

AWARD/CONTRACT	1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING	PAGE OF PAGES 1 26
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2. CONTRACT (Proc. Inst. Ident.) NO. HR0011-09-C-0015	3. EFFECTIVE DATE 21 Nov 2008	4. REQUISITION/PURCHASE REQUEST/PROJECT NO. X92500
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5. ISSUED BY DARPA CMO ATTN: STEPHEN C DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714	CODE: HR0011	6. ADMINISTERED BY (If other than Item 5) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S FT-03 DALLAS TX	CODE: S4420A
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7. NAME AND ADDRESS OF CONTRACTOR LOCKHEED MARTIN CORPORATION MISSILES & FIRE CONTROL, 1701 W. MARSHALL GRAND PRAIRIE TX 75051	8. DELIVERY [] FOB ORIGIN [X] OTHER (See below)
	9. DISCOUNT FOR PROMPT PAYMENT Net 30 Days.
	10. SUBMIT INVOICES 1 ITEM (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: Section G

CODE 64059	FACILITY CODE
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11. SHIP TO/MARK FOR U.S. ARMY RESEARCH LABORATORY T. GORDON BROWN ATTN: AMSRD-ARL-WM-BA ABERDEEN PROVING GROUNDS MD 21005-5069	CODE: W613LT	12. PAYMENT WILL BE MADE BY DFAS COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS P.O. BOX 162381 COLUMBUS OH 43218-2381	CODE: HQ0399
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13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [] 10 U.S.C. 2304(c)() [] 41 U.S.C. 253(c)()	14. ACCOUNTING AND APPROPRIATION DATA See Schedule
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15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
SEE SCHEDULE					

15G. TOTAL AMOUNT OF CONTRACT	\$12,334,390.00
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE:

17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return to <u>comptac</u> assuming office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein (Attachments are listed herein.)	18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number _____ including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.
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19A. NAME AND TITLE OF SIGNER (Type or print) (b)(4)	20A. NAME OF CONTRACTING OFFICER STEPHEN C. DAVIS TEL: Contracting Officer EMAIL:
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19B. NAME OF CONTRACTOR (b)(4)	19C. DATE SIGNED 11-21-08	20B. UNITED STATES OF AMERICA (b)(6)	20C. DATE SIGNED 24 Nov 08
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Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0001	<p>EXACTO Phase I CPFF The Contractor shall accomplish the tasks associated with Phase I in accordance with the Attachment (1) Statement of Work. Data deliverables/reports will be provided in accordance with Sections C and F. FOB: Destination</p>	(b)(4)	(b)(4)	<p>\$12,334,390.00 \$12,334,390.00</p>

See Exhibit A

ITEM NO	AMOUNT
000101	Funding for CLIN 0001
	AO No. X925/00
	ACRN AA
	\$2,100,000.00

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0002	EXACTO Phase I Option CPFF	(b)(4)	(b)(4)	\$813,537.00
OPTION	The Contractor shall accomplish the tasks associated with Phase I in accordance with the Attachment (5) Option Statement of Work. Data deliverables/reports will be provided in accordance with Sections C and F. FOB: Destination			\$813,537.00

Section C - Descriptions and Specifications

CLAUSES INCORPORATED BY FULL TEXT

C-1 Scope of Work

- (a) The Contractor shall furnish the necessary personnel, materials, facilities, and other services as may be required to perform Contract Line Item (CLIN) 0001, as well as those CLINs corresponding to any exercised Option (CLIN 0002, as applicable), in accordance with the Statement of Work, Attachment 1 hereto (and Attachment 5, if Option is exercised).
(end of clause)

C-2 Reports and Other Deliverables

- (a) The Contractor shall submit the following reports and other deliverables in accordance with the delivery schedule set forth in Section F. Reports and other deliverables shall be submitted in writing, as defined in FAR 2.101, or as specified below:

(1) R&D STATUS REPORT

This brief narrative, not to exceed five pages in length, shall contain the following:

- (i) For first report only; the date work actually started.
- (ii) Description of progress during the reporting period, supported by reasons for any change in approach reported previously
- (iii) Planned activities and milestones for the next reporting period.
- (iv) Description of any major items of experimental or special equipment purchased or constructed during the reporting period.
- (v) Notification of any changes in key personnel associated with the contract during the reporting period.
- (vi) Summary of substantive information derived from noteworthy trips, meetings, and special conferences held in connection with the contract during the reporting period.
- (vii) Summary of all problems or areas of concern.
- (viii) Related accomplishments since last report.
- (ix) Fiscal status, to include reporting of summary level financial data in the following format:
(next page)

R&D STATUS REPORT
PROGRAM FINANCIAL STATUS

Work Breakdown	Cumulative to Date			At Completion		
Structure or Task Element	Planned Expend	Actual Expend	% Budget Compl	At Compl	Latest Revised Estimate	Remarks
Subtotal: _____						
Management Reserve: _____						
Or Unallocated Resources: _____						
TOTAL: _____						

Note: Budget at completion changes only with the amount of any scope changes. (Not affected by underrun or overrun)

Based on currently authorized work:

Is current funding sufficient for the current fiscal year (FY)? (Explain in narrative if "NO")

YES NO

What is the next FY funding requirement at current anticipated levels?

\$ _____

Have you included in the report narrative any explanation of the above data and are they cross-referenced?

YES NO

(2) FINAL REPORT

This report shall document the results of the complete effort and should be delivered at the completion of the contract. If the Government chooses to exercise the options under this contract, the due date for the final report is extended accordingly. Title pages shall include a disclaimer worded substantially as follows:

“The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government.”

The Final Technical Report summary shall include:

Task Objectives
Technical Problems
General Methodology (i.e., literature review, laboratory experiments, surveys, etc.)
Technical Results
Important Findings and Conclusions
Significant Hardware Development
Special Comments
Implications for Further Research
Standard Form 298, August 1998

(b) Reports delivered by the Contractor in the performance of the contract shall be considered “Technical Data” as defined in Section I contract clauses entitled “Rights in Technical Data – Noncommercial Items” and “Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation.”

(c) Bulky Reports shall be mailed by other than first-class mail unless the urgency of submission requires use of first-class mail. In this situation, one copy shall be mailed first-class and the remaining copies forwarded by less than first-class.

(d) All papers and articles published as a result of DARPA sponsored research shall include a statement reflecting the sponsorship. In addition, a bibliography of the titles and authors of all such papers are to be included in the Final Technical Report

(1) The cover or title page of each of the above reports or publications prepared, will have the following citation:

Sponsored by
Defense Advanced Research Projects Agency
Information Processing Techniques Office (IPTO)
Program: EXACTO
ARPA Order No. X925/00, Program Code: 8G10
Issued by DARPA/CMO under Contract No. HR0011-09-C-0015

(2) The title page shall include a disclaimer worded substantially as follows:

“The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government.”

(3) All technical reports must (i) be prepared in accordance with American National Standards Institute (ANSI) Standard Z39.18; (ii) include a Standard Form 298, August 1998; and (iii) be marked with an appropriate Distribution Statement.

(end of clause)

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

D-1 Packaging and Marking

- (a) All items shall be preserved, packaged, packed and marked in accordance with best commercial practices to meet the packing requirements of the carrier, and to ensure safe delivery at destination.
(end of clause)

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at destination by the Contracting Officer's Representative (COR) identified at Section G herein.

CLAUSES INCORPORATED BY REFERENCE

52.246-8	Inspection Of Research And Development Cost Reimbursement	MAY 2001
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Section F - Deliveries or Performance

CLAUSES INCORPORATED BY REFERENCE

52.247-34	F.O.B. Destination	NOV 1991
52.247-55	F.O.B. Point For Delivery Of Government-Furnished Property	JUN 2003

CLAUSES INCORPORATED BY FULL TEXT

F-1 Term of Contract

(a) The term of the contract commences on the effective date of the contract and continues through 28 May 2010.

(b) The period of performance for Option 1, as set forth in CLIN 0002, shall be from the effective date of the option exercise to and including twelve months.

(end of clause)

F-2 Reports and Other Deliverables

(a) Delivery of all reports and other deliverables shall be made to the addressee specified in F-3 entitled "Report Distribution" in accordance with the following:

<u>CLIN</u>	<u>Description</u>	<u>Due Date (on or before)</u>
0001	Kickoff Meeting	15 December 2008
0001	R&D Status Reports (per Clause C-2)	Monthly
0001	Updates on SRR documentation	Quarterly
0001	Interim Design System Reviews	Quarterly
0001	SRR and Final TDAP	1 June 2009
0001	HITL Simulation Design Review	30 June 2009
0001	Preliminary Design Review and HITL Simulation Results	14 May 2010
0001	Final Report	21 May 2010

(b)(4)



*If Option is exercised.

(end of clause)

F-3 Report Distribution

(a) Defense Technical Information Center

- (1) Email: TR@dtic.mil
(one electronic copy of the Final Technical Report, if unclassified)

OR

- (2) Attn: DTIC-BCS
8725 John J. Kingman Road, Suite 0944
Fort Belvoir, VA 22060-0944
(two hard copies of the Final Technical Report if unclassified)

(b) DARPA/Library
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: library@darpa.mil
(one copy of the Final Technical Report)

(c) DARPA/CMO
Attn: Mr. Stephen C. Davis
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: Stephen.C.Davis@darpa.mil
Phone: 571-218-4949
(one copy each report)

(d) DARPA/TTO
Attn: Dr. Lyndall Beamer
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: Lyndall.Beamer@darpa.mil
(one copy each report)

(e) DARPA/TTO
Attn: ADPM
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: Jeffrey.Smith@darpa.mil
(one copy each report)

(f) COR

T. Gordon Brown
U.S. Army Research Laboratory
ATTN: AMSRD-ARL-WM-BA
Aberdeen Proving Grounds, MD 21005-5069
Email: brown@arl.army.mil
Phone: (410) 306-0737

F-4 Notice Regarding Late Delivery

(a) In the event the Contractor anticipates difficulty in complying with the contract delivery schedule, the Contractor shall immediately notify the Contracting Officer in writing, giving pertinent details, including the date by which it expects to make delivery; PROVIDED, however, that this date shall be informational only in character and the receipt thereof shall not be construed as a waiver by the Government of any contract delivery schedule, or any rights or remedies provided by law or under this contract.

(end of clause)

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 9780400 1320 X925 P8G10 2525 DPAC 8 5341 S12136 62702E
 AMOUNT: \$2,100,000.00
 AO: X925/00
 CIN 00000000000000000000000000000000: \$2,100,000.00

CLAUSES INCORPORATED BY FULL TEXT

G-1 Procuring Office Representative

(a) The Procuring Office Representative is Stephen C. Davis, DARPA/CMO, 3701 North Fairfax Drive, Arlington, VA 22203-1714, telephone: 571-218-4949, e-mail: Stephen.C.Davis@darpa.mil.
 (end of clause)

G-2 Electronic Submission of Payment Requests

(a) Invoices for goods received or services rendered under this contract shall be submitted electronically through Wide Area Work Flow -- Receipt and Acceptance (WAWF):

(1) Vendors that have never used WAWF shall follow the directions in the WAWF Vendor Getting Started Guide available at the following website:
<http://www.dfas.mil/contractorpay/electroniccommerce/wideareaworkflow.html>. This website also contains links for Vendor training and practice. Additional support can be obtained by calling WAWF Customer Service at 866-618-5988.

(2) Back up documentation (such as timesheets, monthly status reports, etc.) can be included and attached to the invoice in WAWF. Attachments should be in PDF format, but Attachments created in any Microsoft Office product may be attached. Total limit for the size of files per invoice is 5 megabytes.

(b) The following information, regarding invoice routing DoDAAC's, must be entered for completion of the invoice in WAWF:

WAWF Invoice Type:	Select Cost Voucher
Issuing Office DoDAAC	HR0011
Admin Office DoDAAC	S4420A
Service Approver DoDAAC (Cost Voucher)	W813LT
DCAA Office DoDAAC (Used on Cost Vouchers only)	HAA440
Paying Office DoDAAC	HQ0339

(c) Cost Vouchers from Contractors approved by DCAA for direct billing will be directly routed to DFAS. Cost Vouchers from Contractors not approved for direct billing will be routed to DCAA for approval before the Cost

Voucher is routed to DFAS. All Final Cost Voucher submissions will be routed to the Service Approver for approval. The DCAA office for this award is:

DCAA Dallas Branch Office
 DoDAAC: HAA440
 6321 East Campus Circle Drive
 Irving, TX 75063-2742

(d) For each invoice/cost voucher submitted for payment, the contractor shall also e-mail a copy of the WAWF automated invoice notice or a report containing equivalent information of a WAWF invoice notice directly to the following points of contact:

Name	E-mail	Phone	Role
T. Gordon Brown	brown@arl.army.mil	410-306-0737	COR

G-3 Delegation of Authority for Contract Administration

(a) DCMA Lockheed Martin Dallas (DoDAAC: S4420A) is hereby designated as the Contracting Officer's authorized representative for administering this contract in accordance with current directives.
 (end of clause)

G-4 Contracting Officer's Representative (COR)

(a) Performance of work under this contract shall be subject to the technical direction of:

T. Gordon Brown
 U.S. Army Research Laboratory
 ATTN: AMSRD-ARL-WM-BA
 Aberdeen Proving Grounds, MD 21005-5069
 Email: brown@arl.army.mil
 Phone: (410) 306-0737

Such technical direction includes those instructions to the Contractor necessary to accomplish the Statement of Work. 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 to change the specifications of the contract.

(b) Technical direction shall not include any direction which:

- (1) Constitutes additional work outside the scope of work;
- (2) Constitutes a change as defined in Section I contract clause entitled "Changes";
- (3) In any manner causes an increase or decrease in the total estimated cost or the time required for contract performance; or
- (4) Changes any of the stated terms, conditions, or specifications of the contract.

(end of clause)

G-5 Payment Instructions for Multiple Accounting Classification Citations

- (a) Payments under contract line items funded by multiple accounting classification citations shall be made from the earliest available fiscal year funding sources. The earliest assigned ACRN must be fully disbursed before making disbursements from a succeeding ACRN.
(end of clause)

G-6 Incremental Funding

- (a) This contract shall be subject to incremental funding with \$2,100,000 presently made available for performance under this contract. It is estimated that the funds presently available are sufficient to permit the Contractor's performance through 21 March 2009. Except in accordance with the Section I clause FAR 52.232-22, "Limitation of Funds," no legal liability of the part of the Government for payment of any money in excess of \$2,100,000 shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract.
(end of clause)

G-7 Payment of Cost and Fee

- (a) As consideration for the proper performance of work required under this contract, the Contractor shall be paid as follows:
- (1) Costs, as provided for under Section I contract clause titled "Allowable Cost and Payment" not to exceed the amount set forth as "Total Estimated Cost" in Section B, and subject further to those Section I clauses entitled "Limitation of Cost" or "Limitation of Funds".
 - (2) A fixed fee in the amount set forth as "Fixed Fee" in Section B, in accordance with the Section I contract clause entitled "Fixed Fee". The Contractor may bill on each invoice the amount of the fixed fee bearing the same percentage to the total fixed fee as the amount of cost billed bears to the total estimated cost.
(end of clause)

Section H - Special Contract Requirements

CLAUSES INCORPORATED BY FULL TEXT

H-1 Contracting Officer

(a) Notwithstanding any other provision of this contract, the Contracting Officer is the only individual authorized to redirect the effort or in any way amend or modify any of the terms of this contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statement of work, a modification must be issued in writing and signed by the Contracting Officer.

(end of clause)

H-2 Type of Contract

(a) This is a Cost-Plus-Fixed-Fee completion contract.

(end of clause)

H-3 Public Release or Dissemination of Information

(a) There shall be no dissemination or publication, except within and between the Contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of the DARPA Technical Information Officer (DARPA/TIO). All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the Contractor. Papers resulting from unclassified contracted fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987. Any publications shall incorporate an Acknowledgement of Support and Disclaimer in accordance with FAR 252.235-7010.

(b) When submitting material for written approval for open publication as described in subparagraph (a) above, the Contractor must submit a request for public release request to the DARPA TIO and include the following information: 1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx 30 words), number of pages (or minutes of video) and document type (briefing, report, abstract, article, or paper); 2) Event Information: event type (conference, principle investigator meeting, article or paper), event date, desired date for DARPA's approval; 3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and 4) Contractor's Information: POC name, e-mail and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests can be sent either via e-mail to tio@darpa.mil or via 3701 North Fairfax Drive, Arlington VA 22203-1714, telephone (571) 218-4235. Refer to www.darpa.mil/tio for information about DARPA's public release process.

(end of clause)

H-4 Key Personnel

(a) The Contractor shall notify the Contracting Officer prior to making any change in key personnel. Key personnel are defined as follows:

(b)(4)



(b)(4)

(b) The Contractor must demonstrate that the qualifications of the prospective personnel are equal to or better than the qualifications of the personnel being replaced. Notwithstanding any of the foregoing provisions, key personnel shall be furnished unless the Contractor has demonstrated to the satisfaction of the COR that the qualifications of the proposed substitute personnel are equal to or better than the qualifications of the personnel being replaced.
(end of clause)

H-5 Restrictions on Printing

(a) Unless otherwise authorized in writing by the Contracting Officer, reports, data, or other written material produced using funds provided by this contract and submitted hereunder shall be reproduced only by duplicating processes and shall not exceed 5,000 single page reports or a total of 25,000 pages of a multiple-page report. These restrictions do not preclude the writing, editing, preparation of manuscript or reproducible copy of related illustrative materials if required as part of this contract, or incidental printing such as forms or materials necessary to be used by the Contractor to respond to the terms of the contract.
(end of clause)

H-6 Contractor Representations and Certifications

(a) The Contractor's Representations and Certifications dated 29 October 2008 (as well as those listed in the Online Representations and Certifications Application, dated 12 August 2008) are incorporated herein by reference.
(end of clause)

H-7 Insurance Schedule

(a) The Contractor shall maintain the types of insurance listed in FAR 28.307-2 (a), (b) and (c), with the minimum amounts of liability indicated therein. The types of insurance coverage listed in paragraphs (d) and (e) shall also be maintained when applicable.
(end of clause)

H-8 Travel

(a) Reimbursement for travel-related expenses shall be in accordance with the Contractor's approved travel policy. The Federal Travel Regulations, Joint Travel Regulations (JTR), and Standardized Regulations as stated in FAR 31.205-46 will be used as a guide in determining reasonableness of per diem costs. Costs for travel shall be allowable subject to the provisions of FAR 31.205-46.

(b) In connection with direct charge to the contract of travel-related expenses, the Contractor shall hold travel to the minimum reasonable costs required to meet the objectives of the contract, and be compliant with Federal Travel Regulations (FTR), and Contractor's travel policy and procedures. In the event substantial deviations from the amount of travel agreed to during contract negotiation will occur, Contractor shall notify the Contracting Officer in order to seek necessary approvals. When applicable, the Contractor shall notify the COR of proposed travel of an employee beyond that agreed to during negotiations. It is understood that the Contractor shall manage travel-related budget and respective Other Direct Costs (ODCs) at the dollar level that is agreed to during negotiations to support program events, meetings, and other related activities.

(c) Approval of the Contracting Officer shall be obtained in advance for attendance by personnel at training courses, seminars, and other meetings not directly related to contract performance if the costs for the courses, seminars, and other meetings are charged to the contract.

(d) All foreign travel shall be authorized and approved in advance, in writing, by the Contracting Officer. Request for such travel must be submitted to the Contracting Officer at least 30 days in advance of traveler's anticipated departure date, and shall include traveler's itinerary of United States Flag Air Carriers. In accordance with the Contractor's 2009 common disclosure statement, routine compliance training does not require Contracting Officer approval.

(end of clause)

H-9 Metric System

(a) The Defense Advanced Research Projects Agency (DARPA) will consider the use of the metric system in all of its activities consistent with operational, economical, technical and safety requirements.

(b) The metric system will be considered for use in all new designs. When it is deemed not to be in the best interest of the DoD to provide metric design, justification shall be provided.

(c) Physical and operational interfaces between metric items and U.S. customary items will be designed to assure that interchangeability and interoperability will not be affected.

(d) Existing designs dimensioned in U.S. customary units will be converted to metric units only if determined to be necessary or advantageous. Unnecessary retrofit of existing systems with new metric components will be avoided where both the new metric and existing units are interchangeable and interoperable. Normally, the system of measurement in which an item is originally designed will be retained for the life of the item.

(e) During the metric transition phase hybrid metric and U.S. customary designs will be necessary and acceptable. Material components, parts, subassemblies, and semi-fabricated material, which are of adequate or when it is otherwise specifically determined to be in the best interest of the Department of Defense. Bulk materials will be specified and accepted in metric units when it is expedient or economical to do so.

(f) Technical reports, studies, and position papers, (except those pertaining to items dimensioned in U.S. customary units) will include metric units of measurement in addition to or in lieu of U.S. customary units. With respect to existing contracts, this requirement applies only if such documentation can be obtained without an increase in contract costs.

(g) Use of the dual dimensions (i.e., both metric and U.S. customary dimensions) on drawings will be avoided unless it is determined in specific instances that such usage will be beneficial. However, the use of tables on the document to translate dimensions from one system of measurement to the other is acceptable.

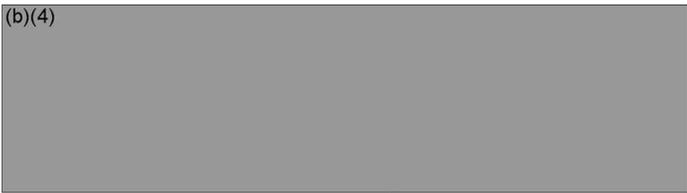
(end of clause)

H-10 Consent to Subcontract

(a) Pursuant to the clause of the General Provisions entitled "Subcontracts (JUN 2007)," FAR 52.244-2(j), the Contracting Officer hereby consents to the placement of subcontract(s) with the following firm(s)/consultant(s) at the level of effort specified for each of the following subcontracts:

<u>NAME</u>	<u>TOTAL AMOUNT</u>
-------------	---------------------

(b)(4)



(b) Incorporation of the above list of subcontractors/consultants into the contract constitutes the required written consent of the Contracting Officer, unless otherwise entitled under the "Subcontracts (JUN 2007)," FAR 52.244-2(j).

(end of clause)

H-12 Small Business Subcontracting Plan and Goals

(a) The Contractor's Small Business Subcontracting Plan, dated 1 October 2008, is incorporated herein and made a part of this contract by reference.

(end of clause)

H-18 Proprietary Technical Data and Computer Software

(a) Any deliverable technical data or computer software developed or generated at private expense and considered to be proprietary by the Contractor or subcontractors shall be delivered in accordance with DFARS 252.227-7013 and 252.227-7014. A list of such data and/or software is incorporated into the contract as Attachment No. 2.

(end of clause)

H-21 Export Control Clause

Should this project develop beyond fundamental research (basic and applied research ordinarily published and shared broadly within the scientific community) with military or dual-use applications the following apply:

(a) The contractor shall comply with all U. S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

(b) The Contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technical data or software.

(c) The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.

(d) The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

(end of clause)

H-22 Invention Disclosure and Reports

All written communications required by this clause shall be submitted to the Administrative Contracting Officer (ACO). All required reporting shall be accomplished using the i-Edison.gov reporting website (<http://s-edison.info.nih.gov/iEdison/>)
(end of clause)

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2007
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	SEP 2006
52.215-2	Audit and Records--Negotiation	JUN 1999
52.215-2 Alt II	Audit and Records--Negotiation (Jun 1999) - Alternate II	APR 1998
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 1997
52.215-12	Subcontractor Cost or Pricing Data	OCT 1997
52.215-14	Integrity of Unit Prices	OCT 1997
52.215-15	Pension Adjustments and Asset Reversions	OCT 2004
52.215-16	Facilities Capital Cost of Money	JUN 2003
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other than Pensions	JUL 2005
52.215-21	Requirements for Cost or Pricing Data or Information Other Than Cost or Pricing Data--Modifications	OCT 1997
52.216-7	Allowable Cost And Payment	DEC 2002
52.216-8	Fixed Fee	MAR 1997
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.222-50	Combating Trafficking in Persons	AUG 2007
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.223-16 Alt I	IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (Dec 200&0 Alternate I	DEC 2007
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.227-1 Alt I	Authorization And Consent (Dec 2007) - Alternate I	APR 1984
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007

52.227-10	Filing Of Patent Applications--Classified Subject Matter	DEC 2007
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.230-2	Cost Accounting Standards	OCT 2008
52.230-6	Administration of Cost Accounting Standards	MAR 2008
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-20	Limitation Of Cost	APR 1984
52.232-22	Limitation Of Funds	APR 1984
52.232-23 Alt I	Assignment of Claims (Jan 1986) - Alternate I	APR 1984
52.232-25	Prompt Payment	OCT 2008
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.242-1	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
52.242-15 Alt I	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V	APR 1984
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	MAR 2007
52.245-1 (Dev)	Government Property (June 2007)	JUN 2007
52.245-9	Use And Charges	JUN 2007
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2004
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.204-7005	Oral Attestation of Security Responsibilities	NOV 2001
252.204-7008	Requirements for Contracts Involving Export-Controlled Items	JUL 2008
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.209-7005	Reserve Officer Training Corps and Military Recruiting on Campus	JAN 2000
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	DEC 2006
252.219-7004	Small Business Subcontracting Plan (Test Program)	AUG 2008
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7004	Report of Contract Performance Outside the United States and Canada--Submission after Award	MAY 2007
252.225-7006	Quarterly Reporting of Actual Contract Performance Outside the United States	MAY 2007
252.225-7012	Preference For Certain Domestic Commodities	MAR 2008
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004

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
252.227-7015	Technical Data--Commercial Items	NOV 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7027	Deferred Ordering Of Technical Data Or Computer Software	APR 1988
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.227-7038	Patent Rights--Ownership by the Contractor (Large Business)	DEC 2007
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	MAR 2008
252.232-7010	Levies on Contract Payments	DEC 2006
252.235-7010	Acknowledgment of Support and Disclaimer	MAY 1995
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.239-7001	Information Assurance Contractor Training and Certification	JAN 2008
252.242-7004	Material Management And Accounting System	NOV 2005
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	JAN 2007
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED BY FULL TEXT

52.203-14 DISPLAY OF HOTLINE POSTER(S) (DEC 2007)

(a) Definition.

United States, as used in this clause, means the 50 States, the District of Columbia, and outlying areas.

(b) Display of fraud hotline poster(s). Except as provided in paragraph (c)--

(1) During contract performance in the United States, the Contractor shall prominently display in common work areas within business segments performing work under this contract and at contract work sites--

(i) Any agency fraud hotline poster or Department of Homeland Security (DHS) fraud hotline poster identified in paragraph (b)(3) of this clause; and

(ii) Any DHS fraud hotline poster subsequently identified by the Contracting Officer.

(2) Additionally, if the Contractor maintains a company website as a method of providing information to employees, the Contractor shall display an electronic version of the poster(s) at the website.

(3) Any required posters may be obtained as follows:

Poster(s) Obtain from:

DoD Inspector General, ATTN: Defense Hotline, 400 Army Navy Drive, Washington, DC 22202-2884

(c) If the Contractor has implemented a business ethics and conduct awareness program, including a reporting mechanism, such as a hotline poster, then the Contractor need not display any agency fraud hotline posters as required in paragraph (b) of this clause, other than any required DHS posters.

(d) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (d), in all subcontracts that exceed \$5,000,000, except when the subcontract--

- (1) Is for the acquisition of a commercial item; or
- (2) Is performed entirely outside the United States.

(End of clause)

52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)

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

- (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;
- (2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;
- (3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or
- (4) That will result in lower overall costs to the Government.

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

- (1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;
- (2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;
- (3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and
- (4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

* Insert either "zero" or the dollar amount agreed to during negotiations. The inserted figure does not apply to the exceptions in paragraph (a)(1) through (a)(4) of the clause.

(End of clause)

52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)

United States law will apply to resolve any claim of breach of this contract.

(End of clause)

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://farsite.hill.af.mil>

(End of clause)

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

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

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

(End of clause)

252.204-7006 BILLING INSTRUCTIONS (OCT 2005)

When submitting a request for payment, the Contractor shall--

(a) Identify the contract line item(s) on the payment request that reasonably reflect contract work performance; and

(b) Separately identify a payment amount for each contract line item included in the payment request.

(End of clause)

252.235-7010 Acknowledgment of Support and Disclaimer. (MAY 1995)

(a) The Contractor shall include an acknowledgment of the Government's support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the Defense Advanced Research Projects Agency (DARPA) under Contract No. HR0011-09-C-0015.

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

Section J - List of Documents, Exhibits and Other Attachments

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	Statement of Work	19	23 October 2008
Attachment 2	Identification and Assertion of Restrictions on the Government's Use, Release or Disclosure of Technical Data and Computer Software	1	29 October 2008
Attachment 3	Contracting Officer's Representative Memorandum	3	12 Nov. 2008
Attachment 4	DD Form 254	TBD	TBD
Attachment 5	Option Statement of Work	2	17 Nov. 2008
Attachment 6	Contract Work Breakdown Structure	9	13 Nov. 2008

Introduction

This Statement of Work (SOW) defines the tasks to be performed in support of the *EXACTO Phase I Contract*. This effort was requested under *DARPA BAA 08-19*. The Phase I period of performance is 18 months ending with a Hardware-In-The-Loop (HTIL) simulation review and Preliminary Design Review (PDR).

1.0 Mission Description

The EXACTO Program is an advanced technology development and demonstration program to create a guided, actively controlled .50 caliber sniper rifle system with significantly improved range and accuracy over the current systems.

The ability to more accurately prosecute targets at significantly longer range would provide a dramatic new capability to the US military. The use of an actively controlled bullet will make it possible to counter environmental effects such as crosswinds and air density, and prosecute both stationary and moving targets while enhancing shooter covertness. This capability would have the further benefit of providing increased accuracy and range while reducing training requirements.

2.0 System Description

The EXACTO concept is composed of two subsystems: a complete guided round, and a Fire Control System (FCS) which includes a new sophisticated spotter scope sub-system. The guided round consists of the cartridge case, primer, propellant, and the guided bullet. The guided bullet consists of the (b)(4)

(b)(4)

A system block diagram is presented in Figure 3-1.

The guided bullet is (b)(4)

The new spotter scope sub-system concept is a tripod mounted unit that replaces the traditional spotter scope and integrates together the observation, targeting, fire control and guidance functions into a compact electronics package. During Phase I, the (b)(4)

(b)(4)

(b)(4) Integration of these subsystems into a tactical form factor will take place in Phases II and III.

HR0011-09-C-0015

1 page denied in full pursuant to 5 U.S.C. § 552 (b)(4)

3.0 Scope

This Statement of Work defines the effort required of Lockheed Martin to execute the EXACTO Phase I program. The EXACTO Phase I program seeks to:

- 1) develop a robust system concept that meets the established performance objectives and has significant military utility;
- 2) identify and mature critical enabling technologies; and
- 3) validate through simulation, component test and Hardware-In-The-Loop demonstration that our EXACTO system solution is achievable.

Lockheed Martin shall execute the EXACTO Phase I contract as directed by DARPA and as described herein. Trade studies shall be used to develop and refine the EXACTO concept to deliver a robust system design that meets the established performance objectives and provides the Warfighter with a significant increase in capability. Critical technologies shall be defined and matured to support transition to Phase II, where live fire testing of the guided projectile will take place to demonstrate that the system meets performance objectives. During Phase I, these technologies shall be validated through simulation, component testing and Hardware-In-The-Loop testing. A Phase II proposal shall be provided prior to the end of Phase I.

As part of the Phase I activity, Lockheed Martin shall manage the overall program, including business management, security management, and cost and technical control of the program. Lockheed Martin shall provide the Government with visibility into the overall cost, schedule, risk, and technical development of the program.

3.1. Objectives

3.1.1. Mature EXACTO Prototype System Design

LMMFC shall submit a prototype system conceptual design with their proposals. During Phase I, LMMFC shall conduct more rigorous technology, producibility, CONOPS and military utility trades about the non-tradable requirements and highly desirable attributes to develop system level requirements and ensure an optimized system design. LMMFC shall conduct ongoing analysis of potential countermeasures to their EXACTO system to ensure a robust final design. LMMFC shall implement a rigorous process to document trade study results, derive and track requirements and design decisions as the design matures to ensure a robust system level design. It is expected that LMMFC will hold a system requirements review (SRR) early in Phase I. This SRR will map system performance capabilities to system level requirements, document the system level requirements, and provide draft segment level requirements and interface definitions. The SRR information will form the basis for deriving the technical objectives of the component level tests and demonstrations as well as the hardware-in-the-loop simulation required to validate the design. LMMFC will continue to mature the design throughout Phase I, adding detail and incorporating the results of component and system level risk reduction activities. The final Phase I deliverable shall be a Preliminary Design Review (PDR) of the EXACTO prototype system to be built in Phase II

3.1.2. Component Technology Risk Reduction

LMMFC shall submit a Technology Development and Assessment Plan (TDAP) that details the component technology risk reduction activities to be performed throughout Phases I and II. This TDAP will be finalized early in Phase I in conjunction with SRR. The TDAP will provide an integrated basis for all risk reduction activities that will be performed during Phases I and II, culminating in the live fire demonstration at the end of Phase II. The TDAP will: 1) identify and assess critical technologies, processes and system attributes (TPSAs) that constitute the major technical and system integration risks on the program; 2) identify major risk reduction tests and demonstrations required to validate the ability to achieve the EXACTO performance goals with a prototype system test in Phase II; 3) define credible intermediate performance objectives (success criteria) associated with each of these critical tests and demonstrations, and 4) define an integrated program for systematically reducing risk that meets the Phase I and II objectives, including the quantified go/no go criteria at the end of Phase I

3.1.3. Monte Carlo Hardware-in-the-Loop (HITL) Simulation

LMMFC shall conduct a Monte Carlo hardware-in-the-loop simulation to validate that their proposed preliminary design can achieve the EXACTO performance objectives. Following completion of SRR, LMMFC will finalize their HITL design. The HITL will have traceability to all of the system level requirements and show how each of them will be validated. The government desires use of 1x scale laboratory components and experimental data at scale. If LMMFC elects to use an alternative approach, LMMFC should provide rationale for why that approach will offer sufficient validation of the design and be of better value to the Government (e.g., reduces cost, shortens schedule, and reduces risk.) The HITL will be the major tool used throughout Phase I to assess system level performance, with interim builds that successively add more functionality in terms of software and hardware component integration. Phase I will culminate in a full system simulation where LMMFC will “shoot” 1,000 rounds to predict system effectiveness (accuracy) at each range/target speed in a simulated operating environment.

4.0 Requirements

4.1. Program Management / Systems Engineering

The objectives of the Program Management and Systems Engineering tasks (WBS C) are to manage the overall program to accomplish the program objectives. The tasks include the program management, system engineering, cost and technical control, and security management, to provide Government visibility into program execution.

4.1.1. Program Management

The objective of the Program Management task (WBS CB) is to manage the cost and schedule of the program and to provide Government visibility into the overall cost and schedule performance. Program Management will take the necessary steps to ensure DARPA is informed of program status.

1. LMMFC shall coordinate with customer and user personnel as required to assure that program requirements are accurately identified, flowed down, tracked and met.
2. LMMFC shall provide continuing updates of cost, schedule, and performance.
3. LMMFC shall provide overall management of the Integrated Product Team activities from the LMMFC prospective, ensuring adequate participation by and communication with appropriate team members.
4. LMMFC shall conduct planning and management of program reviews, provide oversight and participate in design reviews.
5. LMMFC shall coordinate with security personnel to maintain program security safeguards that protect program information as detailed in the EXACTO Program Security Classification Guide.
6. LMMFC shall assess affordability as an aspect of design for the complete round and Fire Control System.
7. LMMFC shall hold a Preliminary Design Review (PDR).
8. LMMFC shall submit Monthly funds and man-hour expenditure reports.
9. LMMFC shall hold quarterly design reviews.
10. LMMFC shall develop and maintain an Integrated Master Schedule (IMS).
11. LMMFC shall develop and maintain an Integrated Master Plan (IMP) with a draft release at program Kickoff and finalized prior to Interim Design Review (IDR) 1.
12. LMMFC shall develop a Phase II proposal.
13. LMMFC shall develop and deliver a Phase I Final Report.

The exit criteria for this task is the successful completion of PDR/HITL and customer approval of submitted Phase I final report.

4.1.2. Systems Engineering

The objective of the Systems Engineering (SE) task (WBS CA) is to ensure the technical program objectives are met by performing analyses, trade studies, generating system/sub-system requirements, and performing risk management.

4.1.2.1. System Definition / Specification

The objective of the system definition and specification task (WBS CAA) is to define/design the EXACTO program effort and the integrated planning and control of the technical program efforts of design and test planning. This task includes the organization and management of the Systems Engineering and Integration Team (SEIT), documentation of draft system/sub-system specifications, draft system/sub-system requirements definition, system trades, and verification of the implemented solution. Overall management, technical direction, and execution of the HITL simulation and all design reviews are included.

The approach for this task is to perform system trade studies spanning all subsystems, document the conceptual design of the EXACTO system, define the concept of operations, document the system/sub-system requirements, develop a draft system specification, and develop a draft subsystem specification. Program reviews will be held quarterly and will include a System Requirements Review (SRR) and Interim Design Reviews (IDRs). Testing will include (b)(4)

(b)(4)

1. LMMFC shall oversee design and analysis activity.
2. LMMFC shall provide oversight of the test activities as specified in the Technical Development and Assessment Plan (TDAP) to assure effective testing of the system and system components at the proper level.
3. LMMFC shall assess imbedded security features as an aspect of design for the cartridge and Fire Control System.
4. LMMFC shall provide a documented conceptual design of the EXACTO system.

The exit criterion for this task is a documented system design, including requirements traceability and draft system/subsystem specifications, validated HITL simulation, and successful completion of all reviews.

4.1.2.2. Value Engineering (Risk Management)

The objective of the Value Engineering task (WBS CAF) is to develop a TDAP that details the component technology risk reduction activities to be performed throughout Phases I and II. This TDAP will be finalized early in Phase I in conjunction with SRR. The TDAP will provide an integrated basis for all risk reduction activities that will be performed during Phases I and II, culminating in the live fire demonstration at the end of

Phase II. The TDAP will: 1) identify and assess critical technologies, processes and system attributes (TPSAs) that constitute the major technical and system integration risks on the program; 2) identify major risk reduction tests and demonstrations required to validate the ability to achieve the EXACTO performance goals with a prototype system test in Phase II; 3) define credible intermediate performance objectives (success criteria) associated with each of these critical tests and demonstrations, and 4) define an integrated program for systematically reducing risk that meets the Phase I and II objectives, including the quantified go/no-go criteria at the end of Phase I. Phase I risk reduction will include testing of laboratory components that validate component level performance capabilities required to achieve the system level performance objectives.

1. LMMFC shall develop a TDAP and associated risk reduction plan.
2. Phase I risk reduction shall include testing of laboratory components that verify component level performance capabilities required to achieve the system level performance objectives.

The exit criterion is customer approval of the TDAP and risk reduction plan prior to SRR.

4.2. Technical Requirements

The objective of the technical engineering tasks/sub-tasks are to mature the EXACTO prototype system design by conducting more rigorous technology, producibility, CONOPS and military utility trades about the non-tradable requirements and highly desirable attributes to develop system level requirements and ensure an optimized system design. The design will be validated in Monte Carlo Hardware-In-The-Loop (HITL) simulations using 1x scale laboratory components wherever practical to validate that the proposed preliminary design can achieve the EXACTO performance objectives. Following the SRR, the HITL design will be finalized.

4.2.1. Complete Round

The objective of this task (WBS A) is to develop a complete round that provides guided bullet accuracy (b)(4)

(b)(4) The design of the complete round will include all the components that are necessary for firing one shot which includes the Guided Bullet (WBS AA) and Propulsion (WBS AB). (b)(4)

4.2.1.1. Guided Bullet

The objective of this task (WBS AA) is to define/design the Guided Bullet (GB). This task will include GB structure (WBS AAA), (b)(4) (WBS AAB), (b)(4) (WBS AAC), (b)(4) (WBS AAD), (b)(4) (WBS AAE), (b)(4) (WBS AAF), (b)(4) (WBS AAG), and the GB tamper proof system (WBS AAH).

4.2.1.1.1. Guided Bullet Structure

The objective of this task (WBS AAA) is to define/design and validate the projectile outer mold line (OML). The task will be accomplished through the definition of mechanical characteristics (dimensions, mass properties), structural and dynamic analyses required to verify flight, and aerodynamic database development (b)(4) (b)(4) for the guided bullet aerodynamics testing.

The work products include guided bullet outer structure evaluation (WBS AAAA, (b)(4) (b)(4) (WBS AAAB, (b)(4) collection of all required aero data for updating 6-DOF aero database (WBS AAAC, (b)(4) (WBS AAAE, (b)(4) a documented conceptual design of the projectile OML, and validated aerodynamic and mechanical characteristics provided to the HITL.

1. LMMFC shall provide a documented conceptual design of the guided bullet OML.
2. LMMFC shall validate the guided bullet aerodynamic design.
3. LMMFC shall provide mechanical characteristics to the HITL.

The exit criterion for this task is completion and documentation of the guided bullet structure and aerodynamics testing.

4.2.1.1.2. Guided Bullet (b)(4)

The objective of this task (WBS AAB) is to define/design, validate, and provide prototypes for the projectile control surfaces. The effort includes all the tasks to fabricate, integrate, functionally test, and deliver assets for HTIL, the guided bullet aerodynamics test, and the (b)(4) test. The primary responsible organization (b)(4) (b)(4)

The work products from this task are a design analysis that indicates the (b)(4) (b)(4) meets the derived performance requirements (WBS AABA, (b)(4) design analysis that the (b)(4) (b)(4) (WBS AABB, (b)(4) (b)(4) (WBS AABC, (b)(4) (b)(4) (WBS AABD, (b)(4) (b)(4) (WBS AABE, (b)(4) (WBS AABF, (b)(4) (WBS AABG, (b)(4)

1. LMMFC shall provide a (b)(4) prototype design to be used for HITL and as test assets.

The exit criterion for this task is the delivery of parts that support sub-system tests, the HITL, and delivery of the (b)(4) prototype design.

4.2.1.1.3. Guided Bullet (b)(4)

The objective of this task (WBS AAC) is to define/design, validate, and provide prototypes for (b)(4)

(b)(4)
Detailed effort includes all tasks to fabricate, integrate, functionally test and deliver (b)(4) in support of HITL and the (b)(4) tests.

The work products from this task are a preliminary design of the (b)(4) (b)(4) requirements, data collection on a representative (b)(4) for bullet component test (WBS AACA, (b)(4) (WBS AACB, (b)(4) (WBS AACC, (b)(4) (WBS AAAE, (b)(4)

- 1. LMMFC shall provide a documented (b)(4) design to be used for HITL and test assets.

The exit criterion for this task is the successful completion of the (b)(4) (b)(4) and HITL support.

4.2.1.1.4. Guided Bullet (b)(4)

The objective of this task (WBS AAD) is to define/design, validate, and provide prototypes for the Guided Bullet (b)(4) The effort includes all the tasks to verify the (b)(4) (b)(4)

The work products from this task are a design analysis that (b)(4) (b)(4) (WBS AADD, (b)(4)

- 1. LMMFC shall provide (b)(4) design to be used for HITL and test assets.

The exit criterion for this task is the delivery of parts that support sub-system tests HITL and delivery of the (b)(4) prototype design.

4.2.1.1.5. Guided Bullet Processor

The objective of this task (WBS AAE) is to define/design the Guided Bullet processor prototype and the support electronics. The effort includes all the tasks necessary to design a processor and support electronics that host the guided bullet software, (b)(4)

(b)(4)

The work products from this task are a processor design (WBS AAEA), and GB support electronics design (WBS AAEB).

1. LMMFC shall provide a processor prototype design to be used for HITL and test assets.
2. LMMFC shall provide a GB support electronics prototype design to be used for HITL and test assets.

The exit criteria for this task are the delivery of parts that support test activities and the HITL and delivery of the GB processor and support electronics prototype design.

4.2.1.1.6. Guided Bullet Software

The objective of this task (WBS AAF) is to define/design and test the Guided Bullet software. This task includes the Guided Bullet Applications Software (WBS AAFA), Guided Bullet Systems Software (WBS AAFB).

Detailed effort includes all tasks to create, integrate, functionally test and deliver operating system software in support of HITL, (b)(4)

(b)(4)

The work products from this task include a software development plan and the development and test of the guided bullet applications software, (b)(4)

(b)(4)

1. LMMFC shall provide functional operating system software to be used for sub-system tests and HITL.
2. LMMFC shall provide functional applications software to be used for sub-system tests and HITL.

The exit criterion for this task is the completion of the (b)(4)

(b)(4)

4.2.1.1.7. Guided Bullet (b)(4)

The objective of this task (WBS AAG) is to define/design, validate, and provide prototypes for (b)(4)

(b)(4) Detailed effort includes all tasks to fabricate, integrate, functionally test and deliver an (b)(4) (b)(4)

The work products from this task are (b)(4) (b)(4) (WBS AAGA, (b)(4) (b)(4) (WBS AAGD, (b)(4) (WBS AAGE, (b)(4) (b)(4)

- 1. LMMFC shall provide a documented (b)(4) design to be used for HITL and test assets.

The exit criterion for this task is the successful completion of the (b)(4) and Monte Carlo runs in the HITL.

4.2.1.1.8. Guided Bullet Tamper Proof System

The objective of this task (WBS AAH) is to define an approach for developing a guided bullet tamper proof system. Detailed effort includes definition of a tamper proof system based on analysis of all guided bullet sub-systems.

The work products from this task include a documented approach for implementing a guided bullet tamper proof system.

- 1. LMMFC shall provide a documented approach for implementing a guided bullet tamper proof system.

The exit criterion for this task is a documented approach for a guided bullet tamper proof system.

4.2.1.2. Propulsion

The objective of this task (WBS AB) is to define/design the propulsion system which provides the forces to transport the complete round from the launch position to the target. (b)(4) is the primary organization responsible for this task with guidance from LMMFC.

4.2.1.2.1. Guided Bullet Propellant Testing

The objective of this task (WBS ABA) is to define/design, validate, and provide prototypes for (b)(4) the guided bullet when fired. Items include a (b)(4) (b)(4)

23 October 2008

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(b)(4) Detailed effort includes all tasks to (b)(4) and propellant performance for HITL and to fabricate, integrate, functionally test and deliver assets for the propellant test. (b)(4) is the primary organization responsible for this task with guidance from LMMFC.

The work products for this task include the propulsion engineering development, and (b)(4) (b)(4) (WBS ABAA, (b)(4) (WBS ABAB, (b)(4) (WBS ABAC, (b)(4)

1. LMMFC shall provide a documented prototype design for the propulsion system and validated propellant characteristics to be used for the HITL.
2. LMMFC shall provide propulsion system physical assets to be used for testing.

The exit criteria for this task are validated propellant characteristics for HITL, physical assets testing, and verified slipping obturator functionality for the guided bullet.

4.2.2. Fire Control System

The objective of this task (WBS B) is to develop a complete EXACTO Fire Control System which includes the Rifle and Scope (WBS BA) and Spotter Scope (WBS BC) to meet the mission objectives of the EXACTO system. The design of the EXACTO Fire Control System shall include (b)(4) (b)(4) (WBS BA) (b)(4) (WBS BC).

4.2.2.1. Rifle and Scope

The objective of this task (WBS BA) is to reduce integration risk of the EXACTO system with the (b)(4) rifle and scope. (b)(4) (b)(4)

4.2.2.2. Spotter Scope (SS)

The objective of this task (WBC BC) is to develop a Spotter Scope (SS) which includes the integration of the SS Operating System (WBS BCA), (b)(4) (b)(4) (WBS BCB), (b)(4) (WBS BCC), (b)(4) System (WBS BCD), SS Processor (WBS BCE), (b)(4) (WBS BCF), SS Display (WBS BCG), SS Controller (WBS BCH), SS Portable Power System (WBS BCI), SS Tripod (WBS BCJ), and a SS Permissive Activation/Tamper Proof System design (WBS BCK) to meet the objectives of the EXACTO system. LMMFC is the primary organization responsible for this activity with support from (b)(4)

4.2.2.2.1. SS Operating System

The objective of this task (WBS BCA) is to define/design, validate, and provide functional code for all Spotter Scope (SS) subsystems. (b)(4) will be the primary organization responsible for this activity with guidance from LMMFC.

The work products from this task include inputs to the software development plan and the development of the SS operating system. The operating system software includes the SS applications software (WBS BCAA) and SS systems software (WBS BCAB).

1. LMMFC shall provide functional operating system software to be used for testing and HITL.

The exit criterion for this task is the delivery of SS operating system software for support of HITL and sub-system tests.

4.2.2.2.2. SS (b)(4)

The objective of this task (WBS BCB) is to develop a (b)(4) (b)(4). All engineering development including design trade studies, detailed design, assembly, and testing of prototypes will be conducted to validate system performance in the HITL. (b)(4) will be the primary organization responsible for this activity with guidance from the LMMFC Fire Control System IPT.

(b)(4)

Work products include (b)(4) (WBS BCBA, (b)(4) (b)(4) (WBS 104-12, (b)(4)

1. LMMFC shall provide a documented brassboard design of the (b)(4) (b)(4)

The exit criteria for these activities include successful completion of the above tests and the validated (b)(4) provided to the HITL.

4.2.2.2.3. SS (b)(4)

The objective of this task (WBS BCC) is to develop the (b)(4) (b)(4) (WBS BCCA), (b)(4) (WBS BCCB), (b)(4) (WBS BCCC). All engineering development including design trade studies, detailed design, assembly, and testing of prototypes will be conducted to validate system level performance in the HITL.

Work products from this task include (b)(4)
(b)(4) (WBS BCCD), (b)(4)
(WBS BCCE), (b)(4)

- 1. LMMFC shall provide a Spotter Scope (b)(4) to support testing and HITL.

The exit criteria for this task are the successful completion of the above tests and the validated (b)(4) provided to the HITL.

4.2.2.2.4. SS (b)(4)

The objective of this task (WBS BCD) is to develop the Spotter (b)(4)
(b)(4) (WBS BCB) (b)(4)
(b)(4) (WBS BCC). (b)(4) (WBS
BCDA), (b)(4) (WBS BCDB), (b)(4) (WBS
BCDC), (b)(4) (WBS BCE). (b)(4)
(b)(4)

Detailed effort includes all tasks to fabricate, integrate, functionally test and deliver assets in support of HITL testing.

- 1. LMMFC shall provide Spotter Scope (b)(4) to support testing and HITL.

The exit criterion for this task (b)(4)
(b)(4)

4.2.2.2.5. SS Processor

The objective of this task (WBS BCE) is to define/design the Spotter Scope processor electronics board (WBS BCEA) and interface (I/O) electronics board (WBS BCEB). The effort includes all the tasks necessary to (b)(4)
(b)(4)
(b)(4) process the met data, and manage the I/O with the spotter display and controller.

The work products from this task are a prototype spotter scope processor electronics board (WBS BCEA) design and an I/O electronics board (WBS BCEB).

- 1. LMMFC shall provide a prototype processor electronics board and design to be used for HITL and test assets.
- 2. LMMFC shall provide a prototype I/O electronics board and design to be used for HITL and test assets.

The exit criteria for this task are the delivery of electronics that support test activities and the HITL and delivery of the spotter scope processor electronics and I/O electronics prototype design.

4.2.2.2.6. (b)(4)

The objective of this task (WBS BCF) is to (b)(4)
(b)(4) This task will be accomplished by (b)(4)
(b)(4)

1. LMMFC shall provide a (b)(4) for Phase I testing.
2. LMMFC shall provide results of (b)(4) for a Phase II (b)(4)
(b)(4)

The exit criteria for this task are a Meteorology sensor to support Phase I testing and documented results of a Phase II Meteorology sensor.

4.2.2.2.7. SS Display

The objective of this task (WBS BCG) is to implement a Phase I Spotter Scope display and design a tactical display. The SS display is the visual interface with the spotter. (b)(4)
(b)(4)

1. LMMFC shall provide a non-tactical Spotter Scope display suitable for Phase I HITL testing.
2. LMMFC shall provide documentation for a tactical Spotter Scope display.

The exit criteria for this task are the delivery of a Spotter Scope display suitable for Phase I HITL testing and documentation for a tactical Spotter Scope display.

4.2.2.2.8. SS Controller

The objective of this task (WBS BCH) is to implement a Phase I the Spotter Scope controller. The controller provides physical interaction with the SS Display (BCG) as well as control of all SS sub-systems (b)(4)
(b)(4)

1. LMMFC shall provide Spotter Scope controls suitable for Phase I HITL testing.
2. LMMFC shall provide documentation for a tactical spotter Scope controller design.

The exit criteria for this task are the delivery of Spotter Scope controls suitable for Phase I HITL testing and documentation for a tactical spotter scope controller design.

4.2.2.2.9. SS Portable Power System

The objective of this task (WBS BCI) is to define the Spotter Scope portable power system. The portable power system provides power to the electronics and optical SS sub-systems. (b)(4)

(b)(4)

1. LMMFC shall provide a SS power system suitable for Phase I testing in HITL.
2. LMMFC shall provide documentation of (b)(4) and design for the Phase II SS portable power system.

The exit criteria for this task are the delivery of a SS power system suitable for Phase I HITL testing and documentation of the Phase II SS portable power system.

4.2.2.2.10. SS Tripod

The objective of this task (WBS BCJ) is to define the Spotter Scope tripod. The SS tripod provides support structure to hold all SS sub-systems. (b)(4)

(b)(4)

1. LMMFC shall provide documentation of the Phase I SS Tripod trade study and design for the tripod system.

The exit criterion for this task is the delivery of a documented design for a SS tripod system.

4.2.2.2.11. SS Permissive Activation / Tamper Proof System

The objective of this task (WBS BCK) is to define an approach for developing a Spotter Scope permissive activation / tamper proof system. (b)(4)

(b)(4)

The work products from this task include a documented approach for implementing a guided bullet permissive activation / tamper proof system.

1. LMMFC shall provide a documented approach for implementing a spotter scope permissive activation / tamper proof system.

The exit criterion for this task is a documented approach for a spotter scope permissive activation / tamper proof system.

4.2.3. System Test and Evaluation

The objective of this task (WBS D) is to integrate, functionally test, and validate operation between all components and software for the complete ordnance system. This task includes the creation of test plan and test reporting for all FCS and HITL sub-system testing.

4.2.3.1. Development, Test and Evaluation

The objective of this task (WBS DA) is to integrate, functionally test, and validate operation between all components and software for the EXACTO system. This task will be accomplished through thorough FCS/Guided Bullet Interface Testing (WBS DAA) and HITL testing. The result of this task will be a validated guided bullet sub-system and fire control sub-system.

4.2.3.1.1. FCS/Guided Bullet Interface Testing

The objective of this task (WBS DAA) is to test the FCS/Guided Bullet Interface. This will be accomplished through a series of TDAP defined tests to achieve FCS system level validation. Documentation of physical characteristics of the entire FCS/GB system is included at this level. LMMFC is the primary organization responsible for execution of this task with support from all sub-system providers.

Work products from this task include (b)(4)

(WBS DAAA, (b)(4)	(WBS
DAAB, (b)(4)	(WBS
DAAC, (b)(4)	(WBS
DAAD, (b)(4)	
(b)(4) (WBS DAAE, (b)(4)	
(b)(4) (WBS DAAF, (b)(4)	
(b)(4) (WBA DAAG, (b)(4)	

1. LMMFC shall conduct and evaluate the results of all environmental and performance tests detailed in the TDAP and demonstrate full compliance of all equipment and software with System Specification.
2. All FCS/GB test shall be conducted in accordance with the TDAP and test development plan.
3. LMMFC shall provide a report from each test at the IDR following the test activity.

Exit criteria for this task include a fully documented design of the guided bullet and fire control systems sufficient to support HITL and for PDR.

4.2.3.1.2. Hardware In The Loop (HITL)

The objective of this task (WBS DAB) is to develop a Hardware In The Loop (HITL) to perform real-time closed-loop integration testing of the EXACTO system hardware and software. This task will be accomplished by (b)(4)

(b)(4)
(b)(4) The proposed baseline 6-DOF will be updated to account for any system concept modifications. (b)(4)

(b)(4)
Monte Carlo runs will be completed to validate system performance against go/no-go criteria. Documentation of physical characteristics of the EXACTO system is included at this level. LMMFC is the primary organization responsible for execution of this task with support from all sub-system providers.

Work products from this task include (b)(4) (WBS DABA, (b)(4)
(b)(4) (WBS DABB, (b)(4)
(b)(4) (WBS DABC, (b)(4) (WBS DABD,
(b)(4) (WBS DABE, (b)(4) (WBS
DABF, (b)(4) (WBS DABG, (b)(4)
(b)

1. LMMFC shall conduct and evaluate the results of all environmental and performance tests detailed in the TDAP for HITL and demonstrate full compliance of all equipment and software with System Specification.
2. Sub-system components included in the HITL shall be tested at the scale identified in the TDAP.
3. All HITL tests shall be conducted in accordance with the TDAP and test development plan.
4. LMMFC shall provide a report from each test at the IDR following the test activity.
5. LMMFC shall provide a report from HITL Monte Carlo runs and HITL demonstration at the PDR.

Exit criteria for this task include a fully documented design of the guided bullet and fire control systems fully integrated into a HITL system sufficient for PDR.

4.2.4. Peculiar Support Equipment

The objective of this task (WBS G) is to define/design the support equipment required to support the tactical requirements of the EXACTO system.

4.2.4.1. (b)(4)

(b)(4) (WBS GB) (b)(4)
(b)(4)

(b)(4)

(b)(4)

(b)(4)

HR0011-09-C-0015

1 page denied in full pursuant to 5 U.S.C. § 552 (b)(4)



DEFENSE ADVANCED RESEARCH PROJECTS AGENCY
3701 NORTH FAIRFAX DRIVE
ARLINGTON, VA 22203-1714

Attachment 3

MEMORANDUM FOR CONTRACTING OFFICER'S REPRESENTATIVE

FROM: DARPA, Contracts Management Office
TO: T. Gordon Brown, Army Research Laboratory
SUBJECT: Appointment as Contracting Officer's Representative (COR)

1. You are hereby appointed as the Contracting Officer's Representative for:

Contract Number: HR0011-09-C-0015
Contractor: Lockheed Martin Missiles and Fire Control
Program Description: EXACTO

2. This appointment authorizes and designates you to perform the following duties and/or responsibilities as specified herein:

- a. Furnish plans, schedules, specifications, descriptions, and other documents to the contractor as required by the contract.
 - b. Assist the contractor in interpreting technical aspects of the contract specifications/statement of work. Differences of opinion and interpretations which could affect the terms and conditions of the contract will be referred to the contracting officer for resolution.
 - c. Provide Government recommendations/approvals to the contractor promptly in all cases where the contract calls for technical approval.
 - d. Observe, monitor, and assess the contractor's performance under the terms of the contract. This includes reporting promptly to the contracting officer any failures, delays, or significant deviations of performance, quality, costs, or other actions which might jeopardize contract performance.
3. In the performance of the duties delegated to you in this letter, you are cautioned that you could be held personally liable for actions taken or directions given by you to the contractor that are beyond the authorities given to you in this letter. The duties or authorities in this letter are not delegable; therefore, you must advise the Contracting Officer or the Contract Administrator/Specialist immediately when you are unable to perform these duties.
4. In your dealings with the contractor you must not give technical direction as though the contractor's employees are Government employees. You must maintain a formal, arms-

length relationship with the contractor in order to avoid even an appearance that the contract is one for personal services. If the contractor's performance takes place in a Government facility, then to the maximum extent practicable, the contractor's work area should be physically separated from areas in which Government employees work, and communication with the contractor's employees on contractual matters should be only through that contractor employee(s) designated by the contractor to supervise them. You must not give any direction to the contractor that is not authorized by the statement of work because it is not the intent of the Government that a contractor be required to do anything that is not included in the contract.

5. You are responsible for providing prompt notification to the contracting officer any significant deficiencies with respect to contractor performance or other actions which might jeopardize contract performance.
6. You are not authorized by this letter to take any action, either directly or indirectly, that could result in a change in the pricing, quantity, quality, place of performance, delivery schedule or any other terms and conditions of the basic contract, or to direct the accomplishment of effort which would exceed the scope of the basic contract. You must be especially cautious in providing interpretation of the specifications/ statement of work. The agreement reached or technical direction given must be formalized in writing with copies to the contracting officer. You shall also inform the contractor that if he believes that the COR's interpretation is erroneous, the contractor must notify the contracting officer in writing concerning the details of his position.
7. Specific duties in addition to those above are as follows:
 - a. Control all government technical interfaces with the contractor.
 - b. Ensure that copies of government technical correspondence are forwarded to the contracting officer for placement in the contract file.
 - c. Promptly furnish documentation on any requests for change, deviation, or waiver (whether generated by the Government or the contractor) to the contracting officer for appropriate action.
 - d. Review and, if required (i.e., Fixed Price Payments), accept invoices submitted through WAWF as stipulated in Section G of the Contract.
 - e. Provide required review of Patent/Invention Disclosures made in I-Edison (<http://www.iedison.gov>).
 - f. The COR must maintain a separate file for each contract for which he/she acts as COR. The file should serve as a repository and record of all documents and communications between the contractor and the COR. At a minimum, the file must include a copy of the contract and all modifications as well as the COR appointment letter. Examples of other file documentation may include:

- Reports required per the contract, e.g. interim and final technical or patent reports
 - Memoranda for Record documenting important contract discussions
 - Records of formal meetings, e.g. post award conference, program reviews, etc.
- g. Assist ACO and/or PCO, as requested, with closeout activities at completion of contract period of performance.

8. If this is your first appointment as a COR or if you have not performed COR duties within the last two years, and in order to comply with DFARS 201.6-2, you must complete COR training immediately so that you can properly execute your responsibilities under this contract. A good source of COR training is available via a web-based module, CLC 106, "Contracting Officer Representative with a Mission Focus" at www.dau.mil.
9. Your appointment as COR for this effort expires 18 months after date of contract.
10. Your good judgment in performing your duties under the contract will have an important effect on the value of the performance obtained by the Government.

(b)(6)

T. GORDON BROWN
Contracting Officer's Representative

12 Nov 2008

Date

(b)(6)

STEPHEN C. DAVIS
Contracting Officer

4 NOV 08

Date

HR0011-09-C-0015

11 pages denied in full pursuant to 5 U.S.C. § 552 (b)(4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES	
				U	1	2
2. AMENDMENT/MODIFICATION NO. P00001	3. EFFECTIVE DATE 07-Jan-2009	4. REQUISITION/PURCHASE REQ. NO. X92500		5. PROJECT NO. (If applicable)		
6. ISSUED BY DARPA CMO ATTN: STEPHEN C. DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.		
				9B. DATED (SEE ITEM 11)		
				X	10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015	
				X	10B. DATED (SEE ITEM 13) 21-Nov-2008	
CODE 64059		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.						
12. ACCOUNTING AND APPROPRIATION DATA (If required)						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.						
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).						
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: the "Changes" Clause.						
D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.						
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfa1asca09175 The purpose of this modification is to incorporate a DD Form 254 to the contract. See Page 2.						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil			
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (b)(6) BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 08-Jan-2009	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION J – LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

The following has been modified as highlighted in bold:

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	Statement of Work	19	23 October 2008
Attachment 2	Identification and Assertion of Restrictions on the Government's Use, Release or Disclosure of Technical Data and Computer Software	1	29 October 2008
Attachment 3	Contracting Officer's Representative Memorandum	3	12 Nov. 2008
Attachment 4	DD Form 254	4	20 Nov. 2008
Attachment 5	Option Statement of Work	2	17 Nov. 2008
Attachment 6	Contract Work Breakdown Structure	9	13 Nov. 2008

2. Except as modified above, the terms and conditions of Contract No. HR0011-09-C-0015 shall remain unchanged and in full force and effect.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES	
			U	1	2
2. AMENDMENT/MODIFICATION NO. P00002	3. EFFECTIVE DATE 09-Jan-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO. (If applicable)	
6. ISSUED BY DARPA CMO ATTN: STEPHEN C. DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714	CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S FT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015	
			X	10B. DATED (SEE ITEM 13) 21-Nov-2008	
CODE 64059	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended.					
<p>Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:</p> <p>(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.</p>					
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral: FAR 52.232-22 "Limitation of Funds"					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfa1asca09297 The purpose of this modification is to provide incremental funding in the amount of \$8,420,000. See Page 2.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (b)(6) BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 09-Jan-2009	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000102 is added as follows:

ITEM NO		AMOUNT
000102	Funding for CLIN 0001	
	AO No. X925/01	
	ACRN AB	\$8,420,000.00

2. SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

a) Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$8,420,000.00 from \$2,100,000.00 to \$10,520,000.00.

b) SUBCLIN 000102:

Funding on SUBCLIN 000102 is initiated as follows:

ACRN: AB

CIN: 00000000000000000000000000000000

Acctng Data: 9790400 1320 X925 P9G10 2525 DPAC 9 5089 S12136 62702E

Increase: \$8,420,000.00

Total: \$8,420,000.00

3. Except as modified above, the terms and conditions of Contract No. HR0011-09-C-0015 shall remain unchanged and in full force and effect.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES	
				U	1	2
2. AMENDMENT/MODIFICATION NO. F00003		3. EFFECTIVE DATE 14-Jan-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY DARPA CMO ATTN: STEPHEN C DAMS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.		
				9B. DATED (SEE ITEM 11)		
				X 10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015		
				X 10B. DATED (SEE ITEM 13) 21-Nov-2008		
CODE 64059		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.						
12. ACCOUNTING AND APPROPRIATION DATA (If required)						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.						
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).						
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: the "Changes" Clause.						
D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.						
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfa1asca09484 The purpose of this modification is to add a subcontractor at no additional cost to the contract, and to incorporate a clause to the contract. See Page 2.						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA (b)(6) BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED 11-Mar-2009	
(Signature of person authorized to sign)						

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION H - SPECIAL CONTRACT REQUIREMENTS

The following have been modified as highlighted in bold:

H-10 Consent to Subcontract

(a) Pursuant to the clause of the General Provisions entitled "Subcontracts (JUN 2007)," FAR 52.244-2(j), the Contracting Officer hereby consents to the placement of subcontract(s) with the following firm(s)/consultant(s) at the level of effort specified for each of the following subcontracts:

<u>NAME</u>	<u>TOTAL AMOUNT</u>
(b)(4)	

(b) Incorporation of the above list of subcontractors/consultants into the contract constitutes the required written consent of the Contracting Officer, unless otherwise entitled under the "Subcontracts (JUN 2007)," FAR 52.244-2(j).
(end of clause)

2. SECTION I - CONTRACT CLAUSES

The following has been added by full text:

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within 30; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 18 months.
(End of clause)

3. Except as modified above, the terms and conditions of the contract shall remain unchanged and in full force and effect.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES
				U	1 2
2. AMENDMENT/MODIFICATION NO. P00004		3. EFFECTIVE DATE 14-Jul-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)
6. ISSUED BY DARPA CMO ATTN: STEPHEN C. DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
				X 10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015	
				X 10B. DATED (SEE ITEM 13) 21-Nov-2008	
CODE 64059		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended.					
<p>Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:</p> <p>(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.</p>					
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X D. OTHER (Specify type of modification and authority) Unilateral: FAR 52.232-22 "Limitation of Funds"					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfaasca09933 The purpose of this modification is to provide incremental funding in the amount of \$25,000 (AO X925/02). See Page 2.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (b)(6) (Signature of Contracting Officer)		16C. DATE SIGNED 14-Jul-2009

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000103 is added as follows:

ITEM NO		AMOUNT
000103	Funding for CLIN 0001	
	AO No. X925/00	
	ACRN AB	\$25,000.00

2. SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

a) Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$25,000.00 from \$10,520,000.00 to \$10,545,000.00.

b) SUBCLIN 000103:

Funding on SUBCLIN 000103 is initiated as follows:

ACRN: AB

CIN: 00000000000000000000000000000000

Acctng Data: 9790400 1320 X925 P9G10 2525 DPAC 9 5089 S12136 62702E

Increase: \$25,000.00

Total: \$25,000.00

c) The following have been modified as highlighted in bold:

G-6 Incremental Funding

(a) This contract shall be subject to incremental funding with **\$10,545,000** presently made available for performance under this contract. It is estimated that the funds presently available are sufficient to permit the Contractor's performance through **21 June 2010**. Except in accordance with the Section I clause FAR 52.232-22, "Limitation of Funds," no legal liability of the part of the Government for payment of any money in excess of **\$10,545,000** shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract.

(end of clause)

3. Except as modified above, the terms and conditions of the contract shall remain unchanged and in full force and effect.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES	
				U	1	2
2. AMENDMENT/MODIFICATION NO. P00005		3. EFFECTIVE DATE 16-Jul-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO. (If applicable)	
6. ISSUED BY DARPA CMO ATTN: STEPHEN C DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.		
				9B. DATED (SEE ITEM 11)		
				X	10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015	
				X	10B. DATED (SEE ITEM 13) 21-Nov-2008	
CODE 64059		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended.						
<p>Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:</p> <p>(a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.</p>						
12. ACCOUNTING AND APPROPRIATION DATA (if required)						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.						
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
X B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).						
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.						
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfa1asca09949 The purpose of this modification is to correct an administrative error associated with clause G-6. See Page 2.						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA BY: (b)(6)		16C. DATE SIGNED 17-Jul-2009
(Signature of person authorized to sign)				(Signature of Contracting Officer)		

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION G - CONTRACT ADMINISTRATION DATA

The following have been modified as highlighted in bold:

G-6 Incremental Funding

(a) This contract shall be subject to incremental funding with \$10,545,000 presently made available for performance under this contract. It is estimated that the funds presently available are sufficient to permit the Contractor's performance through 21 **February** 2010. Except in accordance with the Section I clause FAR 52.232-22, "Limitation of Funds," no legal liability of the part of the Government for payment of any money in excess of \$10,545,000 shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract.

(end of clause)

2. Except as modified above, the terms and conditions of the contract shall remain unchanged and in full force and effect.

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES	
				U	1	5
2. AMENDMENT/MODIFICATION NO. P00006		3. EFFECTIVE DATE 11-Nov-2009	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO.(If applicable)	
6. ISSUED BY DARPA CMO ATTN: STEPHEN C DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.		
				9B. DATED (SEE ITEM 11)		
				X 10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015		
				X 10B. DATED (SEE ITEM 13) 21-Nov-2008		
CODE 64059		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.						
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.						
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).						
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: the "Changes" Clause.						
D. OTHER (Specify type of modification and authority)						
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.						
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfa1asca1071 The purpose of this modification is to replace the CLIN 0002 Option with additional in-scope work. This modification increases the value of the contract and provides funding in the amount of \$238,772 (AO X925/03). See Pages 2-5.						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil			
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY (b)(6)		16C. DATE SIGNED 12-Nov-2009 (Signature of Contracting Officer)	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION A - SOLICITATION/CONTRACT FORM

The total cost of this contract was increased by \$238,772.00 from \$12,334,390.00 to \$12,573,162.00.

2. SECTION B - SUPPLIES OR SERVICES AND PRICES

a) CLIN 0002 has been amended as follows:

FROM:

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0002		(b)(4)	(b)(4)	\$813,537.00
OPTION	EXACTO Phase I Option CPFF The Contractor shall accomplish the tasks associated with Phase I in accordance with the Attachment (5) Option Statement of Work. Data deliverables/reports will be provided in accordance with Sections C and F. FOB: Destination			\$813,537.00

TO:

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0002		(b)(4)	(b)(4)	\$238,772.00
	EXACTO (b)(4) CPFF The Contractor shall accomplish the tasks associated with and in accordance with the Attachment (5) Statement of Work. Data deliverables/reports will be provided in accordance with Sections C and F. FOB: Destination			\$238,772.00

b) SUBCLIN 000201 is added as follows:

ITEM NO		AMOUNT
000201	Funding for CLIN 0002	
	AO No. X925/03	
	ACRN AB	\$238,772.00

3. SECTION C - DESCRIPTIONS AND SPECIFICATIONS

The following have been modified as highlighted in bold:

C-1 Scope of Work

- (a) The Contractor shall furnish the necessary personnel, materials, facilities, and other services as may be required to perform Contract Line Items (CLIN) 0001 **and 0002 in accordance with the Statements of Work, Attachments 1 and 5 hereto.**
(end of clause)

4. SECTION F - DELIVERIES OR PERFORMANCE

The following have been modified as highlighted in bold:

F-1 Term of Contract

- (a) The term of the contract commences on the effective date of the contract and continues through 28 May 2010.
- (b) The period of performance of CLIN 0002 shall be from 11 November 2009 and continue through 28 May 2010.**
(end of clause)

F-2 Reports and Other Deliverables

- (a) Delivery of all reports and other deliverables shall be made to the addressee specified in F-3 entitled "Report Distribution" in accordance with the following:

CLIN	Description	Due Date (on or before)
0001	Kickoff Meeting	15 December 2008
0001	R&D Status Reports (per Clause C-2)	Monthly
0001	Updates on SRR documentation	Quarterly
0001	Interim Design System Reviews	Quarterly
0001	SRR and Final TDAP	1 June 2009
0001	HITL Simulation Design Review	30 June 2009
0001	Preliminary Design Review and HITL Simulation Results	14 May 2010
0001	Final Report	21 May 2010
(b)(4)		

(b)(4)

****Note: All references to the previous Option status of CLIN 0002 have been removed****

(end of clause)

5. SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

a) Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$238,772.00 from \$10,545,000.00 to \$10,783,772.00.

b) SUBCLIN 000201:

Funding on SUBCLIN 000201 is initiated as follows:

ACRN: AB

CIN: 00000000000000000000000000000000

Acctng Data: 9790400 1320 X925 P9G10 2525 DPAC 9 5089 S12136 62702E

Increase: \$238,772.00

Total: \$238,772.00

c) The following have been modified as highlighted in bold:

G-6 Incremental Funding

(a) This contract shall be subject to incremental funding with **\$10,783,772** presently made available for performance under this contract. It is estimated that the funds presently available are sufficient to permit the Contractor's performance through 21 January 2010. Except in accordance with the Section I clause FAR 52.232-22, "Limitation of Funds," no legal liability of the part of the Government for payment of any money in excess of **\$10,783,772** shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract. **CLIN 0002 is henceforth fully funded.**

(end of clause)

6. SECTION J – LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

The following have been modified as highlighted in bold:

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	Statement of Work	19	23 October 2008
Attachment 2	Identification and Assertion of Restrictions on the Government's Use, Release or Disclosure of Technical Data and Computer Software	1	29 October 2008

Attachment 3	Contracting Officer's Representative Memorandum	3	12 Nov. 2008
Attachment 4	DD Form 254	4	20 Nov. 2008
Attachment 5	Statement of Work for (b)(4) (b)(4)	2	4 Nov. 2009
Attachment 6	Contract Work Breakdown Structure	9	13 Nov. 2008

7. Except as modified above, the terms and conditions of the contract shall remain unchanged and in full force and effect.

(End of Summary of Changes)

HR0011-09-C-0015

2 pages denied in full pursuant to 5 U.S.C. § 552 (b)(4)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE	PAGE OF PAGES	
				U	1	2
2. AMENDMENT/MODIFICATION NO. P00007		3. EFFECTIVE DATE 25-Jan-2010	4. REQUISITION/PURCHASE REQ. NO. SEE SCHEDULE		5. PROJECT NO. (If applicable)	
6. ISSUED BY DARPA CMO ATTN: STEPHEN C DAVIS 3701 N. FAIRFAX DR. ARLINGTON VA 22203-1714		CODE HR0011	7. ADMINISTERED BY (If other than item 6) DCMA LOCKHEED MARTIN DALLAS P.O. BOX 650003 M/S PT-03 DALLAS TX		CODE S4420A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) LOCKHEED MARTIN CORPORATION 1701 W MARSHALL DR GRAND PRAIRIE TX 75051-2704				9A. AMENDMENT OF SOLICITATION NO.		
				9B. DATED (SEE ITEM 11)		
				X 10A. MOD. OF CONTRACT/ORDER NO. HR0011-09-C-0015		
				X 10B. DATED (SEE ITEM 13) 21-Nov-2008		
CODE 64059		FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS						
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.						
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule						
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.						
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).						
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X D. OTHER (Specify type of modification and authority) Unilateral: FAR 52.232-22 "Limitation of Funds"						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.						
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: bfulasca10296 The purpose of this modification is to provide incremental funding in the amount of \$1,789,390 (AO X925/04). See Page 2.						
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.						
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) STEVE DAVIS / CONTRACTING OFFICER TEL: 571-218-4949 EMAIL: Stephen.C.Davis@darpa.mil			
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY: (b)(6) (Signature of Contracting Officer)		16C. DATE SIGNED 25-Jan-2010	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

1. SECTION B - SUPPLIES OR SERVICES AND PRICES

SUBCLIN 000104 is added as follows:

ITEM NO		AMOUNT
000104	Funding for CLIN 0001	
	AO No. X925/04	
	ACRN AC	\$1,789,390.00

2. SECTION G - CONTRACT ADMINISTRATION DATA

Accounting and Appropriation

a) Summary for the Payment Office

As a result of this modification, the total funded amount for this document was increased by \$1,789,390.00 from \$10,783,772.00 to \$12,573,162.00.

b) SUBCLIN 000104:

Funding on SUBCLIN 000104 is initiated as follows:

ACRN: AC
CIN: 00000000000000000000000000000000
Acctng Data: 9700400 1320 X925 P0G10 2525 DPAC 0 5019 S12136 62702E
Increase: \$1,789,390.00
Total: \$1,789,390.00

c) The following have been modified as highlighted in bold:

G-6 Incremental Funding

(a) This contract shall be subject to incremental funding with **\$12,573,162** presently made available for performance under this contract. It is estimated that the funds presently available are sufficient to permit the Contractor's performance through **28 May 2010**. Except in accordance with the Section I clause FAR 52.232-22, "Limitation of Funds," no legal liability of the part of the Government for payment of any money in excess of **\$12,573,162** shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract. **CLIN 0001 and CLIN 0002** are henceforth fully funded.

(end of clause)

3. Except as modified above, the terms and conditions of the contract shall remain unchanged and in full force and effect.

(End of Summary of Changes)