

IMPORTANT NOTICE

The U.S. Postal Service continues to irradiate letters, flats, Express and Priority Mail with stamps for postage and other packages with stamps for postage destined to government agencies in the ZIP Code ranges 202 through 205.

Mail that is irradiated may exhibit a discolored (tan-colored) quality, as well as be brittle, show spots on envelopes and make address labels unreadable. Irradiation may destroy electronic format materials provided on computer discs. Customers and businesses sending mail to ZIP Codes 202-205 can avoid the irradiation process by affixing postage meter strips or permit indicia instead of postage stamps to Express or Priority Mail. The use of corporate accounts for Express Mail or registered mail also is another way to avoid the irradiation process.

Due to potential delays in receiving mail and potential for receipt of damaged computer discs, offerors are encouraged to use alternatives to the mail when submitting proposals.

This solicitation contains the provision at FAR 52.215-5 which authorizes facsimile proposals. Offerors are encouraged to use alternatives to the mail when submitting proposals.

SOLICITATION, OFFER AND AWARD		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DOA7	PAGE OF 1 30 PAGES
2. CONTRACT NO.		3. SOLICITATION NO. N00173-02-R-JW03		4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	
7. ISSUED BY CONTRACTING OFFICER NAVAL RESEARCH LABORATORY ATTN: CODE 3230.JW WASHINGTON DC 20375-5326		CODE N00173		5. DATE ISSUED 21 AUG 2002	
		6. REQUISITION/PURCHASE NO.			
		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 1 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 400PM local time 20 Sep 2002
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME James P. Waldenfelds	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) (202)767-3003
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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
	%	%	%	%

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)
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15B. TELEPHONE NO. (Include area code)	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>	17. SIGNATURE	18. OFFER DATE
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AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION
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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) ITEM
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24. ADMINISTERED BY (If other than Item 7) CODE	25. PAYMENT WILL BE MADE BY CODE
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26. NAME OF CONTRACTING OFFICER (Type or print)	27. UNITED STATES OF AMERICA (Signature of Contracting Officer)	28. AWARD DATE
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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 OR SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0001	The contractor shall perform research and development services involving integrated cooperative countermeasures advanced technology, as described in Section C.	\$	\$	\$
000101	ACRN: AA \$**			
000102	ACRN: AB \$**			
0002	Data in accordance with Exhibit A (DD 1423).	* NSP	* NSP	* NSP
TOTAL ESTIMATED COST PLUS FIXED FEE FOR CLINS 0001 AND 0002		\$	\$	\$

* Not Separately Priced

** To be inserted by the Government at the time of award. For explanation, see Provision G-8.

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 19 October 2001 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.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 REFERENCEFAR CLAUSE TITLE

52.246-9 - Inspection Of Research And Development (Short Form) (APR 1984)

DFARS CLAUSE TITLE

252.246-7000 - Material Inspection And Receiving Report (DEC 1991)

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:

<u>FAR CLAUSE</u>	<u>TITLE</u>
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 the date of award through 365 days after the date of award.
- (b) The principal place of performance of this contract shall be at contractor's facility.

(* To be filled in at time of award.)

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.

Contract Matters- *

Security Matters- *

Safety Matters- *

Patent Matters- *

Release of Data- *

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 1008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

(* To be completed at time of award)

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

* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. 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 statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

(* 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)

(One of the following invoicing instructions will be included depending on whether the contractor has been approved for direct submission of interim vouchers.)

G-5 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992)

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

(b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

(To be completed at time of award)

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

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

- (1) Contract line item number (CLIN)
 - (2) Subline item number (SLIN)
 - (3) Accounting Classification Reference Number(ACRN)
 - (4) Payment terms
 - (5) Procuring activity
 - (6) Date supplies provided or services performed
 - (7) Costs incurred and allowable under the contract
 - (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided
- (e) A DD Form 250, "Material Inspection and Receiving Report",
 is required with each invoice submittal.

is required only with the final invoice.

is not required.

(f) A Certificate of Performance

shall be provided with each invoice submittal.

is not required.

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

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

G-6 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992)ALTERNATE II (DEC 1996)

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

(b)(i) In accordance with DFARS 242-803(b)(i)(C), the cognizant Defense Contract Audit Agency (DCAA) auditor has authorized the contractor to submit interim invoices directly to paying offices. This authorization does not extend to the first and final invoices, which shall be submitted to the contract auditor at the following address:

(To be completed at time of award)

A copy of every invoice shall also be provided to the individual listed at the address shown in Section G for the Contracting Officer Representative(COR).

In addition, a copy of the final invoice shall be provided to the Administrative Contracting Officer (ACO).

(ii) Upon written notification to the contractor, DCAA may rescind its authorization for the contractor to submit invoices directly to paying offices. Upon receipt of such written notice, the contractor shall immediately begin to submit all invoices to the contract auditor at the above address.

(iii) Notwithstanding (i) and (ii), when delivery orders are applicable, invoices shall be segregated by individual order and submitted to the addresses specified in the order.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery order. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

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

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number(ACRN)
- (4) Payment terms
- (5) Procuring activity

- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided
- (e) A DD Form 250, "Material Inspection and Receiving Report",
 - is required with each invoice submittal.
 - is required only with the final invoice.
 - is not required.
- (f) A Certificate of Performance
 - shall be provided with each invoice submittal.
 - is not required.
- (g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.
- (h) Costs of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLINS/SLINS with more than once ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

G-7 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-8 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-9 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

- (a) ACRNs cited on the contractor's invoice.
- (b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.
- (c) The ACRN assigned to the following line of accounting:
97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.
- (d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned to the oldest allotment of funds.
- (e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

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 fifteen (15) days in advance (thirty (30) 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:

Senior Systems Engineer (1)*
Senior Software Engineer (1)*
Senior Engineer (1) *

(*To be completed at time of award)

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 for the base period shall be 21,120* total hours of direct labor, 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 a target rate of 1,760* 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. Notwithstanding any of the provisions in the above paragraphs, if the contractor has

delivered at least 90% of the level of effort required in paragraph (a) above, adjustment in the fixed fee shall be as follows:

<u>Delivery of level of effort:</u>	<u>Fee Reduction</u>
At least 90% but less than 91%	90% of the reduction otherwise due per paragraph (f)(l).
At least 91% but less than 92%	80% of the reduction otherwise due per paragraph (f)(l).
At least 92% but less than 93%	60% of the reduction otherwise due per paragraph (f)(l).
At least 93% but less than 94%	40% of the reduction otherwise due per paragraph (f)(l).
At least 94% but less than 95%	20% of the reduction otherwise due per paragraph (f)(i).
At least 95%	No adjustment in the fixed fee shall be made.

(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:

<u>Labor Category</u>	<u>Base Year</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>
Senior Physicist	1,920	1,920	1,920	1,920
Physicist	1,920	1,920	1,920	1,920
Senior Systems Engineer	3,840	3,840	3,840	3,840
Senior Software Engineer	3,840	3,840	3,840	3,840
Senior Engineer	1,920	1,920	1,920	1,920
Engineer	1,920	1,920	1,920	1,920
Electronics Engineer	3,840	3,840	3,840	3,840
Software Engineer	<u>1,920</u>	<u>1,920</u>	<u>1,920</u>	<u>1,920</u>
Support Labor*				
Total*	21,120	21,120	21,120	21,120

*If it is the offeror's established practice to charge certain support labor (such as contracts, subcontract administration, administrative support) as a direct charge, a nominal amount of such support labor may be proposed; pricing detail should match that provided for other labor. The total will be increased accordingly at the time of award. This note will be removed after entry of any proposed support labor upon award of the contract.

H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 02)

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 Z39.18-1995, 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 three 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:	\$ *

* To be inserted by offeror.

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 REPRESENTATIONS AND CERTIFICATIONS

The Contractor's completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

PART II - CONTRACT CLAUSES
SECTION I
CONTRACT CLAUSES

I-1 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.arnet.gov/far>

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

a. FEDERAL ACQUISITION REGULATION CLAUSES

<u>FAR CLAUSE</u>	<u>TITLE</u>
52.202-1	- Definitions (DEC 2001)
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 (JUL 1995)
52.203-7	- Anti-Kickback Procedures (JUL 1995)
52-203-8	- Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
52.203-10	- Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
52.203-12	- Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
52.204-2	- Security Requirements (AUG 1996)
52.204-4	- Printed Or Copied Double-Sided On Recycled Paper (AUG 2000)
52.209-6	- Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
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 (DEC 1998)
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 (OCT 1997)
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 (FEB 2002) (If the contract is with an educational institution, modify the clause by deleting from paragraph (a) "Subpart 31.2" and

substitute "Subpart 31.3". If the contract is with a state or local government, delete from paragraph (a) "Subpart 31.2" and substitute "Subpart 31.6". If the contract is with a nonprofit other than an educational institution, a state or local government, or a nonprofit organization exempted under OMB Circular A-122, modify the clause by deleting from paragraph (a) "Subpart 31.2" and substituting "Subpart 31.7".)

- 52.216-8 - Fixed-Fee (MAR 1997)
- 52.219-6 - Notice Of Total Small-Business Set-Aside (JUL 1996)
- 52.219-8 - Utilization Of Small Business Concerns (OCT 2000)
- 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"
- 52.222-19 - Child Labor – Cooperation With Authorities And Remedies (DEC 2001)
- 52.222-20 - Walsh-Healey Public Contracts Act (DEC 1996)
- 52.222-21 - Prohibition Of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (APR 2002)
- 52.222-29 - Notification Of Visa Denial (FEB 1999)
- 52.222-35 - Equal Opportunity For Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, And Other Eligible Veterans (DEC 2001)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 52.223-5 - Pollution Prevention And Right-To-Know Information (APR 1998)
- 52.223-6 - Drug-Free Workplace (MAY 2001)
- 52.223-10 - Waste Reduction Program (AUG 2000)
- 52.223-14 - Toxic Chemical Release Reporting (OCT 2000)
- 52.225-13 - Restrictions On Certain Foreign Purchases (JUL 2000)
- 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)
(will be included if the successful offeror is a small business or a non-profit organization)
- 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)
- 52.232-20 - 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 (FEB 2002)
- 52.232-25 - Prompt Payment (FEB 2002) Alternate I(FEB 2002)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (MAY 1999)
- 52.233-1 - Disputes (JUL 2002)
- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 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)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate II (APR 1984)
- 52.244-2 - Subcontracts (AUG 1998) - Alternate I (AUG 1998)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts For Commercial Items (MAY 2002)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
- 52.245-18 - Special Test Equipment (FEB 1993)
- 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 (APR 1984)
- 52.247-63 - Preference For U. S. Flag Carriers (JAN 1997)
- 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
- 52.249-14 - Excusable Delays (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

<u>DFARS CLAUSE</u>	<u>TITLE</u>
252.201-7000	- Contracting Officer's Representative (DEC 1991)
252.203-7001	- Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (MAR 1999)
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	- Required Central Contractor Registration (NOV 2001)
252.204-7005	- Oral Attestation Of Security Responsibilities (NOV 2001)
252.205-7000	- Provision Of Information To Cooperative Agreement Holders (DEC 1991)
252.209-7000	- Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
252.209-7004	- Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
252.215-7000	- Pricing Adjustments (DEC 1991)
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 (MAR 1998)
252.225-7002	- Qualifying Country Sources As Subcontractors (DEC 1991)
252.225-7009	- Duty-Free Entry--Qualifying Country Supplies (End Products And Components (AUG 2000))
252.225-7012	- Preference For Certain Domestic Commodities (APR 2002)
252.225-7016	- Restriction On Acquisition Of Ball And Roller Bearings (DEC 2000)

- 252.225-7026 - Reporting Of Contract Performance Outside The United States (JUN 2000)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 1998) (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 and Indian-Owned Economic Enterprises-DoD Contracts (SEP 2001)
- 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)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (JUN 1995)
- 252.227-7030 - Technical Data--Withholding Of Payment (MAR 2000)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7036 - Declaration Of Technical Data Conformity (JAN 1997)
- 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)
- 252.235-7010 - Acknowledgment Of Support And Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (SEP 1999)
- 252.242-7000 - Post Award Conference (DEC 1991)
- 252.243-7002 - Requests For Equitable Adjustment (MAR 1998)
- 252.244-7000 - Subcontracts For Commercial Items And Commercial Components (DOD Contracts) (MAR 2000)
- 252.245-7001 - Reports Of Government Property (MAY 1994)
- 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)

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).

I-3 DFARS 252.225-7008 - SUPPLIES TO BE ACCORDED DUTY- FREE ENTRY (MAR 1998)

In accordance with paragraph (b) of the Duty-Free Entry clause of this contract, in addition to duty-free entry for all qualifying country supplies (end products and components) and all eligible end products subject to applicable trade agreements (if this contract contains the Buy American Act - Trade Agreements - Balance of Payments Program clause or the Buy American Act - North American Free Trade Agreement Implementation Act - Balance of Payments Program clause), the following foreign end products that are neither qualifying country end products nor eligible end products under a trade agreement, and the following nonqualifying country components, are accorded duty free entry.

**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS
SECTION J
LIST OF ATTACHMENTS**

- J-1** Attachment (1) - Statement Of Work - 5 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements List, 4Pages.
- J-2** Attachment (2) - DD Form 254, Contract Security Classification Specification, Ser 003-02 Dated 20020108 2 Pages.
- J-3** Attachment (3) – Personnel Qualifications, 2 Pages.
- J-4** Attachment (4) – 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

Each Offeror must submit a completed 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/rep&certs.htm>

K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAR 2001)

The fill in information is as follows:

The NAICS code for this acquisition is 541330.

The small business size standard is. \$20,000,000.

SECTION L
INSTRUCTIONS CONDITIONS AND NOTICES
TO OFFERORS OR RESPONDENTS

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

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

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

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

FAR CLAUSE	TITLE
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52.204-6	- Data Universal Numbering System (DUNS) Number (JUNE 1999)
52.215-1	- Instructions To Offerors- Competitive Acquisition (MAY 2001)
52.215-5	- Facsimile Proposals (OCT 1997) Paragraph (c) is completed as follows: (202) 767- 6197 (primary) or (202) 767-0494 (alternate). In addition facsimile proposals may be transmitted by e-mail to waldenfels@contracts.nrl.navy.mil (primary) or parnell@nrl.navy.mil (alternate) in either Microsoft Word (version 97 or earlier) or pdf format.
52.215-16	- Facilities Capital Cost Of Money (OCT 1997)
52.237-10	- Identification of Uncompensated Overtime (OCT 1997)

L-2 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-3 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 below

See L-13, VOLUME II - BUSINESS PROPOSAL”.

L-4 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-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from 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-6 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 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-7 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-8 GOVERNMENT-FURNISHED PROPERTY

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

L-9 TRAVEL AND MATERIAL ESTIMATE

The travel and material estimate set forth below must be included in each offeror's cost proposal for evaluating purposes only. The contractor will be reimbursed allowable travel and material costs incurred in performance of the contract.

TRAVEL COSTS - \$400,000 (\$50,000 PER YEAR) PLUS ANY APPLICABLE INDIRECT COSTS.

MATERIAL COSTS - \$400,000 (\$100,000 PER YEAR) PLUS ANY APPLICABLE INDIRECT COSTS.

L-10 INQUIRIES CONCERNING THE RFP

Any questions concerning the RFP must be submitted in writing to waldenfels@contracts.nrl.navy.mil no less than fifteen (15) days before closing. (See the advisory cover sheet re delays in mail to NRL, and consider other means.) After this date, the Government will weigh the interests of an efficient competition, fairness to other potential offerors, and the opportunity for timely submission against the criticality of the question in determining whether to address late questions. The Government is predisposed not to respond to 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 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS

(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 Identification/Mailing - The proposal should be packaged for delivery so as to permit safe and timely arrival at destination. (See the advisory cover sheet re delays in mail to NRL, and consider other means.) The proposal package should be sent to the address shown in Block 7 of the

RFP face page and marked:

Solicitation No. N00173-02-R-JW03
Closing Date:
(As specified in Block 9, RFP face page)
Attn: Code 3230.JW

(3) 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 3 COPIES.

(1) Include a matrix indicating proposed labor hours by skill category required to perform the statement of work. Describe the equivalence of RFP labor categories to your labor categories. This matrix shall not contain labor rates or any other indication of price. The offeror must propose using the level of effort breakdown identified in Section H of the RFP, treating each option period as a separate additional year.

The following information is required for evaluation of your technical/management proposal: Note that effective presentation of information is part of the context of evaluation for each area.

Technical Subfactor 1 - Qualifications of Project Personnel. The offeror must provide convincing proof that it has, or has the ability to obtain, personnel as required by the RFP and described in the Personnel Qualifications attachment as well as DD Form 254, with relevant experience in the task areas described in the Statement of Work. These are highly specialized fields and personnel without actual experience in these areas are not acceptable. In particular, the proposal should indicate specific persons and their qualifications and experience in each task area of the Statement of Work, and the amount of effort each will be performing on the contract. It is essential for the offeror to demonstrate that all key personnel have or will be capable of obtaining a Secret clearance quickly.

The key personnel are the Senior Systems Engineer (1), Senior Software Engineer (1), and Senior Engineer (1).

The proposal must include each person's education level, experience (both general and project related), and software and hardware specific knowledge when appropriate. The proposal must show the availability of sufficient key project professional and technical personnel by the prime contractor as well as any proposed subcontractors and consultants. (Availability of personnel can be based on current staff expected to be on board at time of award, letters of commitment, employment contracts, or any other means that provides evidence of availability.)

The Solicitation sets forth minimum and desired qualifications. Among minimum requirements,

eligibility for SECRET clearance is essential for key personnel. The word “must” is often used to identify such minimum requirements. A proposal would be deficient and unacceptable (though possibly correctable) for failure to satisfy minimum qualification requirements. In other areas the RFP indicates desired qualifications with words such as “should” and “desirable.” While shortfalls in these areas will impact evaluation, they are not deficiencies.

Resumes. In addition to career experience and education, each resume should describe specific experience supporting the Statement of Work and personnel qualifications addressed in the attachment by that title, unless obvious from career experience or addressed elsewhere in the RFP. Ensure resume data for degrees includes the year the degree was granted and the field, and provide bachelor’s degree data, if any, even if a higher degree is required.

Eligibility for SECRET clearance may be based on evidence such as the following:

- (1) possession of a current or interim SECRET or higher clearance,
- (2) previous possession of a SECRET or higher clearance within two years of September 30, 2002, plus eligibility for an interim SECRET clearance, including the absence of indicators that a person would not be eligible, coupled with no prior refusal of a SECRET or higher clearance, unless there is a satisfactory explanation suggesting there is no current problem, and a commitment from the offeror to obtain an interim SECRET clearance as soon as possible.
- (3) other convincing evidence that an interim or SECRET clearance will be obtained within several weeks of the contract start date.
- (4) Clearance status may be indicated in the resume, by a statement in the proposal, or in a summary table.

Technical Subfactor 2 - Technical Understanding. This factor will be based on the offeror’s effective understanding of the Statement of Work, including its requirements as well as key aspects of its technical basis, its knowledge base, typical approaches, typical issues, handling unusual and critical problems, and other practical aspects such as feasibility, reasonableness and time constraints. Offerors should demonstrate a sound technical understanding of the objectives of the required work and the issues involved in carrying out this work. The proposal should make clear how this technical understanding will be transfused via proposed personnel or otherwise into this project. Evidence of effective innovation is welcome. Communicate this understanding clearly.

Technical Subfactor 3 - Company Experience and Management Capability. The evaluation will be based on the information provided pursuant to Section L and other sources if available. The proposal must provide a narrative description of company experience on projects with scientific and technical tasks similar to those required in the Statement of Work. This description should clearly show: (1) the relationship between the company’s experience and the tasks required under the Statement of Work, and (2) prior or current programs in the task areas. Prior experience should be identified by citing contracting agency, period of performance of the contract, and a summary of the nature of the work. Offerors should also describe clearly how the program will be managed, including corporate

commitment and management philosophy, supporting organization, workforce management approach, management systems and internal procedures, how instructions will be communicated by the project manager, how corrections in procedures or individual performance will be implemented, how work performance against schedule will be measured, and how problem areas will be identified and communicated to the COR.

Technical Subfactor 4 - Past Performance

(a) Offerors shall submit the following information as part of their proposal. (Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.) List the last five contracts or subcontracts completed by the offeror or predecessor companies during the past three years for services similar in nature to this requirement, or list all such contracts if fewer than five. Add any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.

1. Name of contracting organization.
2. Contract number
3. Contract type
4. Total contract value
5. Description of the contract work
6. Contracting officer and telephone number
7. Contracting officer's representative, program manager, or similar official and telephone number

(b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.

- (c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

L-13 VOLUME II - BUSINESS PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 2 COPIES Note that only the original and 1 copy of the SF33, and only the original of required fill-in contractual information and the Representations and Certifications, need be supplied. It is not necessary to include RFP pages that do not require offeror entries.

(1) COST PROPOSAL

- (a) 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, subcontracts for labor, direct labor, indirect cost, and other costs such as travel and consultants. The offeror shall provide exhibits as necessary to substantiate each cost element, to the extent not stipulated in the RFP. (Stipulated elements include travel cost, the level of effort (other than for undesignated support labor), and material cost other than for subcontractors and consultants providing required labor.) Any exceptions to RFP provisions, technical or business, should be summarized. The following paragraphs are intended to require data to facilitate an efficient Government review without placing an undue burden on offerors. The intent is to collect data sufficient to produce independent Government spreadsheets while minimizing the need to clarify cost data. Confusion and delay are often caused by uncertainty over the alignment of subcontractor costs with prime offeror rate periods, or the breakout of a subcontract proposal by cost element.
- (b) Base proposal costs on a nominal start date of September 30, 2002. Award is anticipated in September.
- (c) Provide detailed cost tables both for each base or option year and for the total program. The tables for the total program must show detail by the offeror's fiscal year, which will facilitate analysis by NRL. Should hours in a category be broken down to show SOW detail, ensure the tables for the total program (or supplementary tables) show the total hours and costs for each labor category. (Such a breakdown by SOW is not desired for the fiscal year data.)
- (d) Provide a summary table showing the full value (e.g., CPFF or FFP at the subcontractor/consultant level) of each subcontractor's and consultant's costs, as well as its hours, aligned with the offeror's fiscal years for each fiscal year included in the program. State whether the breakout by cost elements has been included with the prime offeror's proposal. In the description of each subcontractor's proposal, state whether the subcontractor will provide its own office facilities for performance or will regularly use another organization's office facilities (state anticipated portion). For each subcontractor providing its own facilities, state whether special facilities are involved beyond normal office facilities with normal computer and software support.
- (e) Burden for labor hours must be based, in accordance with the offeror's accounting practice, on assumed performance at NRL only for one senior systems engineer and one senior software engineer; burden for other personnel must be based on performance at contractor sites vice customer sites. This distribution is anticipated, except for short additional assignments at customer sites.
- (f) If a period of performance (e.g., the first year, second year, etc.) overlaps the point where a rate changes (including labor, burdens, any cost of money), the offeror shall submit a description of the timing of the change, the amount of the base for each rate period, and the rate applied to each base. Alternately, the formulas or methodology for calculating the base for each period may be stated (e.g., two thirds of the hours in the first period, one third in the

second). This may be submitted as a summary table, separate from the cost tables for the total program by fiscal year, or submission may not be necessary if clear from the cost tables for the total program. If subcontractors do not submit such information (for their own rate periods) to the offeror, they should be prepared to submit it to NRL's Contracting Division.

- (g) Provide a rates table showing all burden rates for each fiscal rate period. Include labor categories too, or, alternately for labor, indicate the percentage and timing of adjustments in rates for each category. If your company proposes using individual rates, and rates for some positions are based on composites of individuals, indicate the contribution of each person to the composite rate. Describe the base for each burden and cost of money factor, if used. Provide a table supporting the breakout by base and option years that shows the calculation of composite burden rates weighted by the proportion of the base in each fiscal period. Identify your fiscal year. Provide the same information for each subcontractor willing to provide it directly to you (for subcontractors providing labor for required personnel positions). If subcontractors do not submit such information to the offeror, they should be prepared to submit it to NRL's Contracting Division.
- (h) Should rates be used in the proposal which are not DCAA approved, provide the rationale for their use at time of proposal submission. However, for estimating key personnel costs, use individual labor rates of proposed personnel as the basis when practicable.
- (i) State the policy for the timing of adjustments in labor rates, and state the adjustments and timing used in the proposal. If category rates are proposed, state whether costs are accumulated and billed using category rates, individual employee rates, or both. If both, describe your accounting practice. Provide contingency employment documents for potential new hires and describe the timing of potential adjustments in their salaries if not the same as for current employees. Provide the same information for each subcontractor willing to provide it directly to you (for subcontractors providing labor for required personnel positions). If subcontractors do not submit such information to the offeror, they should be prepared to submit it to NRL's Contracting Division.
- (j) If fringe benefit or overhead rates, G&A rates, or cost of money rates for the first period of performance are changing significantly (about 5% of the rate or more) from previously experienced or approved rates, an explanation should be provided.

(k) Material Estimate

See Provision L-9. (As usual under cost plus fixed fee contracts, the contractor will be reimbursed allocable, allowable and reasonable material costs incurred in contract performance.)

If any burden or cost of money factor depends on a more detailed breakout of material, the offeror must allocate this estimate to appropriate cost sub-elements in the offeror's (subcontract offeror's) accounting system. If shipping is normally addressed as a separate other direct cost element, it should be so treated in the proposal. The offeror may use the following Government estimate for the allocation of these sub-elements, or may use an allocation based on its own experience/"make or buy" practices. If the offeror elects to base the estimate on its own experience and practices, a brief explanation of the basis and

supporting rationale should be provided.. Note that these amounts are in addition to any amounts for subcontracts, consultant costs, etc. for personnel to fill required positions.

Government estimate of material and shipping costs per year: computer related equipment and power converters, wires/cables, meters, optical items - \$50,000; miscellaneous services - \$15,000; software maintenance and technical support - \$25,000; and shipping \$10,000. It is anticipated that single items will be below \$10,000 in cost, with most well below \$10,000.

- (l) TRAVEL ESTIMATE. See Provision L-9. (The yearly travel estimates should not be broken out into further components, such as air fare or per diem.) (As usual under cost plus fixed fee contracts, the contractor will be reimbursed allowable, allocable and reasonable travel costs incurred in contract performance.)
- (m) When you elect to claim facilities capital cost of money as an allowable cost, you must submit Form CASB-CMF and show the calculation of the proposed amount (see FAR 31.205-10). Provide the same information for each subcontractor willing to provide it directly to you (for subcontractors providing labor for required personnel positions). If subcontractors do not submit such information to the offeror, they should be prepared to submit it to NRL's Contracting Division
- (n) Indicate the cognizant DCAA office, including the name and phone number of the point of contact. Include the same information for subcontractors over \$500,000.
- (o) Provide a summary of labor hours by labor category, showing the makeup of each category by offeror hours, each subcontractor's hours and each consultant's hours.

L-14 BACKGROUND OF PROGRAM

The contractor performing the preceding contract, N00173-98-C-2059, is Raven, Inc. of Alexandria, Virginia. The contract was awarded on September 30, 1998 at a cost plus fixed fee amount for the basic contract of \$1,652,062. The current contract cost plus fixed fee value is \$7,487,689.

L-15 OTHER BACKGROUND INFORMATION

The Government will not make more than one award.

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. Although technical considerations are more important than the cost and other factors, the closer the technical scores of the various proposals are to one another, the more important the business considerations become.

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. Within the technical factor, Subfactor 1 is significantly more important than Subfactor 2. Subfactor 2 is more important than Subfactor 3, which is in turn more important than Subfactor 4.

M-2-1. TECHNICAL/MANAGEMENT

Technical Subfactor (1) - Qualifications of Project Personnel: The proposal will be evaluated on the relative expertise of proposed personnel and on the offeror's demonstrated ability to provide personnel with: (1) the appropriate qualifications set forth in the Solicitation; (2) actual relevant experience in the task areas set forth in the Statement of Work; and (3) the ability to obtain a Secret clearance prior to commencing work for key personnel. Technical Subfactor (2) - Technical Understanding: The proposal will be evaluated on the offeror's effective understanding of the technical basis and requirements of the Statement of Work, including the objectives and issues involved, as well as understanding of feasibility and reasonableness aspects including time constraints. Evidence of innovation will be considered. Clarity of communicating technical understanding will be considered.

Technical Subfactor (3) - Company Experience and Management Capability: The proposal will be evaluated on the basis of (1) the offeror's demonstrated company experience in performing projects requiring scientific and technical effort with is closely similar or related to the technical and scientific efforts set forth in the Statement of Work, and (2) the quality of the management approach, including such elements as corporate commitment and management philosophy, supporting organization, workforce management approach, management systems and internal procedures, and ways of handling specific issues.

Technical Subfactor (4) - Past Performance

Past performance will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Section L and other sources if available. The evaluation will take into account past performance information regarding predecessor companies, subcontractors that will perform major or critical aspects of the requirement, or the proposed project manager or key personnel responsible for major or critical aspects of the requirement. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iv).

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).

**INTEGRATED COOPERATIVE COUNTERMEASURES ADVANCED TECHNOLOGY
(ICCAT)**

STATEMENT OF WORK

1.0 Background

The Naval Research Laboratory (NRL) Applied Optics Branch conducts a variety of research and development activities in optics supporting military aircraft and ship systems. Functions include both theoretical and experimental research, and the development of systems to solve tactical problems. Efforts comprise a broad technical scope that includes electronic and optical countermeasures systems, tactical software for these systems, and optical transfer modeling in support of these systems.

2.0 Scope

The scope of the contract is to develop systems to exploit the optical spectrum from infrared through ultraviolet to support Navy and tri-service requirements for missile countermeasures. The areas of technical investigation will have emphasis on electro-optical and infrared (EO/IR) systems and techniques for countering infrared missile threats. The overall objective of the program is to investigate the phenomenology, the relevant technologies, and the means for implementing cooperative countermeasures. The effort will be both analytical and experimental. The work will be performed at the Contractor's site, at the Naval Research Laboratory (NRL), and at test sites in the US and in allied countries.

The classified portion of the work will be at the Secret level. These tasks include research and engineering investigations into individual and cooperative Infrared Countermeasures (IRCM) techniques, into critical item and high technical risk devices used in IR/EO and UV multi-spectral countermeasures systems, and into total countermeasures systems performance through improved interoperability and through the improvement of critical components.

3.0 Tasks

3.1 Field Testing – Signature Measurements

- 3.1.1 Field test preparation and conduct. The Contractor shall support the measurement of infrared (IR) and ultraviolet (UV) signatures of aircraft, missiles, flares, and other signatures relevant to the modeling of anti-aircraft missiles and missile countermeasures (CM). The Contractor shall plan tests, store and assemble the required instrumentation, calibrate and align the instruments, provide for shipment to the appropriate sites, assemble, test and calibrate the instruments, and conduct the field tests. The measurements shall include spatial, spectral, and temporal data. The Contractor shall be responsible for the on site maintenance of the instrumentation used for the measurements, and for data security. The Contractor shall conduct measurements at the White Sands Missile Range (WSMR), Naval Air Warfare Center-Weapons Division (NAWC/WD/CL) China Lake, at the Naval Research Laboratory (NRL), and at other domestic and foreign sites as directed.
- 3.1.2 Data Reduction and Analysis. The Contractor shall reduce, and analyze data gathered during the tests, prepare and organize data for input into models, and prepare reports on the tests. The Contractor shall also write and present papers to professional measurement symposia.
- 3.1.3 Remote Instrumentation Control. The Contractor shall develop control software and integrate hardware to interface data communications and display equipment with measurement instrumentation. The Contractor shall provide interfaces to users to enable remote control via data link of the measurement instrumentation. The Contractor shall also modify software and hardware and alter test instrumentation as necessary to meet on-site test requirements.

3.2 Optical Modeling and Simulation

- 3.2.1 Develop Models. The Contractor shall design optical models and shall program simulations, which shall run on Contractor and NRL workstations, to test cooperative countermeasures designs. The models shall include atmospheric effects, sensor optics, and sensor spatial and temporal responses. The Contractor shall develop models with MatLab, and shall optimize and refine other computer code as directed.
- 3.2.2 Run Simulations. The Contractor shall operate DISAMS, LOWTRAN, MODTRAN and other software simulations and hardware-in-the-loop simulators used at NRL. The Contractor shall also operate Contractor-developed simulations at its facilities.
- 3.2.3 Simulation Recommendations and Analyses. The Contractor shall identify aircraft, countermeasures systems, and threat scenarios that need to be simulated. Using

simulation results with other data, the Contractor shall develop cooperative countermeasures systems performance requirements.

3.3 Missile Attack Warning Systems (MAWS) and IRCM Systems Design

- 3.3.1 Systems Architecture. Based on performance requirements developed from signature measurements and simulation results from Task 3.2, the Contractor shall develop candidate cooperative countermeasures systems architectures. They will be achievable architectures that reflect the use of currently available or near-term feasible technologies.
- 3.3.2 Electronic Design. The Contractor shall design prototype electronic boards and modules and develop embedded processor software in C and Ada for TADIRCM (Tactical Aircraft Directed IRCM) and other advanced and engineering development countermeasures systems.
- 3.3.3 MAWS Evaluation. The Contractor shall evaluate the design of MAWS, including design improvements to current Navy MAWS such as the AAR-47. The Contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with other on-board defensive electronic countermeasures and expendable CM systems. The Contractor shall provide scientific and engineering analyses and evaluation of missile detection sensors, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.
- 3.3.4 Jammer Evaluation. The Contractor shall evaluate the design of IRCM systems, including design improvements to current Navy jammers such as Agile Eye and the ALQ-157. The Contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with MAWS and expendable CM systems. The Contractor shall provide scientific and engineering analyses and evaluation of radiators, optics and systems concepts to identify integration problem solutions, systems improvements, and technologies and systems architectures to meet future requirements.
- 3.3.5 Expendables Evaluation. The Contractor shall evaluate the design of countermeasures expendables. The Contractor shall develop system specifications, evaluate equipment designs, and assess system integration interfaces with on-board MAWS and jammer systems, and other expendable CM systems. The Contractor shall provide scientific and engineering analyses and evaluation of radiators, antennas, optics and systems concepts to identify expendable architectures to meet future requirements.
- 3.3.6 Cooperative Countermeasures Analysis. The Contractor shall analyze simulation results, and test data collected for tri-service on-board and off-board IRCM systems and MAWS to provide independent assessments of IRCM effectiveness,

and to develop new cooperative techniques models for flares, expendable IR/EO/UV sources, and on-board IRCM systems.

3.4 MAWS and On-Board/Off-Board IRCM Cooperative Systems Test Engineering

3.4.1 Test Requirements. The Contractor shall identify test requirements to assess MAWS, and on-board/off-board IRCM cooperative systems concept effectiveness, and to evaluate candidate Navy systems designs. The Contractor shall identify equipment and facility requirements, and data requirements. The measurements shall include spatial, spectral, and temporal data.

3.4.2 Test Preparation and Equipment Assembly. The Contractor shall plan tests, assemble the required instrumentation, calibrate and align the instruments, provide for shipment to the appropriate sites, assemble, test and calibrate the instruments, and conduct the tests for IRCM cooperative systems testing.

3.4.3 Infrared and Radar Cooperative Countermeasures. The Contractor shall identify criteria for the evaluation of cooperative countermeasures between on-board and off-board IRCM systems, and between IRCM and microwave/millimeter wave CM systems.

3.4.4 Flight Test Support. The Contractor shall modify, and integrate test hardware into NRL test aircraft for IRCM cooperative systems testing. Integration shall include training of Government personnel to install, check out, and operate the equipment. The Contractor shall also participate in flight tests.

3.4.5 Detector Testing. The Contractor shall design and implement detector test systems to determine developmental IR/EO/UV detector sensitivity, degradation with use, and overall reliability in support of IRCM cooperative systems test engineering. The Contractor shall integrate, calibrate, and maintain test instrumentation, develop test plans and associated documentation, perform tests and write test reports.

3.4.6 Algorithm Testing. The Contractor shall plan and recommend closed-loop tests to assess software fault tolerance, reusability, and reliability of detection and countermeasures algorithms. The Contractor shall calibrate and maintain test instrumentation, develop test plans and associated documentation, perform tests and write test reports.

3.5 Performance and System Specification, and Identification of Multi-Platform Common and Cooperative Missile Countermeasures Systems

3.5.1 Analyses. The Contractor shall analyze data collected during tests of candidate common and cooperative missile countermeasures systems and estimate the life-cycle costs to evaluate the cost effectiveness of the systems. The evaluation

shall include the ability of the systems to meet published operational requirements for candidate naval platforms and to meet other performance objectives.

- 3.5.2 Technical Plans. The Contractor shall develop a program plan, including technical planning and coordination, engineering investigation and program scheduling, tracking and analysis for on-board and off-board IR/EO/RF countermeasures systems for Advanced Development, and Test and Evaluation.
- 3.5.3 Technical Backup Reports. Using IR signature measurements, modeling, MAWS/dispenser/jammer/flare system analysis and integration concepts, the Contractor shall provide scientific, engineering, and technical data to support the development of common and cooperative IRCM requirements for new and operational tactical Navy aircraft.
- 3.5.4 Infrastructure Support. The Contractor shall provide databases, connectivity, and multi-media support to enable all program participants to access needed information. The Contractor shall ensure that best commercial security practices are implemented to prevent unauthorized use of the data. The Contractor shall not host classified data.
- 3.5.5 Concept Design of Common and Cooperative Countermeasures System. The Contractor shall identify common and cooperative design requirements among multiple platforms, identify critical requirement differences and recommend component, assembly, sub-system, and interface designs both to meet performance requirements, and to minimize design cost, weight, and power requirements. The Contractor shall also assess software modularity for reuse, and identify multi-system applicability.
- 3.5.6 Technology Roadmaps. The Contractor shall assess current and emerging technologies and concepts, which have application to this program development, and evaluate their potential for improving the approaches developed.
- 3.5.7 Test Recommendations. The Contractor shall recommend and prepare related test and measurement plans required to implement the technical demonstrations needed to transition the systems concepts to the next stage of development.

CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. 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 address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. 0002		B. EXHIBIT A		C. CATEGORY: TDP _____ TM _____ OTHER _____		
D. SYSTEM / ITEM Integrated Cooperative CMs Adv Tech.			E. CONTRACT / PR NO. 56-9327-02		F. CONTRACTOR TBD per N00173-02-R-JW03	
1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM Quarterly Progress Reports			3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.) N/A			5. CONTRACT REFERENCE SOW paragraph 3		6. REQUIRING OFFICE NRL 5630	
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY QRTLTY	12. DATE OF FIRST SUBMISSION EOQ + 15 days		14. DISTRIBUTION	
8. APP CODE N/A	11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION Block 12 for ea quarter		a. ADDRESSEE	b. COPIES	
					Draft	Final
					Reg	Repro
16. REMARKS Contractor format. Quarterly progress reports to include both technical and financial progress. Technical reports shall include a description of all comprehensive findings obtained on the contract during the contract's current reporting period, as determined in the execution of the research described herein, and in addition to all drawings and/or test results obtained. Financial reports shall include expenditures of funds for the contract's current reporting period. Include brief statements of technical progress, problems, and plans for the next quarter.				NRL 5630	2	
				15. TOTAL →	2	
1. DATA ITEM NO. A002	2. TITLE OF DATA ITEM Final Report			3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.) N/A			5. CONTRACT REFERENCE SOW paragraph 3		6. REQUIRING OFFICE NRL 5630	
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY 1TIME	12. DATE OF FIRST SUBMISSION EOC + 60 DAYS		14. DISTRIBUTION	
8. APP CODE N/A	11. AS OF DATE EOC	13. DATE OF SUBSEQUENT SUBMISSION N/A		a. ADDRESSEE	b. COPIES	
					Draft	Final
					Reg	Repro
16. REMARKS For format, see Clause H-4, ONR 5252.235-9714 - REPORT PREPARATION (FEB 02) A final technical report to the COR within sixty days of completion of this contract. This report shall provide a brief comprehensive summary of findings on this contract, and may incorporate by reference any publications or completed reports on the individual contract tasks. The address for NRL 5227 is: Director, Naval Research Laboratory, ATTN: Code 5227, 4555 Overlook Ave., S.W., Washington, DC 20375-5326 The address for DTIC is: Defense Technical Information Center (DTIC), 8725 John J. Kingman Rd., Suite #0944, Fort Belvoir, VA 22060-6218				NRL 5630	3	1
				NRL 5227		1
				DTIC		4
				15. TOTAL →	3	6
G. PREPARED BY NRL Code 5630		H. DATE 8/14/2002		I. APPROVED BY		J. DATE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. 0002		B. EXHIBIT A		C. CATEGORY: TDP _____ TM _____ OTHER _____			
D. SYSTEM / ITEM Integrated Cooperative CMs Adv Tech.			E. CONTRACT / PR NO. 56-9327-02		F. CONTRACTOR TBD per N00173-02-R-JW03		
1. DATA ITEM NO. A004	2. TITLE OF DATA ITEM Task Reports			3. SUBTITLE			
4. AUTHORITY (Data Acquisition Document No.) N/A			5. CONTRACT REFERENCE SOW paragraph 3		6. REQUIRING OFFICE NRL 5630		
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED	10. FREQUENCY ASREQ	12. DATE OF FIRST SUBMISSION Task completion + 15days		14. DISTRIBUTION		
8. APP CODE N/A	11. AS OF DATE ASREQ	13. DATE OF SUBSEQUENT SUBMISSION ASREQ		a. ADDRESSEE NRL 5630	b. COPIES		
					Draft	Final	
					Reg	Repro	
16. REMARKS Contractor format. The technical reports shall be comprehensive reports on each technical task. These reports may be a compendium of individual reports on separate task topics or may be integrated task reports. For Task 3.1, the contractor shall provide a comprehensive report that documents the field-testing and the signature measurements. The contractor shall provide: a) Test plans for each test, b) All reduced data in electronic form, and all raw videotapes of the measurements and tests, c) Analytical reports on the performance of the systems, and on the implications of the measurements for the development of countermeasure systems. The reports shall include instrumentation descriptions, calibration and alignment procedures, spatial, spectral, and temporal information, and supporting meteorological data, d) Documentation of all software developed for interfaces between the data communications equipment and data terminal equipment, and between the measurement instrumentation. For Task 3.2, the contractor shall provide a comprehensive report on the evaluation and analytic tools used as well as the digital missile models used. The contractor shall provide: a) All source code in electronic format, b) User Manuals for all simulations developed, and c) Final reports on the results of the simulation analyses. For Task 3.3, the contractor shall report on each design and evaluation. The contractor shall provide: a) Design drawings for all hardware units and sub-assemblies, b) Source code for all embedded software, c) Comprehensive reports on all analyses, describing the analytical methodology, the results and conclusions. For Task 3.4, the contractor shall provide written reports in support of MAWS and IRCM systems test requirements and the results of laboratory testing. The contractor shall provide: a) Written analyses identifying test requirements and test evaluation criteria, b) Written final test reports describing the test setup, data analysis, results and conclusions, and c) Operator's guides/checklists for equipment installed in test aircraft. For Task 3.5, the contractor shall provide data, information and reports to support program engineering. The contractor shall provide: a) Technical reports in contractor format detailing any studies or analyses conducted in support of the project, and b) Technical reports in contractor format detailing any technical plans, backup reports, concept designs, test plans, and technology roadmaps.							
				15. TOTAL	0	3	1
G. PREPARED BY NRL Code 5630			H. DATE 8/14/2002	I. APPROVED BY		J. DATE	

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. 0002		B. EXHIBIT A		C. CATEGORY: TDP _____ TM _____ OTHER _____ F	
D. SYSTEM / ITEM Integrated Cooperative CMs Adv Tech.			E. CONTRACT / PR NO. 56-9327-02		F. CONTRACTOR TBD per N00173-02-R-JW03
1. DATA ITEM NO. A005	2. TITLE OF DATA ITEM Contractor On-Site Labor Report			3. SUBTITLE	
4. AUTHORITY (Data Acquisition Document No.) N/A			5. CONTRACT REFERENCE (Administrative)		6. REQUIRING OFFICE NRL CODE
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED	10. FREQUENCY MTHLY	12. DATE OF FIRST SUBMISSION EOM 1st Mon. +5		
8. APP CODE N/A	9. DIST STATEMENT REQUIRED N/A	11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION MTHLY		
14. DISTRIBUTION					
a. ADDRESSEE			b. COPIES		
	Reg	Repro			
COR Code 5630			0	1	0
AO Code 5602			0	1	0
15. TOTAL →					
G. PREPARED BY NRL CODE 5630			H. DATE 8/14/2002	I. APPROVED BY	
				J. DATE	

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

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 SER: 003-02 a. FACILITY CLEARANCE REQUIRED <div style="text-align: center; border: 1px solid black; padding: 2px;">SECRET</div> b. LEVEL OF SAFEGUARDING REQUIRED <div style="text-align: center; border: 1px solid black; padding: 2px;">SECRET</div>			
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) 20020108	
b. SUBCONTRACT NUMBER				b. REVISED <i>(Supersedes all previous specs)</i>		REVISION NO. DATE (YYYYMMDD)	
<input checked="" type="checkbox"/> c. SOLICITATION OR OTHER NUMBER 56-9327-02		DUE DATE (YYYYMMDD)		c. FINAL <i>(Complete Item 5 in all cases)</i>		DATE (YYYYMMDD)	
4. IS THIS A FOLLOW-ON CONTRACT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO. If Yes, complete the following: Classified material received or generated under _____ <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				b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
FOR RFP PURPOSES ONLY, NOT VALID FOR ACTUAL CONTRACT AWARD						N/A	
7. SUBCONTRACTOR							
a. NAME, ADDRESS, AND ZIP CODE				b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
N/A						N/A	
8. ACTUAL PERFORMANCE							
a. LOCATION				b. CAGE CODE		c. COGNIZANT SECURITY OFFICE <i>(Name, Address, and Zip Code)</i>	
N/A						N/A	
9. GENERAL IDENTIFICATION OF THIS PROCUREMENT INFRARED COUNTERMEASURES RESEARCH							
10. CONTRACTOR WILL REQUIRE ACCESS TO:				11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:			
		YES	NO			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			<input checked="" type="checkbox"/>	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 5630.

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, SECRET storage capabilities, and personnel available with DoD granted personnel security clearances commensurate with level of access required for performance of contract.

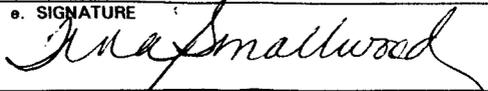
14. ADDITIONAL SECURITY REQUIREMENTS. Requirements, in addition to ISM requirements, are established for this contract. Yes No
 (*If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide 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 TINA SMALLWOOD	b. TITLE CONTRACTING OFFICER, SECURITY	c. TELEPHONE (<i>Include Area Code</i>) (202)767-2240/2521
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d. ADDRESS (*Include Zip Code*)
 NAVAL RESEARCH LABORATORY
 4555 OVERLOOK AVE., SW
 WASHINGTON, DC 20375-5320

e. SIGNATURE


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 1221.1, 5630, 5602

PERSONNEL QUALIFICATIONS

Note: A Bachelor or Master of Engineering degree is considered the same as a Bachelor or Master of Science in Engineering degree.

Senior Scientist: Individuals should have at least 15 years experience with optical sensor systems. Individuals must be recognized in the field of lens and lens coating materials, particularly for ultra-violet optics. Individuals must have demonstrated experience testing optical materials, analyzing test data and reporting results. Individuals should possess a PhD in a physical science or material engineering. A MS in a physical science or material engineering plus an additional 5 years of related experience may be substituted for the PhD.

Physicist: Individuals should have at least 3 years experience in research and development of electronic systems, including three years with IR system setup, test, measurement, and data acquisition, reduction and analysis. Specifically, individuals must have experience with the design of computer algorithms to extract IR signature data, missile warning systems, missile signatures, and IR flare signatures. Individuals must have experience preparing and organizing data for input into models. Individuals must also have recent experience field-testing EO/IR systems for aircraft self defense, including test planning, instrumentation setup, test and calibration in the field and at NRL or other Government laboratory, test execution, data reduction, analysis, and report writing. Individuals should have a BS in Physics, or 8 additional years of experience.

Senior Systems Engineer: Individuals should have at least 15 years experience with Navy electronic warfare (EW) and infrared countermeasures (IRCM) systems, including 10 years recent experience in the research and development of TADIRCM and other infrared and electro-optical systems and their integration with Navy aircraft EW systems. Individuals must have experience in the integration of EW systems into aircraft, common and cooperative design requirements, expendable countermeasures systems design, cooperative techniques and in simulation modeling of countermeasures systems. Individuals should have a MS in Systems Engineering or Systems Management. A BS in science or engineering plus an additional 5 years of EW related experience may be substituted for the MS.

Senior Software Engineer: Individuals should have at least 8 years of software development experience related to real time/near real time processing for tactical aircraft systems. This should include at least 5 years of recent experience developing embedded software in C for TADIRCM and other Navy missile attack warning and infrared countermeasures systems. Experience should also include the development of software for communications interfaces between data communications and display equipment and instrumentation; programming of optical, missile, and off-board countermeasures models and simulations; running DISAMS; and programming in MATLAB. Individuals should have a MS degree in electrical engineering or physics, or a BS degree in electrical engineering, or physics and 5 additional years experience.

Software Engineer: Individuals should have at least 5 years of software development experience related to the development of military systems, and at least 3 years recent experience in object

oriented requirements software. Individuals must be proficient in microcomputer-based data management system programming language and have a demonstrated understanding of top-level application program interface for object oriented Computer Aided Software Engineering (CASE) tools. Individuals must have experience in Unix, Windows NT, Windows integration, and with relational and object oriented databases. Individuals should have a BS degree in engineering, physics, computer science or mathematics. Alternately, a person without a degree who meets the mandatory (“must”) experience requirements is considered fully acceptable if they have the experience described in the first sentence of this paragraph.

Senior Engineer: Individuals should have at least 10 years of experience with the design and development of avionics systems. They must have recent experience in the analysis of embedded software design of missile warning and IRCM systems. Individuals must have recent experience in field-testing of EO/IR systems for aircraft self defense, including test planning, test system and instrumentation setup, test and calibration in the field and at NRL or other Government laboratory, test execution, data reduction, analysis, and report writing. Individuals should have a BS in Physics, or Electronic or Mechanical Engineering. An additional 5 years of electronics design experience may be substituted for a BS.

Electronics Engineer: Individuals should have at least 5 years experience in the development, calibration, and employment of measurement systems. Individuals must have 3 years of recent experience in field-testing of EO/IR systems for aircraft self defense, including test planning, test execution, data reduction, analysis, and report writing. Individuals should have a BS in Physics or Electrical Engineering. An additional 5 years of related experience may be substituted for the BS.

Note: “Should” means that the stated qualification is strongly desired but not mandatory. The degree to which proposed personnel satisfy such qualifications will influence scoring. “Must” indicates a mandatory requirement; failure to satisfy such a requirement will render the entire proposal unacceptable.