

SOLICITATION, OFFER AND AWARD		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE 1 OF 23 PAGES
2. CONTRACT NUMBER	3. SOLICITATION NUMBER N00173-07-R-SC05	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED 16 AUG 07	6. REQUISITION/PURCHASE NUMBER 57-2036-07	
7. ISSUED BY CONTRACTING OFFICER NAVAL RESEARCH LABORATORY ATTN: CODE: 3220.SC WASHINGTON, DC 20375-5326		CODE N00173	8. ADDRESS OFFER TO (If other than Item 7)		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and 4 copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in See Section L-2 until 4pm local time 17 SEP 07
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME Christy Mitchell	B. TELEPHONE (NO COLLECT CALLS)		C. E-MAIL ADDRESS Christy.Mitchell@nrl.navy.mil
		AREA CODE 202	NUMBER 767-0397	EXT.

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OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)
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14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	
15B. TELEPHONE NUMBER	AREA CODE	NUMBER	EXT.	17. SIGNATURE
15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.				18. OFFER DATE

AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)) <input type="checkbox"/> 41 U.S.C. 253(c) ()		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than Item 7)		25. PAYMENT WILL BE MADE BY	28. AWARD DATE
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

**PART I - THE SCHEDULE
SECTION B
SUPPLIES OR SERVICES AND PRICES/COSTS**

B-1 SUPPLIES/SERVICES AND COSTS

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
0001	The Contractor shall provide Research and Development, Engineering and Technical support in accordance with Section C.	\$	\$	\$
0002	Data in accordance with Exhibit A (DD 1423).	NSP*	NSP	NSP

TOTAL ESTIMATED COST PLUS FIXED FEE: \$ \$ \$

* *Not Separately Priced*

NOTICE TO OFFERORS: In addition to inserting the estimated cost and fixed fee for the base year above, the estimated cost and fixed fee for each optional extension of the term of the contract are to be inserted in Section H.

**SECTION C
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

C-1 STATEMENT OF WORK

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

C-2 REQUIREMENTS FOR ON-SITE CONTRACTORS

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 01 June 2007 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/13onsite.htm>

**SECTION D
PACKAGING AND MARKING**

D-1 PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**SECTION E
INSPECTION AND ACCEPTANCE**

E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE

FAR CLAUSE TITLE

- 52.246-8 - Inspection Of Research And Development - Cost Reimbursement (MAY 2001)
- 52.246-9 - Inspection Of Research And Development (Short Form) (APR 1984)

DFARS CLAUSE TITLE

- 252.246-7000 - Material Inspection And Receiving Report (MAR 2003)

E-2 INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

**SECTION F
DELIVERIES OR PERFORMANCE**

F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE TITLE

- 52.242-15 - Stop-Work Order (AUG 1989) - Alternate I (APR 1984)
- 52.247-34 - F.O.B. Destination (NOV 1991)

F-2 PERIOD AND PLACE OF PERFORMANCE

- (a) The term of this contract is from date of contract award through 12 months thereafter with (4) options that will extend the period of performance for an additional 12 months each, if exercised.
- (b) The principal place of performance of this contract shall be at the Naval Research Laboratory, Washington, D.C., 20375.

SECTION G
CONTRACT ADMINISTRATION DATA

G-1 PROCURING OFFICE REPRESENTATIVE

In order to expedite administration of the contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Security Matters- Contracting Officer for Security, Code 1221, (202) 767-2240, DSN 297-2240, email security-group@nrl.navy.mil

Safety Matters- Head Safety Branch, Code 3540, (202) 767-2232, DSN 297-2232, email safety@nrl.navy.mil

Patent Matters-Associate Counsel (Intellectual Property), Code 1008.2, (202) 404-1552, DSN 297-1552, email patents@nrl.navy.mil

Release of Data-Public Affairs Officer, Code 1030 (202) 767-2541, DSN 297-2541, email publicaffairs@nrl.navy.mil

G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS

* is hereby designated the cognizant COR who will represent the Contracting Officer in the technical monitoring and administration of this contract. In accordance with Section E, the COR will accomplish inspection and acceptance of deliverables under this contract. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or the statement of work, a modification must be issued in writing and signed by the Contracting Officer. Unless terminated sooner, this appointment is effective for the period of performance of this contract including any options, if exercised. COR authority may not be redelegated. No change in COR assignment shall be made without written notice by the Contracting Officer, who will modify the contract to reflect the change of COR assignment.

*(* To be completed at time of award)*

G-3 TECHNICAL DIRECTION MEMORANDUM (TDM)

- (a) For the purposes of this clause, technical direction includes the following:
- (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
 - (2) Guidelines to the Contractor, which assist in interpretation of drawings, specifications or technical portions of, work description.
- (b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:

- (1) Assign additional work under the contract;
 - (2) Direct a change as defined in the contract clause entitled "Changes";
 - (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
 - (4) Change any of the terms, conditions or specifications of the contract
- (c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.
- (d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.
- (e) TDMs shall include, but not be limited to, the following information:
- (1) Date of TDM,
 - (2) Contract Number,
 - (3) Reference to the relevant portion or item in the Statement of Work,
 - (4) The specific technical direction or clarification, and
 - (5) The signature of the COR.
- (f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.
- (g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

G-4 SUBCONTRACTORS/CONSULTANTS

- (a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).
- (b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name	Estimated Cost
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(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)

G-5 INCREMENTAL FUNDING

Pursuant to the Limitation of Funds clause (FAR 52.232-22), the total amount allotted to this contract is \$* and it is estimated that this amount is sufficient for contract performance through * .
*(*this provision will be included and completed at time of award, if applicable)*

G-6 INFORMATIONAL SUBLINE ITEMS

It is anticipated that the research and development services performed under this contract will be paid for from multiple sources of funds. Informational subline items will be established as necessary to identify each accounting citation classification.

G-7 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

If there is more than one ACRN within a contract line item, the payment office will make payment using the ACRN(s) cited on the contractor's invoice.

G-8 PAYMENT AND VOUCHER INSTRUCTIONS

In accordance with the contract clause, *Electronic Submission of Payment Requests* (DFARS 252.232-7003), the contractor must submit requests for payment electronically in the Wide Area Workflow (WAWF). It may be accessed at its homepage <https://wawf.eb.mil/>. If the contractor has not registered with WAWF, instructions for doing so may be accessed at: <https://wawf.eb.mil/vreg.htm>. The designated Electronic Business (EB) point of contact in the Central Contractor Registration (CCR) is the person responsible for activating the company's CAGE code in WAWF by calling 1-866-618-5988.

The following information is applicable to vouchers submitted under this contract using WAWF:

Under "Create New Document" select "Cost Voucher". When you enter the contract number, some of the other fields in the document may fill out automatically.

Use the appropriate Item Number stated in Section B of the contract (e.g., 0001, 0002 or 0001AA, 0001AB, etc).

If the contract contains multiple accounting classification reference numbers (ACRNs), the ACRN(s) from which payment is to be made must be cited on the voucher. If more than one ACRN is cited, the voucher must indicate the amounts to be paid from each. Information may be obtained from the COR to assist the contractor in determining the appropriate ACRNs from which payment is to be made.

ROUTING TABLE DATA REQUIRED FOR SUBMISSION OF INVOICE TO WAWF	
Document Type	Cost Voucher
Contract Number	N00173-07-
Issued By DoDAAC	N00173
Admin By DoDAAC	
Pay DoDAAC	
LPO	N00173
Ship To DoDAAC	N00173 Extension
Service Acceptor	N00173 Extension
DCAA Auditor DoDAAC	
CAGE Code	

IMPORTANT: When submitting vouchers using WAWF, utilize the “**Send More Email Notifications**” function in WAWF. This additional notification is important to ensure the Government Acceptor is aware that the invoice documents have been submitted into the WAWF system.

Send More Email Notifications	
Acceptor email	@nrl.navy.mil

Pursuant to DFARS 242.803(b)(i)(c), if the cognizant Government auditor has notified the contractor of its authorization to do so, the contractor may submit vouchers under this contract direct to the payment office. Such authorization does not extend to the first and final vouchers.

For assistance with the WAWF system, you may contact the Navy WAWF Assistance Line : 1-800-559-WAWF(9293).

SECTION H SPECIAL CONTRACT REQUIREMENTS

H-1 TYPE OF CONTRACT

This is a *

*(*To be completed at time of award)*

H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)

- (a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.
- (b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least thirty (30) days in advance (sixty (60) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.
- (c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.
- (d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel: *

(*To be completed at time of award)

Labor Category	First/M/Last Name

H-3 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 30,090 total hours of direct labor for the basic award and 30,090 total hours for each option period, if exercised, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.

(b) The level of effort for this contract shall be expended at an average rate of 2,508 hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{(\text{Required LOE Hours} - \text{Expended LOE Hours})}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the

Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is as follows:

Labor Category	Basic	Option I	Option II	Option III	Option IV
Senior Microwave Engineer	1020	1020	1020	1020	1020
Microwave Engineer	1020	1020	1020	1020	1020
Analog/Digital Engineer	3060	3060	3060	3060	3060
DSP Engineer	17340	17340	17340	17340	17340
Senior Software Engineer	1020	1020	1020	1020	1020
Mechanical Engineer	1020	1020	1020	1020	1020
Microwave Technician	1020	1020	1020	1020	1020
Field Test Engineer/Scientist	4080	4080	4080	4080	4080
Program Manager	510	510	510	510	510
Totals	30,090	30,090	30,090	30,090	30,090

H-4 ONR 5252.235-9714 - REPORT PREPARATION (JUL 2005)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-2005, Scientific and Technical Reports: Elements, Organization, and Design.

[NOTE: All NISO American National Standards are available as free, downloadable pdf(s) at <http://www.niso.org/standards/index.html> . NISO standards can also be purchased in hardcopy form from NISO Press Fulfillment, P. O. Box 451, Annapolis Junction, MD 20701-0451 USA. Telephone U.S. and Canada: (877) 736-6476; Outside the U.S. and Canada: 301-362-6904 ax: 301-206-9789.]

H-5 ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)

In accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), all EIT supplies and services provided under this contract must comply with the applicable accessibility standards issued by the Architectural and Transportation Barriers Compliance Board at 36 CFR part 1194 (see FAR Subpart 39.2). Electronic and information technology (EIT) is defined at FAR 2.101.

H-6 OPTION TO EXTEND THE TERM OF THE CONTRACT

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer giving written notice of renewal to the Contractor within the existing term of the contract. The Government may exercise its option to renew the contract a total of four (4) times and each such renewal shall extend the term of the contract by twelve (12) months. The Contractor agrees that performance under each such renewal shall be accomplished in accordance with all of the terms and conditions of this contract and at the estimated cost and fixed fee set forth below:

First Option

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

Second Option

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

Third Option

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

Fourth Option

Estimated Cost:	\$
Fixed Fee:	\$
Estimated Cost Plus Fixed Fee:	\$

H-7 ON-SITE USE OF GOVERNMENT PROPERTY

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

H-8 PROTECTION OF HUMAN SUBJECTS

Any collection or analysis of data from human subjects must not commence until the contractor provides the following information per SECNAV 3900.39D 8.d. (1):

- (a) An appropriate DoD Navy Assurance or a Federalwide Assurance (FWA) with a DoD Navy addendum to the FWA, or an application for a DoD Navy Assurance.
- (b) Documentation of the Institutional Review Board's (IRBs) initial and continuing review and approval.
- (c) IRB-approved informed consent form, except when not required consistent with law and regulation.
- (d) IRB-approved research protocol.
- (e) Documentation that research ethics and human subject protections training has been completed by the contractor's principle investigators.

The contractor has responsibility for certain reporting requirements per SECNAV 3900.39D 8.d. (2).

PART II - CONTRACT CLAUSES**SECTION I****CONTRACT CLAUSES****I-1 FAR 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

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

<http://www.acqnet.gov/far>

<http://heron.nrl.navy.mil/contracts/home.htm>

a. FEDERAL ACQUISITION REGULATION CLAUSES**FAR CLAUSE TITLE**

52.202-1	-	Definitions (JUL 2004)
52.203-3	-	Gratuities (APR 1984)
52.203-5	-	Covenant Against Contingent Fees (APR 1984)
52.203-6	-	Restrictions On Subcontractor Sales To The Government (SEP 2006)
52.203-7	-	Anti-Kickback Procedures (JUL 1995)
52-203-8	-	Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
52.203-10	-	Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)

- 52.203-12 - Limitation On Payments To Influence Certain Federal Transactions (SEP 2005)
- 52.204-2 - Security Requirements (AUG 1996)
- 52.204-4 - Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
- 52.204-7 - Central Contractor Registration (JUL 2006)
- 52.204-9 - Personal Identity Verification Of Contractor Personnel (NOV 2006)
- 52.209-6 - Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (SEP 2006)
- 52.211-15 - Defense Priority And Allocation Requirements (SEP 1990)
- 52.215-2 - Audit And Records-Negotiation (JUN 1999)
- 52.215-8 - Order Of Precedence - Uniform Contract Format (OCT 1997)
- 52.215-10 - Price Reduction For Defective Cost Or Pricing Data (OCT 1997)
- 52.215-11 - Price Reduction For Defective Cost Or Pricing Data - Modifications (OCT 1997)
- 52.215-12 - Subcontractor Cost Or Pricing Data (OCT 1997)
- 52.215-13 - Subcontractor Cost Or Pricing Data Modifications (OCT 1997)
- 52.215-14 - Integrity Of Unit Prices (OCT 1997)
- 52.215-15 - Pension Adjustments And Asset Reversions (OCT 2004)
- 52.215-17 - Waiver Of Facilities Capital Cost Of Money (OCT 1997)
(*will be included if the successful offeror does not propose facilities capital cost of money*)
- 52.215-18 - Reversion Or Adjustment Of Plans For Post-Retirement Benefits (PRB) Other Than Pensions (JUL 2005)
- 52.215-19 - Notification Of Ownership Changes (OCT 1997)
- 52.215-21 - Requirements For Cost Or Pricing Data Or Information Other Than Cost or Pricing Data -Modifications (OCT 1997)
- 52.216-7 - Allowable Cost And Payment (DEC 2002) (fill in 30th)
- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.216-15 - Predetermined Indirect Cost Rates (APR 1998)
- 52.219-3 - Notice Of Total HUBZone Set-Aside (JAN 1999)
- 52.219-6 - Notice Of Total Small-Business Set-Aside (JUN 2003)
- 52.219-8 - Utilization Of Small Business Concerns (MAY 2004)
- 52.219-14 - Limitations On Subcontracting (DEC 1996)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (JUN 2003)
- 52.222-21 - Prohibition Of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (MAR 2007)
- 52.222-35 - Equal Opportunity For Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (SEP 2006)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (SEP 2006)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (AUG 2003)
- 52.223-6 - Drug-Free Workplace (MAY 2001)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.223-14 - Toxic Chemical Release Reporting (AUG 2003)
- 52.225-13 - Restrictions On Certain Foreign Purchases (FEB 2006)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)

- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-10 - Filing Of Patent Application- Classified Subject Matter (APR 1984)
- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-17 - Interest (JUN 1996)
- 52.232-18 - Availability Of Funds (APR 1984)
- 52.232-20 - Limitation Of Cost (APR 1984) (*Applicable when the contract or task order is fully funded*)
- 52.232-22 - Limitation Of Funds (APR 1984) (*Applicable when the contract or task order is not fully funded*)
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (OCT 2003) Alternate I (FEB 2002)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (OCT 2003)
- 52.233-1 - Disputes (JUL 2002)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.233-4 - Applicable Law For Breach Of Contract Claim (OCT 2004)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (MAY 2001)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.243-6 - Change Order Accounting (APR 1984)
- 52.243-7 - Notification Of Changes (APR 1984) fill in 30
- 52.244-2 - Subcontracts (JUN 2007) - Alternate I (JUN 2007)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items (MAR 2007)
- 52.245-1 - Government Property (JUN 2007)
- 52.245-2 - Government Property Installation Operation Services (JUN 2007)
- 52.245-9 - Use And Charges (JUN 2007)
- 52.245-19 - Government Property Furnished "As-Is" (APR 1984)
- 52.246-23 - Limitation Of Liability (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (FEB 2006)
- 52.247-63 - Preference For U. S. Flag Air Carriers (JUN 2003)
- 52.249-6 - Termination (Cost-Reimbursement) (MAY 2004)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984) (fill in Defense Federal Acquisition Regulation Supplement (48 CFR Chapter 2))
- 52.253-1 - Computer Generated Forms (JAN 1991)

b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

DFARS CLAUSE TITLE

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related

- Felonies (DEC 2004)
- 252.203-7002 - Display Of DoD Hotline Poster (DEC 1991)
- 252.204-7000 - Disclosure Of Information (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Alternate A (NOV 2003)
- 252.204-7005 - Oral Attestation Of Security Responsibilities (NOV 2001)
- 252.205-7000 - Provision Of Information To Cooperative Agreement Holders (DEC 1991)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (DEC 2006)
- 252.215-7000 - Pricing Adjustments (DEC 1991)
- 252.215-7004 - Excessive Pass-Through Charges (APR 2007)
- 252.223-7004 - Drug-Free Work Force (SEP 1988)
- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 252.225-7001 - Buy American Act And Balance Of Payments Program (JUN 2005)
- 252.225-7002 - Qualifying Country Sources As Subcontractors (APR 2003)
- 252.225-7004 - Report Of Intended Performance Outside The United States And Canada-Submmission After Award (MAY 2007)
- 252.225-7006 - Quarterly Reporting Of Actual Contract Performance Outside The United States (MAY 2007)
- 252.225-7012 - Preference For Certain Domestic Commodities (JAN 2007)
- 252.225-7013 - Duty Free Entry (OCT 2006)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (MAR 2006) (fill in : Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113)
- 252.226-7001 - Utilization of Indian Organizations, Indian-Owned Economic Enterprises, And Native Hawaiian Small Business Concerns (SEP 2004)
- 252.227-7000 - Non Estoppel (OCT 1966)
- 252.227-7001 - Release Of Past Infringement (AUG 1984)
- 252.227-7013 - Rights In Technical Data -- Noncommercial Items (NOV 1995)
- 252.227-7014 - Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995)
- 252.227-7016 - Rights In Bid Or Proposal Information (JUN 1995)
- 252.227-7018 - Rights In Noncommercial Technical Data And Computer Software--Small Business Innovative Research (SBIR) Program (JUN 1995)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
- 252.227-7026 - Deferred Delivery Of Technical Data Or Computer Software (APR 1988)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (SEP 1999)
- 252.227-7039 - Patents--Reporting Of Subject Inventions (APR 1990)
- 252.231-7000 - Supplemental Cost Principles (DEC 1991)
- 252.232-7003 - Electronic Submission Of Payment Requests (MAY 2006)
- 252.232-7010 - Levies On Contract Payments (DEC 2006)
- 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (NOV 2004)

- 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)
- 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DoD Contracts) (JAN 2007)
- 252.245-7001 - Reports Of Government Property (MAY 1994)
- 252.246-7003 - Notification Of Potential Safety Issues (JAN 2007)
- 252.247-7023 - Transportation Of Supplies By Sea (MAY 2002)
- 252.247-7024 - Notification Of Transportation Of Supplies By Sea (MAR 2000)
(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)
- 252.251-7000 - Ordering From Government Supply Sources (NOV 2004)

I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) *Definitions.* "Ozone-depleting substance", as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR Part 82 as –

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

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

WARNING

Contains (or manufactured with, if applicable) _____, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

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

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

SECTION J

LIST OF ATTACHMENTS

- J-1** Attachment (1) - Statement of Work - 7 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 4 Pages.
- J-2** Attachment (2) – List of Acronyms, 1 Page.
- J-3** Attachment (3) - DD Form 254, Contract Security Classification Specification, Ser 046-07 Dated `06/26/2007.
- J-4** Attachment (4) – Personnel Qualifications, 7 Pages.
- J-5** Attachment (5) – Accounting and Appropriation Data- 1 page. *

(* To be included at time of award)

PART IV - REPRESENTATIONS AND INSTRUCTIONS
SECTION - K
REPRESENTATIONS, CERTIFICATIONS
AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

K-1 REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

In accordance with FAR 4.1201, prospective contractors must complete electronic annual federal representations and certifications via the Online Representations and Certifications Application (ORCA) at <http://orca.bpn.gov> in conjunction with required registration in the Central Contractor Registration (CCR) <http://www.ccr.gov> database. The representations and certification must be updated as necessary, but at least annually, to ensure they are kept current, accurate and complete.

In addition, each offeror must submit completed DFARS and contract specific Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/repandcerts.htm> .

Use Contract Representations and Certifications: A

K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 2004)

The fill in information is as follows:

- (a) (1) The NAICS code for this acquisition is 541330
- (2) The small business size standard is \$25M

SECTION L
INSTRUCTIONS CONDITIONS AND NOTICES
TO OFFERORS OR RESPONDENTS

L-1 FAR 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://www.acqnet.gov/far>
<http://heron.nrl.navy.mil/contracts/home.htm>

FAR CLAUSE TITLE

52.204-6	-	Data Universal Numbering System (DUNS) Number (OCT 2003)
52.214-34	-	Submission Of Offers In The English Language (APR 1991)
52.214-35	-	Submission Of Offers In U.S. Currency (APR 1991)
52.215-1	-	Instructions To Offerors- Competitive Acquisition (JAN 2004)
52.215-16	-	Facilities Capital Cost Of Money (JUN 2003)
52.219-24	-	Small Disadvantaged Business Participation Program - Targets (OCT 2000)
52.222-24	-	Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
52.237-10	-	Identification Of Uncompensated Overtime (OCT 1997)

DFAR CLAUSE TITLE

252.209-7001-	Disclosure Of Ownership Or Control By The Government Of A Terrorist Country (OCT 2006)
252.215-7003	- Excessive Pass-Through Charges—Identification Of Subcontract Effort (APR 2007)
252.225-7003	-Report Of Intended Performance Outside The United States And Canada – Submission With Offer (DEC 2006)

L-2 INSTRUCTIONS FOR SUBMISSION OF PROPOSALS/OFFERS

All proposals shall be submitted in accordance with FAR 52.215-1- *Instructions to Offerors- Competitive Acquisition*. Proposals/offers submitted in paper media through the United States Postal Service (USPS) or delivery services shall be addressed:

Contracting Officer, ATTN: Code 3220.SC

RFP No. N00173-07-R-SC05

Closing Date: 17 SEP 2007 Time: 4:00 pm

Naval Research Laboratory

4555 Overlook Avenue, S.W.

Washington, D.C. 20375

Proposals may be hand delivered to the Contracting Office, NRL, 4555 Overlook Avenue, S.W., Washington, D.C. 20375, Building 222, Room 115 between the hours of 8AM until 4PM, local time, excluding weekends and federal holidays. NRL is a controlled-access facility. Photo identification will be required. Report first to Building 72, Visitor Control for access to NRL. After receiving a Visitor Pass, proceed directly to Building 222, Room 115, Contracting Office Receptionist to deliver the proposal. All offerors shall allow sufficient time for delivery of their proposal to the Contracting Office prior to the closing date and time announced in the solicitation. Directions and additional information about NRL is available at <http://www.nrl.navy.mil/aboutdc.htm>

If facsimile proposals are authorized, contracting officers may request offeror(s) to provide the complete; original signed proposal at a later date.

L-3 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be a DX rated order; DO rated order certified for national 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-4 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)ALTERNATE IV (OCT 1997)

- (a) Submission of cost or pricing data is not required.
- (b) Provide information described in Section L-2, Instructions for Submission and Information Required to Evaluate Proposals.

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

The Government contemplates award of a Cost Plus Fixed Fee Term contract resulting from this solicitation.

L-6 FAR 52.233-2 - SERVICE OF PROTEST (SEP 2006)

(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 Government Accountability Office(GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

- (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-7 DFARS 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 a 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 a 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 documents, 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 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.
- (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 for 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 such items, 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 specially 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.

L-8 DFARS 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.

L-9 GOVERNMENT-FURNISHED PROPERTY

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

L-10 INQUIRIES CONCERNING THE RFP

Any questions concerning the RFP must be submitted in writing to the Contracting Officer representative at the contact location noted in blocks 7 and 10 of the Standard Form 33, Solicitation, Offer and Award, "no less than fifteen (15) days before closing". The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

L-11 PROPOSAL ORGANIZATION

(1) Information for the technical/management proposal shall be placed in Volume I and be completely separate from the business proposal (Volume II).

(2) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

L-12 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 4 COPIES.

(1) The offeror must propose the labor categories in accordance with the Level of Effort Breakdown in Section H. If the offeror uses labor category terminology other than that used in Section H, the offer must provide a matrix clearly relating their proposed labor categories to those stated.

(2) The following information is required for evaluation of your technical/management proposal:

A. PERSONNEL QUALIFICATIONS

Provide resumes for all proposed personnel relevant to each labor category. The resume must reflect specific experience and qualifications of the proposed personnel relevant to the task(s) in the Statement of Work and previous experience including the degree to which they meet the requirements set forth in the Personnel Qualifications.

B. TECHNICAL UNDERSTANDING

The Offeror shall describe an understanding of the technical support requirements described in the Statement of Work. Offerors must include at a minimum, approach to quality performance, ensuring technical excellence, use of subcontractors, use of facilities, and overall corporate capabilities to accomplish the requirements. Concisely describe your plans for effective management and oversight of the resultant contract. Ensure that, at a minimum, the following areas are addressed: Ability to accomplish the full scope of technical requirements anticipated; approach to effective technical performance, including subcontracting; and ability to ensure consistent quality and availability of professional staff.

C. MANAGEMENT PLAN/CORPORATE EXPERIENCE

The Offerors management plan must include the quantity and quality of the offeror's corporate experience relevant to the proposed task. The Offeror will be evaluated on the capability and suitability for performing under the required tasks in the Statement of Work.

L-13 VOLUME II - BUSINESS PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 4 COPIES

(1) COST PROPOSAL

The offeror shall submit a business proposal that includes a cost proposal with supporting information for each cost element consistent with offeror's cost accounting system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate each cost element. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission. However, offerors are advised to use actual labor rates of proposed personnel as the basis for estimating labor costs when practicable.

L-14 MATERIAL ESTIMATE (FOR EVALUATION PURPOSES ONLY)

The material estimate and other direct costs set forth **MUST** be included in each offeror's cost proposal for evaluation purposes only. During the term of the contract, the contractor will be reimbursed actual and verifiable material and other direct associated expenses.

The Government estimates the material cost for this effort as \$2,000,000 per year for the basic award and \$2,000,000 per each option period, if exercised.

L-15 TRAVEL ESTIMATE (FOR EVALUATION PURPOSES ONLY)

The travel estimate and other direct costs set forth MUST be included in each offer's cost proposal for evaluation purposes only. During the term of the contract, the contractor will be reimbursed actual and verifiable travel and other direct associated expenses in accordance with federal travel guidelines.

The Government estimates the travel cost for this effort as \$150,000 per year for the basic award and \$150,000 per each option period, if exercised.

**SECTION M
EVALUATION FACTORS FOR AWARD****M-1 EVALUATION**

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. The technical considerations are more important than the cost factor. The closer the technical scores of the various proposals are to one another, the more important the cost considerations become. The Technical and Cost factors are each more important than the Small Business Participation factor.

M-2 EVALUATION FACTORS FOR AWARD

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. The technical factors (1) and (2) are of equal importance and more important than factor (3).

M-2-1. TECHNICAL/MANAGEMENT**(1) PERSONNEL QUALIFICATIONS**

The proposed personnel will be evaluated on the experience and qualifications of the proposed personnel relevant to the proposed task.; the quantity and quality of the Offeror's corporate experience relevant to the proposed task; and the previous experience of the key personnel including the degree to which they meet the requirements set forth in the Personnel Qualifications.

(2) TECHNICAL UNDERSTANDING

Evaluation will be based on the offeror's demonstrated understanding and accomplishment of the technical requirements as detailed in the Statement of Work.

(3) MANAGEMENT/CORPORATE EXPERIENCE

The proposals will be evaluated on the capability and suitability for performing under the required tasks in the Statement of Work.

M-2-2 COST TO THE GOVERNMENT

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon an evaluation of cost realism. Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical proposal as well as the proposed labor and indirect rates. It also includes evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

M-3 FAR 52.217-5 - EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

STATEMENT OF WORK

FOR

ELECTRONIC SUPPORT MEASURES (ESM)

ENGINEERING SERVICES

Naval Research Laboratory
4555 Overlook Ave., SW
Washington, DC 20375

1 INTRODUCTION

This Statement of Work (SOW) describes the engineering and technical support services to be provided to the Naval Research Laboratory's (NRL) Tactical Electronic Warfare Division (TEWD), which is located in Washington, D.C.

2 BACKGROUND

This SOW describes a variety of tasks to be performed in support of the mission of the Electronic Support Measures (ESM) Branch of the TEWD. The ESM Branch is tasked with performing research on naval Electronic Warfare (EW) systems and the application of technologies to support the development and fielding of EW systems. Areas of specific interest include a broad spectrum of scientific research, engineering development, computer simulation, and direct technical liaison with Navy and Marine Corps EW experts. The ESM Branch is seeking contractor technical support in a variety of disciplines and related applications. Services conducted under this SOW will concentrate on system research and development (R&D), RF engineering and fabrication, mixed signal circuit design, digital signal processing, software development (real-time DSP, real-time displays, and GUIs), mechanical engineering, information technology deployment and maintenance support, as well as fabrication, assembly, integration and testing of prototype EW systems. General design and development support (e.g., schematics, design documentation, and user and operator manuals) and program management support will also be required. The required services include a number of interrelated tasks that vary in both their technical dimensions and deliverable product. The unique nature of this research requires access to NRL hardware and classified computing resources and databases dictating that a major portion of the labor tasks be performed on-site at the NRL.

3 SCOPE

The Contractor shall provide, on a level-of-effort basis, the person-hours of scientific, technical, and engineering support services to perform the tasks described within this SOW. These tasks include systems engineering (hardware and software), systems analysis (hardware and software), and data collection and analysis. The uniqueness of data availability, availability of necessary processing equipment, and security requirements dictates that the Contractor shall perform a major portion of the tasks at the NRL. The Contractor shall provide research and engineering services in support of seven basic task areas:

- Task I - RF Engineering
- Task II - Mixed-signal circuit design (Analog/Digital)
- Task III - Digital Signal Processing (DSP) and Software Development
- Task IV - Mechanical Engineering
- Task V - Fabrication, Assembly, Integration and Test
- Task VI - Program Management

4 SOW TASKS

4.1 Task 1 RF Engineering

The Contractor shall provide Radio Frequency (RF) engineering and technical support for design, development, and repair of unique components and subsystems supporting R&D projects and prototype system developments. RF frequency of interest for this task may range from 100 MHz up through 100 GHz. Contractor services provided under this task may include the design, analysis and fabrication of antennas, filters, amplifiers, oscillators, frequency conversion components and various types of millimeter wave, microwave and RF receivers. The contractor shall be able to provide 3-D and 2-D electromagnetic modeling and simulation capability suitable for the development of antennas, antenna arrays as well a variety of common RF components. Additionally, the contractor shall have the capability to provide receiver design and analysis capability leading to the development of new receiver architectures. Based on a given set of requirements, the Contractor shall design, build, and integrate the RF hardware required to fulfill the requirements. This involves a variety of tasks, including system architectural design; hardware development; layout, fabrication, procurement, assembly, and testing; system level integration; and testing.

4.2 Task 2 Mixed Signal Circuit Design (Analog/Digital)

The contractor shall provide Mixed Signal Circuit Design engineering and technical support for the design, development and repair of unique components and subsystems supporting R&D projects and prototype system developments. The primary objective for this task will be the development of circuits containing both analog and digital circuitry. An example of the type of work to be anticipated under this task is the development of a circuit board containing analog signal conditioning components, analog-to-digital conversion (ADC) components and digital signal processing components. ADC sample rates are expected to be in excess of 2.0 GSPS. Extreme attention to detail concerning the control of signal isolation and crosstalk will be required to optimize circuit performance. Noise mitigation in the analog sections will be critical. The Contractor shall provide hardware design and debug services, including embedded processor design, to support electronic warfare processing applications. Based on a given set of requirements, the Contractor shall design, build, and integrate the digital, analog, and RF hardware and software required to fulfill the requirements. This involves a variety of tasks, including system architectural design; hardware and software development; printed wiring board (PWB) design, layout, fabrication, procurement, assembly, and testing; system level integration; and testing. Detailed digital designs shall use ADCs and shall include the supporting analog and RF circuitry required to perform signal reception, amplification, conditioning, filtering, as well as digital circuitry to perform digital signal processing.

4.3 Task 3 Digital Signal Processing (DSP) and Software Development

DSP is concerned with the practical aspects of representing information bearing signals in digital form and with using computers or special purpose digital hardware to extract that information or to transform the signals in useful ways. DSP applications are ever changing and commercial-off-the-shelf (COTS) products that have proven performance will be used to satisfy this requirement when applicable and within budgetary constraints.

4.3.1 Task 3-A DSP Hardware

The Contractor shall integrate high-speed ADC boards with state-of-the-art processor boards. Data from these boards must then be transformed into useful data using a variety of data analysis algorithms. This data will be used by the software application to implement signal detection, characterization and analysis algorithms. The Contractor shall implement high throughput data transfers across numerous bus technologies including RACEway, PCI, Compact-PCI, PCI-Express, PXI, VME, VXI and other serial or optical devices. COTS dedicated DSP chips and their associated support circuitry may be used with NRL engineering staff concurrence. The fastest and most demanding problems shall require the Contractor to implement a Field Programmable Gate Array (FPGA) solution using complex signal transformation algorithms. The Contractor shall have demonstrated knowledge of VHDL or other programmable logic tools and techniques that are required to complete this work.

4.3.2 Task 3-B DSP Software Development

The Contractor shall develop software using the target high-bandwidth processing hardware and the requisite developmental systems. The Contractor shall implement in software established DSP techniques including FFTs, convolution, digital filters, number system conversions, vector algebra, trigonometry, and other more esoteric algorithms. The Contractor shall optimize DSP algorithms using real-time DSP and FPGA COTS technologies.

4.3.3 Task 3-C ES Systems Software Development

The current and projected emitter environment requires emphasis on advanced EW support systems that can simultaneously detect and process a large number of emitters. The contractor shall develop software capable of analyzing and processing large amounts of emitter data collected by these EW systems. Custom software must also be developed for integration and test purposes as well as advanced algorithm development for automatic analysis techniques and real-time process control. Additionally, software shall be developed to integrate GUIs required to display all data collected and analyzed by the system with operator control via this interface.

4.3.4 Task 3-D Analysis Software Development

The contractor shall design, develop, and manage software systems used to collect, distribute, analyze, record and display emitter data. Requirements for the software being developed are based on on-going R&D projects. Additional requirements are constantly being added because of newly developed algorithms and evolving emitter sources. The Contractor shall implement near real-time digital signal processing and deliver the results to a graphical user interface (GUI).

This task also includes the development of a variety of established as well as developmental digital signal processing algorithms. The Contractor shall rapidly prototype and develop algorithms to provide various processing and control functions as part of the software development task. Initial algorithm development may be accomplished using test code developed on a desktop workstation or on any of several commercially available mathematical packages such as The Mathworks product, MatLab. The Contractor shall integrate third party mathematics packages as required by the application. The Contractor shall perform all tasks from initial algorithm development through prototyping and final implementation. The development of the advanced algorithms requires the Contractor to meet frequently with the

development team. The Contractor shall develop algorithms based on these meetings, subject to approval by the Contracting Officer's Representative (COR).

The Contractor shall fully document all developed software in the source code and associated design manuals.

4.3.5 Task 3-E Software Testing

The Contractor shall conduct software testing at both a system and subsystem level to verify requirements. The Contractor shall document the testing to show the requirement, the module(s) that satisfies the requirement, and the test engineer conducting the test.

Field testing is required of all prototype digital electronic support systems. The field tests often lead to the development of new requirements and adjustments to algorithms. The Contractor shall travel to offsite locations with the NRL developers to perform field testing and modification, if required. The Contractor shall place the results of the field testing under configuration control and present any errors occurring during field testing to the software development team for resolution.

The Contractor shall develop automated tests that can be used to test a delivered baseline of the system. These automated tests shall be stored with the software baseline and shall be capable of being modified if necessary. The automated tests shall produce a test report that identifies any errors and documents the satisfaction of all requirements.

4.3.6 Task 3-F Configuration Management System

The Contractor shall use an automated configuration management system (CMS) for the configuration control of all software design, development, test and integration efforts. All design concepts, source code, documentation and test results shall be included in the CMS. All developed software shall be initially baselined using the CMS and any upgrades, maintenance patches and test repairs shall be released at an agreed upon timeline determined by the COR. The ability to extract any baseline from the CMS is also required. Patches to developed software systems will be allowed and shall be documented and installed using the same procedures as a new baseline. All embedded DSP and FPGA software shall be configuration controlled using the same CMS methods as the application baselines.

4.4 Task 4 Mechanical Engineering

The Contractor shall provide mechanical engineering and technical support for design, development, and repair of unique components and subsystems supporting R&D projects and prototype system developments. The mechanical assemblies developed will consist of electronic component and antenna system support structures and enclosures. The assemblies will be developed for the laboratory, ship-board and air-borne environment. Examples of the types of assemblies to be designed under this task are; assemblies of RF components and antenna support and positioning assemblies. The contractor shall provide extensive mechanical design and CAD capability. CAD programs such as AutoCad, SolidWorks and Pro-Engineer will be utilized. The contractor shall perform thermal, time-motion and shock tolerance analysis for the proposed designs. The contractor will produce a mechanical design documentation set to include estimated mechanical assembly performance where relevant and sufficiently detailed mechanical design data so as to specify assembly fabrication.

4.5 Task 5 Fabrication, Assembly, Integration, and Test

The Contractor shall develop, integrate, and test hardware for prototype systems. The hardware shall include structural components, mechanical and electro-mechanical devices, electronic and avionics components, ground support equipment, and other devices supporting TEWD activities. The Contractor shall design, procure, test, and integrate electronic and avionics systems for data acquisition, processing, and analysis; command and telemetry functions; low-noise signal conditioning and sensor interfaces; power conversion; and temperature control.

4.5.1 Task 5-A Design and Procurement

The contractor shall provide technical and engineering support for NRL facilities and experiments. The Contractor shall design, fabricate or acquire, and deliver to NRL incidental hardware required for the support of research within the scope of this SOW. The Contractor shall modify, repair or maintain existing equipment in support of on-going research efforts; and document performance of systems or subsystems. The Contractor shall provide experiment support, design, fabrication, maintenance, and repair of system or subsystems.

4.5.2 Task 5-B Fabrication and Assembly

The Contractor shall provide for the fabrication and assembly of hardware for prototype systems and subsystems, including the fabrication of unique piece parts, printed wiring boards, fixtures, and mechanical assemblies for use during assembly, integration, and test. The Contractor shall provide specialized material, hardware, and components (e.g., raw materials, electrical, electronic, and electro-mechanical parts, machined parts, weldments, racks and structures, test equipment, and special processes) in support of this SOW. The Contractor shall interface with vendors for the production and delivery of hardware, components and equipment. The Contractor shall maintain piece part inventories and will track and monitor the traveler process on selected efforts.

4.5.3 Task 5-C Integration and Test

The Contractor shall provide engineering services to test and integrate systems and subsystems with the target platform. The Contractor shall provide support to the NRL engineering staff to establish requirements for environmental test of specific systems and subsystems to include mechanical and electrical experimental and functional testing, along with corrective actions where necessary. The Contractor shall develop test plans and procedures for the integration and test of systems and subsystems into an operational platform at NRL or other NRL-designated facilities. The Contractor shall design, fabricate, assemble, test, calibrate, and maintain specialized laboratory equipment, instrumentation, GSE, and facilities to support the integration and test activity. The Contractor shall perform system level environmental and functional testing, along with corrective actions. The Contractor shall provide scientific expertise, engineering test support, and supplies for scientists and engineers performing special system calibrations and reducing the resultant test data sets.

4.5.4 Task 5-D Support of On-Site and Field Experiments

The Contractor shall provide support, to include procurement of supplies and equipment, fabrication, integration, test and calibration, as well as hardware, software, and diagnostics for efforts at both on-site and for fielded experiments at off-site locations in support of this SOW. The Contractor, in support of the requirements herein, shall install and operate diagnostic

equipment, acquire raw data, process the data, as well as analyze and archive collected data. Upon completion of this analysis, the Contractor shall provide the data acquired, including all disks, tapes, films, etc., and submit a written report of the results.

4.6 Task 6 Program Management

4.6.1 Task 6-A Contract Management and Data Reporting

The Contractor shall perform administrative, technical, and financial management functions during the course of this effort and shall maintain a status of its effort towards achieving the SOW objectives, including all technical activities and efforts, problems/deficiencies, impacts, recommended solutions, pertinent test and simulation data, etc. The contractor shall submit a record of all administrative, technical and financial functions in a Monthly Financial and Technical Status Report [CDRL A001]. The Contractor shall provide a Monthly Contractor On-Site Labor Report [CDRL A002]. The Contractor shall prepare programmatic and technical presentations and briefings, including technical and design data packages that support major program review milestone activities [CDRL A003]. The contractor shall summarize all work performed and results obtained for each task performed under this SOW in a monthly progress report [CDRL A004]. The contractor shall deliver a trip report at the conclusion of any travel associated with this contract [CDRL A005].

Task 6-B Graphics and Drafting Services

The Contractor shall provide for the creation of illustrations, drawings, and other graphic material required by various programs, studies, proposals, or technical presentations. The Contractor shall provide artistic capabilities and the computer resources to render illustrations, drawings, schematics, block diagrams, flow charts, and text files. The Contractor will scan and edit mechanical and electrical drawings produced using designated computer aided drafting (CAD) systems. The Contractor shall leverage existing drawings and illustrations from previous NRL developments and shall administer files on a variety of file servers. The Contractor shall coordinate graphic requirements associated with program review cycles. The Contractor shall possess requisite hardware, software and peripheral devices necessary to fulfill task requirements for all work efforts performed off-site from the NRL.

EXHIBIT A

CONTRACT DATA REQUIREMENTS LIST <i>(2 Data Items)</i>						Form Approved OMB No. 0704-0188			
<p>The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.</p>									
A. CONTRACT LINE ITEM NO.			B. EXHIBIT		C. CATEGORY: TDP _____ TM _____ OTHER _____				
D. SYSTEM/ITEM ESM Engineering Services			E. CONTRACT/PR NO. N00173-07-R-SC05		F. CONTRACTOR				
1. DATA ITEM NO. A004	2. TITLE OF DATA ITEM Monthly Progress Reports				3. SUBTITLE				
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE		6. REQUIRING OFFICE NRL Code 5726				
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED D(see blk 16)	10. FREQUENCY monthly		12. DATE OF FIRST SUBMISSION 40DAC		14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION 5th workday		a. ADDRESSEE	b. COPIES			
					Draft	Final			
						Reg	Repro		
16. REMARKS The contractor shall prepare monthly progress reports for each task that must include: a) Description of progress for each task during the reporting period. Any change in technical approach reported previously shall be with reasons for the change. b) Notification of any change in key personnel associated with the contract during reporting period. c) Summary of substantive information derived from trips, meetings, scientific papers in connection with the contract during reporting period. d) Summary of problem areas on which government guidance is desired. e) Statement relative to any anticipated deviation in contractor planned efforts. f) List of material purchased for each task during current reporting period. For each item purchased the following data shall be supplied; manufacturer, part #, cost, qty, order date, and expected delivery date. g) List of material ordered prior to current reporting period that has not been delivered h) List of materials rcvd during current reporting period					Code 5726		1		
					Code 5720		1		
					15. TOTAL	→	0	2	0
1. DATA ITEM NO. A005	2. TITLE OF DATA ITEM Trip Reports				3. SUBTITLE				
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE SOW		6. REQUIRING OFFICE				
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED D(see blk 16)	10. FREQUENCY As needed		12. DATE OF FIRST SUBMISSION * see blk 16		14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION * see blk 16		a. ADDRESSEE	b. COPIES			
					Draft	Final			
						Reg	Repro		
16. REMARKS The contractor shall prepare a trip report at the conclusion of any travel associate with this contract. Trip reports shall include but not be limited to: a) Objective/goal of trip. Briefly state reason for travel b) Contract task that the trip supports. c) Navy program that the trip supports. d) Itinerary. List work performance locations only. e) Degree of success. Describe the level to which the stated objectives are met. f) Describe technical issues encountered. Provide an estimate of the cause of the technical issue as well as a proposed solution. g) Contacts made. List and describe relevant contacts made with other government personnel, contractors, and foreign nationals encountered. * Date of first submission: 15 working days after completion of first trip. * Date of subsequent submission: 15 working days after completion of any trip.					Code 5726		1		
					Code 5720		1		
					15. TOTAL	→	0	2	0
G. PREPARED BY NRL Code 5726			H. DATE 7/25/2007	I. APPROVED BY		J. DATE			

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

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EXHIBIT A

CONTRACT DATA REQUIREMENTS LIST <i>(2 Data Items)</i>						Form Approved OMB No. 0704-0188			
The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.									
A. CONTRACT LINE ITEM NO.		B. EXHIBIT		C. CATEGORY: TDP _____ TM _____ OTHER _____					
D. SYSTEM/ITEM ESM Engineering Services			E. CONTRACT/PR NO. N00173-07-R-SC05		F. CONTRACTOR				
1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM Monthly Fiscal Status Reports				3. SUBTITLE				
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE SOW		6. REQUIRING OFFICE NRL Code 5726				
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED D(see blk 16)	10. FREQUENCY monthly		12. DATE OF FIRST SUBMISSION 40DAC		14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION * see blk16		a. ADDRESSEE		b. COPIES		
					Draft	Final			
						Reg	Repro		
16. REMARKS					Code 5726		1		
The contractor shall prepare monthly fiscal status report for each task that must include: a) Amount of funds currently received on the contract b) Expenditures and commitments to date. c) Completed month's expenditures for labor, travel, and material. All expenditures will be listed with associated contract task. d) Estimated funds required for the current month. Funding requirements will be broken out by contract task. e) Estimated funds required for the current fiscal year. Funding requirements will be broken out by contract task. f) Estimated date of completion of all active contract tasks.					Code 5720		1		
* Date of subsequent submission: 15 working days after end of month					Code 5720.B0		1		
					15. TOTAL	→	0	3	0
1. DATA ITEM NO. A003	2. TITLE OF DATA ITEM Technical Data and Briefing Packages				3. SUBTITLE				
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE SOW		6. REQUIRING OFFICE NRL, Code 5726				
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED D(see blk 16)	10. FREQUENCY ASREQ		12. DATE OF FIRST SUBMISSION *se blk16		14. DISTRIBUTION			
8. APP CODE N/A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION *see blk16		a. ADDRESSEE		b. COPIES		
					Draft	Final			
						Reg	Repro		
16. REMARKS					Code 5726		1		
The contractor shall provide a report identifying programmatic and technical presentations and briefings, including technical and design packages that support the program review milestone activities.					Code 5720		1		
The contractor shall provide technical summaries, survey and investigative reports for all tasks.									
* The COR will provide contractor with dates of submission and format									
					15. TOTAL	→	0	2	0
G. PREPARED BY NRL Code 5726			H. DATE 7/25/07		I. APPROVED BY		J. DATE		

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EXHIBIT A

CONTRACT DATA REQUIREMENTS LIST <i>(2 Data Items)</i>												Form Approved OMB No. 0704-0188		
<p>The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please do not return your form to the above organization. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.</p>														
A. CONTRACT LINE ITEM NO.				B. EXHIBIT			C. CATEGORY: TDP _____ TM _____ OTHER _____							
D. SYSTEM/ITEM ESM Engineering Support Services						E. CONTRACT/PR NO. N00173-07-R-SC05			F. CONTRACTOR					
1. DATA ITEM NO. A005		2. TITLE OF DATA ITEM Scientific, Technical, Data, Diagnostic Reports							3. SUBTITLE					
4. AUTHORITY (Data Acquisition Document No.)					5. CONTRACT REFERENCE SOW				6. REQUIRING OFFICE NRL Code 5726					
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED N/A		10. FREQUENCY ASREQ		12. DATE OF FIRST SUBMISSION *see blk 16			14. DISTRIBUTION					
8. APP CODE N/A				11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION			a. ADDRESSEE			b. COPIES		
16. REMARKS The contractor shall provide hardware and software documentation at the conclusion of all tasks and subtasks that include either hardware or software development, or modification to existing hardware or software. The contractor shall provide separate reports which will include raw, analyzed, and archived data in support of on-site and field experiments * The COR will provide contractor with dates of submission and format									Draft			Final		
									Code 5726			1		
									15. TOTAL →			0 1 0		
1. DATA ITEM NO. A006		2. TITLE OF DATA ITEM Final Technical Reports							3. SUBTITLE					
4. AUTHORITY (Data Acquisition Document No.)					5. CONTRACT REFERENCE SOW				6. REQUIRING OFFICE NRL, Code 5726					
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED N/A		10. FREQUENCY ITIME		12. DATE OF FIRST SUBMISSION EOC			14. DISTRIBUTION					
8. APP CODE N/A				11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION			a. ADDRESSEE			b. COPIES		
16. REMARKS The contractor shall prepare and deliver a final technical report within 30 calendar days after completion of contract. The report will summarize all work performed, recommendations and results obtained for all tasks performed. Contractor format is acceptable.									Draft			Final		
									Code 5726			1		
									DTIC			1		
									15. TOTAL →			0 2 0		
G. PREPARED BY NRL Code 5726					H. DATE 7/25/07			I. APPROVED BY				J. DATE		

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APPENDIX A – LIST OF TERMS AND ACRONYMS

LIST OF ACRONYMS	
A/D	Analog-to-Digital
ADC	Analog to Digital Converter
CMS	Configuration Management System
COTS	Commercial Off the Shelf
CW	Continuous Wave
DAC	Digital to Analog Converter
DFT	Discrete Fourier Transform
DSP	Digital Signal Processing
ESM	Electronic Support Measures
EW	Electronic Warfare
FFT	Fast Fourier Transform
FPGA	Field Programmable Gate Array
GFE	Government Furnished Equipment
GUI	Graphical User Interface
HTTP	Hypertext Transport Protocol
IDE	Integrated Development Environment
IP	Intellectual Property or Internet Protocol
ISR	Interrupt Service Routine
LAN	Local Area Network
M/COS	Mercury Computer Operating System
MHz	Mega Hertz
NICEnet	NRL Integrated Communications Environment Network
NRL	Naval Research Laboratory
PCI	Peripheral Component Interconnect
PPC	Power PC (Personal Computer)
PRI	Pulse Repetition Interval
PW	Pulse Width
PWB	Printed Wiring Board
RF	Radio Frequency
RT	Real Time
RTOS	Real-Time Operating System
SAL	Scientific Algorithms Library
SOW	Statement of Work
TCP/IP	Transaction Control Protocol/Internet Protocol
TEWD	Tactical Electronic Warfare Division
UDP	User Datagram Protocol
VHDL	VHSIC High level Design Language
VHSIC	Very High Speed Integrated Circuit
VME	VersaModule Eurocard Bus
WAN	Wide Area Network

DEPARTMENT OF DEFENSE CONTRACT SECURITY CLASSIFICATION SPECIFICATION <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				1. CLEARANCE AND SAFEGUARDING			
				a. FACILITY CLEARANCE REQUIRED SECRET			
				b. LEVEL OF SAFEGUARDING REQUIRED SECRET			
2. THIS SPECIFICATION IS FOR: <i>(X and complete as applicable)</i>			3. THIS SPECIFICATION IS: <i>(X and complete as applicable)</i>				
a. PRIME CONTRACT NUMBER		<input checked="" type="checkbox"/>		a. ORIGINAL <i>(Complete date in all cases)</i>	DATE (YYYYMMDD) 2007/06/26		
b. SUBCONTRACT NUMBER				b. REVISED <i>(Supersedes all previous specs)</i>	REVISION NO. DATE (YYYYMMDD)		
<input checked="" type="checkbox"/> c. SOLICITATION OR OTHER NUMBER 57-2036-07		DUE DATE (YYYYMMDD)		c. FINAL <i>(Complete Item 5 in all cases)</i> DATE (YYYYMMDD)			
4. IS THIS A FOLLOW-ON CONTRACT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under <u>N00173-04-C-2027</u> <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.							
5. IS THIS A FINAL DD FORM 254? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: In response to the contractor's request dated _____, retention of the classified material is authorized for the period of _____							
6. CONTRACTOR <i>(Include Commercial and Government Entity (CAGE) Code)</i>							
a. NAME, ADDRESS, AND ZIP CODE FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> N/A				
7. SUBCONTRACTOR							
a. NAME, ADDRESS, AND ZIP CODE N/A		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> N/A				
8. ACTUAL PERFORMANCE							
a. LOCATION N/A		b. CAGE CODE	c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i> N/A				
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT ELECTRONIC SUPPORT MEASURES (ESM) ENGINEERING SERVICES.							
10. CONTRACTOR WILL REQUIRE ACCESS TO:		YES	NO	11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:		YES	NO
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION			<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY			<input checked="" type="checkbox"/>
b. RESTRICTED DATA			<input checked="" type="checkbox"/>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY			<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION			<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL		<input checked="" type="checkbox"/>	
d. FORMERLY RESTRICTED DATA			<input checked="" type="checkbox"/>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE			<input checked="" type="checkbox"/>
e. INTELLIGENCE INFORMATION				e. PERFORM SERVICES ONLY			<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)			<input checked="" type="checkbox"/>	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES			<input checked="" type="checkbox"/>
(2) Non-SCI		<input checked="" type="checkbox"/>		g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER			<input checked="" type="checkbox"/>
f. SPECIAL ACCESS INFORMATION			<input checked="" type="checkbox"/>	h. REQUIRE A COMSEC ACCOUNT			<input checked="" type="checkbox"/>
g. NATO INFORMATION			<input checked="" type="checkbox"/>	i. HAVE TEMPEST REQUIREMENTS			<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION			<input checked="" type="checkbox"/>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS			<input checked="" type="checkbox"/>
i. LIMITED DISSEMINATION INFORMATION			<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE			<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION			<input checked="" type="checkbox"/>	l. OTHER <i>(Specify)</i>			
k. OTHER <i>(Specify)</i>							

12. **PUBLIC RELEASE.** Any information (*classified or unclassified*) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release Direct Through (*Specify*)

COMMANDING OFFICER, NAVAL RESEARCH LABORATORY, WASHINGTON, DC 20375-5320, CODE 5726

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)* for review.
 *In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

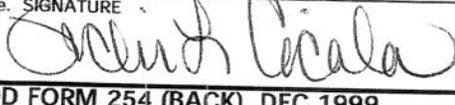
13. **SECURITY GUIDANCE.** The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (*Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.*)

Access to classified information is not required for the purpose of submitting a bid/proposal for this statement of work. However, prior to award of contract, the successful contractor will be required to have a SECRET facility clearance, and personnel available with final DoD granted personnel security clearances commensurate with level of access required for performance of contract.

14. **ADDITIONAL SECURITY REQUIREMENTS.** Requirements, in addition to ISM requirements, are established for this contract. Yes No
 (*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.*)

15. **INSPECTIONS.** Elements of this contract are outside the inspection responsibility of the cognizant security office. Yes No
 (*If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.*)

16. **CERTIFICATION AND SIGNATURE.** Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. TYPED NAME OF CERTIFYING OFFICIAL VICKI CICALA	b. TITLE CONTRACTING OFFICER, SECURITY	c. TELEPHONE (<i>Include Area Code</i>) (202) 767-2240/2576
d. ADDRESS (<i>Include Zip Code</i>) NAVAL RESEARCH LABORATORY 4555 OVERLOOK AVE. SW WASHINGTON, DC 20375-5320		17. REQUIRED DISTRIBUTION <input checked="" type="checkbox"/> a. CONTRACTOR <input type="checkbox"/> b. SUBCONTRACTOR <input checked="" type="checkbox"/> c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR <input type="checkbox"/> d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION <input type="checkbox"/> e. ADMINISTRATIVE CONTRACTING OFFICER <input checked="" type="checkbox"/> f. OTHERS AS NECESSARY 1226.2, 5702, 5726
e. SIGNATURE 		

SPECIALIZED LABOR CATEGORIES AND PERSONNEL QUALIFICATIONS FOR TECHNICAL SUPPORT SERVICES

ESM Engineering Services

1 LABOR CATEGORIES / QUALIFICATIONS

1.1 *RF Engineering*

Tasking is for off-site component and systems research and development. An evaluation of contractor research and fabrication capability will be a significant component of the contract award process. Successful execution of task will be evaluated based on quality of product. Various labor categories will be required and will be subject to government review and approval.

1.1.1 Labor Category: Senior Microwave/RF Engineer

Education: MS Electrical Engineering with specialization in microwave engineering. Education and experience is substituted on a one to two year ratio. (Ex.: five years of education and two years of experience would equal a MS degree.)

Security Clearance: Secret clearance desired but not mandatory

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: a minimum of 10 years experience in microwave circuit design including 5 years experience in RF/microwave antenna and receiver design and integration. Demonstrated detailed knowledge of the requirements, alternatives, interrelationships and tradeoffs of wideband RF/microwave antennas and receiver systems and the leading-edge technologies relevant to these systems. Demonstrated ability to define system functional interfaces, incorporate leading-edge technology into functional modules and transition them into developed system architectures.

Demonstrated ability to design microwave antennas, assemblies, subassemblies and circuits using all currently existing microwave circuit fabrication technologies. This also includes a demonstrated capability in system and module definition and documentation and fluency in the computer aided design (CAD) and modeling of microwave components, antennas and broadband receiver systems.

1.1.2 Labor Category: Microwave/RF Engineer

Education: BS Electrical Engineering with specialization in microwave engineering. Education and experience is substituted on a one to two year ratio.

Security Clearance: Secret clearance desired but not mandatory

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: a minimum of 5 years experience in microwave circuit design including 2 years experience in RF/microwave antenna and receiver design and integration. Demonstrated detailed knowledge of the requirements, alternatives, interrelationships and tradeoffs of wideband RF/microwave antennas and receiver systems and the leading-edge technologies relevant to these systems. Demonstrated ability to define system functional interfaces, incorporate leading-edge technology into functional modules and transition them into developed system architectures.

Demonstrated ability to design microwave antennas, assemblies, subassemblies and circuits using all currently existing microwave circuit fabrication technologies. This also includes a demonstrated capability in system and module definition and documentation and fluency in the computer aided design (CAD) and modeling of microwave components, microwave antennas and broadband receiver systems.

1.2 *Mixed-signal Circuit Design (Analog/Digital)*

Tasking is for on-site component and systems research and development. An evaluation of contractor research and fabrication capability will be a significant component of the contract award process. Successful execution of task will be evaluated based on quality of product.

1.2.1 Labor Category: Analog/Digital Engineer

Education: MS Electrical Engineering with specializations in both analog and digital circuit design. Education and experience is substituted on a one to two year ratio.

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: a minimum of 5 years experience in the design of circuit level analog-to-digital signal acquisition hardware. Demonstrated detailed knowledge of the requirements, alternatives, interrelationships and tradeoffs of wideband digital signal acquisition technology and techniques. Demonstrated ability to define system functional interfaces,

incorporate leading-edge technology into functional modules and transition them into developed system architectures. This also includes a demonstrated capability in system and module definition and documentation and fluency in the circuit board computer aided design (CAD) to include high frequency layout and routing.

1.3 Digital Signal Processing (DSP) and Software Development

Tasking is for on-site component and systems research and development. Successful execution of task will be evaluated based on quality of product.

1.3.1 Labor Category: DSP Engineer (hardware and software)

Education: BS Electrical Engineering with specialization in the development of digital signal processing and software, firmware and hardware. Education and experience is substituted on a one to two year ratio.

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: 5 years experience in digital signal processing algorithm development and implementation. Demonstrated knowledge of the requirements, alternatives, workings, interrelationships and tradeoffs of DSP based systems and leading-edge technologies relevant to these systems. A demonstrated knowledge in current digital circuit and software design including digital signal acquisition and processing technologies is required. The contractor shall have experience developing signal acquisition systems based on the HP Acqiris and Annapolis Microsystems Wildstar platforms. With respect to the Wildstar platform, the contractor shall have demonstrated experience with the COREFIRE FPGA programming environment. The Contractor shall have a proven history of software development using the target high-bandwidth processing hardware and the requisite developmental systems. The Contractor shall have extensive experience with the established DSP techniques including FFTs, convolution, digital filters, number system conversions, vector algebra, trigonometry, and other more esoteric algorithms.

The contractor shall demonstrate an ability to design digital assemblies, subassemblies and circuits using all currently existing digital circuit design and fabrication technologies. Demonstrated experience with the development and integration of digital signal acquisition systems including the application of high speed analog-to-digital converters (ADCs) and digital signal processors (DSPs) shall be required. The contractor shall demonstrate knowledge of the current digital logic families to include, but not be limited to, the integration and programming of field programmable gate arrays (FPGAs).

The Contractor shall have experience with a variety of target systems, including PowerPC, Athlon or Pentium microprocessors, and their operating systems, to include Linux, Unix, Windows 2000, XP or Vista. The Contractor shall have experience with relevant industry standard compilers and development tools such as Microsoft Visual C++. The Contractor shall use widely available modern programming languages (e.g., C and C++) to develop near real-time applications to run under commercial real time operating systems (RTOS), primarily Wind River VxWorks. The Contractor shall develop custom interfaces and, when required, make modifications and/or additions to the RTOS source. This software development requires extensive knowledge of the selected RTOS and the design and test tools available from these vendors. Various low-level components including device drivers and Interrupt Services Routines may be required to support specialized hardware.

Additionally, the contractor shall provide evidence of advanced software development capability including programming in Assembly Language, VHDL, Visual C++ and MATLAB. This also includes a demonstrated capability in system and module definition and documentation and fluency in computer aided design (CAD) modeling of systems and digital circuitry.

1.3.2 Labor Category: Senior Software Engineer

Education: MS Electrical Engineering minimum. Note: Software engineers and programmers are not considered qualified for this position.

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following minimum experience is required: 5 years experience in algorithm development in a research and development environment. Extensive experience in programming in MATLAB and Visual C++. Extensive experience in graphic user interface (GUI) development, real-time signal processing and interfacing to digital acquisition hardware.

The contractor must have a demonstrated capability of developing system level software for processing realtime emitter data. Must also have an understanding of DSP technology and capabilities, and must work closely with the project DSP engineers.

1.4 *Mechanical Engineering*

Tasking is for off-site component and systems research and development. An evaluation of contractor research and fabrication capability will be a significant component of the contract award process. Successful execution of task will be evaluated based on quality of product. Various labor categories will be required

and will be subject to government review and approval.

1.4.1 Labor Category: Mechanical Engineer

Education: BS Mechanical Engineering

Security Clearance: Secret clearance desired but not mandatory

Experience Requirements: In addition to the above stated education requirements or equivalencies, the following experience is required: 5 years experience in the performing thermal, structural and reliability analysis on ES modules, systems and processing assemblies. The contractor shall demonstrated knowledge of the physical workings, interrelationships, tradeoffs and mechanical characteristics of microwave electronic components, assemblies and fabrication processes.

Demonstrated ability to derive the impact of environmental factors on system performance such as shock, vibration, solar loading, thermal cycling and weathering elements on electronic assemblies. Demonstrated fluency in computer aided modeling procedures associated with design of mechanical systems and the management of environmental effects. Demonstrated familiarity with fabrication, plating and finishing processes associated with the exotic materials utilized in microwave assemblies and packaging.

Must be computer literate to the degree that would be required to conduct relevant component, subsystem and system analysis, design and documentation. Must have mechanical engineering computer skills encompassing production of mechanical drawings using AutoCad, SolidWorks and Pro-Engineer.

1.5 *Fabrication, Assembly, Integration and Test*

Tasking is for both on-site and off-site component and systems research and development. An evaluation of contractor research and fabrication capability will be a significant component of the contract award process. Successful execution of task will be evaluated based on quality of product. Various labor categories will be required and will be subject to government review and approval.

1.5.1 Labor Category: Microwave Technician

Education: High School plus 1 year of vocational training in an applicable technical school

Security Clearance: None required

Experience Requirements: In addition to the above stated education requirements, the following experience is required: 5 years experience in microwave component assembly, design and testing. Demonstrated experience in assembly, testing and

tuning of microwave and millimeterwave modules and equipment, operating from 1 to 1000 GHz. Demonstrated knowledge of and capability in the alignment and testing of microwave and millimeterwave functional modules to verify performance. Demonstrated capability in the operation of vector and scalar network analyzers, spectrum analyzers, noise figure and power meters.

1.5.2 Labor Category: Field Test Engineer

Education: BS in an applicable field minimum.

Security Clearance: Secret

Experience Requirements: Must have a minimum of 5 years of experience with in-field ELINT data collection and analysis. Additionally, the contractor must have a minimum of 5 years operational experience with the AN/UYX-3 and its precursor technology. Will be required to work at remote field sites either as an individual or as part of a team. Must be able to define goals and requirements for exercises and write test plans. Will evaluate and document system capabilities, performance and end product results. Will provide collection/analysis systems training in the laboratory and in the field. Will be required to perform site surveys, evaluate logistics support requirements, and define site and exercise test requirements. Must be flight qualified on military propeller aircraft.

Must demonstrate a high degree of proficiency with the IBM PC and/or compatibles to the degree that the contractor would be able to install, configure and operate software. Must have a working knowledge of Microsoft operating systems from DOS to Windows XP inclusive.

Demonstrated ability to communicate (i.e., liaison) with leading scientists in the areas of ELINT data collection and analysis. The contractor must have a demonstrated ability to communicate the results of his work in the form of written reports.

1.6 Labor Category - Program Manager

Tasking is for on-site or off-site component and systems research and development. Successful execution of task will be evaluated based on quality of product.

Education: BS Electrical Engineering

Security Clearance: Secret minimum

Experience Requirements: In addition to the above stated education requirements

or equivalencies, the following minimum experience is required: Must have a minimum of 5 years experience in electronic system development and demonstrate some experience in program management. The contractor must have the capability to generate technical drawings and documentation necessary to support program reviews when required.

A single point-of-contact Program Manager (PM) for SOW technical and procedural matters shall be provided. The PM shall be cognizant of SOW technical elements and shall be responsible for the management of tasks conducted under this SOW. The PM shall interface with the COR, and as necessary, other Government representatives and contractors. The PM shall oversee the efforts of on-site Contractor personnel and shall ensure that tasks are performed according to SOW requirements. The PM shall be responsible to ensure the performance of any ad hoc design studies and efforts that may be required to augment or supplement the tasks defined herein. The PM shall ensure that required documents and deliverables are properly prepared and delivered. The Contractor shall maintain a record of all internal data, documents, and computer programs and files that have been generated during execution of this SOW.