AWARD/CONTRACT

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)

RATING

PAGE 1 OF PAGES 20

2. CONTRACT (Proc. Inst. Ident.) NO.
HR0011-05-C-0153

3. EFFECTIVE DATE
September 23, 2005

4. REQUISITION/PURCHASE REQUEST/PROJECT NO.
U947/00

5. ISSUED BY CODE HR0011
DARPA
CMO
ATTN: DONALD C. SHARKUS
3701 NORTH FAIRFAX DRIVE
ARLINGTON VA 22203-1714

6. ADMINISTERED BY (If other than Item 5) CODE S1002A
DCMA ORLANDO
3555 MAGUIRE BOULEVARD
ORLANDO FL 32803-3726

7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and zip code)
HARRIS CORPORATION
2400 PALM BAY RD
NE
MELBOURNE FL 32902-0037

8. DELIVERY
[ ] FOB ORIGIN [X] OTHER (See below)

9. DISCOUNT FOR PROMPT PAYMENT

10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: ITEM Section G

CODE 81417
11. SHIP TO/MARK FOR CODE FACILITY CODE
See Schedule

12. PAYMENT WILL BE MADE BY CODE HQ0338
DFAS COLUMBUS CENTER
SOUTH ENTITLEMENT OPERATIONS
P.O. BOX 182264
COLUMBUS OH 43218-2264

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
[ ] 10 U.S.C. 2304(c)( ) [ ] 41 U.S.C. 253(c)( )

14. ACCOUNTING AND APPROPRIATION DATA
See Schedule

15A. ITEM NO.	15B. SUPPLIES/ SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
	SEE SCHEDULE				

15G. TOTAL AMOUNT OF CONTRACT $5,816,003.00

16. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE

17. [X] CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 2 copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein.
(Attachments are listed herein.)

18. [ ] AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.

19A. NAME AND TITLE OF SIGNER (Type or print)
Joe Sesbeau Senior Manager, Contract Administration

20A. NAME OF CONTRACTING OFFICER
(b)(6)
Contracting Officer
TEL: (703) 696-2383 EMAIL: Donald.Sharkus@darpa.mil

19B. NAME OF CONTRACTOR
Harris Corporation, GCSD

BY (b)(6)
(Signature of person authorized to sign)

19C. DATE SIGNED
9/26/05

20B. UNITED STATES OF AMERICA
(b)(6)

20C. DATE SIGNED
29 Sep 05

NSN 7540-01-152-8069
PREVIOUS EDITION UNUSABLE

26-107

GPO 1985 O - 469-794

STANDARD FORM 26 (REV. 4-85)
Prescribed by GSA
FAR (48 CFR) 53.214(a)

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0001	Coherent Optical and RF Waveform Source The contractor shall research Coherent Optical and RF Waveform Source in accordance with the Attachment (1) - Statement of Work.	(b)(4)		$5,816,003.00

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
000101	Funding for Item 0001 AO No. U947/00	$0.00	$0.00	$0.00
	Funding for Item 0001			
	ACRN AA			$2,707,106.00

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0002	Reports and Data and Deliverables	$0.00	$0.00	$0.00
	Reports and Data and Deliverables in accordance with Section C-2, "Reports and Other Deliverables" and the Attachment (1) - Statement of Work.			NSP*

*NSP – Not Separately Priced

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0003	Coherent Optical and RF Waveform Source	(b)(4)		$9,762,241.00
	Option 1 - The contractor shall research Coherent Optical and RF Waveform Source in accordance with the Attachment (1) - Statement of Work.			

ITEM NO	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	TOTAL EST. COST PLUS FIXED FEE
0004	Reports and Data and Deliverables	$0.00	$0.00	$0.00
	Option 1 - Reports and Data and Deliverables in accordance with Section C-2, "Reports and Other Deliverables" and the Attachment (1) - Statement of Work.			NSP*

*NSP – Not Separately Priced

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 Numbers (CLINs) 0001 and 0002 (also 0003 and 0004 if exercised) in accordance with the Statement of Work, Attachment 1 hereto.

C-2 Reports and Other Deliverables - CLINs 0002 and 0004 (if exercised)

(a) The Contractor shall submit reports and other deliverables in accordance with the Attachment (1) – Statement of Work, Appendix A - Contract Data Requirements List (CDRL)

(b) 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
Defense Sciences Office (DSO)
Program: Optical Arbitrary Waveform Generation (OAWG)
ARPA Order No. U947/00, Program Code: 5720
Issued by DARPA/CMO under Contract No. HR0011-05-C-0153

(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."

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.

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	N/A	N/A	N/A	Government
000101	N/A	N/A	N/A	Government
0002	N/A	N/A	N/A	Government
0003	N/A	N/A	N/A	Government
0004	N/A	N/A	N/A	Government

CLAUSES INCORPORATED BY REFERENCE

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

Section F - Deliveries or Performance

CLAUSES INCORPORATED BY REFERENCE

52.247-34 F.O.B. Destination NOV 1991

CLAUSES INCORPORATED BY FULL TEXT

F-1 Term of Contract

(a) The term of the contract commences on the contract effective date and continues through March 16, 2007.

(b) The period of performance for Option 1 (if exercised), as set forth in CLINs 0003 and 0004, shall be the date of option exercise, or other date specified in the option exercise modification, through April 17, 2009.

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."

F-3 Report Distribution

(a) DARPA/DSO
Attn: Maj John R. Lowell, USAF
3701 North Fairfax Drive
Arlington, VA 22203-1714
Email: (Jay.Lowell@darpa.mil)
(one copy each report)

(b) DARPA/DSO
Attn: ADPM
3701 North Fairfax Drive
Arlington, VA 22203-1714
(one copy each report)

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

(d) 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)

(e) DARPA/CMO
Attn: Donald C. Sharkus
3701 North Fairfax Drive
Arlington, VA 22203-1714
(one copy each report)

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.

ACCOUNTING AND APPROPRIATION DATA

AA: 9750400 1320 U947 P5720 2525 DPAC 5 5399 S12136 62716E
AMOUNT: $2,707,106.00
CIN 0000000000000000000000000000000: $2,707,106.00

CLAUSES INCORPORATED BY REFERENCE

252.242-7000 Postaward Conference DEC 1991

CLAUSES INCORPORATED BY FULL TEXT

G-1 Procuring Office Representative

(a) The Procuring Office Representative is Mr. Donald C. Sharkus, DARPA/CMO, 3701 North Fairfax Drive, Arlington, VA 22203-1714, telephone: (703) 696-2383, e-mail: Donald.Sharkus@darpa.mil.

G-2 Invoices

(a) An original invoice identified by contract number, with supporting statements, shall be submitted for review and provisional approval to the cognizant audit agency listed below:

DCAA Melbourne Branch Office
6767 N. Wickham Road, Suite 507
Melbourne, FL 32940
Phone (321) 752-2400
Or as directed by DCAA

G-3 Delegation of Authority for Contract Administration

(a) DCMA Harris, 1425 Troutman Blvd NE, Palm Bay, FL 32905-4102, is hereby designated as the Contracting Officer's authorized representative for administering this contract in accordance with current directives.

G-4 Contracting Officer's Representative (COR)

(a) Performance of work under this contract shall be subject to the technical direction of Everett W. "Bill" Jacobs, SSC San Diego, Code 2825, 53560 Hull St., San Diego, CA, 92152-5001, telephone (619) 553-1614, e-mail: jacobs@spawar.navy.mil. 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.

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.

G-6 Incremental Funding

(a) This contract shall be subject to incremental funding with $2,707,106 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 May 19, 2006. 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 $2,707,106 shall arise unless and until additional funds are made available by the Contracting Officer through a modification to this contract.

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.

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.

H-2 Type of Contract

(a) This is a cost-plus-fixed-fee contract.

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 COR. 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.

(b) When submitting material for clearance for open publication, the Contractor must furnish DARPA Technical Information Officer, 3701 North Fairfax Drive, Arlington VA 22203-1714, telephone (703) 526-4163 with five copies and allow four weeks for processing. Viewgraph presentations must be accompanied with a written text. Whenever a paper is to be presented at a meeting, the Contractor must indicate the exact dates of the meeting or the Contractor's date deadline for submitting the material.

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:

- Dr. Richard DeSalvo
- Mr. Bruce Fitzgerald
- Dr. Peter Delfyett
- Dr. Young-Kai (Y.K.) Chen
- Dr. Andreas Leven
- Dr. Andrew Chraplyvy

(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.

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.

H-6 Contractor Representations and Certifications

(a) The Contractor's Representations and Certifications dated August 2, 2005 are incorporated herein by reference.

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.

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 required to meet the objectives of the contract, and substantial deviations from the amount of travel agreed to during contract negotiation shall not be made without the authorization of the Contracting Officer.

When applicable, the Contractor shall notify the COR of proposed travel of an employee beyond that agreed to during negotiations.

(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 forty-five (45) days in advance of traveler's anticipated departure date, and shall include traveler's itinerary of United States Flag Air Carriers.

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.

H-10 Consent to Subcontract

(a) Pursuant to the clause of the General Provisions entitled "Subcontracts (AUG 1998)," FAR 52.244-2, the Contracting Officer hereby consents to the placement of subcontract(s) with the following firm(s)/consultant(s) at the ceiling amounts specified:

NAME	TOTAL AMOUNT
Lucent Technologies	$3,617,955 – Base $5,920,531 – Option 1 (if exercised)
University of Central Florida (UCF)	$931,211 – (Base) $834,668 – Option 1 (if exercised)

(b) Approval must be obtained from the Administrative Contracting Officer to increase the use or number of subcontractors from the level established in subparagraph (a).

H-11 Pre-contract Costs

(a) The extent of allowability of costs incurred by the Contractor prior to the effective date of the contract shall be governed by the advance agreement listed in Section J as Attachment (2) – "Precontract Cost Authorization Agreement."

H-12 Small Business Subcontracting Plan and Goals

(a) The Contractor's apporved DoD Comprehensive Small Business Subcontracting Plan, approved by DCMA for the period from October 1, 2004 through September 30, 2005, is incorporated herein and made a part of this contract by reference. Extensions or revisions to this approved plan shall be forwarded to the Contracting Officer for incorporation by reference into the Contract.

H-13 Contractor-Acquired Property

(a) The Contractor is authorized to acquire the following items which are needed to accomplish this contract:

Items To Be Acquired	Estimated Cost
Parbert Subsystem (Option 1 if exercised)	$625,666
Substrate Test Vehilce (Option 1 if exercised)	$ 30,000
Total	**$655,666**

(b) The costs incurred by the Contractor in acquiring the items listed in paragraph (a) above shall be considered allowable costs under the contract provided that the total net amount of the special test equipment does not exceed $655,666. The Contractor shall have no obligation to acquire special test equipment and the Government shall have no obligation to reimburse any amount for special test equipment in excess of the amount set forth above unless the contract is amended to increase this amount.

(c) The contractor-acquired property listed above shall be considered Government Property and shall be subject to the provisions of FAR 52.245-05, incorporated by reference in Section I.

(d) The Contractor shall not use Contractor-acquired property listed above for work other than that performed pursuant to this contract unless so authorized in writing by the Contracting Officer.

H-14 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. (3) – Identification and Assertion of Use Restrictions – Technical Data and Computer Software.

H-15 Consultants

(a) The contractor is authorized to use the following consultants to the extent indicated:

Name	No. of Hours	Rate	Total Amount

NO CONSULTANTS AUTHORIZED AS OF THE EFFECTIVE DATE OF THIS CONTRACT.

(b) Approval must be obtained from the Administrative Contracting Officer to increase the use of consultants from the level estimated in subparagraph (a).

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	JUL 1995
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	JUN 2003
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	JAN 2005
52.215-10	Price Reduction for Defective Cost or Pricing Data	OCT 1997
52.215-12	Subcontractor Cost or Pricing Data	OCT 1997
52.215-15	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
52.215-19	Notification of Ownership Changes	OCT 1997
52.216-7	Allowable Cost And Payment * In subparagraph (a)(3) insert "30th"	DEC 2002
52.216-8	Fixed Fee	MAR 1997
52.219-8	Utilization of Small Business Concerns	MAY 2004
52.219-9	Small Business Subcontracting Plan	JUL 2005
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	APR 2002
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	DEC 2001
52.222-39	Notification of Employee Rights Concerning Payment of Union Dues or Fees	DEC 2004
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	JUN 2000
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	AUG 1996
52.227-12	Patent Rights--Retention By The Contractor (Long Form) ** In subparagraph (l) insert the following "All documents and reporting clause(s) shall be submitted to the PCO and ACO points of contact identified herein."	JAN 1997
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.232-9	Limitation On Withholding Of Payments	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 2003
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-3	Penalties for Unallowable Costs	MAY 2001
52.242-4	Certification of Final Indirect Costs	JAN 1997
52.242-13	Bankruptcy	JUL 1995
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V*** - In subparagraph (e) insert the following: "See clause H-10 above."	APR 1984
52.244-2 Alt I	Subcontracts (Aug 1998) - Alternate I	MAR 2005
52.244-6	Subcontracts for Commercial Items	DEC 2004
52.245-5 Dev	Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts) Deviation	MAY 2004
52.246-1	Contractor Inspection Requirements	APR 1984
52.249-6	Termination (Cost Reimbursement)	MAY 2004
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
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	NOV 2003
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	MAR 1998
252.215-7000	Pricing Adjustments	DEC 1991
252.215-7002	Cost Estimating System Requirements	OCT 1998
252.219-7003	Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (DOD Contracts)	APR 1996
252.219-7011	Notification to Delay Performance	JUN 1998
252.225-7012	Preference For Certain Domestic Commodities	JUN 2004
252.225-7016	Restriction On Acquisition Of Ball and Roller Bearings	JUN 2005
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
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests	JAN 2004
252.235-7010	Acknowledgment of Support and Disclaimer **** In subparagraphs (a) and (b) insert the following: "See clause C-2, subparagraphs (b)(1) & (b) (2) above.	MAY 1995
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.242-7004	Material Management And Accounting System	DEC 2000
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	MAR 2000

252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

CLAUSES INCORPORATED 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 days of March 19, 2007; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days 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 extend beyond April 17, 2009.

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)

52.247-1 COMMERCIAL BILL OF LADING NOTATIONS (APR 1984)

If the Contracting Officer authorizes supplies to be shipped on a commercial bill of lading and the Contractor will be reimbursed these transportation costs as direct allowable costs, the Contractor shall ensure before shipment is made that the commercial shipping documents are annotated with either of the following notations, as appropriate:

(a) If the Government is shown as the consignor or the consignee, the annotation shall be:

"Transportation is for authorized contract supplies under contract HR0011-05-C-0153 and the actual total transportation charges paid to the carrier(s) by the consignor or consignee are assignable to, and shall be reimbursed by the Government."

(b) If the Government is not shown as the consignor or the consignee, the annotation shall be:

"Transportation is for authorized contract supplies under Contract HR0011-05-C-0153 and the actual total transportation charges paid to the carrier(s) by the consignor or consignee shall be reimbursed by the Government, pursuant to cost-reimbursement contract no. HR0011-05-C-0153. This may be confirmed by contacting Mr. Donald C. Sharkus at (703) 696-2383."

(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 (DFARS) (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)

Section J - List of Documents, Exhibits and Other Attachments

Exhibit/Attachment Table of Contents

DOCUMENT TYPE	DESCRIPTION
Attachment 1	Statement of Work
Attachment 2	Precontract Cost Authorization Agreement
Attachment 3	Identification and Assertion of Use Restrictions – Technical Data and Computer Software

HARRIS CORPORATION

STATEMENT OF WORK
FOR THE
OPTICAL ARBITRARY WAVEFORM GENERATION (OAWG) PROGRAM

Harris SOW Number: OAWG-SOW-1000

1. SCOPE. This Statement of Work (SOW) defines the tasks to be accomplished by the Harris/Lucent/UCF-CREOL team to advance science and technology of optical arbitrary waveform generation and its applications through 18-month Phase 1 and 24 month Phase 2 efforts. It includes the associated program management and technology development tasks for each phase.

1.1 Background. The ultimate vision is to demonstrate a compact, robust, practical, stable octave-spanning optical oscillator, and to demonstrate the ability to produce arbitrary optical waveforms of extremely high fidelity. This would provide an unprecedented level of performance for optical systems, and enable numerous high level applications, including revolutionary changes to the performance of sensing systems and ultra-wideband communications capabilities. The core technology components of the envisioned system are a mode-locked and frequency-stabilized, octave-spanning optical frequency comb functioning as a stable local oscillator; an encoder (or pulse shaper) that modulates the oscillator output into an arbitrary waveform; and a decoder / receiver capable of extracting the encoded information.

2. APPLICABLE AND REFERENCE DOCUMENTS

2.1 Government Documents.

Optical Arbitrary Waveform Generation, SOL BAA05-11, 29 November 2005

2.2 Prime Contractor Documents

Performance Goals

3. REQUIREMENTS

3.1 The contractor shall furnish all the personnel, materials, equipment, and services required to perform Phase I tasks contained in this SOW. Phase II and the Ultra Wideband Continuation Option shall be performed following satisfactory completion of the prior phase and Government authorization to exercise the options. The contactor shall conduct experiment-driven development with the following objectives for each phase/option.

3.1.1 Phase I

3.1.1.1 Design, build, and successfully demonstrate a breadboard Mode Locked Laser Oscillator.

3.1.1.2 Design, build, and successfully demonstrate a breadboard OAWG engine.

3.1.1.3 Provide Principal Investigator guidance and systems engineering to complete trades and analyses.

3.1.2 Phase II (Option)

3.1.2.1 Investigate, implement, and demonstrate further noise reduction approaches for the Model Locked Laser (MLL) Oscillator through octave spanning concepts.

3.1.2.2 Design, build, and successfully demonstrate a brassboard OAWG encoder/decoder.

3.1.2.3 Develop, integrate, and demonstrate a laboratory version of an integrated brass board Transmit/Receive test vehicle.

3.1.2.4 Provide Principal Investigator guidance and systems engineering to complete trades and analyses

3.1.3 Ultra Wideband Continuation Option (Option)

3.1.3.1 Conduct further Dense Wavelength Division Multiplex (DVDM) demonstrations and tests using discrete components and InP OE-ICs in concert with Phase II.

3.2 Performance Goals. The contractor shall measure progress toward the Performance Goals outlined in Table 1 and Table 2 as part of the interim and final progress reviews in each development phase. In addition, the Contractor shall identify applicable Technical Performance Measures (TPMs) during each phase and document contractor estimates and/or measurements at three month intervals in each phase to measure progress toward performance goals. (A001)

3.3 Technical Reports. A summary of objectives, configuration, and test results for principle experiments and demonstrations shall be documented to support Government review(s) and associated Go/No-Go decisions for the subsequent phases. (A001)

3.3 Cost and Schedule Reporting. The Contractor shall prepare Quarterly Contract Funds Status Report (CFSR). Monthly reports shall include headcount, dollars expended versus planned, and project schedule. (A002, A003, A004)

3.4 Program Management. The Contractor shall provide effective program management that ensures performance of all tasks in this SOW. The Contractor shall communicate progress to Government via Quarterly Program Reviews and monthly teleconferences. The Contractor Integrated Management Plan (IMP) shall document the significant accomplishments necessary to meet objectives for each phase and successfully complete key program events.

3.5 Deliverable Items. Data Submittal Requirements are listed in Appendix A.

3.6 Change Management. Contractor shall manage change in accordance with Contract Change Proposal (CCP) process. (A0005)

3.7 Terms and Conditions.

3.7.1 Performance Goals. The Phase I Technical Report shall include updated Table 1 Performance Goals for Phase II.

3.7.2 Government Furnished Equipment. None.

Appendix A

CONTRACTOR DATA REQUIREMENTS LIST (CDRL)

CDRL SEQ No.	TITLE	DATA ITEM DESCRIPTION (DID) NUMBER	NO. OF COPIES / FORM Hardcopy (HC) Electronic Copy (EC)	FREQUENCY	GOVERNMENT APPROVAL	COMMENTS
A001	Scientific & Technical Report	DI-MISC-80711A/T	1 x HC 1 x EC	Phase I Interim at 8 Months Final at 18 Months ---------- Phase II Interim at 11 Months Final at 24 Months	No	Contractor Format
A002	Contract Funds Status Report	DI-MGMT-81468/T	1 x HC 1 x EC	Quarterly	No	Contractor Format
A003	Monthly Status Report	DI-MGMT-80368	1 EC	Monthly (Include TPM Update Each Quarter)	No	Contractor Format Cost Reporting to Level 2
A004	Integrated Master Schedule	DI-MISC-81183A/T	1 x HC 1 x EC	Monthly	No	Contractor Format
A005	Contract Change Proposal	DI-ADMN-81401A/T	1 x HC 1 x EC	As Required	Yes	Contractor Format

Table 1	Harris/Lucent/CREOL POC: Dr. Richard DeSalvo/Harris					
		Phase 1			Phase 2	
PROGRAM ATTRIBUTE	State-of-Art (If applicable)	8 MONTHS GOALS	16 MONTHS GOALS (Phase I Go/No-Go)	18 MONTHS GOALS (End of Phase I)	29 MONTHS GOALS	40 MONTHS GOALS (Phase II Go/No-Go)

(b)(4)

(b)(4)

48 MONTHS GOALS

System Engineering Tools

(b)(4)

Table 2	Harris/Lucent/CREOL POC: Dr. Richard DeSalvo/Harris					
	State-of-Art	Phase 1			Phase 2	
Semiconductor Modelocked Oscillator						

(b)(4)

Notes: * Indicates UWB Continuation Option Must Be Exercised To Support Performance Goals

(b)(4)

(b)(4)

Attachment (2) –
Precontract Cost Authorization Agreement

ADVANCE AGREEMENT TO AUTHORIZE INCURRENCE OR PRE-AWARD COSTS UNDER CONTRACT HR0011-05-C-0153

Reference:
(a) DARPA Procurement Guidance U947/00, dated July 1, 2005
(b) Harris Corporation Technical Proposal entitled, "Coherent Optical and RF Waveform Source - CORWAVES," dated February 14, 2005 – revised June 9, 2005
(c) Harris Corporation Cost Proposal (Revision 4), dated August 4, 2005

The Contracts Management Office (CMO), Defense Advanced Research Projects Agency (DARPA) has received a valid and properly funded procurement request (reference (a)) in support of DARPA's Optical Arbitrary Waveform Generation Program. This request follows upon receipt of reference (b), and its evaluation under Broad Agency Announcement (BAA) 05-11. The issuance of a cost-plus-fixed-fee contract is intended.

Since the Contracting Officer has determined that incurrence of costs before the effective date of the contract is necessary to ensure compliance with the proposed delivery schedule, the Government and the Contractor agree as follows:

FIRST: **In the event a contract is awarded**, pre-award costs, not to exceed $100,000.00 shall be allowable under the contract resulting from the incorporation of reference (b), provided that the individual costs therein shall be:

(1) Otherwise allowable, reasonable and allocable;
(2) Incurred no sooner than August 15, 2005.
(4) Incurred specifically and exclusively to accomplish work in the contractor's (b) Technical and Management Proposal entitled, "Coherent Optical and RF Waveform Source - CORWAVES" dated February 14, 2005 as revised June 9, 2005.

SECOND: Contract specifications and price shall be agreed to by the earlier of:

(1) 1 September 2005;
(2) The date on which the amount of funds obligated, committed or expended under this Advance Agreement is equal to no more than $100,000.00.

THIRD AND FINALLY: It is the intention of the Government to award a contract to the Contractor, subject to final agreement on the contract terms, specifications and price(s). Any resulting contract shall incorporate this Advance Agreement. It is understood and agreed by both parties that this Agreement concerns the treatment of pre-award costs **in the event of Contract award**. This Agreement does not require the Contractor to incur any such costs, and any such costs incurred are at the risk of the Contractor, pending the award of a contract.

For the Contractor:

Virgil D. Bon

(Signature and Date)

Virgil D. Bon
(Print Name)

Contract Manager, OAWG Program
(Title)

For the Government:

Donald C. Sharkus 8/15/05

Donald C. Sharkus
Contracting Officer
Defense Advanced Research Projects Agency

Date

Attachment No. (3) –

Identification and Assertion of Use Restrictions – Technical Data and Computer Software

Table 5.10. Lucent Restricted Data

Technical Data or Computer Software To Be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(b)(4)	Developed using Lucent private expense money	Restricted	Lucent Technologies
	Developed using Lucent private expense money	Restricted	Lucent Technologies
	Developed using Lucent private expense money	Restricted	Lucent Technologies
	Developed using Lucent private expense money	Restricted	Lucent Technologies
	Developed using Lucent private expense money	Restricted	Lucent Technologies
	Developed using Lucent private expense money	Restricted	Lucent Technologies
Patent Application Number Chen 25-2 Serial No. 10/133469 Analog Modulation Of Optical Signals	Developed using Lucent private expense money	Restricted	Lucent Technologies
Chen 30-4 Serial No. 10/674722 High Speed Modulation Of Optical Subcarriers	Developed using Lucent private expense money	Restricted	Lucent Technologies
Chen 31-5 Serial No. 10/771069 Optical Digital-To-Analog Converter	Developed using Lucent private expense money	Restricted	Lucent Technologies
Chen 32-6 Serial No. 10/630331 Quadrature Amplitude Modulation Of Optical Carriers	Developed using Lucent private expense money	Restricted	Lucent Technologies