software Operating environment by 4 months after the date of the order for CLIN 3000 in accordance with Clause H-26 and SOW paragraph 3.2.8.b., CLIN 3005 may be ordered. In pricing this CLIN the contractor should assume that the period of performance for CLIN 3005 may begin any time from the date of award of CLIN 3000 and 6 months thereafter and shall be completed by the start of contractor FAQT.

Please note that CLIN 3002 is not separately priced. All cost and fee associated with CLIN 3002 shall be included in the cost-plus-incentive-fee arrangement for CLIN 3000.

L23-1.3 Proposed Cost

L-23.1.3.1 CWBS (CLINs 3000, 3002, 3003 and 3005)
SPREADSHEET FORMAT A: The Offeror shall provide a breakdown of cost for Contract Line Item Numbers (CLINs) 3000, 3002, 3003 and 3005 by cost element (see L-22.3.3, Cost Elements, below) in accordance with a Contract Work Breakdown Structure (CWBS) that is common among the participating MIDS JTRS Phase 2B vendors. The format for this spreadsheet shall be in accordance with Template A, Total Cost by CWBS and Cost Element, which is at the end of this Section L. The Offeror may tailor this template if certain cost elements are extraneous or missing.

The Offeror shall work with the other MIDS JTRS Phase 2B vendor(s) to define a common CWBS. An example CWBS that may be used as a starting point for this discussion between the MIDS JTRS Phase 2B vendors is at the end of this Section L. At a minimum, the Government would like the final, common CWBS to include the elements contained in the provided example CWBS. The offeror, in conjunction with the other MIDS JTRS Phase 2B vendor(s), may make changes to the structure of this CWBS example or make additions to this CWBS example as needed to meet an essential requirement of the RFP or to enhance the effectiveness of the Contract CWBS in satisfying program objectives. Contractors are expected

to extend the CWBS to the appropriate level - the level that satisfies the critical visibility requirements and does not overburden the management control system. Although there may not be a one-to-one relationship, the relationship of the CWBS elements to the statement of work tasks, the specifications, and the contract line items should be clearly traceable.

L-23.1.3.2 BASES OF ESTIMATE (CLINs 3000, 3002, 3003 and 3005)

For each lowest-level WBS element to be performed by the Offeror in accordance with the common CWBS structure defined by the MIDS JTRS Phase 2B vendor(s), the offeror shall provide a basis of estimate that includes, at a minimum, the following information:

(a) Company Name
(b) CWBS Title
(c) CWBS Number
(d) CLIN Number
(e) Labor Category, including associated Labor Category code, if applicable
(f) Hours per Labor Category
(g) Subcontracts
(h) Travel
(i) Other Direct Costs
(j) Duration of Task
(k) CWBS Task Definition

A complete rationale for each cost element listed above (e through i) and the proposed task duration (j) shall be included in the bases of estimate. If the Offeror proposes any subcontracts within the Offeror's BOE (i.e. if, in the case of a minor subcontractor, a separate cost proposal by CWBS element is not provided by the subcontractor), the Offeror shall name the subcontractor and provide the subcontractor's cost or price and, if appropriate, cost evaluation of that subcontractor's price. Any BOE that lists a subcontractor shall have the proposed subcontractor's proposed cost or price quotation attached. Any travel proposed shall describe the purpose of the trip, the trip destination, the duration of the trip, the number of people travelling, the proposed cost of airfare, the proposed cost of per diem, and the proposed cost of lodging. Any other direct costs proposed shall include a complete description and rationale for those costs. In short, all cost elements described within the BOE shall be fully described and supported by the Offeror in the BOE.

L-23.1.3.3 COST ELEMENTS (CLINs 3000, 3002, 3003 and 3005)

SPREADSHEET FORMAT B: The Offeror shall provide a separate spreadsheet for each CLIN that delineates a total breakdown by the following cost elements, as applicable, and for each month of performance. The format for this spreadsheet shall be in accordance with Template B, Total Cost by CLIN and Cost Element, which is at the end of this Section L. The Offeror may tailor this template if certain cost elements are extraneous or missing. A roll-up summary of this spreadsheet shall also be provided at the CLIN Level in accordance with Template C, which is at the end of this Section L. Again, the Offeror may tailor this template if certain cost elements are extraneous or missing.

- (1) Direct Materials – Identify proposed material items, purchased parts or subcontracted materials including the basis for the proposed amount (e.g., engineering estimate, vendor quotation, catalog item). Provide a detailed Bill of Material (BOM) showing piece parts, quantities, unit prices and extended prices by WBS. Also provide a summary BOM in descending extended price order. The format for this information is provided below.

WBS#	WBS Element	Unit of Measure	Vendor	Basis of Price	Sole Source/Comp	Qty/Unit	Unit Price	Total Qty	Total Recurring	Total Non-Recurring	Total Extended Cost

- (2) Material Overhead – If applicable and in accordance with the Offeror's normal accounting procedures, identify the material overhead rate(s) and total material overhead amount being proposed and identify the cost elements to which the material overhead rate is applied.

- (2) Direct Labor – Identify the various labor categories required/intended for use under this contract (e.g. Sr. Engineer, Jr. Engineer). Include the labor category code assigned by the Offeror, if applicable, the number of labor hours and total cost for each labor category proposed.

- (3) Fringe Benefits – If applicable and in accordance with the Offeror's normal accounting procedures, identify the fringe benefit rate(s) and total finge benefit cost being proposed and identify the cost elements to which the fringe benefit rate is applied.

- (4) Overhead – Identify the current and projected overhead rate(s) and total overhead cost being proposed and identify the various cost elements to which overhead is applied.

- (5) Other –

  (i) Direct Cost – Identify any other direct cost elements being proposed which are not included above but are applicable to your cost volume (e.g., royalties, Special Tooling, Material, Travel, Computer Usage). The decision as to whether costs are handled as direct or indirect costs rests with the offeror, but shall be consistent with the offeror's approved cost accounting practices as disclosed in the Offeror's CAS Disclosure Statement.

  (ii) Indirect Cost – Identify any other indirect cost element being proposed which has not been included above and identify the various cost elements for which the rate is applied. Advise if the rates proposed are in accordance with any Forward Pricing Rate Agreements and period of validity of any such agreement.

- (6) General and Administrative Expense – Identify the General and Administrative Expense (G&A) rate(s) and the total G&A cost proposed and identify the various cost elements to which the G&A is being applied.

- (7) Fee – Identify the fixed fee rate, total fixed fee, and the cost elements to which the fee is applied.

- (8) Facilities Capital Cost of Money (FCCM) – If the Offeror proposes FCCM, the Offeror shall submit with its proposal a completed DD Form 1861 "Contract Facilities Capital and Cost of Money" with supporting documentation.

L-23.1.3.4 Offeror Support for Asserting Data and Software Restrictions and Proposed Prices

If the offeror identifies in its completed Section K clause entitled "Identification and Assertion of Use, Release, or Disclosure Restrictions" (DFARS 252.227-7017) that it will deliver any of the CDRLS listed in Section B, Table 3 with less than Unlimited Rights, the offeror shall fully support: 1) its rationale for asserting the identified restrictions, and 2) its rationale for any price other than "$0" proposed in Section B, Table 3 Section B. This section should be sufficiently detailed to provide the Government with a complete understanding of the circumstances that led the contractor to assert that other than unlimited rights will be provided to the Government, and that led the contractor to propose any price other than "0". To explain its asserted restrictions and/or proposed prices, the offeror shall describe and disclose amounts of any IR&D funding or other contractor funding invested, or any other factors that support the asserted restrictions and/or proposed prices.

L-23.1.3.5 In addition to the above requirements, the Offeror may provide other type of cost data or formats that would aid in the evaluation of its proposal.

NEW CLAUSE

L-24. REQUIRED SUBCONTRACTING ARRANGEMENTS

The MIDS International Program Office requires that the MIDS JTRS design, development, and qualification program be conducted on a collaborative basis by each of the participating nations' designated national contractors. To that end, the prime U.S. vendor participants responding to this RFP must subcontract with one of the following "Integrator" industries to be eligible for award of a contract for this requirement:

- France: Thales Communications ("Integrator")
- Italy: Marconi Selenia Communications ("Integrator")

The prime U.S. vendors must each select a different European integrator. At a minimum, the role of the European "integrator" will be to assemble and qualify terminals at a European facility for delivery to the European nations.

Additionally, the following European companies must be included as a subcontractor under one or more of the prime U.S. vendor proposals and resulting contracts:

- Spain: Indra Sistemas S.A.
- Germany: EADS Deutschland GmbH

TEMPLATE A – Total Cost by CLIN, CWBS and Cost Element

CLIN No.

CWBS No.	Direct Materials	Material Overhead	Direct Labor Hours	Total Unburdened Labor Cost	Fringe Benefits	Overhead	Other Direct Cost	Subtotal	G&A	Total Cost	Fixed Fee	Total Cost Plus Fixed Fee

TEMPLATE B – Total Cost by CLIN, CWBS, Cost Element, and Month

CLIN No.
CWBS No.

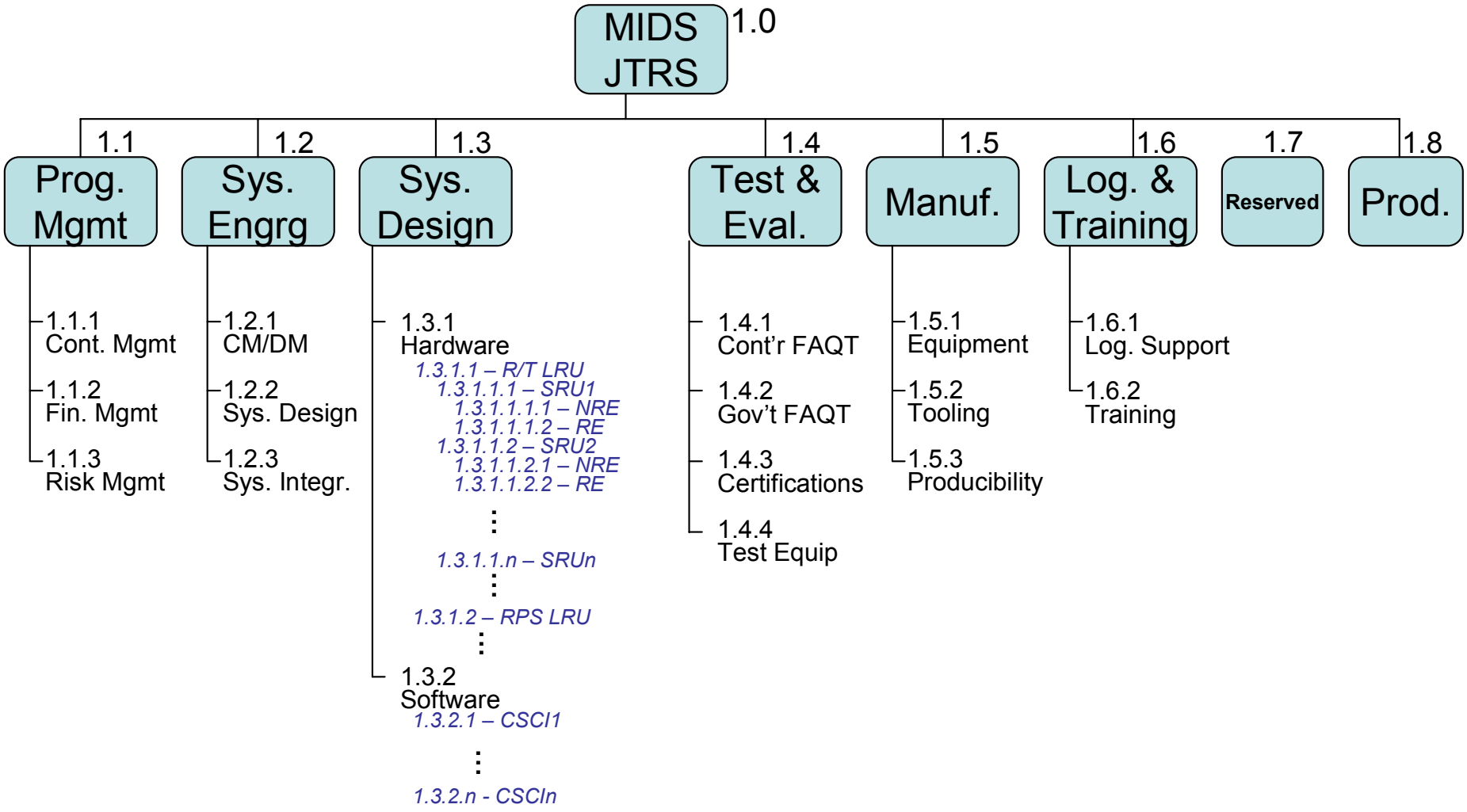
Cost Element	February 2004 (example)	March 2004	April 2004	May 2004	June 2004	July 2004	August 2004	September 2004	October 2004
Direct Material									
Material Overhead									
Direct Labor Hours									
Direct Labor									
Fringe Benefits									
Overhead									
Other Direct Cost									
Subtotal									
G&A									
Total Cost									
Fixed Fee									
FCCM									
Total Cost Plus Fixed Fee									

TEMPLATE C – Total Cost by CLIN, Cost Element, and Month

CLIN No.

Cost Element	February 2004 (example)	March 2004	April 2004	May 2004	June 2004	July 2004	August 2004	Septemb er 2004	October 2004
Direct Material									
Material Overhead									
Direct Labor Hours									
Direct Labor									
Fringe Benefits									
Overhead									
Other Direct Cost									
Subtotal									
G&A									
Total Cost									
Fixed Fee									
FCCM									
Total Cost Plus Fixed Fee									

Draft WBS


MIDS JTRS
1.0
1.1
Prog. Mgmt
1.1.1 Cont. Mgmt
1.1.2 Fin. Mgmt
1.1.3 Risk Mgmt
1.2
Sys. Engrg
1.2.1 CM/DM
1.2.2 Sys. Design
1.2.3 Sys. Integr.
1.3
Sys. Design
1.3.1 Hardware
1.3.1.1 – R/T LRU
1.3.1.1.1 – SRU1
1.3.1.1.1.1 – NRE
1.3.1.1.1.2 – RE
1.3.1.1.2 – SRU2
1.3.1.1.2.1 – NRE
1.3.1.1.2.2 – RE
1.3.1.1.n – SRUn
1.3.1.2 – RPS LRU
1.3.2 Software
1.3.2.1 – CSCI1
1.3.2.n - CSCIn
1.4
Test & Eval.
1.4.1 Cont'r FAQT
1.4.2 Gov't FAQT
1.4.3 Certifications
1.4.4 Test Equip
1.5
Manuf.
1.5.1 Equipment
1.5.2 Tooling
1.5.3 Producibility
1.6
Log. & Training
1.6.1 Log. Support
1.6.2 Training
1.7
Reserved
1.8
Prod.

STATEMENT OF WORK

PHASE 2B DEVELOPMENT

MIDS JOINT TACTICAL RADIO SYSTEM

25 November 2003

Revision P

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1. SCOPE

This Statement of Work (SOW) defines the tasks to be performed, and the hardware and software to be delivered by the contractor in the Development Phase 2B of the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS) cooperative development and pre-production program.

The objective of the MIDS JTRS cooperative development program is to enable the participating contractors to produce equipment that will meet the MIDS JTRS Functional Baseline (FBL) requirements. Since the intent of this contract is to enable two U.S. and two European producers of MIDS JTRS terminals, no limitations will be imposed on the European subcontractors from producing and delivering MIDS JTRS terminals. The resulting MIDS JTRS Terminal, hereafter referred to as the "Terminal", shall be capable of porting and simultaneous operating multiple communications waveforms and shall be compliant with the JTRS Software Communications Architecture (SCA). There shall be two configurations, which are defined by the Terminal Input/Output (I/O) capability: a "U.S." configuration supporting mostly U.S. platforms and a European configuration supporting mostly European platforms. There shall be two sub-configurations, a "Master" configuration and a "Slave". The "Master" configuration Terminal shall be capable of stand alone operation or operation in conjunction with a "Slave" configuration Terminal. The "Slave" configuration Terminal shall only be capable of being used in conjunction with a "Master" configuration Terminal.

For the purposes of this procurement, the term "contractor" shall encompass the prime U.S. contractor and its European and U.S. subcontractors and the phrase "other participating contractors" shall mean all other prime contractors together with their subcontractors.

The objective of the Development Phase 2B is to develop, build, and qualify a Terminal that meets all the requirements specified in the Terminal FBL consisting of the System Specification (SS) for the MIDS JTRS, the System/Segment Interface Control Specification (S/SICS) for MIDS JTRS, the System Specification for Link 16 Waveform (SSL16W) for MIDS JTRS, and the System Specification for TACAN Waveform (SSTW) for MIDS JTRS; and all other requirements applicable to the Terminal as specified elsewhere in the contract and to develop the capabilities and support programs to a level where the Terminal can be produced by each participating prime contractor and supported by each participating nation. All Terminal configurations shall be as specified in the SS and the S/SICS.

The requirements of this SOW apply to all Terminal configurations unless otherwise noted. Thus, for the purposes of this procurement, the term "Terminal" shall mean all Terminal configurations unless otherwise noted or where the context indicates a particular Terminal configuration.

The contractor, in conjunction with the other participating contractors, shall develop the Terminal. In addition, the contractor shall perform the tasks to achieve First

Article Approval. The contractor shall perform production engineering/planning, configuration management, logistics support analysis and other Integrated Logistics Support (ILS) tasks as part of this effort. The contractor shall designate a U.S. Terminal configuration integrator and a European Terminal configuration integrator. The contractor shall conduct all the activities necessary for First Article Approval of each of the Terminal configurations resulting from the activities of the two designated integrators. The contractor shall participate in platform integration and field development test and evaluation for selected platforms. During platform integration and Government field testing, the contactor shall provide engineering, logistics and maintenance services, including correcting Terminal performance not meeting specification, as needed to satisfy the requirements of the Development Phase 2B contract. A Preliminary Design Review (PDR), a Critical Design Review (CDR), a Test Readiness Review (TRR) with each integrator, a Production Readiness Review (PRR), and a Functional Configuration Audit (FCA) with each integrator will be conducted. A Physical Configuration Audit (PCA) may also be conducted. The Technical Data Package (TDP) may also be ordered.

The data to be delivered as a result of performing the tasks prescribed by this SOW are specified in the Contract Data Requirements List (CDRL).

2. APPLICABLE DOCUMENTS

The following documents of the exact issue shown form a part of this SOW to the extent specified herein. In the event of conflict between the documents referenced here and the contents of this SOW, the conflict shall be resolved according to the order of precedence given in Section H, Clause H-1.2 of the contract.

2.1 SPECIFICATIONS

ICS-J-10002	System/Segment Interface Control Specification for MIDS JTRS
MSRS-5000SCA Version 2.2 17 November 2001	Software Communications Architecture
SS-J-10001	Performance Specification, System Specification for MIDS JTRS
SS-J-10002	Performance Specification, System Specification for LINK-16 Waveform for MIDS JTRS
SS-J-10003	Performance Specification, System Specification for TACAN Waveform for MIDS JTRS
TSRD No. __-__ 17 September 2003	Telecommunications Security Requirements Document for the Multifunctional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS)
UIC	Unified Information Security (INFOSEC) Criteria
DoD	EMC Features Certification Performance Specification
	SINCGARS/ESIP Waveform Development Specification

2.2 STANDARDS

ANSI/EIA-632-1998 7 January 1998	Processes for Engineering a System
ANSI/EIA-649-1998	National Consensus Standard for Configuration Management
ANSI/EIA-748-1998 19 May 1998	Standard for Earned Value Management Systems
AQAP-110	NATO Quality Assurance Requirements for Design,

Edition 2 February 1995	Development and Production
ARMP-1 Edition 2 October 1993	NATO Requirements for Reliability and Maintainability
ASME Y14.100-2000	Engineering Drawing Practices
ASME Y14.24-1999	Types and Applications of Engineering Drawings
ASME Y14.34M-1996	Associated Lists
ASME Y14.35M-1997	Revision of Engineering Drawings and Engineering Drawings
ISO 9001	Quality Systems – Model for Quality Assurance in Design/Development, Production, Installation and Servicing
ISO 10012-1	Quality Assurance Requirements for Measuring Equipment – Part 1: Metrological Confirmation System for Measuring Equipment
ISO/IEC 12207 1995	Software Life Cycle Processes
FED-STD-313D 3 April 1996 Notice 1 21 March 2000	Material Safety Data, Transportation Data, and Disposal Data for Hazardous Materials Furnished to Government Activities
MIL-STD-196E 17 February 1998	Joint Electronics Type Designation System
MIL-STD-461E 20 August 1999	Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-882D 10 February 2000	Standard Practice for System Safety
MIL-STD-961D 22 March 1995	Defense Specifications
MIL-STD-1472F 23 August 1999	Human Engineering
MIL-STD-1553B	Interface Standard for Digital Time Division

21 September 1978 Notice 2 8 September 1986 Notice 3 31 January 1993 Notice 4 15 January 1996	Command/Response Multiplex Data Bus
MIL-STD-1686C 25 October 1995	Electrostatic Discharge Control Program for Production of Electrical and Electronic Parts, Assemblies, and Equipment
MIL-STD-2218 20 May 1992	Thermal Design, Analysis, and Test Procedures for Airborne Electronic Equipment
STANAG 4107 Edition 6 6 January 1997	Mutual Acceptance of Government Quality Assurance

2.3 **HANDBOOKS**

MIL-HDBK-61A 7 February 2001	Configuration Management Guidance
MIL-HDBK-189 13 February 1981 Notice 1 24 October 2000	Reliability Growth Management
MIL-HDBK-217F Notice 1 10 July 1992 Notice 2	Reliability Prediction of Electronic Equipment
MIL-HDBK-338B 1 October 1998	Electronic Reliability Design
MIL-HDBK-470A 4 August 1997	Designing and Developing Maintainable Products and Systems
MIL-HDBK-472 24 May 1966 Notice 1 12 January 1984	Maintainability Prediction
MIL-HDBK-727 5 April 1984	Design Guidance for Producibility

Notice 1 13 February 1990	
MIL-HDBK-781A 1 April 1996	Reliability Test Methods, Plans, and Environments for Engineering Development, Qualification, and Production
MIL-HDBK-2165 31 July 1995	Testability Program for Systems and Equipment
MIL-HDBK-46855 17 May 1999	Human Engineering Program Process and Procedures

2.4 **OTHER DOCUMENTS**

C-M (55) 15 15 November 1984	North Atlantic Defense System (NADS) Program Security Classification Guide
	MIDS Configuration and Data Management Plan
	Program Security Instruction for Multifunctional Information Distribution System
Tri-Service Technical Brief 002-93-08 July 1993	Environmental Stress Screening Guidelines

3. REQUIREMENTS

3.1 COOPERATIVE PROGRAM

3.1.1 **Responsibilities.** The contractor, in conjunction with the other participating prime Terminal development contractors, shall cooperatively develop the Terminal. The contractor, in conjunction with the other participating prime contractors, shall define the relationships and responsibilities among the participating prime contractors to design and develop the Terminals and its component modules which may be Line Replaceable Units (LRUs), Shop Replaceable Units (SRUs), Circuit Card Assemblies (CCAs), or Computer Software Configuration Items (CSCIs). The contractor, in conjunction with the other participating contractors, shall ensure that the design and development process incorporates the principals and methods of Concurrent Engineering (CE) to ensure that all design, development, test, logistics, manufacturing and production, and quality assurance disciplines are active participants in the design and development process. This requirement shall apply regardless of whether the activities of any specific discipline will be conducted by the contractor in conjunction with the other participating contractors or conducted by the contractor separate from the other participating contractors. The relationships and responsibilities among the participating prime contractors and their subcontractors to design and develop the Terminal shall be defined in a single System Engineering Management Plan (SEMP) developed by all the participants. The contractor, in conjunction with the other participating prime contractors, shall report and discuss these elements at the Post Award Conference. (CDRL JA01)

3.2 ENGINEERING

3.2.1 **Terminal Design.** The contractor, in conjunction with the other participating contractors, shall provide the design of the Terminal, hardware configuration items, and software configuration items. The Terminal design shall comply with the FBL requirements and all other requirements applicable to Terminal as specified elsewhere in the contract. The configuration for Terminal shall consist of a main Receiver/Transmitter (RT) LRU, a Remote Power Supply (RPS), and the resident CSCIs in accordance with section 1.1 of the S/SICS.

3.2.2 **Metric Units.** All Terminals shall be in accordance with the metric system as defined in the International Standardization Organization (ISO) standards. No translation between the inch/pound system and the ISO system shall be accepted, except for off-the-shelf components purchased from existing specifications written in the inch/pound systems.

3.2.3 **Systems Engineering.**

3.2.3.1 **Systems Engineering Management.** The contractor, in conjunction with the other participating contractors, shall perform systems engineering management activities in accordance with the single SEMP developed by all the participants, and shall conduct analysis to identify support functions and requirements needed to develop, test, operate, and maintain the Terminal. The contractor, in conjunction with the other participating contractors, shall prepare, update, maintain, and implement the MIDS JTRS SEMP as guided by ANSI/EIA-632. The contractor shall adhere to the SEMP. (CDRL JA01)

3.2.3.2 **Systems Engineering Requirements.** The systems engineering effort during the period of the contract shall be the definition and development of the Terminal. The contractor, in conjunction with the other participating contractors, shall perform the systems engineering effort on a total systems basis such that a firm technical base can be established from which to enter into production. The contractor, individually and in conjunction with the other participating contractors, shall employ CE principals and methods as a integral part of the systems engineering process. The systems engineering work shall be directed towards achieving a minimum-investment Terminal system configurations considering performance, producibility, support costs, production readiness, and schedule.

The systems engineering work shall also be directed towards:

a. The maximum reuse of current test equipment of the MIDS Low Volume Terminal (LVT) program as upgraded and reprogrammed as necessary;

b. Commonality to the extent practical between any new test equipment for the Terminal and the test equipment developed as part of the JTRS Cluster 1 development;

c. The maximum commonality of hardware and software for the First Article Qualification Test (FAQT)/acceptance test equipment, the factory test equipment, and the hardware and software recommended for the Terminal support facility in accordance with 3.2.8.1.4.2;

d. The minimization of the development of Specialized Test Equipment (STE) as part of the FAQT/acceptance test equipment and the factory test equipment; and

e. Giving precedence to the use of Commercial-Off-The-Shelf (COTS) hardware and software in the development of the FAQT/acceptance test equipment and the factory test equipment, and in the recommendation of the hardware and software for the Terminal support facility.

f. Insuring that the initial Terminals delivered to the Government are production representative. To insure that these initial Terminals are production representative, a formal systems engineering model shall be identified and followed. The Best Manufacturing Practices Center of Excellence (BMPCOE) maintains a systems engineering model based on the best practices that BMPCOE collects from industry. Certain elements of this model have been identified as critical for initial units to be production representative. The corresponding elements in the contractor's model shall be identified. The status of these elements shall be reported at the PDR, the CDR, and the Program Management Reviews (PMRs). The Government will provide the contractor with the appropriate charts for these elements from the BMPCOE model.

The contractor shall report the development status and configuration of the FAQT/acceptance test equipment and the factory test equipment; the status of the recommendation for and the configuration of hardware and software for the Terminal support facility; the commonality between the FAQT/acceptance test equipment, the factory test equipment, and the recommended hardware and software for the Terminal support facility; and the COTS hardware and software selected at all PMRs and design reviews.

3.2.3.2.1 **Requirements Analysis.** The Terminal requirements shall be as specified in the SS, the S/SICS, SSL16W, and the SSTW composing the FBL (see 3.4.1.1.1) and all other requirements applicable to Terminal as specified elsewhere in the contract. The contractor, in conjunction with the other participating contractors, shall participate in the Technical Working Group (TWG) in accordance with 3.2.4 to assist in defining the interfaces between the Terminal and the host platforms, coordinate interface related Engineering Change Proposals (ECPs), and submit proposed changes to the FBL in accordance with 3.4.1.2.1. The contractor, in conjunction with the other participating contractors, shall evaluate any directed change from the Government in Terminal requirements for its effect on cost, schedule, logistics, and technical design parameters.

3.2.3.2.2 **Requirements Allocation.** The contractor, in conjunction with the other participating contractors, shall progressively identify and analyze the Terminal functions and subfunctions for meeting their performance requirements. Beginning with the preliminary Allocated Baseline (ABL) previously developed under Phase 2A, the contractor, in conjunction with the other participating contractors, shall complete the allocation of performance and design requirements to each function and subfunction on an iterative basis as the system development progress towards the final PDR. The allocated requirements shall be stated in sufficient detail for allocation to hardware and computer resources. Allocated requirements shall be traceable through the analysis by which they were derived to the system requirement they are designed to fulfill.

3.2.3.2.3 **Synthesis.** The contractor, in conjunction with the other participating contractors, shall synthesize the design of the Terminal in accordance with ANSI/EIA-632-1998.

3.2.3.2.4 **Optimization.** The contractor, in conjunction with the other participating contractors, shall perform tradeoffs among engineering design alternatives considering risk, technical performance, schedule and cost, producibility, and supportability. The contractor, in conjunction with the other participating contractors, shall document and make available to the Government trade study results and rationale.

3.2.3.2.5 **Interchangeability.** The contractor, in conjunction with the other participating contractors, shall provide systems engineering to assure interchangeability at the SRU and LRU levels between Terminals produced by all participating prime contractors as specified in Clause C-2. The contractor, in conjunction with the other participating contractors, shall assure Terminal SRU and LRU interchangeability over the applicable range of required environmental conditions as specified in the SS. This effort shall include development of common reference test equipment which will be used as a standard for LRU and SRU interchangeability qualifications.

3.2.3.2.6 **Reserved.**

3.2.3.2.7 **Design Producibility.** The contractor, in conjunction with the other participating contractors, shall consider producibility of the Terminal as part of the systems engineering design and development process. The contractor, in conjunction with the other participating contractors, shall perform a producibility analysis of the Terminal design. The producibility analysis shall include, but not be limited to, the following items of special interest:

a. Design changes made to enhance producibility.

b. The six sigma evaluations for each lamina and SRU. This analysis shall be used to assess the absolute and relative producibility of the Terminal.

c. The effects of component and circuit density on producibility.

MIL-HDBK-727 may be used for guidance in meeting these producibility analysis requirements. The contractor, in conjunction with the other participating contractors shall report on the producibility of the Terminal at the PDR, the CDR, and the PRR. (CDRL JA0S)

3.2.3.2.8 **Hardware Configuration Items (HWCIs).** The contractor's system engineering activity, in conjunction with the other participating contractors, shall designate HWCIs. The contractor, in conjunction with the other participating contractors, shall designate all Terminal LRUs and SRUs to be HWCIs.

3.2.3.2.9 **Critical Items.** The contractor, in conjunction with the other participating contractors, shall design Terminal with a minimal number of critical items. The critical items shall be any and all components below the CCA level unique to the Terminal or identified as a reliability critical item in accordance with ARMP-1, Requirement 321, and 3.2.3.8.1n. The contractor, in conjunction with the other participating contractors, shall identify all hardware items that are engineering or reliability critical, subject to Government approval. These critical items may include, but not be limited to, all Application Specific Integrated Circuits (ASICs), Monolithic Microware Integrated Circuits (MMICs), Gate Arrays, Hybrids, and Multichip Modules (MCMs) developed as part of the Terminal development. The contractor, in conjunction with the other participating contractors, shall present the critical items at the final PDR.

3.2.3.2.10 **Generation of Specifications.** The contractor's system engineering activity, in conjunction with the other participating contractors, shall:

a. Complete, update, and maintain until authentication the preliminary Terminal LRU and SRU Item Performance Specifications (IPSs) previously developed under Phase 2A of the Terminal development in accordance with section 4 and Appendix A of MIL-STD-961. (CDRL JA02)

b. Generate, update, and maintain until authentication any Terminal LRU and SRU IPSs not previously developed in accordance with Section 4 and Appendix A of MIL-STD-961. (CDRL JA02)

c. Generate, update, and maintain until authentication Software Requirements Specifications (SRSs) in accordance with 3.2.8.1.2. A separate SRS is required for each CSCI. (CDRL JA03)

d. Generate, update, and maintain until the end of the contract Item Detail Specifications (IDSs) for all HWCIs in accordance with Section 4 and Appendix A of MIL-STD-961 except limited to the requirements that will be the basis for the unit acceptance tests. (CDRL JA04)

e. Generate, update, and maintain until the end of the contact Software Design Descriptions (SDDs) in accordance with 3.2.8.1.2. A separate SDD is required for each CSCI. (CDRL JA0W)

f. Generate, update, and maintain until the end of the contract Software Product Specifications (SPSs) in accordance with 3.2.8.1.2. A separate SPS is required for each CSCI. (CDRL JA05)

The contractor's plan, in conjunction with the other participating contractors, for generating, completing, updating and maintaining the specifications, including the schedule for Government review and approval (when required by the CDRL), shall be provided in the SEMP. (CDRL JA01)

3.2.3.2.11 **Generation of Interface Documents.** The contractor's system engineering activity, in conjunction with the other participating contractors, shall:

a. Complete, update, and maintain until authentication the preliminary internal Interface Control Document (ICD) for the RT LRU previously developed under Phase 2A of the Terminal development in accordance with the external interface content requirements guidelines of Appendix A, Section A.3.18 of MIL-STD-961. (CDRL JA06)

b. Generate, update, and maintain until the end of the contract software Interface Requirements Specifications (IRSs) in accordance with 3.2.8.1.2. A separate IRS is required for each CSCI. (CDRL JA07)

c. Generate, update, and maintain until the end of the contract software Interface Design Documents (IDDs)/Application Program Interfaces (APIs) between CSCIs and between CSCIs and HWCIs in accordance with 3.2.8.1.2. A separate IDD/API is required for each CSCI. (CDRL JA08)

The contractor's plan, in conjunction with the other participating contractors, for generating, completing, updating and maintaining the interface documents, including the schedule for Government review and approval (when required by the CDRL), shall be provided in the SEMP. (CDRL JA01)

3.2.3.3 **System Engineering/Design Reviews.**

3.2.3.3.1 **Formal Technical Reviews.** The contractor, in conjunction with the other participating contractors, shall conduct formal systems engineering reviews and meetings with the Government. These reviews shall be conducted at the contractors, facilities in accordance with ANSI/EIA-632 and the program schedule. The contractor, in conjunction with the other participating contractors, shall provide a co-chairman for each technical review and shall ensure that the contractor action items are understood and implemented. The contractor, in conjunction with the other participating contractors, shall be prepared to provide the analyses and methodologies used in arriving at specific recommendations and conclusions for a design approach. The contractor shall make applicable engineering data, specifications, drawings, schematics, design, and test documentation, software development files, schedules, working papers, and results of

studies and analysis available for reference and Government inspection at the reviews. Key contractor personnel supporting review topics shall be available to respond to Government questions.

If contractor prerequisites which impact any formal technical review have not been fulfilled as a result of contractor action, the Government shall have the option of postponement of that formal technical review without prejudice to other contractual schedule requirements. In addition to requirements stated for each review, formal technical reviews or meeting shall not be considered closed until all associated action items within the scope of the contract have been resolved to the Government's satisfaction. The contractor, in conjunction with the other participating contractors, shall prepare an agenda, minutes and presentation materials for each formal technical review and meeting. The schedule for these reviews shall be presented at PMRs.

At the request of the contractor, the Government will conduct separate final technical review sessions attended only by the contractor and the Government for the purpose of discussing information that the contractor does not wish to disclose to the other participating contractors.

(CDRL JD08, CDRL JD09, CDRL JD0A)

3.2.3.3.1.1 **Reserved.**

3.2.3.3.1.2 **Preliminary Design Review.** The contractor, in conjunction with the other participating contractors, shall conduct the hardware PDR in accordance with Requirement 11, Table C.11, and Table E.1 (Subsystem Design) of ANSI/EIA-632-1998 and Appendix B. The contractor, in conjunction with the other participating contractors, shall conduct the software PDR in accordance with ISO/IEC 12207 and Appendix B. PDRs for portions of HWCIs or CSCIs are unacceptable. The user system interface requirements definition shall be presented at the PDR describing the results of the contractor's human engineering analysis. The PDR shall not take place until the specifications and documents identified in the ABL have been submitted to the Government in accordance with the CDRL. The PDR shall not be closed until the Government has reviewed the ABL specifications and documents, all resulting Government comments have been resolved, and the ABL specifications and documents authenticated by the Government.

3.2.3.3.1.3 **Critical Design Review.** The contractor, in conjunction with the other participating contractors, shall conduct the hardware and software CDR in accordance with Requirement 11, Table C.11, and Table E.1 (Detail Design) of ANSI/EIA-632-1998, ISO.IEC 12207, and Appendix C. For purposes of this procurement, the term "Detailed Design Review" where used in ANSI/EIA-632-1998 shall be considered synonymous with "Critical Design Review" where used elsewhere in this SOW. CDRs for portions of HWCIs and CSCIs are unacceptable. The CDR shall not take place until the Government has authenticated all allocated baseline documents and has placed them under Government configuration control. At the CDR, the contractor shall propose to the

Government for approval their entrance criteria for FAQT. The entrance criteria for FAQT shall include, as a minimum, the successful completion of the contractor's Terminal acceptance test. A production readiness assessment shall be part of the CDR.

3.2.3.3.1.4 **Test Readiness Review.** The contractor shall conduct a TRR and present to the Government status of all the contractor FAQT test plans and test procedures; test results from module level tests and system integration tests; and status of completion of all of the entrance criteria for FAQT established at the CDR. The contractor shall conduct the TRR in accordance with Appendix E. The contractor shall also present test tool development status and other test data that demonstrates to the Government that the contractor's Terminal is ready to enter FAQT.

3.2.3.3.1.5 **Design Readiness Review (DRR).** The contractor shall support a DRR. The contractor shall provide, as a minimum, the number of subsystem and system design reviews successfully completed; the planned corrective actions to hardware/software deficiencies; a summary of the development testing conducted and the test results; an assessment of environment safety and occupational health risks; a completed failure modes and effects analysis; the identification of key system characteristics and critical manufacturing processes; an estimate of system reliability based on demonstrated reliability rates; etc. to assess overall design maturity.

3.2.3.3.1.6 **Subcontractor/Vendor Reviews.** The contractor shall review equipment developed by subcontractors. The contractor shall assure that actions required as a result of these design reviews are accomplished. The Government may participate as an observer in subcontractor and vendor design reviews at its option. The schedule of formal vendor reviews shall be presented at the PMRs, but no later than 45 days prior to such reviews.

3.2.3.4 **Technical Interchange Meetings (TIMs).** The Government will conduct TIMs within 14 calendar days after a request for a TIM by the Government or the contractor. TIMs shall be held at the contractor's facility or a Government facility at the direction of the Government. For Government called TIMs, the Government will provide the contractor with a list of topics to be discussed at the TIM; otherwise, the contractor shall provide an agenda. Attendance of the other participating contractors at individual TIMS shall be determined by the Government based on the topics to be discussed. The documentation support requirements in paragraph 3.2.3.3.1 shall apply. The Government estimates that 16 TIMs will be required. The contractor shall document each meeting's significant events, results, and action items in minutes. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.2.3.5 **Reserved.**

3.2.3.6 **System Safety.**

3.2.3.6.1 **System Safety Program.** The contractor, in conjunction with the other participating contractors, shall extend the System Safety program established under the

MIDS LVT program to include the Terminal. The contractor, in conjunction with the other participating contractors, shall perform an analysis on the impact to systems safety due to the Terminal design. The contractor, in conjunction with the other participating contractors, shall present the results of the analysis at the final PDR and CDR. The contractor, in conjunction with the other participating contractors, shall develop and implement a System Safety Program meeting the requirements of section 4 of MIL-STD-882. The contractor, in conjunction with the other participating contractors, shall document the System Safety Program in a System Safety Program Plan. The contractor, in conjunction with the other participating contractors, shall support status reviews, with presentations of the identified and analyzed hazards, including evaluation of the overall effectiveness of the System Safety Program. The first review shall be at the Final PDR and the second review shall be at the CDR. Subsequent reviews, if required, shall be conducted as TIMs. The contractor, in conjunction with the other participating contractors, shall develop a method or procedure to document and tract hazards with a combined severity category (as given in Table A-I of MIL-STD-882)-probability risk (as defined in Table A-II of MIL STD-882) hazard risk of I E, II D, III C or greater from identification until each hazard is eliminated or the associated risk reduced to a level acceptable to the Government. Prior to any FAQT verifications or Acceptance Testing (AV), severity category I and II hazards shall be eliminated or controlled in accordance with the precedence defined in section 4.4 of MIL-STD-882. (CDRL JA09, CDRL JA0A)

3.2.3.6.2 **Hazardous Materials.** Any hazardous material as defined in FED-STD-313 which may be used in, supplied with, or required in support of any supplied product shall be approved by the Government. Prior to approval, the contractor shall provide a Hazardous Material Summary Report to the Government. This report shall identify all hazardous material and include justification for its use. Additionally, it shall include the necessity for the type, container size, and quality of hazardous material (or material that results in hazardous waste) together with a listing of less hazardous potential substitutes that were considered and the reasons why these substitutes cannot be used. The order of precedence for acceptance shall be:

a. Non-hazardous material

b. Material that is recyclable

c. Material that results in hazardous waste that can be treated to reduce it to a non-hazardous state.

The contractor shall submit a Hazardous Material Summary Report to the Government for review and approval. The submittal shall include a Material Safety Data Sheet (MSDS) (OSHA Form 174) for all material listed in the report, other than those sheets submitted prior to contract award as required by Federal Acquisition Regulation (FAR) Clause 52.223-3 and as listed in contract section D and I. (CDRL JA0B)

3.2.3.7 **Human Engineering.** The contractor, in conjunction with the other participating contractors, shall conduct a human engineering program and shall apply the criteria of sections 4.5, 4.8, 5.5, 5.9, and 5.13 of MIL-STD-1472 except as noted in the SS. MIL-HDBK-46855 may be used for guidance in meeting these human engineering requirements.

3.2.3.7.1 **Requirement.** The contractor, in conjunction with the other participating contractors, shall extend the Human Engineering program established under the MIDS LVT program to include the Terminal. The contractor, in conjunction with the other participating contractors, shall perform an analysis on the impact to human engineering due to the Terminal design, including the new front panel layout, new handle location, etc. The contractor, in conjunction with the other participating contractors, shall present the results of the analysis at the final PDR and CDR. The contractor's human engineering program, in conjunction with the other participating contractors, shall be integrated with other program activities including systems engineering, design, test, and Logistics Support Analysis Record (LSAR). The human engineering program shall consider only organizational and intermediate level maintenance. In considerations of work environment, the contractor, in conjunction with the other participating contractors, shall include the maintenance of the Terminal while nuclear, biological, and chemical warfare protective clothing and equipment are required.

3.2.3.8 **Reliability and Maintainability (R&M).**

3.2.3.8.1 **Requirements.** The contractor, in conjunction with the other participating contractors, shall conduct a reliability and maintainability program for the Terminal in accordance with ARMP-1 except for paragraphs 310, 316, 317, 319, 322, 324, 329 and 330. For purposes of this procurement, the term "Purchaser" where used in ARMP-1 shall be considered synonymous with "Government" where used elsewhere in this SOW. The contractor, in conjunction with the other participating contractors, shall maintain a reliability and maintainability design record for each newly developed or modified LRU and SRU containing all information, analyses, reports, and memoranda documenting the development of reliability and maintainability in the subject items. The output of the analysis required by ARMP-1 shall be provided as inputs to the Logistic Support Analysis (LSA) database established in accordance with 3.6.2. The following requirement supplement the referenced paragraphs of ARMP-1:

a. Section 12.0 of MIL-HDBK-338 and section 4 of MIL-HDBK-470 may be used as guidance to supplement paragraph 303, R&M Programme Plans, of ARMP-1. (CDRL JA0C)

b. Section 11.2.6 of MIL-HDBK-338 and section 4.2.5 of MIL-HDBK-470 may be used as guidance to supplement paragraph 304, Monitor and Control of Sub-Contractors and Suppliers, of ARMP-1.

c. Section 7.11 of MIL-HDBK-338 and section 4.2.6 of MIL-HDBK-470 may be used as guidance to supplement paragraph 306, Design Reviews, of ARMP-1.

d. Sections 6.2.2, 6.2.3, 11.2.2.1, 11.4.1, and 11.5.1 of MIL-HDBK-338 and section 4.3.1.2 of MIL-HDBK-470 may be used as guidance to supplement paragraph 307, Analysis of the Operating and Environmental Conditions, of ARMP-1.

e. Section 7.0 of MIL-HDBK-338 may be used as guidance to supplement paragraph 308, Reliability Design Criteria, of ARMP-1.

f. Sections 3.4 and 4.3 of MIL-HDBK-470 may be used as guidance to supplement paragraph 309, Maintainability Design Criteria, of ARMP-1.

g. Section 7.2 of MIL-HDBK-338 may be used as guidance to supplement paragraph 311, Parts and Materials Reliability, of ARMP-1. The contractor, in conjunction with the other participating contractors, shall prepare a parts management plan. To the extent practical, the contractor, in conjunction with the other participating contractors, shall employ a commercial/industrial parts selection quality system. To the extent practical, the contractor, in conjunction with the other participating contractors, shall avoid parts that are available from a single source. The contractor, in conjunction with the other participating contractors, shall identify an alternate source for each part when an alternate source is known. Each new Terminal critical item developed by the contractor shall be capable of being manufactured by an alternate source. The contractor shall provide evidence of that capability. A price quote by a potential alternate source is acceptable evidence. Exceptions to these requirements shall require Government approval. The contractor is not required to produce newly developed critical items from more than one source. (CDRL JA0D)

h. Section 6.4.4 of MIL-HDBK-338 and section 4.4.1.4.1 of MIL-HDBK-470 may be used as guidance to supplement paragraph 312, R&M Modeling, of ARMP-1. The maintenance levels and concepts to which the model will pertain are described in the SS. (CDRL JA0E)

i. Section 6.3 of MIL-HDBK-338 and section 4.4.1.6.2 of MIL-HDBK-470 may be used as guidance to supplement paragraph 313, R&M Allocations, of ARMP-1. The contractor, in conjunction with the other participating contractors, shall provide allocations to the LRU and SRU levels.

j. Section 6.4.5 of MIL-HDBK-338 and section 4.4.1.6.1 of MIL-HDBK-470 may be used as guidance to supplement paragraph 314, R&M Predictions, of ARMP-1. The contractor, in conjunction with the other participating contractors, may use the operating environments as defined in table 3.2 of

MIL-HDBK-217 for the reliability predictions. The contractor, in conjunction with the other participating contractors, may use the procedures of MIL-HDBK-217, parts stress analysis method, for the reliability prediction and procedure V of MIL-HDBK-472 for the maintainability prediction. If the contractor, in conjunction with the other participating contractors, elects to use MIL-HDBK-217, but when, in the contractors' judgment, the data in MIL-HDBK-217 is dated, incomplete, or otherwise inadequate, the contractor, in conjunction with the other participating contractors, shall use additional sources, of the contractors' choosing, that, in the contractors' judgment, provide more accurate data for the prediction of reliability. The contractor, in conjunction with the other participating contractors, shall identify these additional sources in the Reliability Predictions and Documentation of Supporting Data. The reliability prediction model shall consist of all the subsystems and assemblies in series. The contractor, in conjunction with the other participating contractors, shall have as a goal the achievement of a reliability prediction with a Terminal Mean Time Between Failure (MTBF) of 1250 hours.

The contractor, in conjunction with the other participating contractors, shall perform the reliability prediction with two different cooling conditions:

- For condition A, which corresponds to the worse case cooling conditions, the Terminal shall be assumed to transmit Link 16 packed-2 double pulse messages in 50 percent of the Link 16 Time Division Multiple Access (TDMA) time slots and to receive in all remaining time slots, the inlet cooling air shall be assumed to be +29.4° C (+85° F), the exit cooling air temperature shall be assumed to be +71° C (+160° F), and the flow rate characteristics of the cooling air shall be assumed to the characteristics specified in 3.20.3.1 of the SS.

- For condition B, which corresponds to the nominal cooling conditions, the Terminal shall be assumed to transmit Link 16 packed-2 double pulse messages in 50 percent of the Link 16 TDMA time slots and to receive in all remaining time slots, the inlet cooling air shall be assumed to be +29.4° C (+85° F), with a cooling air flow rate of 15 grams/second for the RT LRU and 2.6 grams/second for the RPS LRU.

The contractor, in conjunction with the other participating contractors, shall use Condition B to evaluate the effect of power dissipation changes on the reliability predictions. The contractor, in conjunction with the other participating contractors, shall perform reliability predictions for the RT LRU and the RPS LRU for the two conditions described above (A, B), assuming an airborne uninhabited fighter environment. Use of other procedures shall be subject to Government approval. The contractor shall perform a thermal survey on the RT LRU and the RPS LRU with the results to be used to update

the reliability prediction. The thermal survey shall be performed at Terminal operating and temperature conditions as specified for Condition A above for reliability predictions. As actual experience and test data become available in addition to the results of the thermal survey, the contractor shall update the reliability predictions. This shall not be interpreted as requiring the contractor to perform more than a single thermal survey. (CDRL JA0F)

k. Section 7.8 of MIL-HDBK-338 and section 4.4.1.3.3 of MIL-HDBK-470 may be used as guidance to supplement paragraph 315, R&M Failure Modes, Effects, and Criticality Analysis (FMECA), of ARMP-1. The FMECA shall be an early and integral part of the design process so that problem areas may be identified and corrected with minimum impact. The FMECA shall be performed at the LRU, SRU, and other identified levels where maintenance actions will be initiated down to the levels specified in sections 3.24.1a and b of the SS. In addition the FMECA shall analyze and document failure effects at functional levels that cross hardware boundaries (e.g., when a failure in one SRU results in a failure effect in a different SRU. The FMECA shall be performed in accordance with procedures agreed to by the participating contractors and the Government. The FMECA shall be performed for all of the applicable functional requirements of the SRUs including input/output functions and functions critical to the internal operation of the SRUs. Sufficient detail shall be included to support troubleshooting, fault isolation, and failure verification of the system through the use of Built-In-Test (BIT), Automatic Test Equipment (ATE), and manual test equipment and procedures performed at the maintenance levels specified in sections 3.24.1a and b of the SS. (CDRL JA0G)

l. Sections 9.0 and 12.8.1 of MIL-HDBK-338 may be used as guidance to supplement paragraph 318, The Impact of Software on R&M, of ARMP-1.

m. Section 7.3 of MIL-HDBK-338 may be used as guidance to supplement paragraph 320, Derating, of ARMP-1. The contractor, in conjunction with the other participating contractors, shall conduct a part-level stress analysis to verify derating compliance. This analysis shall verify compliance with parameter deratings under the following conditions;

    1. Nominal unit and module power dissipation,

    2. Worst-case piece part stress, and

    3. Worst-case equipment thermal environment including worst-case altitude and temperature.

    This analysis shall be submitted to the Government at the PDR and the CDR. The contractor, in conjunction with the other participating contractors, shall identify all non-compliances, together with corrective plans and associated

actions, for discussion at PMRs via the PMR agenda submitted to the Government.

n. Section 7.2.2.1 of MIL-HDBK-338 may be used as guidance to supplement paragraph 321, Critical Items, of ARMP-1. See 3.2.3.2.9.

o. Section 2.3.5 of MIL-HDBK-470 may be used as guidance to supplement paragraph 323, R&M and Integrated Logistics Support, of ARMP-1. Quantitative requirements shall be as specified in the SS.

p. Sections 7.2.2.7 and 8.2 of MIL-HDBK-338 may be used as guidance to supplement paragraph 325, Data Reporting, Analysis and Corrective Action System (DRACAS), of ARMP-1. DRACAS/Failure Reporting, Analysis and Corrective Action System (FRACAS) shall include all phases of the MIDS JTRS program including platform integration activities and Government testing as well as contractor in-plant activities. The contractor shall analyze all failures and shall complete the analysis of each failure within thirty calendar days of the occurrence of the failure. In failure reporting, the LRU and SRU serial number and part numbers shall be identified. (CDRL JA0H)

q. MIL-HDBK-189, section 8.5 of MIL-HDBK-338 and sections 5.2.1.1, 5.3.1, and 5.5 of MIL-HDBK-781 may be used as guidance to supplement paragraph 326, Reliability Growth Test (RGT) Program, of ARMP-1. The RGT program shall be conducted to enhance life cycle and mission reliability. The RGT program shall be equivalent to a Test, Analyze, And Fix (TAAF) program. The contractor shall focus the RGT program on reliability growth through the identification, analysis, and correction of failures and the verification of the corrective action effectiveness. The contractor shall direct the efforts to determine the relevance of failures towards reliability growth rather than towards deciding whether some specific reliability measure has been achieved or not. The contractor shall identify and describe the use of the growth model that will be employed, including confidence bounds and the methods to be used to estimate the projected reliability of the Terminal, in the reliability test plan. No specific growth rate or reliability requirement is required to be demonstrated as part of the RGT. (CDRL JA0J, CDRL JA0K)

r. Section 11.2.3 of MIL-HDBK-338 and section 5.3.2.1 and 5.7 of MIL-HDBK-781 may be used as guidance to supplement paragraph 328, Environmental Stress Screening (ESS), of ARMP-1. The LRU ESS baseline environmental profile shall be as specified in the SS. Modifications to the ESS baseline environmental profile in order to optimize the ESS effectiveness shall be in accordance with the considerations and processes described in the Tri-Service Technical Brief 002-93-08. Each LRU shall be subjected to ESS after manufacture and following any major repair or rework. The contractor shall select the ESS environmental profile to be performed on SRUs prior to LRU ESS or prior to delivery as a spare in accordance with the considerations

and processes described in the Tri-Service Technical Brief 002-93-08. The contractor, in conjunction with the other participating contractors, shall recommend in the reliability and maintainability program plan what constitutes a major repair, rework, or upgrade. The contractor quality assurance organizations shall verify ESS compliance of each LRU. The contractor shall report on and review the effectiveness of the ESS plan at all PMRs. (CDRL JF04, CDRL JF05, CDRL JF06)

3.2.3.8.2 **Built-In-Test (BIT) Development.** The contractor, in conjunction with the other participating prime contractors, shall develop, establish, and conduct a BIT development program for the Terminal to insure that the Terminal meets the maintainability and fault isolation requirements of the SS. The contractor, in conjunction with the other participating contractors, shall integrate the BIT development program with the other design efforts. The contractor, in conjunction with the other participating contractors, shall provide the BIT development plan in the SEMP. (CDRL JA01)

3.2.3.8.2.1 **BIT Development Study.** The contractor, in conjunction with the other participating prime contractors, shall conduct a study of Terminal BIT considering design factors, including reliability, performance, Electromagnetic Interference (EMI)/Electromagnetic Compatibility (EMC), computer sizing and timing, and such other design factors deemed appropriate by the prime contractors. MIL-HDBK-2165 may be used for guidance in conducting the BIT development study. The study shall include, but not be limited to, an analysis of the internal BIT signals to determine the suitability of using averaging, majority logic, or other statistical techniques in the processing of the internal BIT signals leading to the resulting BIT pass or BIT fail reports to the platform. The objective of evaluating statistical techniques is to refine the BIT pass/BIT fail criteria in order to minimize the Terminal BIT false alarm rate relative to BIT false alarm rates achieved using traditional methods of processing internal BIT signals. The study shall result in the BIT baseline design for the Terminal including performance monitoring. The contractor, in conjunction with the other participating prime contractors, shall complete and submit the BIT development study prior to the PDR and report the results at the PDR. (CDRL JA0L)

3.2.3.8.2.2 **BIT Development Reviews.** The contractor, in conjunction with the other participating prime contractors, shall review the BIT development of the Terminal at the PDR, the CDR, and at the TIMs when either the Government or the contractor requests the TIM. In addition to the BIT development study review at PDR, these reviews shall include:

a. BIT development status;

b. BIT design of the Terminal;

c. The BIT performance monitoring features of the Terminal;

d. The relation between the BIT of the Terminal and the FMECA results (see 3.2.3.8.1k);

e. Projected and realized BIT isolation capabilities;

f. Plans for BIT verification.

3.2.3.8.2.3 **BIT Report.** The contractor, in conjunction with the other participating contractors, shall prepare and submit a detailed technical report describing the Terminal BIT. This technical report shall describe the BIT architecture of the Terminal, the LRUs, and the SRUs; each and every test executed as part of BIT; the flow of BIT and BIT related data within the Terminal; each and every internal data structure for BIT information; and each and every internal and external BIT data report. (CDRL JA0M)

3.2.4 **Technical Working Group.** The contractor, in conjunction with the other participating contractors, shall support a Government chaired TWG. The TWG is the forum that provides the communications link between the participating contractors, the Government, the national representatives, and the senior technical and platform integrator representatives for resolving interface and technical problems. The TWG meetings shall be held a maximum of four times a year. Each TWG meeting shall be a maximum of three (3) days duration and shall be held at each participating MIDS JTRS contractor's or sub-contractor's facility on a rotating basis. The contractor shall host the TWG meetings at its or its sub-contractor's facility accordingly.

3.2.5 **Mechanical Design and Analysis.** As part of the design process, the contractor, in conjunction with the other participating contractors, shall analyze and verify the mechanical features of the Terminal design for conformance to the mechanical requirements of the SS and the S/SICS and for impacts to platform integration.

3.2.5.1 **Structural Analysis.** The contractor, in conjunction with the other participating contractors, shall compare the physical features of the Terminal to MIDS LVT. The contractor, in conjunction with the other participating contractors, shall perform an analysis to assess any impact to aircraft platform integration, which could occur when replacing the MIDS LVT terminal with the Terminal. The contractor, in conjunction with the other participating contractors, shall analyze identified differences between the MIDS LVT and Terminal for structural and safety impacts. This comparison shall include as a minimum:

a. Comparison of the form factors of the Terminal LRUs with the form factors of the MIDS LVT LRUs;

b. Comparison of the center of gravity of the Terminal LRUs with the center of gravity of the MIDS LVT LRUs;

c. Comparison of the connector arrangements on the Terminal LRUs with the connector arrangements on the MIDS LVT LRUs;

d. Comparison of the weights of the Terminal LRUs with the weights of the MIDS LVT LRUs;

e. Comparison of the cooling air orifices on the Terminal LRUs with the cooling air orifices on the MIDS LVT LRUs; and

f. Comparison of the hold down features of the Terminal LRUs with the hold down features of the MIDS LVT LRUs.

The contractor, in conjunction with the other participating contractors, shall prepare and submit a report containing the results of the structural analysis. (CDRL JA0N)

3.2.5.2 **Thermal Design Analysis.** The contractor, in conjunction with the other participating contractors, shall perform a thermal analysis to demonstrate that the Terminal complies with the component junction temperature derating criteria under the environmental temperature extremes and worst case operating conditions with cooling air specified in the SS. As a minimum this analysis shall include:

a. Thermal paths from component case to ambient;

b. The Terminal boundary conditions;

c. Locations of the thermal sensors;

d. Details of design features used to promote heat transfer and cooling air;

e. Pressure drop;

f. Airflow allocations to SRUs;

g. LRU, SRU, and component level power dissipation estimates; and

h. Predicted junction temperatures and correction to thermal surveys.

The contractor, in conjunction with the other participating contractors, shall prepare and submitted a report containing the results of the thermal design analysis. (CDRL JA0P)

3.2.5.2.1 **Thermal Survey.** As part of the design process, the contractor shall conduct thermal engineering testing using MIL-STD-2218 as a guide. The contractor shall prepare and submit a report containing the results of the thermal engineering testing. (CDRL JA0Q).

3.2.6 **Electromagnetic Compatibility.**

3.2.6.1 **Requirements.** The contractor, in conjunction with the other participating contractors, shall design and develop the Terminal in accordance with the EMC requirements of the SS.

3.2.6.2 **EMC Program (EMCP).** The contractor, in conjunction with the other participating contractors, shall establish an EMCP. The contractor, in conjunction with the other participating contractors, shall develop an EMC control procedure. The contractor, in conjunction with the other participating contractors, shall ascertain Terminal requirements for the host systems from the platform integration contractors and shall assist the platform integration contractors in performing analyses and testing to verify requirements and shall provide engineering support to the platform integration contractors to aid in achieving EMC when and to the extent tasked under separately issued Delivery Orders. The EMC of emissions from the Terminal antenna system shall be determined at waveform spectrum levels that are not weaker than the maximum levels allowed by the SS. The contractor, in conjunction with the other participating contractors, shall submit ECPs to include any additional or modified system level requirements identified while conducting the EMCP. (CDRL JA0R)

3.2.7 **Telecommunications Security.** The contractor, in conjunction with the other participating contractors, shall design the Terminal to meet the performance requirements required by the Telecommunications Security Requirements Document (TSRD) and the Unified Information Security Criteria (UIC). The contractor shall coordinate these telecommunications security performance requirements with the National Security Agency (NSA).

3.2.8 **Computer Resources Management.** The contractor, in conjunction with the other participating contractors, shall designate CSCIs in three categories:

a. Category I CSCIs shall be the Government provided waveform software applications as developed under the JTRS Cluster 1 program.

b. Category II CSCIs shall be the operating environment CSCIs. These CSCIs are expected to be CSCIs developed under the JTRS Cluster 1 program, provided by the Government, and modified for the Terminal. In the event that the Government does not provide these CSCIs, these CSCIs shall be developed exclusively for the Terminal.

c. Category III CSCIs shall be those other CSCIs developed exclusively for the Terminal.

The contractor, in conjunction with the other participating contractors, shall modify if and to the extent necessary the Category I, modify or develop Category II CSCIs as necessary, develop the Category III CSCIs, and select computer resources to meet the requirements of this contract. The contractors' proposed CSCIs shall be subject to Government approval. All computer programs whose instructions reside in any type of

Read-Only-Memory (ROM), whether called software or firmware, shall be designated CSCIs. The contractor, in conjunction with the other participating contractors, shall not document any computer software or firmware as a HWCI without the prior written approval of the Government regardless of whether that software or firmware is treated as separate from or integral to its host hardware for configuration management purposes.

3.2.8.1 **Software Development.** The contractor, in conjunction with the other participating contractors, shall modify the Category I, modify or develop Category II CSCIs, and develop the Category III CSCIs in accordance with ISO 12207 and the MIDS JTRS Software Development Plan (SDP). The contractor, in conjunction with the other participating contractors, shall port, rehost, and adapt the Category I and Category II CSCIs to ensure the successful operation of these CSCIs in the Terminal and shall describe the processes for porting, rehosting, and adapting the Category I and Category II CSCIs in the SDP. The contractor, in conjunction with the other participating contractors, shall begin the process to port, rehost, and adapt each Category I CSCI immediately upon receipt of the corresponding JTRS Cluster 1 waveform software application from the Government. The contractor, in conjunction with the other participating contractors, shall develop single configurations of each CSCIs. Each single CSCI shall be fully operational when installed in each and every Terminal configuration. The contractor, in conjunction with the other participating contractors, shall ensure the overall Terminal software architecture and the Terminal CSCIs, as designed and implemented, are in compliance with the JTRS SCA version 2.2. (CDRL JA0U)

3.2.8.1.1 **Software Development Plan.** The contractor, in conjunction with the other participating contractors, shall develop and implement a Government approved MIDS JTRS SDP and shall manage the modifications of the Category I CSCIs, the modifications or the development of the Category II CSCIs, and the development of the Category III CSCIs in accordance with the MIDS JTRS SDP. (CDRL JA0U)

3.2.8.1.2 **Generation of Terminal Software Documentation.** The contractor, in conjunction with the other participating contractors, shall generate, update, and maintain software documentation and specifications in accordance with the CDRL. Preparation of Terminal software documentation and specifications shall be in accordance with ISO 12207. Documentation and specifications for Category I CSCIs shall be modifications and updates to the documentation and specifications developed under the JTRS Cluster 1 program. Documentation and specifications for Category II CSCIs shall be modifications and updates to the documentation and specifications developed under the JTRS Cluster 1 program if these CSCIs are provided by the Government. The contractors' plan for modifying and updating the documentation and specifications for the Category I, for updating or generating the documentation and specifications for the Category II CSCIs, and for generating the documentation and specifications for the Category III CSCIs, including the schedule for Government review and approval, shall be provided in the SDP. (CDRL JA03, CDRL JA05, CDRL JA07, CDRL JA08, CDRL JA0W)

3.2.8.1.3 **Terminal Software Maintenance.** The contractor, in conjunction with the other participating contractors, shall maintain each version of modified Category I

CSCIs, and each version of Category II CSCIs and Category III CSCIs until the end of the contract subject to the provision of 3.2.8.4.

3.2.8.1.4 **Software Development System.** The contractor, in conjunction with the other participating contractors, shall make maximum use of commercially available hardware and software in the implementation, development, and documentation of computer software. The contractor, in conjunction with the other participating contractors, shall identify and define the software development system in the SDP. (CDRL JA0U)

3.2.8.1.4.1 **Software Development System Maintenance.** The contractor, in conjunction with the other participating contractors, shall provide for the maintenance of all computer software, firmware, hardware, associated documentation, needed rights, and licensing agreements developed, procured, or provided as Government Furnished Property (GFP) to design, develop, code, test, modify, maintain, and use Terminal software and firmware. The contractor, in conjunction with the other participating contractors, shall maintain any and all modified GFP. The Government will provide software maintenance for unmodified GFP.

3.2.8.1.4.2 **Support Facility.** The contractor, in conjunction with the other participating contractors, shall conduct an analysis and provide recommendations for the hardware, software, facilities, and personnel that are required for support of the Terminal after system acceptance. The analysis and resulting recommendations shall be included in the SDP. The contractor, in participating with the other participating contractors, shall provide all appropriate software required to support and maintain the Terminal. (CDRL JA0U)

3.2.8.1.5 **Software Preliminary Qualification Testing (SPQT).** The contractor shall plan and conduct SPQTs for each Terminal CSCI. SPQTs shall verify all SRS and IRS requirements indicated as SFQT requirements in the Software Test Plan (STP). SPQTs shall be executed on actual Central Processing Unit (CPU) target hardware and shall utilize a test configuration that simulates the hardware and software interface and interrupts to the CSCI under test. This simulation configuration may utilize actual available SRU hardware and shall be completely described in the applicable STP. (CDRL JB06, CDRL JB07, CDRL JB08)

3.2.8.1.6 **Software Formal Qualification Test (SFQT).** The contractor shall plan and conduct the SFQT on the Terminal CSCIs. SFQTs shall be executed on FAQT representative hardware. The SFQT shall be completed by prior to the start of contractor FAQT and results presented at the TRR. (CDRL JB06, CDRL JB07, CDRL JB08).

3.2.8.2 **Computer Hardware Requirements.**

3.2.8.2.1 **Computer Resource Reserve Capacity.** The contractor, in conjunction with the other participating contractors, shall present at the PDR and the CDR the estimates of the computer resource reserve capacity (memory, throughput, and processing power) per channel as specified in the SS.

3.2.8.2.2 **Reserved**.

3.2.8.2.3 **Trade Studies and Analyses.** The contractor, in conjunction with the other participating contractors, shall perform the following trade studies and analyses to provide documented evidence that the computer resources of the Terminal meet the specified performance criteria.

3.2.8.2.3.1 **Sizing and Timing Analyses.** The contractor, in conjunction with the other participating contractors, shall analyze the sizing and timing for each Terminal CSCI, for each processor where multiple processors support the same CSCI, and for each processor where the processor supports multiple CSCIs. This analysis shall be based on the mission load specified in the SSL16W. The contractor, in conjunction with the other participating contractors, shall prepare and submit a report containing the results of the sizing and timing analyses. (CDRL JA0X)

3.2.8.3 **Computer Software Requirements.** The contractor, in conjunction with the other participating contractors, shall meet the following requirements to ensure supportable software over the system life cycle, and optimize the software design for reusability.

3.2.8.3.1 **Software Development Reports.** The contractor, in conjunction with the other participating contractors, shall prepare periodic reports for the Government on the planned and actual status of software development including requirements analysis, design, coding, and testing and shall, in addition, present the status at PMRs. These software metrics shall be in accordance with ISO 12207.

3.2.8.3.2 **Software Delivery.** The contractor, in conjunction with the other participating contractors, shall deliver all developed and modified software and all COTS software procured under this contract to the Government subject to license restrictions. The contractor shall also deliver all additional support software used to design, develop, debug, test, and analyze the Terminal operational and support software. This support software shall be compatible with the software development facility of the target system. For COTS used in the Terminal the contractor, in conjunction with the other participating contractors, shall provide all up-to-date commercially available manuals and supplement all of these commercial documents with all updates correcting discrepancies, operating procedures, etc. received from the vendors during the period of the instant contract, subject to license restrictions. In support of the software delivery, the contractor shall prepare and submit a Software Version Description, a Software User Manual, and a Software Programmer's Manual for each CSCI. (CDRL JA0Y, CDRL JA0Z, CDRL JA10, CDRL JA11)

3.2.8.4 **Terminal Software Design and Release.** The contractor, in conjunction with the other participating contractors, shall deliver all Terminals with the most recent version of the Terminal software. The contractor, in conjunction with the other participating contractors, shall maintain and provide user support for each version of the

Terminal software not longer than the release of the most recent version of the Terminal software.

3.2.9 **Nuclear Effects.**

3.2.9.1 **Nuclear Electromagnetic Pulse (NEMP) Survivability Program.** The contractor, in conjunction with the other participating contractors, shall conduct a NEMP survivability program to ensure that the Terminal meets the requirements of the SS and that the NEMP survivability can be maintained over the life of the system. The contractor, in conjunction with the other participating contractors, shall develop a NEMP survivability program plan to delineate the management structure, design approaches, analysis, and verification techniques to be employed during the development effort. The contractor, in conjunction with the other participating contractors, shall also outline the contractor's plan for NEMP hardness assurance and maintenance. (CDRL JA12)

3.2.9.2 **NEMP Survivability and Design.** The contractor, in conjunction with the other participating contractors, shall determine, employing the verification methods specified in the SS, the effects of the specialized NEMP environments on the Terminal.

a. The contractor, in conjunction with the other participating contractors, shall perform a NEMP analysis, using the environment specified with the SS, to determine the hardness of the Terminal. This analysis shall include a prediction of the transient coupled to electronic equipment by cables connecting to external elements to ensure that the specified hardness margins are maintained. (CDRL JA13)

b. The contractor, in conjunction with the other participating contractors, shall develop cost effective means of hardening the Terminal to survive the specified environment with the margins specified. (CDRL JA13)

c. The contractor, in conjunction with the other participating contractors, shall identify those features, items, and processes that are critical to achieving the required hardness levels and incorporate them into the Terminal. (CDRL JA13)

d. The contractor, in conjunction with the other participating contractors, shall document the hardening design, identifying all hardness margins and hardness critical features, items, and processes in the NEMP survivability design parameters report. This report shall also include the analysis used to determine the design parameters from the NEMP analysis. (CDRL JA13)

The contractor, in conjunction with the other participating contractors, shall prepare and submitted a Nuclear Survivability Design Parameters Report containing the results of the NEMP survivability and design efforts under 3.2.9.2a, b, c, and d.

e. The contractor shall perform all engineering and verification testing necessary to provide the data to support the above efforts. (CDRL JA14, CDRL JA15)

3.2.9.3 **Hardness Assurance.** The contractor, in conjunction with the other participating contractors, shall develop a hardness assurance plan for the Terminal. This plan shall describe the methods used during manufacture and installation to ensure that the hardness levels of the deployed units are not compromised. The contractor, in conjunction with the other participating contractors, shall carry out the hardness assurance provisions of this plan for all Terminals delivered under this contract. As part of acceptance testing, the contractor shall perform hardness assurance tests on all Terminals delivered under this contract to verify the hardness of each Terminal. This testing shall be conducted in accordance with a Government approved hardness assurance plan. (CDRL JA16)

3.2.9.4 **Hardness Maintenance and Surveillance.** The contractor shall develop NEMP hardness maintenance and surveillance plans describing the techniques and procedures to be used in the maintenance of the Terminals to ensure that the survivability of the system is not degraded over time. All hardness critical parts, processes, and procedures shall be marked on the technical orders, manuals, and drawings. (CDRL JA17)

3.2.10 **Specialized Test Equipment.** The contractor, in conjunction with the other participating contractors, shall identify any STE that will be developed as part of the MIDS JTRS program and the associated STE development plans and schedules in the SEMP. The contractor, in conjunction with the other participating contractors, shall present the technical characteristics and capability and the functional design of the STE as part of all design reviews. The contractor, in conjunction with the other participating contractors, shall present and review the development status of the STE at all PMRs. (CDRL JA01)

3.2.11 **Problem Review Board.** The contractor shall be a member of and participate in the activities of the Problem Review Board in accordance with Clause H-44.1.

3.3 FIRST ARTICLE APPROVAL

3.3.1 **U. S. Integrator First Article Approval.** U.S. Integrator First Article Approval shall be achieved through successful completion of contractor FAQT, Government FAQT, and through the attainment of the Telecommunications Security Approval for Use, EMC Features Approval, and Air Worthiness Certification. All requirements for First Article Approval in accordance with Clause H-23.2 must be successfully fulfilled prior to the first terminal delivery.

3.3.1.1 **Contractor FAQT.**

3.3.1.1.1 **Contractor FAQT Program.** The contractor shall provide the facilities, services, materials, and equipments required to conduct the Terminal Contractor FAQT.

a. The contractor shall provide all Terminal HWCIs and CSCIs required to conduct the Contractor FAQT.

b. To minimize test delay, the contractor shall provide at each test site spare LRUs and SRUs, and qualified hardware and software trouble shooting and maintenance personnel. These spare LRUs and SRUs shall not be those owned by the Government.

c. The contractor shall develop a system level test plan called the System Test Plan. The contractor shall include a Verification Cross Reference Matrix (VCRM) as part of the System Test Plan. This VCRM shall identify the formal qualification verification activities with which each SS, SSL16W, SSTW, and Single Channel Ground to Air Radio System (SINCGARS)/ESIP requirement will be verified. For all FAQT verifications, the contractor shall designate in the VCRM any subcontractor responsible for a specific verification, the facility that will be used for each verification, and the location where each verification will be conducted. Separate System Test Plans are required for the FAQT conducted by the U.S. integrator and for the FAQT conducted by the European integrator. (CDRL JB01)

3.3.1.1.2 **General Rules for Contractor FAQT.** The following general rules shall apply for all Contractor FAQT activities:

a. Contractor FAQT shall be performed in accordance with Government approved test plans and test procedures as required by the CDRL. Test witnessing by Government representatives shall be allowed and shall be at the discretion of the Government. The contractor shall prepare and submit FAQT test plans and test procedures. Separate test plans and test procedures are required for the FAQT conducted by the U.S. integrator and for the FAQT conducted by the European integrator. (CDRL JA14, CDRL JB02, CDRL JB03, CDRL JB06, CDRL JB07, CDRL JB09, CDRL JB0A, CDRL JB0C)

b. The contractor shall post to the Government Virtual Program Office (VPO) a detailed schedule of Contractor FAQT activities to facilitate Government witnessing. The contractor shall post an updated schedule whenever the scheduled dates of the Contractor FAQT activities change, but no more frequently that once per week. The contractor is not required to delay any scheduled Contractor FAQT activity to accommodate Government witnessing.

c. The contractor shall prepare and submit test reports of Contractor FAQT activity results. Separate test reports are required for the FAQT conducted by the U.S. integrator and for the FAQT conducted by the European integrator. (CDRL JA15, CDRL JB04, CDRL JB08, CDRL JB0B).

d. The contractor shall prepare and submit a technical report for all Contractor FAQT verifications performed by inspection, analysis, or demonstration rather than test. Separate technical reports are required for the FAQT conducted by the U.S. integrator and for the FAQT conducted by the European integrator. (CDRL JB05).

e. The contractor shall record and track any out-of-specification issues uncovered during Contractor FAQT. The contractor shall post these out-of-specification issues to the Government VPO.

f. The contractor shall keep logs to record all events that have occurred during the conduct of the Contractor FAQT.

g. The contractor shall conduct reverifications of previously completed formal verifications when the Government judges that correction of a deficiency or any other modification affects the results of prior formal verifications. The requirement for reverification is a joint contractor and Government decision with the Government having the final authority.

h. The contractor shall maintain configuration control of the test units used during Contractor FAQT and post those configurations to the Government VPO.

i. During Contractor FAQT, the contractor shall provide a weekly status of Contractor FAQT progress and completion to the Government.

3.3.1.1.3 **Contractor FAQT Execution.** The contractor shall conduct the Contractor FAQT in accordance with section 4 of the SS, section 4 of the SSL16W, and section 4 of the SSTW and the test requirements in the SINCGARS/ESIP Waveform Development Specification (WDS).

a. The contractor shall conduct Terminal Contractor FAQT on a test configuration composed of a U.S master configuration Terminal and a U.S. slave configuration Terminal. The waveform configuration shall consist of

Link-16 and TACAN with SINCGARS/ESIP instantiated on all universal channels.

b. The contractor shall evaluate all design corrections from all verifications activities and any other design modifications as to the effect on the prior verification of Terminal requirements. The contractor shall present evaluation results to the Government at PMRs. When the Government judges that prior verifications are affected, the contractor shall incorporate design changes in the Terminals to be used for Contractor FAQT and shall conduct reverifications of the affected Terminal requirements.

c. The Contractor FAQT activities shall only be conducted on Terminals whose software has completed SPQT.

(CDRL JB02, CDRL JB03, CDRL JB04)

3.3.1.1.3.1 **U.S. Interchangeability Verification.** The Contractor FAQT shall include LRU and SRU interchangeability qualification verifications using the common reference test equipment developed in accordance with 3.2.3.2.5 for each and every LRU and SRU that comprise the U.S Master Configuration Terminal and the U.S. Slave Configuration Terminal. The Contractor FAQT shall include LRU interchangeability (backward compatibility) qualification verifications of each and every LRU that comprise the U.S. Master Configuration Terminal with the LRUs that comprise the MIDS LVT. These interchangeability qualification verifications shall be conducted at the high end temperature, a mid range temperature, and the low end temperature of the temperature range over which the Terminal is required to meet full performance as specified in the SS. During these interchangeability qualification verifications each LRU and SRU shall achieve full compliance with all the functional requirements specified in the ABL specification for the LRU or SRU at all three temperatures.

3.3.1.1.3.2 **FAQT EMI Qualification Verifications.** The FAQT EMI qualification verifications shall be conducted by a laboratory accredited to conduct MIL-STD-461 compliance verifications by the National Voluntary Laboratory Accreditation Program (NVLAP). All FAQT EMI qualification verifications shall be under the guidance of National Association of Radio and Telecommunication Engineers (NARTE).

3.3.1.2 **Government FAQT.** The Government FAQT will consist of functional and interchangeability tests. The contractor shall complete Contractor FAQT prior to shipping U. S. configuration Terminals to the Government. Upon verifying Terminal compliance with Contractor FAQT requirements, the contractor shall notify the Government. The contractor shall ship the Terminals to a Government designated facility for Government FAQT. During Government FAQT, the contractor shall provide support for Terminal troubleshooting, repair, and replacement.

3.3.1.3 **Contractor Approvals.** The contractor shall perform the necessary tasks to attain the following approvals:

3.3.1.3.1 **Telecommunications Security Approval for Use.** The contactor shall take all the actions and provide all the information required to attain Telecommunications Security Approval for use in accordance with Clause H-17. The term "Telecommunication Security" as used in this SOW and the terms "Communications Security" and "COMSEC" as used in Clause H-17 are equivalent. As part of this effort, the contractor shall plan and conduct qualification verifications of the telecommunication functions of the Terminal as required by the TSRD including security verification, TEMPEST testing, software testing, and INFOSEC-Boundary testing. The contractor shall coordinate the requirements for these telecommunications security qualification verifications with the NSA. (CDRL JS01, CDRL JS02, CDRL JS03, CDRL JS04, CDRL JS05, CDRL JS06, CDRL JS07, CDRL JS08, CDRL JS09, CDRL JS0A, CDRL JS0B, CDRL JS0C, CDRL JS0D, CDRL JS0E, CDRL JS0F, CDRL JS0G, CDRL JS0H, CDRL JS0J, CDRL JS0K, CDRL JS0L, CDRL JS0M, CDRL JS0N, CDRL JS0P, CDRL JS0Q, JS0R, CDRL JS0S, CDRL JS0T)

3.3.1.3.2 **EMC Features Approval.** The contractor shall take all the actions and provide all the information required to attain EMC Features approval in accordance with Clause H-16.1. As part of this effort, the contractor shall plan and conduct EMC Features qualification verifications to verify Terminal compliance with the EMC features requirements of the SSL16W and the Department of Defense (DoD) EMC Features Certification Performance Specification. PEO-C4I&S or its designated representative will witness the EMC features qualification test and any related retesting required to certify the EMC features data. The contractor shall notify the program office at least 60 days before the EMC Feature qualification test. (CDRL JB0C, CDRL JB0D)

3.3.1.3.3 **Air Worthiness Certification.** The contractor shall submit an Airworthiness certification in accordance with Clause H-15.

3.3.1.3.4 **SCA Certification.** The contractor shall take all the actions and provide all the information required to attain SCA certification in accordance with Clause H-17.1.

3.3.2 **European Integrator First Article Approval.** European Integrator First Article Approval shall be achieved through successful completion of contractor FAQT and Government FAQT. All requirements for First Article Approval in accordance with Clause H-23.2 must be successfully fulfilled prior to the first European configuration Terminal delivery.

3.3.2.1 **Contractor FAQT.** The requirements for European Contractor FAQT shall be in accordance with the requirements of 3.3.1.1.

3.3.2.1.1 **Contractor FAQT Program.** The requirements for the European contactor FAQT program shall be in accordance with the requirements of 3.3.1.1.1.

3.3.2.1.2 **General Rules for Contractor FAQT.** The general rules for the European contractor FAQT shall be in accordance with the general rules of 3.3.1.1.2.

3.3.2.1.3 **Contractor FAQT Execution.** The requirements for the execution of the European of the contractor FAQT shall be in accordance with the requirements of 3.3.1.1.3 except that the test configuration shall consist of a European configuration Terminal.

3.3.2.1.3.1 **European Interchangeability Verification.** The Contractor FAQT shall include LRU and SRU interchangeability qualification verifications using the common reference test equipment developed in accordance with 3.2.3.2.5 for the LRUs and SRUs that comprise the European Configuration Terminal. The Contractor FAQT shall include LRU interchangeability (backward compatibility) qualification verifications of each and every LRU that comprise the European Master Configuration Terminal with the LRUs that comprise the MIDS LVT. These interchangeability qualification verifications shall be conducted at the high end temperature, a mid range temperature, and the low end temperature of the temperature range over which the Terminal is required to meet full performance as specified in the SS. During these interchangeability qualification verifications each LRU and SRU shall achieve full compliance with all the functional requirements specified in the ABL specification for the LRU or SRU at all three temperatures.

3.3.2.2 **Government FAQT.** The Government FAQT will consist of functional and interchangeability tests. The contractor shall complete Contractor FAQT prior to shipping European configuration Terminals to the Government. Upon verifying Terminal compliance with Contractor FAQT requirements, the contractor shall notify the Government. The contractor shall ship the Terminals to a Government designated facility for Government FAQT. During Government FAQT, the contractor shall provide support for Terminal troubleshooting, repair, and replacement.

3.3.2.3 **Contractor Approvals.** The contractor shall perform the necessary tasks to attain the following approvals:

3.3.2.3.1 **Telecommunications Security Approval for Use.** The contactor shall take all the actions and provide all the information required to attain European Telecommunications Security Approval for Use.

3.3.2.3.2 **EMC Features Approval.** The contractor shall take all the actions and provide all the information required to attain European EMC Features. (CDRL JB0C, CDRL JB0D)

3.3.2.3.3 **Air Worthiness Certification.** The contractor shall submit an Airworthiness certification in accordance with Clause H-15.

3.3.2.3.4 **SCA Certification.** The contractor shall take all the actions and provide all the information required to attain SCA certification.

3.4 CONFIGURATION AND DATA MANAGEMENT

3.4.1 **Configuration Management.** The contractor shall identify a single authority/Point of Contact (POC) within its organization who shall be responsible for all configuration management and control. The contractor, in conjunction with the other participating contractors, shall prepare a MIDS JTRS Configuration Management Plan (CMP) for Government approval. Upon approval by the Government, the contractor, in conjunction with the other participating contractors, shall establish the configuration management program defined by the CMP. The contractor, in conjunction with the other participating contractors, shall provide any updates to the CMP to the Government for approval. Configuration management shall be in accordance with ANSI/EIA-649, the MIDS Configuration and Data Management Plan (CDMP) and as tailored below. MIL-HDBK-61 may be used for guidance in meeting these configuration management requirements. The contractors' CMP must also provide details of the processes and interfaces required among the other participating MIDS JTRS contractors and the Government. (CDRL JC01)

3.4.1.1 **Configuration Identification and Baselines.** The contractor, in conjunction with the other participating contractors, shall comply with the requirements of section 5.2 of ANSI/EIA-649 to achieve configuration traceability for all equipment, components, computer software/firmware, facility sites, and spares. The contractor, in conjunction with the other participating contractors, shall assign configuration identifiers to each deliverable HWCI and CSCI. Configuration identification is required for the Terminal. The configuration of the Terminal shall be controlled at three baselines: the FBL, the ABL, and the Product Baseline (PBL). The contractor, in conjunction with the other participating contractors, shall prepare, update and maintain a Baseline Description Document to fully describe the documents required to establish each baseline and their status. (CDRL JC02)

3.4.1.1.1 **Functional Baseline.** The FBL shall consist of the SS, the S/SICS, the SSL16W, and the SSTW. The interface between the RT LRU and the RPS LRU shall be considered an external interface, documented in the S/SICS, and controlled as part of the FBL. The FBL shall be under Government configuration control and maintainance. Any proposed changes to the FBL shall be processed in accordance with the requirements as described in paragraph 3.4.1.2.

3.4.1.1.2 **Allocated Baseline.** The ABL shall consist of the LRU and SRU IPSs, the internal ICD, SRSs and the IRSs. The ABL shall constitute the complete allocation of the functional requirements defined by the FBL to the identified HWCIs and CSCIs. The contractor shall update and finalize the ABL documents previously developed under Phase 2A for submittal to the Government for approval. The ABL shall be established when these IPSs, ICD, SRSs, and IRSs are authenticated by the Government as part of the PDR. After authentication, the IPSs, the internal ICD, the SRSs, and the IRSs shall be under Government configuration control and the Government will maintain each specification and the ICD from the time of authentication. Once under Government configuration control, any proposed changes to the ABL shall be processed in accordance

with the requirements as described in paragraph 3.4.1.2. (CDRL JA02, CDRL JA03, CDRL JA06, CDRL JA07)

3.4.1.1.3 **Product Baseline.** The contractor's PBL shall consist of the common IDSs, the common SPSs, and the common IDDs/APIs; and the contractor's MIDS JTRS product drawings and associated lists. The contractor's PBL shall be established when the common PBL documents are approved by the participating MIDS JTRS contractors and the contractor approves its product drawings and associated lists as part of the CDR for release to manufacturing per Clause H-56 of this contract. The contractor, in conjunction with the other participating contractors, shall maintain each IDS, SPS, and IDD/API until the end of the contract in accordance with the requirements as described in paragraph 3.4.1.2. The contractor shall maintain each product drawing and associated list until the end of the contract in accordance with the requirements as described in paragraph 3.4.1.2.

3.4.1.1.4 **Reserved.**

3.4.1.1.5 **Part Numbers.** The contractor shall assign part numbers to each Terminal and each HWCI at the System, LRU, and SRU levels. The contractor shall use a part numbering system that will ensure traceability and provide visibility to the version of the Government controlled FBL, the version of the Government controlled ABL, and the version of contractor controlled PBL applicable to the manufacture of each Terminal, LRU, and SRU. The contractor shall ensure that all part number re-identifications are appropriately rolled up to the next higher assembly. CSCIs that remain resident to an LRU or SRU, and are not reprogrammable via an external interface shall be treated as firmware. All firmware shall be treated as a hardware component of the HWCI on which it resides. CSCIs that are reprogrammable via an external interface shall not change the part number of the HWCI on which they reside.

3.4.1.1.6 **Serial Numbers.** The contractor shall assign serial numbers to each Terminal HWCI manufactured at the System, LRU and SRU levels. Serial numbers shall be unique for each HWCI manufactured. The original serial numbers of a HWCI shall not be changed. Once assigned, a serial number shall not be reused for another HWCI.

3.4.1.1.7 **Reference Designators.** The contractor shall propose the assignment of electrical and electronic reference designations by preparing a Reference Designation Assignment Plan to the Government for approval. The contractor shall maintain reference designators in accordance with the approved plan. The contractor shall maintain the plan and shall provide any proposed updates of the plan to the Government for approval. (CDRL JC03)

3.4.1.1.8 **Nomenclature.** The contractor, in conjunction with the other participating contractors, shall request assignment of Joint Electronic Type Designation (JETDES) nomenclature in accordance with MIL-STD-196 for the Terminal and each associated LRU. The contractor, in conjunction with the other participating contractors, shall

request revised assignments of nomenclature whenever the data on the approved nomenclature form, DD Form 61, changes. (CDRL JC04)

3.4.1.1.9 **Version Numbers.** The contractor, in conjunction with the other participating contractors, shall assign version numbers to each Terminal CSCI. The contractor, in conjunction with the other participating contractors, shall develop a version number assignment system that will ensure traceability and provide visibility to the version of the Government controlled FBL, the version of the Government controlled ABL, and the version of PBL. The contractor, in conjunction with the other participating contractors, shall assign version numbers that provide each build of a CSCI with a unique identifier. Engineering builds shall be given a distinguishing identifier as a part of the version number that will ensure it is readily identifiable as an engineering build.

3.4.1.2 **Configuration Control.** The contractor, in conjunction with the other participating contractors, shall comply with the requirements of section 5.3 of ANSI/EIA-649 to ensure configuration control shall be accomplished. Government configuration control of the ABL shall be initiated with the authentication of the first document forming part of the ABL and shall continue throughout the contract as each ABL document is authenticated. The contractor, in conjunction with the other participating contractors, shall maintain configuration control on each ABL document until such time that it is authenticated by the Government, and at which time, configuration control shall be exercised by the Government under the authority of the MIDS Configuration Control Board (CCB). The contractor, in conjunction with the other participating contractors, shall maintain configuration control of the common elements of its PBL throughout the contract. The contractor shall maintain configuration control of the unique elements of its PBL throughout the contract. However, once the common elements of the PBL are approved by the participating MIDS JTRS contractors, any proposed change to the common PBL documentation must be mutually approved by each of the participating MIDS JTRS contractors. Further, upon the contractor's first system delivery to the Government following the Government FAQT, the contractor's PBL will be considered finalized and all proposed PBL changes shall be processed through the Government as established herein. Also, once approved by the Government, any proposed changes to the Acceptance Test Procedures shall be submitted to the Government for approval.

3.4.1.2.1 **Engineering Change Proposals.** The contractor, in conjunction with the other participating contractors, shall prepare proposed changes as ECPs in accordance with section 5.3 of ANSI/EIA-649 and using MIL-HDBK-61 for guidance. The contractor, in conjunction with the other participating contractors, shall use DD Form 1692 as the format for all ECPs that are to be submitted to the Government. (CDRL JC05)

3.4.1.2.1.1 **Classification of ECPs.** ECPs shall be classified as Class I or Class II in accordance with section 5.3.1.2 of ANSI/EIA-646 where a major change shall be classified as Class I ECP and where a minor change shall be classified as a Class II ECP. The contractor, in conjunction with the other participating contractors, shall use MIL-HDBK-61 Table 62 for further clarification of ECP classification. All proposed changes to an FBL or ABL document under Government configuration control shall be processed

as Class I ECPs and require Government approval by the MIDS CCB. Only administrative corrections to the FBL and ABL documentation may be processed as Class II ECPs and require Government approval by the MIDS Configuration Manager. In addition to the definitions set forth in ANSI/EIA-649 and MIL-HDBK-61, the contractor shall classify any proposed change to its PBL as Class I if any of the following items are affected: security posture (or areas of the terminal that store or process common carrier data), Telecommunications Security, EMC, EMI or environmental factors.

3.4.1.2.1.2 **Content of ECPs.** The contractor, in conjunction with the other participating contractors, shall use MIL-HDBK-61 for guidance to define the information that shall be provided in each ECP. For all proposed changes to Government controlled FBL and ABL documents, the contractor, in conjunction with the other participating contractors, shall submit Notices of Revision (NORs) with the ECP for each document affected.

3.4.1.2.1.3 **Processing of ECPs.** Once Government configuration control has been established, the contractor, in conjunction with the other participating contractors, shall submit all Class I ECPs with proposed changes to the FBL and ABL to the Government for approval. The contractor, in conjunction with the other participating contractors, shall not implement a change that deviates from FBL and/or ABL requirements prior to the approval of the ECP by the Government. Any proposed change to the contractor's PBL that creates a non-conformance to an FBL and/or ABL specification requirement, or can be identified as a functional or allocated requirement that was not previously identified, shall not be processed by the contractor as a PBL ECP until the contractor has first submitted a Class I FBL/ABL ECP and obtained Government approval. Upon finalization of the contractor's PBL at the first system delivery, the contractor shall not implement any Class I PBL ECPs without prior written consent from the Government. Written consent shall not be granted prior to the completion of the regression verification requirements established in paragraph 3.4.1.2.3. The contractor shall provide all Class II PBL ECPs to the Government Defense Contract Management Agency (DCMA) representative for concurrence in classification. Additionally, the Government Program Office will conduct reviews of Class II changes, as required, to ensure that the contractor is meeting the classification requirements established herein.

3.4.1.2.2 **Notices of Revision.** The contractor, in conjunction with the other participating contractors, shall submit NORs for all proposed changes to FBL and ABL documents under Government configuration control with the ECP that proposes the change. The NORs shall delineate the "From:" and "To:" condition for each document. The contractor, in conjunction with the other participating contractors, shall use MIL-HDBK-61 for guidance on NOR preparation. The contractor, in conjunction with the other participating contractors, shall use DD Form 1695 as the format for all NORs that are to be submitted to the Government. (CDRL JC06)

3.4.1.2.2.1 **NOR Numbers.** The contractor, in conjunction with the other participating contractors, shall assign NOR numbers by using a combination of the base document number to which they apply followed by the new revision as assigned by that NOR.

3.4.1.2.2.2 **NOR Revisions.** The current revision to be indicated on the NOR is that of the last approved release of the document, plus any outstanding approved or pending NORs upon which NOR is created. The new revision is the next available revision letter/number following the last known revision currently assigned by an outstanding approved or pending NOR for that document; or, if there are no outstanding NORs, the new revision will be the next revision letter/number following that currently assigned to the document. In the event that a pending NOR is disapproved for technical content, the NOR shall be revised and approved to reflect only the rolling of the revision of the document being changed so that the revision sequence may be retained.

3.4.1.2.3 **Regression Verification.** For all Class I PBL ECPs, the contractor shall determine the impact on its system qualification requirements and shall develop a Regression Verification Procedure (RVP) to define the necessary analysis and testing to ensure the qualification requirements are validated for the new configuration. Requirements in Temperature/Altitude, Random Vibration (endurance), Gunfire Vibration, Crash Safety, Explosive Atmosphere, EMI, and Electrical Power are safety of flight requirements and their verification is mandatory. Verification may be accomplished either by test, analysis or a combination of both methods. The RVP shall include the detailed procedures for any testing required and the details of any analyses to be performed, and the details for any combination thereof. The contractor shall additionally include a table that depicts: (a) the requirements in the SS to be verified as a part of the regression verification, (b) the original verification methods used during FAQT, (c) the regression verification method to be used, and (d) the rationale for the regression verification method to be used if it is different than that used during FAQT. The contractor shall submit the RVP to the Government for approval with the Class I PBL ECP. The contractor's analysis of the required regressive testing shall follow the guidance used in qualifying the terminal. The contractor shall record a Regression Verification Report (RVR) and provide it to the Government. The RVR shall include the results of all tests conducted and analyses performed. Any failures will require corrective action and retesting by the contractor. All regression testing and analyses, based on a Government approved RVP, shall be successfully completed before delivering an RVR to the Government. (CDRL JC07, CDRL JC08)

3.4.1.2.3.1 **EMC and Telecommunications Security.** The contractor shall consider the impact of all proposed changes to their EMC certification and Telecommunications Security Approval for Use and is responsible for obtaining all required certifications and endorsements in accordance with Sections H-16 and H-17 of this contract prior to implementing any such change.

3.4.1.2.4 **Requests for Deviation (RFDs).** The contactor shall submit RFDs that fully document all non-compliances with the FBL and ABL for all Configuration Items (CIs) delivered to the Government and shall be approved by the MIDS CCB. Any non-compliance for which the Government does not approve an RFD, the contractor shall correct the non-compliance at no additional cost to the Government. All non-compliances with the approved common PBL, for CIs delivered to the Government, shall be submitted to and approved by the participating MIDS JTRS contractors, and shall

further be submitted to the Government for concurrence. The contractor shall use MIL-HDBK-61 for guidance on RFD classification and content. The contractor shall use DD Form 1694 as the format for all RFDs that are to be submitted to the Government. (CDRL JC09)

3.4.1.2.5 **Investigation Requests (IRs).** Any designated user of the Terminal may request investigations into changes to the Functional and Allocated Baselines via an IR. The contractor, in conjunction with the other participating contractors, shall review all IRs submitted for technical feasibility and validity. The contractor, in conjunction with the other participating contractors, shall also evaluate cost and schedule impact of each IR reviewed. The results of these reviews shall be provided to the Government within 30 days after receipt of the IR. In the event that the contractor, in conjunction with the other participating contractors, recommends additional analysis or testing, the Government will evaluate the need to issue a Delivery Order for an Engineering Investigation. The Government may also request the contractor to provide IRs on behalf of the Terminal users as needed. The Government estimates that the contractor will be required to provide approximately ten IRs per year. (CDRL JC0A)

3.4.1.3 **Interface Control.** The contractor, in conjunction with the other participating contractors, shall comply with the requirements of ANSI/EIA-649 for identifying and defining the functional and physical external, internal, and installation interfaces.

3.4.1.3.1 **Interface Control Working Group (ICWG).** The contractor, in conjunction with the other participating contractors, shall participate in Government chaired ICWG meetings. The ICWG is the organization responsible for the planning, scheduling, and performance of the Terminal interface control activities. The principal ICWG objective is to ensure that the Terminal components are physically, functionally, and electrically compatible with the requirements of the host platforms and among the participating MIDS JTRS contractors. The ICWG shall provide the communications link among the MIDS JTRS participants and shall document interface definition, problem resolution, and coordinate ECPs prior to submission to the Government configuration control process for decision. The ICWG shall ensure that all contractors agree on the exact technical wording of the NORs associated with any proposed change to the FBL and/or ABL prior to their submittal to the Government as a part on an ECP. The contractor shall provide review comments or concurrence with the wording of the proposed changes within 30 days after they have been made available to the ICWG. The contractor shall be assigned a lead role to any item for which they have submitted to the ICWG and may be assigned a lead role for any item which a designated Terminal user has submitted or one submitted by the Government. The contractor shall present any item, and any associated comments, for which it has been assigned a lead role available for discussion during the ICWG quarterly face-to-face meetings. The contractor shall communicate with the other members of the ICWG via all available means during periods between the quarterly face-to-face meetings to ensure timely resolution of all proposed changes. The contractor shall come to agreement on any rewording necessary to achieve concurrence by the meeting participants no later than the next face-to-face ICWG held following the initial 30-day review period. After resolution of all interface and technical issues and the

contents of the accompanying NORs have been agreed upon, the contractor(s) shall submit an ECP to the Government that includes estimated costs, schedule, and implementation effectivity for their respective contract within 30 calendar days after agreement was made in the ICWG. The NORs shall be attached to the ECP submitted by the contractor that was assigned the lead role for that item.

3.4.1.3.1.1 **ICWG Membership.** The contractor and the participating MIDS JTRS contractors shall be members of the ICWG. The Government chairman may invite the contractors for the host platforms and the integrating contractors to the ICWG in order to resolve interface issues. All concerned activities of the Governments of the participating MIDS nations may participate in ICWG.

3.4.1.3.1.2 **ICWG Scheduling.** The ICWG shall hold quarterly face-to-face meetings. Each face-to-face meeting shall be a maximum of three (3) days duration and shall be held at each participating MIDS JTRS contractor's or sub-contractor's facility on a rotating basis. The contractor shall host the face-to-face ICWG at its or its sub-contractor's facility accordingly. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.4.1.3.2 **External Interfaces.** The external interface requirements are identified in the S/SICS. Referenced documents identified in the SS as interface definitions are considered an expansion of the SS and, therefore, are included as part of the FBL. The contractor, in conjunction with the other participating contractors, shall verify the interfaces defined and shall generate and provide ECPs to the S/SICS as a result of design enhancements.

3.4.1.3.3 **Internal Interfaces.** The interfaces among Terminal configuration items shall be defined in the IRSs, IDDs, and the internal ICD. Internal interface requirements within configuration item functions shall be identified within the configuration item specifications. The contractor, in conjunction with the other participating contractors, shall verify the interfaces defined and shall generate and provide ECPs to the ABL as a result of design enhancements.

3.4.1.4 **Configuration Audits.** Configuration audits shall be performed on each Terminal HWCI and CSCI in accordance with section 5.5.2 of ANSI/EIA-649 and using MIL-HDBK-61 for further guidance.

3.4.1.4.1 **Functional Configuration Audit.** The contractor shall schedule and conduct jointly with Government personnel an FCA for the Terminal. The FCA shall be performed at the system level and shall include each Terminal HWCI and CSCI for which an IPS or SRS has been prepared. The FCA shall be conducted after completion of Terminal FAQT and HWCI and CSCI qualification testing. The contractor shall prepare and submit a Configuration Audit Summary Report that documents the complete results of the FCA for Government approval. (CDRL JC0B)

3.4.1.4.2 **Physical Configuration Audit.** See Appendix A.

3.4.1.5 **Configuration Status Accounting.**

3.4.1.5.1 **Configuration Management Accounting Report (CMAR).** The contractor shall develop a CMAR that meets the requirements of section 5.4 of ANSI/EIA-649 and using MIL-HDBK-61 for guidance. The contractor's CMAR shall include such items as ECPs, deviations, conditional acceptance terms, and software definition for the as-built configurations. Additionally, the contractor shall include an equipment tree drawing that documents all approved part number changes to a configuration item and that lists the version numbers for all CSCIs and the changes thereto. The initial delivery of the CMAR shall include top-level assembly drawings and associated parts lists for each HWCI. Subsequent deliveries of the CMAR shall include updated top-level assembly drawings and associated parts lists for each HWCI for which these drawings or parts lists have changed since their prior submittal. (CDRL JC0C)

3.4.1.5.2 **Configuration Data Information.** The contractor shall document the as-built configuration of each HWCI delivered to the Government. The documentation shall include hardware, software, and firmware and shall accompany each HWCI delivery. (CDRL JC0D)

3.4.2 **Data Management.** The contractor shall identify a POC within the organization for data management efforts. (This person may be the same as the Configuration Management POC.) The contractor's Data Management team shall possess a thorough understanding of current data management techniques. The contractor shall work with the Government to resolve all computer related compatibility issues. The contractor shall be responsible for obtaining and maintaining any Public Key Infrastructure (PKI) certificates necessary to access the Government maintained data management systems.

3.4.2.1 **Contract Data Requirements.** The contractor shall provide one (1) electronic copy of all data deliverables. The contractor shall utilize the Government maintained data management systems for delivery of all CDRL items. All data shall be submitted in a universal viewer format (e.g. html, pdf, tif). The contractor shall provide the native format data (preferably Microsoft Office Suite) to the Government upon request at no extra cost. The contractor shall provide e-mail notification of all data submittals. Databases delivered to the Government shall be compatible with other Government and contractor databases.

3.4.2.2 **Data Accession List.** All documentation produced or prepared by the contractor, its subcontractors or vendors under this contract shall be accessible to the Government. The Data Accession List is a complete listing of all data, computer software and documentation generated by the contractor for use during the course of performing or in fulfillment of the contract requirements herein. The contractor shall prepare and update quarterly a Data Accession List for all data, software and documentation generated. This list shall be provided to the Government. At all times, throughout the life of the contract, the contractor shall provide Government personnel full access to this documentation including providing copies to the Government as requested per Section H-22 of this contract. (CDRL JC0E)

3.4.3 **Technical Data Package.** See Appendix A.

3.5 PROGRAM MANAGEMENT

3.5.1 **Program Manager.** The contractor shall designate a single program manager who shall have overall responsibility for control and coordination of all work performed. This manager shall act as the single focal point within the contractor's activity for all required program status information. The contractor, in conjunction with the other participating contractors, shall define and implement a cooperative management structure to support the development effort. A single program management POC will be established. The management structure shall provide the governance of the cooperative development effort and shall include the processes for the resolution of disputes and other conflicts that occur during the execution of the program.

3.5.2 **Program Planning and Control.** The contractor shall establish, maintain, and use in the performance of this contract Earned Value Management Systems (EVMS)/Cost Schedule Control Systems (CSCS). The contractor shall establish, maintain, and use in the performance of this contract a management control system that provides for planning and control of cost, measurement of performance (value for completed tasks), and generation of timely and reliable information for input into the Cost Performance Report (CPR) in compliance with 3.5.7.1. The contractor shall employ an EVMS/CSCS meeting the criteria specified in DoDI 5000.2 (Operation of the Defense Acquisition System) in accordance with the guidelines in ANSI/EIA-748. The contractor shall establish a formal organization responsible for accomplishing the tasks outlined in this SOW. The contractor shall ensure that all plans and procedures required by this SOW and the CDRL and that require approval by the Government are adhered to by the contractor and its subcontractors. A clear line of project authority shall exist between all organizational elements and the program manager. The contractor shall identify each Contract Work Breakdown Structure (CWBS) element and SOW task against one or more positions or elements within the contractor's (to include subcontractors) organization that will perform the corresponding work. The contractor shall identify and maintain, throughout the acquisition period, a list of key personnel who have management and task accomplishment responsibility, including the key personnel of the major subcontractors. The contractor shall ensure expeditious transfer of appropriate technical data among subcontractors.

3.5.3 **Program Schedule.** The contractor, in conjunction with the other participating contractors, shall prepare and maintain a master schedule of program events. Back-up schedules detailing the sub-events required to achieve milestones in the master schedule shall also be prepared and maintained. Schedules shall be updated monthly and augmented with an explanation addressing all updates. Schedules shall be keyed to the CWBS and SOW and reported in the program milestones report. The contactor, in conjunction with the other participating contractors, shall address the effect on interrelated milestones. The status of program schedules shall be briefed during program management and design reviews. (CDRL JD01)

3.5.4 **Post Award Conference.** The contractor, in conjunction with the other participating contractors, shall host a Post Award Conference not later than two (2)

Months After Receipt of Order (MARO). The Government shall establish the specific dates in conjunction with the contractor. The agenda include, but not be limited to, the following:

a. Introduction and identification of key Government and contractor management and engineering personnel,

b. The contractor's management organization, plans, procedures, and schedules,

c. Government's management organization, plans, procedures, and schedules,

d. The results of Phase 2A and how these results will be incorporated into the Phase 2B program,

e. The elements of the cooperative program including the partition of the Terminal into common and unique modules and the designation of the lead prime contractor for each common module,

f. Government concerns,

g. Contractor concerns,

h. Host platform integrators (program) status (Government),

i. Status of submittals and approvals of regulatory, i.e. export, security, etc. (Government),

j. Status of subcontracts, and

k. Other items established by the Government in conjunction with the contractor.

(CDRL JD08, CDRL JD09, CDRL JD0A)

3.5.5 **Risk Assessment and Management.** The contractor, individually and in conjunction with the other participating contractors, shall conduct a process oriented technical risk management program utilizing the U.S. Navy's Program Managers WorkStation (PMWS) tool Technical Risk Identification and Mitigation System (TRIMS). The contractor, individually and in conjunction with the other participating contractors, shall develop a management plan detailing, at a minimum, how the contractor, individually and in conjunction with the other participating contractors, will conduct:

a. TRIMS System baselining and tailoring.

b. TRIMS Database management.

c. TRIMS Report generation and analysis.

The latest release, as of the date of the Request for Proposal (RFP) containing this SOW, of the Systems Engineering and Software knowledge bases shall be initially used (weighting matrixes for high dollar high volume will be used). Copies of this software can be downloaded from the BMPCOE web site at www.bmpcoe.org. For downloading assistance only call the BMPCOE help desk at 703-403-8179.

The contractor may, and is encouraged to, request permission from the Government to tailor the baseline as needed. The risk management process shall be addressed as an integral part of the PDR, the CDR, each PMR, and at such other time as the MIDS JTRS Program Manager shall require.

The contractor shall support initially, and quarterly thereafter:

d. Site surveys by the Government as part of its overall risk management process. These surveys will be based on the TRIMS models.

e. The contractor shall provide the Government with an up to date set of TRIMS data files. In lieu of these submissions, the contractor may allow the Government continuous access to the up to date data files.

f. The contractor shall provide the Government, after each site survey, a report analyzing the potential effects on performance, cost, and schedule of all TRIMS template areas rated yellow and red (high and medium risk) as a result of the site survey.

3.5.6 **Program Management Reviews.**

3.5.6.1 **Requirement.** The contractor, in conjunction with the other participating contractors, shall present and administratively support program management reviews every three months commencing three (3) months after the Post Award Conference. All PMRs shall be held at a contractor's facility. Alternate reviews shall be an expanded PMR to include an executive session. To the maximum extent possible, the PMRs shall be held jointly with design and technical reviews.

3.5.6.2 **Program.** The contractor, in conjunction with the other participating contractors, shall develop agendas and minutes for the PMRs. The PMR agendas shall include, but not be limited to, the PMR items identified in Appendix D. The Government will have the right to modify or add items to the PMR agenda. At the PMRs, the contractor, in conjunction with the other participating contractors, shall determine and report detailed program status information, keyed to the CWBS, the SOW, and the CDRL, including subcontractor work. Program progress as identified by integrated product teams will be included in the status presented. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.5.7 **Security.**

3.5.7.1 **Classified Information.** The contractor as a United States company shall comply with its industrial security manual. The contractor's European subcontractors shall comply with corresponding national industrial security procedures. The contractor shall comply with the Program Security Instruction for Multifunctional Information Distribution System Program. Classified information shall be handled and controlled in accordance with provisions of C-M(55) 15 (Final) "Security Within the North Atlantic Treaty Organization" and supplemented by local procedures. The contractor shall ensure that individuals requiring access to classified information pertaining to this project have proper clearance for access to North Atlantic Treaty Organization (NATO) classified information. Telecommunications Security/TEMPEST classified and unclassified information shall be handled and controlled on a Government-to-Government basis between the National Security Agency and the Cryptologic Authorities of the participating nations.

3.5.8 **Financial Reports.** The contractor shall develop the following financial reports in accordance with the Contractor Cost Data Reporting (CCDR) Plan.

3.5.8.1 **Cost Performance Reports.** The contractor shall provide monthly reports from its EVMS detailing the integrated cost and schedule status of work progress on the contract for the prime and each subcontractor. The prime contractor shall report the combined costs and shall provide a separate report for each European subcontractor costs. The report shall be prepared in accordance with the CDRL. The contractor shall also relate technical accomplishment with cost and schedule accomplishment in contract performance reports and meetings. In the report, the contractor shall provide an analysis of significant critical risk elements that will be periodically updated throughout the life of the contract. The analysis shall address the critical issues that effect cost, schedule, and technical performance. Cost reporting in the CPR shall be at the appropriate contract CWBS level for prime and key subcontractors according to the risk associated with a particular effort. Most elements shall be reported at level three of the CWBS except for the specific SRU elements listed at Level 3. These SRUs shall be reported at appropriate control account levels. The contractor shall ensure subcontractor data is properly integrated into a consolidated report for all formats of the CPR. Format 1 shall reflect the integrated product information. Format 2 shall reflect the functional information which may break out the subcontractors as separate reporting elements. Files shall be submitted in accordance with the format specified for the X.12 839 ANSI file format. (CDRL JD02)

3.5.8.2 **Contract Funds Status Report (CFSR).** The contractor shall submit a CFSR (DD Form 1586) in accordance with the CDRL. The prime contractor shall report the combined funds status and shall provide a separate report for each European subcontractor funds status. The CFSR reporting level shall be to the CWBS level three except for the specific SRUs listed at Level 3. These SRUs shall be reported at the contractor’s derived CWBS Level 5 or lower. (CDRL JD03)

3.5.8.3 **Cost Data Summary Report (CDSR).** The contractor shall provide a CDSR in accordance with the CDRL. The prime contractor shall report the combined cost data summary and shall provide a separate report for each European subcontractor cost data summary. The CDSR (DD Form 1921) shall incorporate the total incurred costs at completion of units against the applicable CWBS elements as reported in the CCDR Plan (DD Form 2794). Reporting criteria applicable to the contractor shall also be applicable to major subcontractors. The contractor shall obtain CCDR information from its subcontractors for the MIDS JTRS contract. (CDRL JD04)

3.5.8.4 **Functional Cost-Hour and Progress Curve Report.** The contractor shall provide a Functional Cost-Hour and Progress Curve Report in accordance with the CDRL. The prime contractor shall report the combined functional cost-hour and progress curve and shall provide a separate report for each European subcontractor functional cost-hour and progress curve. The Functional Cost-Hour and Progress Curve Report (DD Form 1921-1) shall provide actual costs of the corresponding CWBS elements with respect to engineering, tooling, quality control, etc. and direct labor hours and costs as applied with direct labor, material, and overhead. A separate DD Form 1921-1 shall be required for recurring and non-recurring costs. The contractor shall provide the Progress Curve data in terms of unit size. Reporting criteria applicable to the Contractor shall also be applicable to major subcontractors. The contractor shall obtain CCDR information from its subcontractors for the MIDS JTRS contract. (CDRL JD05)

3.5.8.5 **Earned Value Measurement System.** The contractor shall perform the contract technical effort using a criteria-compliant EVMS that correlates cost and schedule performance with technical progress. Progress and problems shall be presented and discussed at periodic program management reviews. Technical issues shall be covered in terms of performance goals, exit criteria, schedule progress and/or cost impact. The data presented in monthly cost reports shall be derived from the Contractor's mainstream accounting system. To accommodate the mapping of this data, report requirements shall be tailored at the Integrated Baseline Review (IBR) to maximize consistency with the Contractor's in-house system. The contractor's in-house management control system shall comply with the 32 Industry Standard Guidelines for Earned Value Measurement Systems as found at http://www.acq.osd.mil/pm/currentpolicy/currentpolicy.html.

3.5.9 **Contract Work Breakdown Structure.** The contractor shall provide a CWBS to reflect how the contractor plans to accomplish the entire contract work scope. The CWBS shall serve as the framework for contract planning, budgeting, and reporting of cost and schedule status to the Government. The contractor shall identify major elements of subcontracted work in the CWBS. At the Post Award Conference, the Contractor shall present the CWBS and a briefing on the corporate cost performance and schedule management procedures. Subsequent changes to the CWBS must be approved by the Government and shall be submitted in accordance with the CDRL. The supporting CWBS dictionary, which describes the efforts and tasks associated with each CWBS element and correlates SOW paragraphs and contract line items, is subject to Government review as part of the IBR process and the Integrated Process Team (IPT) process. (CDRL JD07)

3.5.10 **Presentation Material.** The contractor, in conjunction with the other participating contractors, shall provide selected viewgraphs and photographic materials to support program office briefing requirements for documenting program activities. (CDRL JD09)

3.5.11 **Integrated Product Teams.** The contractor, in conjunction with the other participating contractors, shall establish and participate in joint contractor /Government IPTs. These IPTs will integrate cost, schedule, and technical data to provide a global perspective and detailed insight to management and technical personnel, in both Government and industry. An objective of the IPT concept is to ensure that the principal of concurrent engineering is applied to the development of the Terminal. Another is to reduce the levels of formal, periodic, Government design reviews while maintaining the necessary Government program controls and understanding of program progress.

3.5.11.1 **IPT Structure.** To achieve these objectives, these IPTs will be structured to foster a close working relationship between the contractor, in conjunction with the other participating contractors, and the Government. The establishment and membership of individual IPTs will depend on the phase of the program and joint Government and contractor determinations of program issues and needs. Sufficient IPTs will be established and managed to accomplish the design and development of the Terminal, manage program risk, and ensure affordability of the Terminal during production and support phases of the program. Subcontractor participation will be consistent with the responsibilities of the respective team. The contractor, in conjunction with the other participating contractors, and Government shall each identify an individual to act as team leader or assistant team leader, consistent with the scope of responsibility of the team, and by agreement between the contractors' and Government's program managers.

3.5.11.2 **IPT Responsibilities.** IPT responsibilities will include:

a. Monitoring of the accomplishment of program work and progress using information from all available sources, including cost and schedule data,

b. Identification of technical and program risks, and formulation of risk mitigation recommendations,

c. Expediting resolution of problems, and

d. Participation in PMR activities as agreed to by the contractors' and Government's program managers.

The IPTs will communicate the status of their activities to the program managers and raise critical issues for discussion at PMRs.

3.5.11.3 **Meetings.** Meetings will be held as deemed necessary by the team leaders. Appropriate notification will be made to team members so that visit clearances may be submitted in advance to the security personnel of the hosting activity.

3.5.11.4 **Availability of Documentation.** In order to increase the members' understanding of the contractor efforts and status and reduce the time for government review (or approval if required), the IPTs may have access to in process working draft documents, subject to export regulations per the International Traffic in Arms Regulations (ITAR). Information exchanged and used as a part of the IPT process will be used only in connection with the objectives and charter of the IPT.

3.6 LOGISTICS

3.6.1 **Integrated Logistics Support.** The contractor, in conjunction with the other participating contractors, shall establish and maintain an ILS Program to support the Terminal. The contractor, in conjunction with the other participating contractors, shall insure that logistics considerations and logistics planning are integrated in the system/equipment engineering and design process to obtain optimum cost effectiveness and maximum support readiness. The contractor shall identify an ILS Manager (ILSM) to manage the Terminal ILS Program. The contractor's ILSM shall be the principal logistics point of contact for all ILS requirements. The contractor, in conjunction with the other participating contractors, shall establish procedures for an ILS Program to support the Terminal developed under this contract. The contractor, in conjunction with the other participating contractors, shall ensure that maintenance planning, supply support, technical data, support and test equipment, training, software support, facilities, manpower and personnel, packaging/handling, storage and transportation, design interface, pre-operational support, reliability and maintainability, testability, availability, human factors and system safety efforts are integrated into a total ILS Program.

3.6.1.1 **Integrated Support Plan (ISP).** The contractor's detailed approach to integrate logistics considerations and logistics planning for the Terminal shall be documented in the ISP. The contractor, in conjunction with the other participating contractors, shall develop the basic elements of the ISP. The contractor, in conjunction with the other U.S. participating contractors, shall develop the actual ISP. The ISP shall contain all sections identified below:

a. **Section 1 Introduction.** This section shall be formatted and contain the data as shown below:

    1. Purpose and Scope. Provide a concise statement on the scope and intended purpose of the ISP as the document for managing and executing the contractual ILS program.
    2. ISP Summary. Provide a concise description of the ISP sufficient to establish a clear understanding of the total scope, content, and organization of the material presented.
    3. Updating Process. Provide a description of the manner in which changes and revisions to the content of the ISP shall be developed, approved, and incorporated.

b. **Section 2 Summary Of System Characteristics** This section shall be a summary of the details contained in the system and configuration item specifications and shall provide an understanding of the significant characteristics of the system and the manner in which the system shall be employed in its intended operational environment.

    1. System/Equipment Description. Provide a brief description of functional and physical characteristics of the system and its major

subsystems. Use block diagrams or other graphic means to support the text.

2. Operating Environment. Describe the operational environment. Include annual operating hours, duty cycles, maximum allowable down time, life expectancy, environment, and other requirements as applicable.
3. Availability Requirements. State the availability requirements contained in the system and configuration item specifications. Include predicated and demonstrated values when available.
4. Reliability Requirements. State the reliability requirements contained in the system and configuration item specifications. Include predicated and demonstrated values when available.
5. Quantitative Maintainability Requirements. State the quantitative maintainability requirement contained in the system and configuration item specifications. Include requirements for test points and BIT, manpower and personnel constraints, and other requirements as applicable.
6. Maintainability Design Criteria. Summarize design criteria developed in response to maintainability requirements.
7. Other Requirements. Summarize any other logistic-related requirements not listed above which are found in the system and configuration item specifications.

c. **Section 3 ILS Program Management, Organization And Execution.** This section shall provide a description of the overall process, involving both the Government and the contractor, that shall be used in managing and executing the contractual ILS program.

Section 3A Management and Organization

1. Contractor's Objectives, Policies, and General Management Procedures. State the objectives, policies, and general management procedures that relate to the ILS program.
2. Contractor's ILS Organization Structure. Describe the organizational structure that has been selected to accomplish the contractual ILS program effort. Identify names, positions, functions, responsibilities and authority of those responsible for satisfying the contractual ILS program requirements.
3. Subcontractor and Vendor Interface Management. List the major subcontractors involvement in the ILS program and describe the scope of ILS work assigned to each, the method of controlling the accomplishment of this work, and the organizational interfaces established with each subcontractor. Include a general description of the method of specifying ILS requirements in vendor purchase orders and controlling the accomplishment of specific work and deliverables.

4. Government ILS Organizational Interface. Describe the government ILS organization and indicate the relationship with the contractor's organization delineated above.

Section 3B Design Interface Related Planning

1. Design Interface. This section shall contain a description of how the contractor shall accomplish, report, provide an audit trail for the integration, and interface a formal design influence program. The design interface planning shall ensure that all logistics requirements and maintenance decisions made by the other contractually required system engineering specialties are input to and out from one another. The system engineering specialties include, but are not limited to, the design program; the safety program; the standardizations program; LSA program and the human factors program.
2. Contractor's Objective. Describe a design interface specialty which provides for the cost effective integration design, development, test, and evaluation required to progress from operational need to the deployment and operation of a system/equipment by the user organization. Identify audit trail and reporting criteria.
3. Contractor's Approach. Establish a design interface and system engineering approach or process which provide for a logical sequence of events as activities and decisions transform an operational need into a viable cost effective system.
4. Contractor's Integration. Design for and ensure design interface/engineering specialty integration which establishes timely and appropriate intermeshing of all engineering, design and management efforts, and disciplines such as reliability, maintainability, availability, ILS, value engineering, standardization, and production, to control their influence on ILS programs, cost effective design enhancement and system/equipment design. Identify audit trail and reporting criteria.
5. Contractor's Control and Reporting. Identify in-house reports emanating from above elements. Identify relationship of technical program planning to cost and schedule planning. Identify planned interface, specific task and management procedures that ensure design influence and contractual provisions are met, and that the relationship of ILS to design influence and system engineering is established, controlled, reported and balanced between performance, support, ownership requirements, life cycle cost, and system effectiveness.

d. **Section 4 ILS Program Tasks.** This section shall contain a detailed description of how the contractor shall accomplish all ILS program tasks contained in the ILS program statement of work. For ILS program tasks not covered by separately delivered plans, a detailed description shall be provided.

e. **Section 5 Milestone Schedules.** This section shall contain the master milestones as planned and scheduled for the ILS effort. This section shall be formatted and contain the data shown below:

1. Master Milestone Chart. A master milestone chart to include all program milestones; e.g. PCA, PDR, CDR, contractor and government tests, reliability and maintainability demonstrations, etc.
2. ILS Program Milestone Chart. A milestone chart for events required to accomplish all required ILS program tasks.
3. Support Element Milestone Chart. A milestone chart for the events required to accomplish all contractually required support element development efforts; e.g. technical publications, training efforts, provisioning effort.

f. **Section 6 Related Plans.** This section shall reference the most recent version of all contractually required ILS program tasks; e.g. LSA Plan (LSAP), and all separately deliverable plans for all contractually required support element development efforts; e.g., Provisioning Plan, Training and Training Equipment Plan.

The results of trade-off and use studies shall be included in updates to the ISP. (CDRL JE01)

3.6.1.2 **Integrated Logistics Support Management Team (ILSMT).** The contractor's ILSM shall be a member of and support the ILSMT which shall be the primary forum for the implementation of the Logistics IPT concept. ILSMT meetings (not to exceed 5) will be scheduled (alternately at the contractors' facilities and at PMW 101/159) as mutually agreed upon by the Government and contractors' ILSMs. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.1.3 **ILS Management Guidance Conference.** The contractor, in conjunction with the other participating contractors, shall convene an ILS Management Guidance Conference in conjunction with the post award conference to discuss implementation of the contractual requirements of the ILS Program. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.1.4 **Cataloging/Codification.** The contractor shall host and participate in a government cataloging/codification conference, within five months after CDR, for the assignment of stock numbers for the MIDS JTRS LRUs and SRUs. The contractor shall initially provide, in accordance with 3.6.1.4.1, for assignment of stock numbers, top assembly drawings for each LRU and associated SRUs to contain at a minimum the following:

a. Drawing title

b. Drawing number

c. Picture of the item

d. Part number with suffix or dash number

e. Revision letter

f. Contract number

g. Contractor name, address

h. Commercial and Government Entity (CAGE) code

i. Appropriate marking of data rights

j. Next higher assembly or used on information

k. Physical characteristics (length, width, height, weight)

The contractor shall provide the minutes of the cataloging/codification conference. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.1.4.1 **Cataloging/Codification Data.** The contractor shall provide quarterly reports on system configuration (system tree) and part numbers (for all LRUs and SRUs) to the Primary Inventory Control Activity (PICA) by means of the CMAR. See 3.4.1.5.1.

3.6.1.5 **Contractor Database.** The contractor shall be responsible during the length of the contract for maintaining accurate availability and reliability data in the contractor database, developed under the MIDS LVT production contract. The database shall be electronically delivered to the Government monthly, after initial population. The contractor shall obtain and provide all data required to effectively assess availability, maintainability and reliability. This data will be presented at each ILSMT and PMR. (CDRL JE03, CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.2 **Logistics Support Analysis General Requirements.** The contractor, in conjunction with the other participating contractors, shall establish and maintain a LSA Program for the Terminal as defined herein. The purpose of this LSA Program is to: define support requirements that are optimally related to each other, define the support required during the operational phase, and prepare attendant data products. The LSA Program shall be the single analytical effort interfacing with the system engineering process to identify logistic support requirements. It shall include support resources, reliability, maintainability, testability, training, supply support, technical data (technical manual data), safety and human engineering for the Terminal.

3.6.2.1 **Task Requirements.** The contractor, in conjunction with the other participating contractors, shall perform the following tasks for the level of design detail required under

this contract, and shall perform the analysis required to provide the data for the LSAR. The LSAP can be an Appendix of the ISP. (CDRL JE01, CDRL JE04)

3.6.2.1.1 **Logistic Support Analysis Plan.** The contractor, in conjunction with the other participating contractors, shall prepare an LSAP which describes how the LSA program shall be conducted to meet program requirements. The LSAP may be included as part of the ISP. The LSAP shall include the following elements of information, with the range and depth of information for each element tailored to the acquisition phase:

a. A description of how the LSA program shall be conducted to meet program requirements.

b. A description of the management structure and authorities applicable to LSA, including the relationship between line, service, staff, and policy organizations.

c. Identification of each LSA task that shall be accomplished and how each shall be performed.

d. A schedule with estimated start and completion points for each LSA program activity or task. Schedule relationships with other ILS program requirements and associated system engineering activities shall be identified.

e. A description of how LSA tasks and data shall interface with other ILS and system oriented tasks and data. This description shall include analysis and data interfaces with the following programs, as applicable:

    1. System Design Program
    2. System Reliability Program
    3. System Maintainability Program
    4. Human Engineering Program
    5. Standardization Program
    6. Parts Control Program
    7. System Safety Program
    8. Packaging, Handling, Storage & Transportation (PHS&T) Program
    9. Provisioning Program
    10. Testability Program
    11. Technical Publications Program
    12. Training and Training Equipment Program
    13. Support Equipment Program

f. Explanation of the LSA control numbering system to be used.
g. The method by which supportable and supportability related design requirements are disseminated to designers and associated personnel.

h. The method by which supportable and supportability related design requirements are disseminated to subcontractors and the controls levied under such circumstances.
i. Government data to be furnished to the contractor.
j. Procedures for updating and validating of LSA data to include configuration control procedures for LSA data.
k. LSA requirements of Government furnished equipment/material and subcontractor/vendor furnished material including end items of support equipment.
l. The procedures to evaluate the status and control of each task, and identification of the organizational unit with the authority and responsibility for executing each task.
m. The procedures, methods, and controls for identifying and recording design problems or deficiencies affecting supportability, corrective actions required, and the status of actions taken to resolve the problems.
n. Descriptions of the data collection system to be used by the performing activity to document, disseminate, and control LSA and related design data.
o. Update the LSAP as required, based on analysis results, program schedule modifications, and program decisions.

3.6.2.1.2 **Program and Design Reviews.** The contractor, in conjunction with the other participating contractors, shall plan and provide for official review and control of released design information with LSA program participation in a timely and controlled manner, and to assure that the LSA program is proceeding in accordance with the contractual milestones so that the supportability and supportability related design requirements shall be achieved.

a. Formal review and assessment of supportability and supportability related design contract requirements shall be an integral part of each Terminal design review specified by this contract. The contractor shall schedule reviews with subcontractors and suppliers, and inform the Government in advance of each review. Results of each design review shall be documented. Design reviews shall identify and discuss all pertinent aspects of the LSA program. Agendas shall be developed and coordinated to address at least the following topics as they apply to the program phase activity and the review being conducted.

    1. LSA conducted by task and CWBS element
    2. Supportability assessment of proposed design features including supportability, cost, and readiness drivers and new or critical logistic support resources requirements.
    3. Corrective actions considered, proposed, or taken, such as:

        (a) Support alternatives under consideration.
        (b) System/equipment alternatives under consideration.
        (c) Evaluation and tradeoff analysis results.
        (d) Comparative analysis with existing systems/equipment.

(e) Design and redesign actions proposed or taken.

4. Review of supportability and supportability related design requirements.
5. Progress toward establishing or achieving supportability.
6. LSA documentation required, completed, and scheduled.
7. Design, schedule, or analysis problems affecting supportability.
8. Status of previous action items and actions required.
9. Other topics and issues as appropriate.

b. The LSA program shall be planned and scheduled to permit the contractor and the Government to review program status. The status of the LSA program shall be assessed at each LSA review. LSA reviews shall identify and discuss all pertinent aspects of the LSA program to a more detailed level than that covered at design and program reviews. Agendas shall be developed and coordinated to address at least the topics listed above as they apply to the program phase activity and the review being conducted.

3.6.2.1.3 **Functional Requirements Identification.** The contractor, in conjunction with the other participating contractors, shall identify the operations and support functions that must be performed for the Terminal and then identify the tasks that must be performed in order to operate and maintain the new system/equipment in its intended environment.

a. Identify the operations and maintenance tasks for the Terminal based on the identified functional requirements. Tasks shall be identified to a level commensurate with the design and operational scenario development and shall cover all functions, which require logistics support resources. Preventative maintenance, corrective maintenance, and operations and other support tasks such as preparation for operation, operation, post operation, calibration, and transportation shall be identified by the following means:

    1. The results of the FMECA, or equivalent analysis, shall be analyzed to identify and document corrective maintenance task requirements. The FMECA, or equivalent, shall be documented on the Terminal hardware and software and to the indenture level consistent with the design progression. The LSAR shall be used for the FEMCA documentation.
    2. Preventative maintenance task requirements shall be identified by conducting a reliability centered maintenance (RCM) analysis. The RCM analysis shall be based on the FMECA data and documented in the LSAR.

b. Update the functional requirements and operations and maintenance task requirements as the Terminal becomes better defined and better data becomes available.

3.6.2.1.4 **Task Analysis.** The contractor, in conjunction with the other participating contractors, shall analyze required operations and maintenance tasks for the Terminal to (1) identify logistic support resource requirements for each task, (2) identify new or critical logistic support resource requirements, (3) identify transportability requirements, (4) identify support requirements which exceed established goals, thresholds, or constraints, (5) provide data to support participation in the development of design alternatives to reduce Operational & Support (O&S) costs, optimize logistic support resource requirements or enhance readiness, and (6) provide source data for preparation of required ILS documents (technical manuals, training programs, manpower and personnel lists, etc).

a. Conduct a detailed analysis of each operation and maintenance task requirement identified in paragraph 3.6.2.1.3. Specifically the contractor shall:

    1. Determine the procedural steps required to perform the task to include identification of those tasks that are duty position specific (performed principally by only one individual) or collective tasks (performed by two or more individuals as a team or crew).
    2. Determine the logistic support resources required (considering all ILS elements) to perform the task.
    3. Determine the task frequency, task interval, elapsed time, and manhours in the Terminal intended operational environment and based on the specified annual operating base.
    4. Document these results in the LSAR.

b. Identify those logistic support resources required to perform each task which are new or critical. New resources are those which require development to operate or maintain the Terminal. These can include support and test equipment, facilities, new or restructured personnel skills, training devices, new or special transportation systems, new computer resources, and new repair, test, or inspection techniques or procedures to support new design plans or technology. Critical resources are those which are not new but require special management attention due to schedule constraints, cost implications, or known scarcities. Unless otherwise required, document new and modified logistic support resources in the LSAR.

c. Based upon the identified task procedures and personnel assignments, identify training requirements and provide recommendations concerning the best mode of training (formal classroom, on-the-job, or both) and the rationale for the recommendations. Document the results in the LSAR.

d. Analyze the total logistic support resource requirements for each task and determine which tasks fail to meet established supportability or supportability related design goals or constraints for the Terminal. Identify tasks which can be optimized or simplified to reduce O&S costs, optimize logistic support

resource requirements, or enhance readiness. Propose alternative designs and participate in the development of alternative approaches to optimize and simplify tasks or to bring task requirements within acceptable levels.

e. Based upon the identified new or critical logistic support resources, determine what management actions can be taken to minimize the risks associated with each new or critical resource. These actions could include development of detailed tracking procedures or schedule and budget modifications.

f. Prepare output summaries and reports to satisfy ILS documentation requirements. These shall include all pertinent data contained in the LSAR at the time of preparation.

g. Update the data in the LSAR as better information becomes available and as applicable input data from other system engineering program is updated.

3.6.2.2 **LSA Guidance Conference.** A LSA Guidance Conference shall be held at a participating contractor's facility within three (3) MARO award to establish guidelines for conducting the program. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.2.3 **LSA Record.** The contractor, in conjunction with the other participating contractors, shall document information generated by the LSA process.

Supplemental data, such as functional block diagrams, decision trees, troubleshooting charts, sketches, etc., shall be identified as hard-copy supplemental data in the LSAR.

Connecting and installing hardware, bracketry, standard hardware items, bulk material, and simple parts which are not economically repairable shall be included in the LSA documentation to the extent cited in this paragraph for the next higher assembly.

The LSAR shall be developed for the Terminal as the central file of validated, integrated, design-related logistic data pertaining to the acquisition program. The contractor shall update the LSAR on a continuing basis throughout the contract period to reflect changes in support requirements resulting from:

a. Changes to equipment design or mission/operational requirements.

b. Logistic support improvements or the correction of deficiencies discovered through the analysis of data from field and test data collection systems, test reports, and by the contractor's validation of LSAR data.

c. Government reviews and audits.

(CDRL JE05)

3.6.2.3.1 **LSA Candidate List.** The LSA Plan shall identify the LSA Candidate List. LSA candidates shall include: systems; subsystems; assemblies; subassemblies; end items/articles and any other items that can be considered to be a repairable item that requires documentation of operational logistic support parameters and requirements. List all items for which the Government does not have an existing maintenance capability and for which logistics support determinations are required. Maintenance capability, as used in this context, includes but is not limited to: trained personnel, transportation and handling, logistic technical data, support and test equipment, supply support, and facilities. The selection of LSA candidate items shall be governed by the following procedures:

a. The contractor, in conjunction with the other participating contractors, shall prepare an initial list of LSA candidates in consonance with the criteria below. The list shall include LSA control number, National Stock Number (NSN), NATO Stock Number, and manufacturer's part number, CAGE code, and item name as available. The initial list of candidate items shall be included in the draft LSA Plan submission and shall be augmented by the contractor as design changes occur. The following items shall be candidates for LSA:

    1. Contractor-furnished installed equipment that can or will be inspected, tested, repaired, maintained, or overhauled as part of the system/equipment.
    2. Contractor-furnished installed equipment that can or will be inspected, tested, repaired, maintained, or overhauled separately from the system, end item, component, assembly, or subassembly with which they are functionally associated.
    3. Contractor-furnished, non-installed equipment to include support and test equipment and training equipment.
    4. nstalled and non-installed GFP when required to interface with contractor-furnished equipment.

b. The contractor, in conjunction with the other participating contractors, shall include a list of items considered and not recommended for LSA, and the rationale for non-recommendation, with the list of LSA candidate items.

c. The contractor, in conjunction with the other participating contractors, shall perform a LSA for each item on the Government-approved LSA Candidate List to the specified maintenance level below:

USN AIRCRAFT

MAINTENANCE LEVEL	MAJOR TASKS PERFORMED
Operator (O)	Detects failures using BIT
Maintainer at-platform (M1)	Verifies/isolates failures using BIT
	Performs LRU remove/replace (R/R)

	Verifies terminal operation using BIT
	Performs preventive maintenance as required
Maintainer off-platform (M2)	Verifies/isolates failures using Consolidated Automatic Support System (CASS) Test Program Set (TPS)
	Performs LRU repair [SRU R/R]**
	Verifies terminal operation using CASS TPS
Commercial depot (CD)	Repairs SRUs

USAF AIRCRAFT & ALL EUROPEAN

MAINTENANCE LEVEL	MAJOR TASKS PERFORMED
Operator (O)	Detects failures using BIT
Maintainer at-platform (M1)	Isolates failures to LRU using BIT
	R/R failed LRU
	Verifies terminal operation using BIT
	Performs preventive maintenance as required
Commercial depot (CD)	Repairs LRUs and SRUs

USN SHIPBOARD

MAINTENANCE LEVEL	MAJOR TASKS PERFORMED
Operator (O)	Detects failures using BIT
Maintainer at-platform (M1)	Verifies/isolates failures using BIT
	Repairs LRUs [SRU R/R]
	Verifies terminal operation using BIT
	Performs preventive maintenance as required
Commercial depot (CD)	Repairs SRUs and designated LRUs

NOTE: The RPS and RT are designated LRUs, R/R

The LSA shall establish the requirements for operational support of the system/equipment. The LSA shall define the logistics support requirements in terms of:

1. Maintenance Planning
2. Manpower and personnel
3. Supply Support

4. Support and test equipment
5. Training and training devices
6. Technical Data
7. Packaging, handling, storage, and transportation

3.6.2.3.2 **LSA Control Number (LCN).** The contractor, in conjunction with the other participating contractors, shall assign LCNs by the Classical Assignment Method to the maximum extent possible to individual equipment items and equipment grouping to facilitate Automatic Data Processing (ADP) storage and retrieval. This method dictates assignment of a unique LCN to every application of a part numbered item in the system including piece parts. This method ensures proper identification of an item to its Next Higher Assembly (NHA) and ensures proper roll-up/summarization of data for all LSAR reports. From a provisioning standpoint, use of the classical assignment method would allow the automatic assignment of Provisioning List Item Sequence Number (PLISN), NHA PLISN, SAME AS PLISN, and Indenture Code. The structure of the LCN shall reflect a top down breakdown sequence of system/equipment hardware, and installation (connecting) hardware items, but excluding COTS equipment. Each item in the system/equipment, from the contract end items down to each individual replaceable item, shall be assigned a unique LCN for each higher assembly. The contractor, in conjunction with the other participating contractors, is responsible for ensuring the compatibility and integration of subcontractor/vendor LCNs within the overall coding arrangement. The contractors' numbering structure shall be described in the LSAP and requires Government approval.

3.6.2.3.3 **Data Storage and Retrieval.** The contractor, in conjunction with the other participating contractors, shall utilize a Material Readiness Support Activity (MRSA) approved system to record and store LSA record data and process the data. The U.S. Army MRSA validated format shall be used to develop the LSAR.

3.6.2.3.4 **LSA Validation Review and Approval.** The contractor, in conjunction with the other participating contractors, shall establish internal procedures for the progressive validation of the adequacy and technical accuracy of LSA/LSAR. The Government will perform LSA reviews, as mutually agreed upon by the Government and contractor's ILSM, (not to exceed 4 reviews; the first will be held at approximately six (6) MARO) and examine the contractor-produced LSA/LSAR to evaluate the contractor's compliance with the requirements of this contract and the Government's maintenance concepts, and the progress toward accomplishing these requirements. The contractor, in conjunction with the other participating contractors, shall participate in and provide administrative support (facilities, office equipment, personnel, prototype models, mock-ups and technical data) for Government reviews at a participating contractor's facility. Technical data (e.g., LSA data, LSAR data, engineering drawings, and other related information) pertaining to the reviews shall be made available for Government review prior to and during the scheduled reviews. Government approval of contractor LSA/LSAR documentation does not imply the approval of any design changes proposed as result of LSA. Approval of such changes shall be obtained through the normal contractual process. LSA data shall be available at formal Government design reviews to verify the

adequacy of the data and the supportability of the design. (CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.2.3.5 **LSAR Deliverables and Output Reports.** The contractor, in conjunction with the other participating contractors, shall generate electronically recorded LSAR Data Tables.

The LSAP shall identify the specific LSAR Output Reports planned for internal use. (CDRL JE05)

3.6.3 **Provisioning Data.** The contractor shall identify for the selected the systems requirements by each maintenance level and frequency of use for spares/repairable items for the Terminal. The contractor shall utilize the LSA to assure that the provisioning data for supply support items clearly and accurately reflect stable design information, verifiable demand factors, quality production information, and operational performance and supply system characteristics. LRU/SRU provisioning related data shall be provided no later than the first Terminal delivery and subsequently updated as required. Final piece part provisioning related data shall be provided with the delivery of the First Articles and updated subsequently as required. For the purpose of supply support, Long Lead Time Items (LLTI) shall be those items which because of their complexity of design, complicated manufacturing process, or limited production capacity cause production or procurement cycles which would preclude timely or adequate delivery, if not ordered in advance of normal provisioning. A Provisioning Guidance Conference shall be held in conjunction with the LSA Guidance Conference, at the contractor's facility. The Government will chair the conference. (CDRL JE06, CDRL JD08, CDRL JD09, CDRL JD0A)

3.6.4 **Tools, Support Equipment and Unique Test Equipment.** The Terminal shall not require any special tools, support equipment or test equipment unique to the Terminal for field maintenance.

3.6.5 **Telecommunication Security Maintenance Training and Manuals.** The contractor shall plan and implement telecommunication security maintenance training and develop maintenance manuals as required by the TSRD. The contractor shall coordinate the requirements for the telecommunications security maintenance training and maintenance manuals with the NSA.

3.7 MANUFACTURING AND ACCEPTANCE VERIFICATION

3.7.1 **Manufacturing.** The contractor shall fabricate Terminals and spare LRUs and SRUs. The contractor shall fabricate all Terminals and all spare LRUs and SRUs in a typical production environment. Terminals and spare LRUs and SRUs manufactured for delivery to the Government shall be fabricated to a configuration that incorporates corrections to all deficiencies identified during FAQT and Acceptance Tests. (CDRL JF01)

3.7.2 **Manufacturing Management Program.** The contractor shall implement an effective manufacturing management program for the Terminal and the spare LRUs and SRUs.

3.7.2.1 **Production Representative Controls.** In order that the fabricated Terminals and spare LRUs and SRUs are production representative, the contractor shall ensure that:

a. The Terminal design has been fully loaded into the contractor's Material Resource Planning (MRP) system and released to production prior to initial unit fabrication and

b. The Terminal manufacturing drawing package is greater than 95% complete prior to initial unit fabrication.

3.7.2.2 **Defect Control Program.** As part of the manufacturing program, the contractor shall implement an effective defect control program for the Terminal. As part of the defect control program, the contractor shall:

a. Implement a defect prevention plan that identifies the needed production equipment, trains personnel, and controls the manufacturing processes.

b. Establish a corrective action team composed of technical and management personnel familiar with the Terminal.

c. Integrate the manufacturing processes with the DRACAS/FRACAS required by 3.2.3.8.1p.

d. Identify types of assembly defects in terms of data categories and priorities for corrective action.

e. Track the effectiveness of the corrective actions as they are phased into the manufacturing process versus time and SRUs, LRUs, and Terminals fabricated.

f. Develop and implement a system to continuously monitor inspection and test yields and hardware throughput. This system shall include predetermined thresholds and shall define the management actions and responses necessary

when each threshold is breached. This system shall be documented in the SEMP. (CDRL JA01)

g. Establish a factory policy that adequately reflects the criticality of its defect information and tracking system. This policy shall include posting current process yield data on the factory floor.

h. Monitor and track critical product yields to ensure consistency of performance.

i. Implement a defect reporting and tracking system that correlates defects to (1) location and environment, (2) time in cycle, (3) test step, (4) point in the manufacturing process, (5) symptom description, and (6) similar defect observed in the assembly.

j. Set yield and defect thresholds to provide a meaningful assessment of progress or degradation from the result of corrective action.

k. Implement a parts screening system as needed to insure that the parts available at the production line have low variability.

The contractor shall report the status and results of the defect control program at the CDR and the PMRs.

3.7.3 **Manufacturing Program Planning.** The contractor shall perform manufacturing planning throughout the program to assure early risk identification and resolution. CE methods shall be applied in order to develop the production processes concurrent with the design and development of the Terminal. The CE shall be an integral part of the overall systems engineering process described in 3.2.3. As part of the manufacturing program planning, the contractor shall ensure that the manufacturing program includes:

a. Documented and validated manufacturing processes,

b. Documented material used in the manufacturing,

c. A stable and trained workforce,

d. Identification of the technical orders, spare parts, tools, and support equipment that will be used in the manufacturing,

e. Identification of personnel with representative skill levels, and

f. Identification of the Terminal configurations that will be manufactured.

g. A plan for the re-layout and fabrication of circuit card laminas as needed to eliminate white wires on CCAs for the Contract Line Item Number (CLIN) 3001 deliveries.

The contractor shall report the status and results of the manufacturing program planning at the PDR, the CDR and the PMRs.

3.7.4 **Manufacturing Surveillance.** The contractor shall maintain an effective, timely, and responsive manufacturing surveillance operation. As part of the manufacturing surveillance operation, the contractor shall collect data sufficient to track the following metrics:

a. Defects at unit acceptance verification for units received from each subcontractor,

b. First Time test yields on each SRU, LRU, and Terminal,

c. Rework (percentage of total touch and test labor hours charged to rework),

d. STE down time,

e. Running total number of CCAs, SRUs, LRUs, and Terminals in build, repair, retrofit, and inventory.

f. Average and worse case repair times,

g. Terminal unit integration and test time,

h. Total number of individual inspections and tests,

i. Productivity (output per total labor hours input),

j. Work shifts planned for scheduled work,

k. On schedule and late deliveries, and

l. Longest lead time for material needed.

The contractor shall report the status and results of the manufacturing surveillance operation including the above listed metrics at the CDR and the subsequent PMRs. The contractor shall prepare and submit the report of the status and results of the manufacturing surveillance operation. Separate reports are required for the manufacturing surveillance conducted by the U.S. integrator and for the manufacturing surveillance conducted by the European integrator. (CDRL JF01)

3.7.5 **Production Readiness Review.** The contractor shall conduct a PRR. The contractor shall identify and report on the status of all specific actions which must be satisfactorily accomplished prior to executing a production go-ahead decision. The PRR shall include, but not be limited to, discussion of high risk/low yield manufacturing processes and materials, requirements for manufacturing development effort, production planning, facilities allocation, incorporation of producibility oriented changes, identification and fabrication of tools and test equipment, and long lead acquisition. The PRR shall be held as an adjunct meeting to the CDR.

3.7.6 **Manufacturing Operations Management.**

3.7.6.1 **Work Management System.** The contractor shall provide the Government with access to the documentation, data, and reports generated by any existing work measurement system applied to the production of the Terminal.

3.7.6.2 **Electrostatic Discharge Control Program.** The contractor shall establish and maintain an electrostatic discharge control program in accordance with MIL-STD-1686.

3.7.6.3 **Telecommunication Security Assurance.** The contractor shall prepare and implement a Security Production Assurance (SPA) program to ensure the security integrity of all Terminals manufactured by the contractor as required by the TSRD. The contractor shall coordinate the requirements for the SPA program with the NSA.

3.7.7 **Reserved.**

3.7.8 **Technical Data Package.** See Appendix A (option).

3.7.9 **Acceptance Verifications.** Acceptance verification shall include ESS and functional tests. The contractor shall use the LRU ESS environmental profile as specified in the SS. See 3.2.3.8.1r. The contractor shall derive the functional test requirements from the requirements specified in the IDSs. The contractor shall develop SRU, LRU, and system level acceptance verifications based on these requirements.

3.7.9.1 **Terminal Acceptance Verification.** The contractor shall plan and conduct AV on each Terminal to be delivered to the Government.

a. Acceptance verification shall be conducted using Government approved acceptance test procedures.

b. In the event that the Government approved AV test procedures are inadequate the perform the required AV tests, the contractor is authorized to modify the AV test procedures provided that the contractor notifies the Government of the modifications to the AV test procedures within 30 calendar days from the incorporation of the modifications.

c. The contractor shall maintain all results from each AV test conducted for Government inspection.

The contractor shall prepare and submit acceptance verification test plans, test procedures, and test report. Separate test plans, test procedures, and test reports are required for the acceptance verification conducted by the U.S. integrator and for the acceptance verifications conducted by the European integrator. (CDRL JF04, CDRL JF05, CDRL JF06)

3.7.9.1.1 **Link 16 Spectral Characteristics and EMC Features.** The contractor shall plan and conduct elements of the AV on each Terminal delivered to the Government to ensure that the Link 16 spectral characteristics are within specification and the EMC features monitors are working properly. The following test may be performed at the SRU or the LRU acceptance test stations. (CDRL JE07, CDRL JF08, CDRL JF09)

3.7.9.1.1.1 **Output Power.** At nine Radio Frequency (RF) carrier frequencies; 969, 990, 1008, 1053, 1065, 1113, 1146, 1176, and 1206 MHz; the AV shall record the transmitted Link 16 peak forward output power at each antenna port when the Terminal is operated in the highest Link 16 output power mode (200 watts or less) for each antenna selection mode. The AV shall verify that the sum of the Link 16 output powers does not exceed the nominal power level +1 dB.

3.7.9.1.1.2 **Pulse Spectrum.** While the Terminal is operating in each of the Link 16 output power modes, the AV shall record plots of the individual transmitted pulse power spectrum at nine RF carrier frequencies; 969, 990, 1008, 1053, 1065, 1113, 1146, 1176, and 1206 MHz; at each antenna when operating in the single antenna mode. The AV shall measure the Link 16 transmitted spectrum in 300 kHz bandwidth segments. For each RF carrier frequency, the plot shall cover a 50 MHz span centered on the carrier. The AV shall verify that the pulse spectra comply with the spectrum requirements specified in the SS.

3.7.9.1.1.3 **Full Band Spectrum.** While the Terminal is operating in each of the Link 16 output power modes and in communication mode 1, the AV shall record spectrum plots over the following frequency bands at each antenna when operating in the single antenna mode. The AV shall measure the spectrum in 300 kHz bandwidth segments.

a. 100 MHz span centered on 925 MHz,

b. 60 MHz span centered on 1030 MHz,

c. 60 MHz span centered on 1090 MHz,

d. 100 MHz span centered on 1250 MHz, and

e. 960 to 1215 MHz.

The AV shall verify the spectra between 920 MHz and 1266 MHz comply with the spectrum requirement specified in the SS.

3.7.9.1.1.4 **Capability to Transmit Detection.** For each Link 16 power mode, the AV shall measure and record the following at each component element, including any and all monitors that verify Link 16 TDMA isolation, that the Terminal monitors to detect when it is capable of Link 16 transmission:

a. The signal level into the monitor when not transmitted or isolated,

b. The signal level into the monitor above which it reports that the amplifier stage is capable of transmitting, and

c. The signal level into the monitor during normal pulse transmissions.

The contractor shall use the AV results to verify that the operating thresholds of the component elements and monitors used for the Link 16 Capability to Transmit Detection function of like deliverable units are within 10% of their nominal acceptance test thresholds.

3.7.9.1.1.5 **1030/1090 MHz Low Level Emissions Detector.** The AV shall measure and record the following:

a. The peak power level of the lowest power pulsed Continuous Wave (CW) signal emitted at 1030 MHz that causes a Link 16 1030/1090 MHz Emissions Fault Report.

b. The peak power level of the lowest power pulsed CW signal emitted at 1090 MHz that causes a Link 16 1030/1090 MHz Emissions Fault Report.

The AV shall measure the Link 16 peak power level using a spectrum analyzer in 3 MHz bandwidth segments. The pulse shape of the injected CW signals shall be as close as possible to the shape of the normally transmitted Link 16 pulses. The AV shall verify that the peak CW power level that causes a Link 16 1030/1090 MHz Emissions Fault Report is no greater than –7 dBm at the MIDS JTRS output ports.

3.7.9.1.1.6 **1030/1090 MHz Low Level Emissions Detector Built-In-Test.** The AV shall inject a test signal into the Terminal that results in an output at the 1030 MHz and 1090 MHz monitor that has the same signal level as the level of the monitor self test signal at those monitor outputs. The width and shape of the injected test signal shall be the same as the Terminal self test signal. The AV shall measure and record the peak power of the injected test signal at the antenna ports using a spectrum analyzer in 3 MHz bandwidth segments. The AV shall verify that the injected signal level is no greater than –5 dBm at the antenna output.

3.7.9.1.1.7 **Pulse Width.** At nine RF carrier frequencies; 969, 990, 1008, 1053, 1065, 1113, 1146, 1176, and 1206 MHz; while operating the Terminal in the highest Link 16 output power mode (200 watts or less), measure and record the following:

a. The average Link 16 pulse width at the 95% voltage level,

b. The average Link 16 pulse width at the level at which the Terminal measures pulse width, and

c. The average of the difference between the results for 3.7.9.1.1.7a and b for the nine RF carrier frequencies. The AV shall denote this average as Δ.

For each of the nine RF frequencies, at the level the Terminal measures pulse width, the AV shall measure and record the following:

d. The narrowest width for which the Terminal will identify pulses as being acceptable width. The AV shall record the average value of these pulse widths for the nine RF frequencies. This AV shall denote this average by NA.

e. The widest width for which the Terminal will identify the pulses as being acceptable width. The AV shall record the average value of these pulse widths for the nine RF frequencies. The AV shall denote this average by WA.

The AV shall verify that NA - $\Delta \geq$ 6080 ns – 50 ns and WA - $\Delta \leq$ 6720 ns + 50 ns.

3.7.9.1.1.8 **Frequency Monitor.** With the Terminal operating in the Link 16 multiple antenna mode and at the highest Link 16 output power mode (200 watts or less), the AV shall measure and record the following:

a. The frequency of an emitted pulse in the vicinity of 1023 MHz above which the Terminal declares a Link 16 1030/1090 MHz fault and below which the Terminal declares a Link 16 Out-Of-Band fault.

b. The frequency of an emitted pulse in the vicinity of 1097 MHz below which the Terminal declares a Link 16 1030/1090 MHz fault and above which the Terminal declares a Link 16 Out-Of-Band fault.

c. The frequency of an emitted pulse in the vicinity of 969 MHz below which the Terminal declares a Link 16 Out-Of-Band fault.

d. The frequency of an emitted pulse in the vicinity of 1206 MHz above which the Terminal declares a Link 16 Out-Of-Band fault.

The AV shall verify that the frequencies measured are within 200 kHz of 1023 MHz, 1097 MHz, 967 MHz, and 1208Mhz.

3.7.9.1.1.9 **Output Power Restriction.** The AV shall verify that the Terminal will indicate excess power when the peak Link 16 pulse output power exceeds 200 watts +2 dB at any Link 16 pulse carrier frequency.

3.7.9.2 **LRU and SRU Acceptance Verification.** The contractor shall plan and conduct acceptance verification on each LRU and SRU to be delivered to the Government separate from complete Terminals. The contractor shall prepare and submit LRU and SRU acceptance verification test plans, test procedures, and test report. Separate test plans, test procedures, and test reports are required for the LRU and SRU acceptance verification conducted by the U.S. integrator and for the LRU and SRU acceptance verifications conducted by the European integrator. (CDRL JF04, CDRL JF05, CDRL JF06)

3.8 QUALITY ASSURANCE

3.8.1 **Quality Assurance (QA) Program.** The contractor shall implement a quality assurance program in accordance with ISO 9001 as supplemented by AQAP-110. The contractor shall apply the quality standards and specifications to:

a. The development and design of the Terminal;

b. The integration of the Terminal hardware and software modules;

c. Achieve and maintain high repeatability in the Terminal production and depot repair lines;

d. Achieve and maintain low variability in the Terminal production and deport repair lines;

e. Internal contractor management processes;

f. Ensure that best commercial practices and policies are in place and the capability exists to audit these practices and policies to confirm that they are being followed;

g. Terminal specifications compliance and request for deviations;

h. FAQT test plans, procedures, and reports;

i. The conduct of the FAQT;

j. Acceptance test plans, procedures, and reports;

k. The conduct of the acceptance tests: and

l. Process improvement.

At PMRs, the contractor shall demonstrate in detail how:

m. Benchmarks and metrics are established and controlled for the development and design process, hardware and software module integration; FAQT, production and fabrication to ensure repeatability results, and acceptance testing;

n. The fabrication processes that are being used will produce or are producing Terminals with low variability at regular intervals; and

o. Internal QA processes meet all applicable Government requirements stated elsewhere in this contract.

The contractor shall document the quality assurance program in a quality system plan. (CDRL JG01)

3.8.2 **Stipulations.** The following stipulations apply:

a. The contractor shall make available for review, and retention if required by the Government, all records associated with the establishment, implementation, and operation of a quality system compliant with the documents listed above.

b. The contractor shall monitor the preparation, maintenance, and compliance with work and inspection instructions as a function of the quality program.

3.8.3 **Calibration System.** The contractor shall maintain a calibration system in accordance with ISO 10012-1 and shall develop and maintain a written description of his calibration system covering measuring and test equipment standards.

3.8.4 **Hardware Quality Audits.** The contractor shall support a hardware quality audit in each location that is fabricating, assembling, or manufacturing hardware for conformance to the SS. The contractor shall provide the management and technical skills necessary to perform hardware quality audits on equipment selected at random by the Government team. Each audit shall be conducted in accordance with ISO 9001 as supplemented by AQAP-110. Each audit shall be contractor performed and Government witnessed for no more than two (2) days in each location. Disassembly will be to the CCA level and will be nondestructive. If the results warrant, an additional teardown and inspection will be accomplished following correction of the deficiencies. The contractor shall initiate corrective action to preclude further deficiencies. The contractor shall make a corrective action plan available to the Government.

3.8.5 **Corrective Action and Disposition System.** The contractor shall maintain a corrective action and disposition system for nonconforming material in accordance with ISO 9001 as supplemented by AQAP-110.

3.8.6 **Subcontractor/Vendor Quality.** The contractor shall implement a subcontractor/vendor quality program in accordance with ISO 9001 as supplemented by AQAP-110.

3.8.7 **Quality Data Trends.** The quality trends data maintained and briefed by the contractor during PMRs shall include but not be limited to the number of scrap, number of rework dispositions, hours of rework, number of repair dispositions, hours of repair, contractor benchmarks, quality metrics to the CCA level, and the additional metrics identified in 3.7.4.

3.8.8 **Material Improvement Program.** The contractor shall define, implement, and verify corrective action for every discrepancy found during host platform and laboratory

integration testing, and during flight testing and Government field testing and attributed to any Terminal HWCI or CSCI or any combination of HWCIs and CSCIs. These discrepancies will be conveyed to the contractor via Government generated service reports. The Government and the contractor will review every discrepancy to decide which corrective actions will be implemented and verified during the development and which corrective actions can be deferred. The contractor shall track and report progress in resolving CI discrepancies. For each corrective action that includes a design change to the Terminal, the contractor shall perform appropriate regressive, formal qualification verification of the modified item to verify that the modified item meets all of its specifications. The Government will act as a arbiter when questions arise as to whether a discrepancy is attributable to a CI. (CDRL JG02)

3.9 **DELIVERY**

3.9.1 **Delivery.** The contractor shall deliver to the Government all Terminals and Terminal LRUs, SRUs, assemblies, subassemblies, and parts. Contract residual assets will be delivered "as is".

3.10 PREOPERATIONAL SUPPORT

3.10.1 **Preoperational Support.** The contractor shall provide and perform engineering, technical, maintenance, supply, field retrofit, and test support through the duration of the Terminal Development Phase 2B contract task for:

a. Host platform and laboratory integration testing which is platform integrator-conducted, contractor-supported testing done at platform integrator facilities to integrate the Terminal with the host platforms.

b. Flight testing and Government field testing which is Government and platform integrator-conducted, contractor-supported testing done at Government and platform integrator facilities to demonstrate completion of the Terminal development and to identity deficiencies.

c. Depot level maintenance.

d. During all host platform and laboratory integration testing, and all flight testing and Government field testing, the contractor shall record information required by 3.6.2. This data shall constitute the measured portion of TBD.

3.10.2 **Engineering Services.** The contractor shall furnish the services of engineers knowledgeable of the operation, maintenance, and functional and performance characteristics of the Terminal during all host platform and laboratory integration testing and all flight testing and Government field testing. Engineering services shall include both on site engineering support including platform application studies and in-plant engineering support. These engineering services shall be provided at the locations and for the time periods including permanent assignments as designated by the Government. These contractor engineers shall be responsible for:

a. All field maintenance and repair of the Terminal. The contractor engineers shall perform this maintenance and repair at the Terminal and LRU levels through LRU and SRU replacement. The Government will provide Spare LRUs and SRUs.

b. Operation of the Terminal as requested.

c. Assistance in the planning for and the execution of integration testing, flight testing, and field testing as requested, including equipment installation. This assistance includes helping to develop test objectives, test plans, test procedures, and test criteria; and participating in Test Planning Working Groups (TPWGs).

d. Installation, test, and verification of all field changes to the Terminal.

e. Analysis and evaluation of integration test results, flight test results, and field test results as requested.

f. Depot repair coordination, including the shipment of all Terminal components that cannot be repaired at the field locations to the contractor's depot for repair and the replenishment of Government spares.

g. Field site administration and record keeping, including failure reports, configuration records, problem reports, technical observations, and recommendations. At all times, each of these contractor engineers shall be able to identify the exact configuration of each and every Terminal for which he or she has responsibility.

h. Retrofit of hardware and software updates.

The contractor shall provide these engineering services at the designated test locations. The contractor shall provide all documentation, tools, training, and test equipment necessary for the performance of these engineering services dependent on Government procurement decisions. The contractor shall be responsible for the maintenance and calibration for these tools and test equipment.

3.10.3 **Depot Level Maintenance.** The contractor shall establish and operate a repair depot capability. As part of the depot operation, the contractor shall perform the following:

a. Repair all Terminal components that cannot be repaired at field locations such that those components are returned to the fully functional status. For the purposes of pre-operational support, the contractor shall identify long lead and high cost items. Long lead refers to those items (repair parts/components) that create repair turn around times of greater than 30 days. High cost refers to those items (repair parts/components) which is repurchased have greater than 20% cost increase over the original procurements. Long lead and high cost repair items will be provide by the Government.

b. Establish and operate bonded storerooms for receiving and storing failed components, repaired components, and Government long lead and high cost repair items.

c. Upgrade all returned Terminal components to their most recent approved configurations as mutually agreed by the Government and the contractor.

d. Perform acceptance tests on all repaired and upgraded Terminal components.

e. Replenish Government spares with components of the most recent approved configuration.

f. Administration and record keeping, including failure reports, configuration records, status of depot repairs, problem reports, technical observations, recommendations, and repair/consumption /usage reports for Government spares and repair parts. At all times, the contractor shall be able to identify the exact configuration of all Terminal components shipped from the depot.

The contractor shall provide the facilities and all documentation, tools, training, and test equipment necessary to operate the depot through the duration of this MIDS JTRS Delivery Order. The contractor shall be responsible for the maintenance and calibration for these tools and test equipment.

3.11 VENDOR TO VENDOR INTERCHANGABILITY.

3.11.1 **Interchangeability Verification.** The contractor, in conjunction with the other participating contractors, shall plan and conduct Vendor to Vendor interchangeability qualification verifications to verify compliance with the interchangeability requirements of the FBL and Clause C-2.1, not later than five months after both U.S participating contractors have obtained their First Article Approvals. (CDRL JH01, CDRL JH02, CDRL JH03)

4. NOTES

4.1 **Definitions.** This section provides definitions for some of the terms used in this SOW:

European Configuration Terminal. A Terminal configuration, either Master or Slave, consisting of a RT LRU and a RPS LRU where the RT LRU provides MIL-STD-1553 and 3910 data interfaces.

Line Replaceable Unit. An item that is to be functionally isolated and physically removed during on-platform maintenance. An LRU consists of one or more Shop Replaceable Units. The LRU is equivalent to the Weapons Replaceable Assembly (WRA) terminology used by the U.S. Navy.

Master Configuration Terminal. A Terminal configuration consisting of a RT LRU and a RPS LRU where the RT LRU contains a Link 16 Radio Frequency Amplifier (RFA) SRU, three 2 - 2000 MHz Transceivers SRUs, and a TACAN/Global Positioning System (GPS) SRU. A Master Configuration Terminal may be used for stand alone operation or in conjunction with a Slave Configuration Terminal.

Shop Replaceable Unit. An item within an LRU that can be functionally isolated and physically removed. The SRU is equivalent to the Shop Replaceable Assembly (SRA) terminology used by the U.S. Navy.

Slave Configuration Terminal. A Terminal configuration consisting of a RT LRU and a RPS LRU where the RT LRU contains four 2 - 2000 MHz Transceiver SRUs. The Slave Configuration Terminal does not contain a Link 16 RFA SRU or a TACAN/GPS SRU. A Slave Configuration Terminal may only be used in conjunction with a Master Configuration Terminal.

Specialized Test Equipment. Test equipment that is part of the FAQT/acceptance test equipment or the factory test equipment and that has no application other than testing of the Terminal.

U.S. Configuration Terminal. A Terminal configuration, either Master or Slave, consisting of a RT LRU and a RPS LRU where the RT LRU provides MIL-STD-1553 and Ethernet data interfaces.

4.2 **Abbreviations and Acronyms.** The following is a list of abbreviations and acronyms used in the SOW:

ABL	Allocated Baseline
ADP	Automatic Data Processing
ANSI	American National Standards Institute
API	Application Program Interface
ASIC	Application Specific Integrated Circuit

ASME	American Society of Mechanical Engineers
ATE	Automatic Test Equipment
AV	Acceptance Verification
BIT	Built In Test
BMPCOE	Best Manufacturing Practices Center of Excellence
CAGE	Commercial and Government Entity
CASS	Consolidated Automatic Support System
CCA	Circuit Card Assembly
CCB	Configuration Control Board
CCDR	Contractor Cost Data Reporting
CDMP	Configuration and Data Management Plan
CDR	Critical Design Review
CDRL	Contract Data Requirements List
CDSR	Cost Data Summary Report
CE	Concurrent Engineering
CFSR	Contract Funds Status Report
CI	Configuration Item
CLIN	Contract Line Item Number
CMAR	Configuration Management Accounting Record
CMP	Configuration Management Plan
COMSEC	Communication Security
COTS	Commercial-Off-The-Shelf
CPR	Cost Performance Report
CPU	Central Processing Unit
CSCI	Computer Software Configuration Item
CSCS	Cost Schedule Control System
CW	Continuous Wave
CWBS	Contractor Work Breakdown Structure
DCMA	Defense Contracts Management Agency
DoD	Department of Defense
DRACAS	Data Recording, Analysis and Corrective Action System
DRR	Design Readiness Review
ECP	Engineering Change Proposal
EIA	Electronic Industries Alliance
EMC	Electromagnetic Compatibility
EMCP	Electromagnetic Compatibility Program
EMI	Electromagnetic Interference
ESS	Environmental Stress Screening
EVMS	Earned Value Management System
FAR	Federal Acquisition Regulations
FAQT	First Article Qualification Test
FBL	Functional Baseline
FCA	Functional Configuration Audit
FMECA	Failure Modes, Effects, and Criticality Analysis
FRACAS	Failure Reporting, Analysis and Corrective Action System
GFP	Government Furnished Property

GPS	Global Positioning System
HWCI	Hardware Configuration Item
IBR	Integrated Baseline Review
ICD	Interface Control Document
ICWG	Interface Control Working Group
IDD	Interface Design Document
IDS	Item Detail Specification
ILS	Integrated Logistics Support
ILSM	Integrated Logistics Support Manager
ILSMT	Integrated Logistics Support Management Team
INFOSEC	Information Security
I/O	Input/Output
IPS	Item Performance Specification
IPT	Integrated Product Team
IR	Investigation Request
IRS	Interface Requirements Specification
ISP	Integrated Support Plan
ISO	International Standards Organization
ITAR	International Traffic in Arms Regulations
JETDES	Joint Electronic Type Designation
JTRS	Joint Tactical Radio System
LCN	LSA Control Number
LLTI	Long Lead Time Item
LRU	Line Replaceable Unit
LSA	Logistics Support Analysis
LSAP	Logistics Support Analysis Plan
LSAR	Logistics Support Analysis Record
LVT	Low Volume Terminal
MARO	Months After Receipt of Order
MCM	Multichip Module
MIDS	Multifunctional Information Distribution System
MMIC	Monolithic Microware Integrated Circuit
MRP	Material Resource Planning
MRSA	Material Readiness Support Activity
MSDS	Material Safety Data Sheet
MTBF	Mean Time Between Failure
NARTE	National Association of Radio and Telecommunication Engineers
NATO	North Atlantic Treaty Organization
NEMP	Nuclear Electromagnetic Pulse
NHA	Next Higher Assembly
NOR	Notice of Revision
NSA	National Security Agency
NSN	National Stock Number
NVLAP	National Voluntary Laboratory Accreditation Program
O&S	Operational and Support
OSHA	Occupational Safety and Health Administration

PBL	Product Baseline
PCA	Physical Configuration Audit
PDR	Preliminary Design Review
PHS&T	Packaging, Handling, Storage, and Transportation
PICA	Primary Inventory Control Activity
PKI	Public Key Infrastructure
PLISN	Provisioning List Item Sequence Number
PMR	Program Management Review
PMWS	Program Mangers WorkStation
POC	Point of Contact
PRR	Production Readiness Review
QA	Quality Assurance
RCM	Reliability Centered Maintenance
RF	Radio Frequency
RFA	Radio Frequency Amplifier
RFD	Requests for Deviation
RFP	Request for Proposal
RGT	Reliability Growth Test
R&M	Reliability and Maintainability
ROM	Read Only Memory
RPS	Remote Power Supply
R/R	Remove/Replace
RT	Receiver Transmitter
RVP	Regression Verification Procedure
RVR	Regression Verification Report
SCA	Software Communications Architecture
SDD	Software Design Description
SDP	Software Development Plan
SEMP	Systems Engineering Management Plan
SFQT	Software Formal Qualification Test
SINCGARS	Single Channel Ground to Air Radio System
SOW	Statement of Work
SPA	Security Production Assurance
SPQT	Software Preliminary Qualification Test
SPS	Software Product Specification
SRA	Shop Replaceable Assembly
SRS	Software Requirements Specification
SRU	Shop Replaceable Unit
SS	System Specification
S/SICS	System/Segment Interface Control Specification
SSL16W	System Specification for Link 16 Waveform
SSTW	System Specification for TACAN Waveform
STE	Specialized Test Equipment
STP	Software Test Plan
TAAF	Test, Analyze, and Fix
TDP	Technical Data Package

TDMA	Time Division Multiple Access
TIM	Technical Interchange Meeting
TLCSC	Top Level Computer Software Components
TPS	Test Program Set
TPWG	Test Planning Working Group
TRIMS	Technical Risk Identification and Mitigation System
TRR	Test Readiness Review
TSRD	Telecommunications Security Requirements Document
TWG	Technical Working Group
UIC	Unified INFOSEC Criteria
U.S.	United States
VCRM	Verification Cross Reference Matrix
VPO	Virtual Program Office
WDS	Waveform Development Specification
WRA	Weapons Replaceable Assembly

APPENDIX A

(Option)

Technical Data Package

10.0 **Scope.** This appendix defines the required additional efforts associated with the delivery of a manufacturing TDP.

10.1 **Generation of Specifications.** In addition to the requirements of 3.2.3.2.10, the contractor's system engineering activity shall:

a. Generate, update, and maintain full IDSs for all HWCIs in accordance with Section 4 and Appendix A of MIL-STD-961. The IDSs shall be based on and expansions of the IDSs generated under 3.2.3.2.10d. (CDRL JA04)

10.2 **Technical Data Package.** The contractor, individually and in conjunction with the other participating contractors, shall maintain the elements of the TDP not under Government configuration control as they are developed as a composite set.

The contractor, in conjunction with the other participating contractors, shall maintain the following documents:

a. The IDSs,

The contractor shall maintain the following documents:

b. The product drawings and associated lists, exclusive of COTS items and non-developed equipment,

c. The special tooling drawings and associated lists.

In the event that the contractor develops specialized test equipment (special inspection equipment) (see 10.3) as part of the factory test equipment or the acceptance test equipment, the contractor shall also maintain the following documents as they are developed as part of the same composite set listed above:

d. Special inspection equipment drawings and associated lists,

e. Special inspection equipment operating instructions,

f. Special inspection equipment descriptive documentation, and

g. Special inspection equipment calibration procedures.

When completed, this composite set of TDP documents together with the FBL and ABL documents under Government configuration control, the SPSs, the IDDs/APIs, the acceptance test plans, and the acceptance test procedures shall constitute a complete design disclosure for the Terminal. In the event that the above list of documents together with the documents composing the FBL and ABL, the SPSs, the IDDs/APIs, the acceptance test plans, and the acceptance test procedures does not constitute a complete design disclosure for the Terminal, the contractor, in conjunction with the other participating contractors, shall promptly identify the deficiencies and shall prepare and submit a proposal containing additional data items which shall provide for a complete design disclosure. As delivered the TDP shall include all configuration changes approved prior to the completion of the PCA, and shall exactly represent the design configuration and the manufacturing processes of the Terminal that successfully completed contractor FAQT. The TDP shall not include any COMSEC/TEMPEST information. (CDRL JC0G)

10.3 **Specialized Test Equipment.** The contractor shall provide the design, operating instructions, description, and calibration procedures of all STE (special inspection equipment) developed under this contract for the Terminal as part of the factory test equipment or the acceptance equipment. For all STE the contractor shall provide the software internal documentation through the data accession list as soon as it is available and prior to the formal use of this test equipment. (CDRL JC0G)

10.4 **Physical Configuration Audit.** The contractor shall schedule and conduct jointly with Government personnel a PCA for the Terminal and for each Terminal HWCI and CSCI for which an IPS or a SRS has been prepared. The PCA shall be conducted after completion of the FCA and in accordance with section 5.5.2 of ANSI/EIA-649. (CDRL JC0F)

10.5 **Product Drawings and Associated Lists.** The contractor shall prepare, revise, and maintain the product drawing and associated lists in accordance with ASME Y14.100-2000, ASME Y14.24-1999, ASME Y14.34M-1996, and ASME Y14.35M-1997.

APPENDIX B

Preliminary Design Review

20.0 **Scope.** This appendix defines the requirements for the PDR.

20.1 **General.** The PDR shall be a formal technical review of the basic design approach for the Terminal and its composite HWCIs and CSCIs.

20.2 **Items to be Reviewed.** The contractor, in conjunction with the other participating contractors, shall present the following for review:

20.2.1 **HWCIs:**

a. The preliminary design synthesis of the hardware IPSs for the Terminal HWCIs.

b. Trade studies and design studies results.

c. Functional flow, requirements allocation data, and schematic diagrams.

d. Terminal Conceptual Drawings and Associated Lists. (CDRL JJ01)

e. Any proprietary or restricted design/process/components and information.

f. Environmental control and thermal design aspects.

g. Electromagnetic compatibility of the preliminary design.

h. Power distribution and grounding design aspects.

i. Preliminary mechanical and packaging design.

j. Safety engineering considerations.

k. Security engineering considerations.

l. Survivability/Vulnerability (including NEMP) considerations.

m. Preliminary lists of materials, parts, and processes.

n. Pertinent reliability and maintainability data.

o. Preliminary size and weight data.

p. Development test data to the extent such exists.

q. Interface requirements contained in IPSs and ICDs, and interface control data (e.g. Interface Control Drawings) derived from these requirements.

r. Configuration item development schedules.

rs Mock-ups, models, breadboards, or prototype hardware to the extent such exists.

t. Producibility and manufacturing considerations (e.g. materials, tooling, test equipment, processes, facilities, skills, and inspection techniques). Identify single source, sole source, diminishing source.

u. Transportability, packaging, and handling considerations.

v. Human engineering considerations.

w. Standardization considerations.

z. Platform compatibility.

y. Corrosion prevention/control considerations.

z. Finding and status of the quality assurance program.

aa. Support equipment requirements.

20.2.2 **CSCIs:**

a. Functional flow. The computer software functional flow embodying all of the requirements allocated from the SRSs and IRSs to the individual Top-Level Computer Software Components (TLCSCs) of each CSCI shall be presented.

b. Storage allocation data. This information shall be presented for each CSCI as a whole, describing the manner in which available storage is allocated to individual TLCSCs. Timing, sequencing requirements, and relevant equipment constraints used in determining the allocation shall be included.

c. Control function descriptions. A description of the executive control and start/recovery features of each CSCI shall be available, including method of initiating system operation and features enabling recovery from system malfunction.

d. CSCI structure. The top-level structure of each CSCI, the reasons for choosing the components described, the development methodology which will be used within the constraints of the available computer resources, and any support program which will be required in order to develop/maintain the CSCI structure and allocation of data storage.

e. Security. An identification of unique security requirements and a description of the techniques to be used for implementing and maintaining security within each CSCI shall be provided.

f. Reentrancy. An identification of any reentrancy requirements and a description of the techniques for implementing reentrant routines shall be available for review.

g. Computer software development facilities. The availability, adequacy, and planned utilization of the computer software development facilities shall be addressed.

h. Computer software development facility versus the operational system. Information relative to unique design features which may exist in a TLCSC in order to allow use within the computer software development facility, but which will not exist in the TLCSC installed in the operational system shall be provided. Information on the design of support programs not explicitly required for the operational system but which will be generated to assist in the development of the CSCIs shall be provided. Details of the Software Development Library controls shall be provided.

i. Development tools. Descriptions of any special simulation, data reduction, of utility tools that are not deliverable under the terms of the contract, but which are planned for use during software development shall be provided.

j. Test tools. Descriptions of any special test system, test data, data reduction tools, test computer software, or calibration and diagnostic software that are not deliverable under the terms of the contract, but which are planned for use during product development shall be provided.

k. Descriptions and characteristics of commercially available computer resources, including any optional capabilities such as special features, interface units, special instructions, controls, formats, etc. shall be provided. Limitations of commercially available equipment such as failure to meet human engineering, safety, and maintainability requirements of the SRS shall be include. Deficiencies shall be identified.

l. Existing documentation (technical orders, commercial manuals, etc.) for commercially available computer resources and copies of contractor specifications used to procure computer resources shall be made be provided.

m. Support resources. Those resources necessary to support the software during operational deployment of the system, such as operational and support hardware and software, personnel, special skills, human factors, configuration management, test, and facilities/space shall be described.

n. Operation and support documents.

o. Review considerations applicable to 20.2.1 as appropriate.

20.2.3 **Additional PDR Elements.** The contractor shall present:

a. The development status and configuration of the FAQT/acceptance test equipment and the factory test equipment; the status of the recommendation for and the configuration of hardware and software for the Terminal support facility; the commonality between the FAQT/acceptance test equipment, the factory test equipment, and the recommended hardware and software for the Terminal support facility; the COTS hardware and software selected; and the system engineering model elements for production representative deliveries in accordance with 3.2.3.2.

b. The producibility status of the Terminal including the results of the producibility analysis in accordance with 3.2.3.2.7.

c. The identification of the critical items in accordance with 3.2.3.2.9.

d. The results of the analysis on the impact to system safety due to the Terminal design in accordance with 3.2.3.6.1.

e. The results of the analysis on the impact to human engineering due to the Terminal design in accordance with 3.2.3.7.1.

f. The status of the reliability and maintainability program in accordance with 3.2.3.8.1.

g. The results of the BIT development study in accordance with 3.2.3.8.2.1.

h. A review of the BIT development of the Terminal in accordance with 3.2.3.8.2.2

i. The estimates of computer reserve capacity (memory, throughput, and processing power) per channel for the processors hosting Terminal CSCIs in accordance with 3.2.8.2.1.

j. The results of the TRIMS site survey report in accordance with 3.5.5f.

k. All pertinent aspects of the LSA program and the associated LSA data in accordance with 3.6.2.1.2 and 3.6.2.3.4.

APPENDIX C

Critical Design Review

30.0 **Scope.** This appendix defines the requirements for the CDR.

30.1 **General.** The final PDR shall be a formal technical review of the detail design for the Terminal and its composite HWCIs and CSCIs.

30.2 **Items to be Reviewed.** The contractor, in conjunction with the other participating contractors, shall present the following for review:

30.2.1 **HWCIs:**

a. Adequacy of the detail design reflected in the developmental drawings and the IDSs in satisfying the requirements of the IPSs for the HWCIs.

b. Developmental Drawings and Associated Lists. (CDRL JJ02)

c. Adequacy of the detailed design in the following areas:

1. Electrical design.
2. Mechanical design.
3. Environmental control and thermal aspects.
4. Electromagnetic compatibility.
5. Power generation and grounding.
6. Electrical and mechanical interface compatibility.
7. Mass properties.
8. Reliability and maintainability.
9. System safety engineering.
10. Security engineering.
11. Survivability.
12. Producibility and manufacturing.
13. Transportability, packaging, and handling.
14. Human engineering.
15. Standardization.
16. Design versus logistics trade-offs.
17. Support equipment requirements.
18. Testability.
19. Parts derating.

d. Interface control drawings.

e. Mock-ups, breadboards, and prototype hardware.

f. Design analysis and test data.

g. Initial manufacturing readiness (for example: manufacturing engineering; development and proofing of new materials; processes; methods; tooling; test equipment; procedures; reduction of manufacturing risks to acceptable level; personnel identification, training, and qualification).

h. Verify corrosion prevention/control to insure materials have been chosen that will be compatible with operating environment.

i. Finding/status of the quality assurance program.

30.2.2 **CSCIs:**

a. The software detail design, data base design, and interface design together with the associated documents. In the event that the CDR is conducted in increments, complete documents to support that increment shall be available.

b. Supporting documentation describing results of analysis, testing, etc., as mutually agreed by the Government and the contractor.

c. Progress on activities required by CSCI PDR. See section 20.2.2

d. Schedules for the remaining milestones.

e. Updates since the last review to all previously delivered software related CDRL items.

20.2.3 **Additional CDR Elements.** The contractor shall present:

a. The development status and configuration of the FAQT/acceptance test equipment and the factory test equipment; the status of the recommendation for and the configuration of hardware and software for the Terminal support facility; the commonality between the FAQT/acceptance test equipment, the factory test equipment, and the recommended hardware and software for the Terminal support facility; the COTS hardware and software selected; and the system engineering model elements for production representative deliveries in accordance with 3.2.3.2.

b. The producibility status of the Terminal including the results of the producibility analysis in accordance with 3.2.3.2.7.

c. The results of the analysis on the impact to system safety due to the Terminal design in accordance with 3.2.3.6.1.

d. The results of the analysis on the impact to human engineering due to the Terminal design in accordance with 3.2.3.7.1.

e. The status of the reliability and maintainability program with special emphasis on the parts management, TAAF, and ESS programs in accordance with 3.2.3.8.1.

f. A review of the BIT development of the Terminal in accordance with 3.2.3.8.2.2

g. The estimates of computer reserve capacity (memory, throughput, and processing power) per channel for the processors hosting Terminal CSCIs in accordance with 3.2.8.2.1.

h. The results of the TRIMS site survey report in accordance with 3.5.5f.

i. All pertinent aspects of the LSA program and the associated LSA data in accordance with 3.6.2.1.2 and 3.6.2.3.4.

j. The status and results of the defect control program in accordance with 3.7.2.2.

k. The status and results of the manufacturing program planning in accordance with 3.7.3.

l. The status and results of the manufacturing surveillance operation in accordance with 3.7.4.

APPENDIX D

Program Management Reviews

40.0 **Scope.** This appendix defines the program status information to be reported at the PMRs.

40.1 **General.** Each PMR shall be a formal management review of the Terminal development and production program.

40.2 **Items to be Reviewed.** The contractor, in conjunction with the other participating contractors, shall present the following for review:

40.2.1 **The Technical Status:**

a. Summary of action items from all formal meetings and reviews.

b. Technical areas that are a risk to meeting Terminal FBL performance requirements.

c. Technical areas that are a risk to cost and schedule.

d. Proposed corrective actions to minimize risk.

e. LRU technical status broken out to the SRU level.

    1. Reporting information to include quantity to date; deliverables and non-deliverables.

    2. Break out design vs. fabrication, assembly, integration, test and provide current percent complete of process.

f. Software technical presentation to include current period productivity and cumulative project productivity; percentage complete by CSCI for design, code, test, integration, current line of code sizing projections by existing, modified, deleted, new; and risk analysis.

40.2.2 **The Schedule Status:**

a. Status of work relative to Government approved schedules.

b. Risk of missing milestones.

c. Cause and effect of tardy performance of work.

d. Proposed corrective action to schedule problems.

e. Current software schedule status.

f. Schedule for formal technical reviews and subcontractor/vendor reviews.

40.2.3 **The Cost Status:**

a. Financial allocations and staff augmentation.

b. Deviations between planned and actual progress.

c. Status of SRU design costs and SRU fabrication, assembly, integration, test costs with a current percentage of total cost breakout by SRU.

40.2.4 **The Test Status:**

a. Summary of test discrepancy reports.

b. Corrective action planned and accomplished.

c. Retest schedule.

40.2.5 **The Configuration Management Program Status.**

40.2.6 **Logistics and Preoperational Support Status.**

40.2.7 **The Manufacturing Status:**

a. Manufacturing surveillance.

b. Producibility engineering and planning.

c. Quality data trends.

d. Effectiveness of the ESS plan.

40.2.8 **The Status of the Contract Data Required.**

40.2.9 **The Status of the Acceptance and Factory Test Equipment.**

40.2.10 **The Recommended Hardware and Software for the Terminal Support Facility.**

40.2.11 **Additional PMR Elements:**

a. The development status and configuration of the FAQT/acceptance test equipment and the factory test equipment; the status of the recommendation for and the configuration of hardware and software for the Terminal support facility; the commonality between the FAQT/acceptance test equipment, the factory test equipment, and the recommended hardware and software for the Terminal support facility; the COTS hardware and software selected; and the system engineering model elements for production representative deliveries in accordance with 3.2.3.2.

b. The producibility status of the Terminal including the results of the producibility analysis in accordance with 3.2.3.2.7.

c. The schedules for all formal technical reviews in accordance with 3.2.3.3.1 and subcontractor/vendor reviews in accordance with 3.2.3.3.1.6.

d. The planned and actual status of software development in accordance with 3.2.8.3.1.

e. The development status of the STE in accordance with 3.2.10.

f. The results of the TRIMS site survey report in accordance with 3.5.5f.

g. The status and results of the defect control program in accordance with 3.7.2.2.

h. The status and results of the manufacturing program planning in accordance with 3.7.3.

i. The status and results of the manufacturing surveillance operation in accordance with 3.7.4.

j. Quality assurance program information in accordance with 3.8.1m, n, and o.

k. Quality trends data is accordance with 3.8.7.

40.2.12 **Corrective Actions.** Proposed corrective actions to any problems identified in the other items to be reviewed as listed above and to minimize costs throughout the lifecycle of the Terminal.

APPENDIX E

Test Readiness Review

50.0 **Scope.** This appendix defines the requirements for the TRR.

50.1 **General.** The TRR shall be a formal review of the contractor's readiness to begin FAQT. The TRR shall be conducted after the FAQT test procedures are available and the integration of the HWCIs and CSCIs comprising the Terminal is complete. The purpose of the TRR is for the Government to determine whether the contractor is in fact ready to begin the FAQT.

50.2 **Items to be Reviewed.** The contractor shall present the following for review:

50.2.1 **Requirements Changes.** Any and all changes to the FBL that have been approved since the CDR and which impact the conduct of the FAQT.

50.2.2 **Design Changes.** Any and all changes to the designs of the HWCIs and CSCIs comprising the Terminal that have been made since the CDR and which impact the conduct of the FAQT.

50.2.3 **Configuration Identification.** The part number of the Terminal configuration that will be subjected to the FAQT plus the part numbers of the HWCIs and the version numbers of the CSCIs that comprise this Terminal configuration.

50.2.4 **FAQT Test Plans.** Any and all contractor proposed changes to the approved FAQT test plans.

50.2.5 **FAQT Test Procedures.** The test procedures to be used in conducting the FAQT including retest procedures for test anomalies and corrections.

50.2.6 **Traceability.** The traceability between the Terminal requirements as specified in the FBL and the qualification activities and events comprising the FAQT as identified and documented in the System Test Plan and the FAQT test plans and test procedures.

50.2.7 **FAQT Schedule.** The schedule and sequence for all qualification activities and events comprising the FAQT.

50.2.8 **Locations.** Identification and availability status of the facilities where the FAQT will be conducted. For those facilities available to multiple programs where use of each facility must be reserved, the contractor shall present the periods reserved for the Terminal FAQT and demonstrate that those reserved periods are consistent with the overall Terminal FAQT schedule. Identification of the qualification activities and events to be conducted at each location.

50.2.9 **Test Equipment.** Identification and availability status of all test equipment to be used in the conduct of the FAQT including, but not limited to: functional test sets/stations, instrumentation, environmental chambers and specialized environmental test equipment, and EMI/EMC and TEMPEST test chambers and specialized test equipment. For those test equipments available to multiple programs where use of each test equipment must be reserved, the contractor shall present the periods reserved for the Terminal FAQT and demonstrate that those reserved periods are consistent with the overall Terminal FAQT schedule. Test equipment identification shall be by description, manufacturer, nomenclature, and (if know at the time of the TRR) individual serial numbers.

50.2.10 **Test Software.** Identification and availability status of all test software to be used in the conduct of the FAQT. Test software identification shall be by description, vendor/supplier, and nomenclature or version number as applicable.

50.2.11 **Personnel.** Identification, availability status, and qualifications of the personnel that will conduct the FAQT.

50.2.12 **Data Recording.** Identification of how the data will be recorded for each FAQT activity and event.

50.2.13 **Data Reduction and Analysis.** Identification of how the data recorded for each FAQT activity and event will be reduced and analyzed.

50.2.14 **FAQT Limitations.** Identification of all known FAQT limitations.

50.2.15 **Terminal Problems.** Identification and summary of Terminal problem status including all known discrepancies between the performance of the Terminal configuration that will be subjected to the FAQT and the requirements specified in the FBL.

50.2.16 **Security.** Identification of any security measures or guidelines that will be observed.

50.2.17 **Acceptance Test Results.** The results of the acceptances tests conducted prior to the TRR.