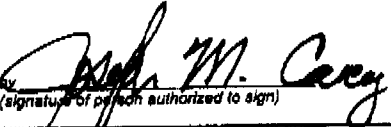


AWARD / CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER OPAS (15 CFR 350)		RATING DO-A7		PAGE of PAGES 1 17	
2. CONTRACT (PROC. INST. IDENT.) NO. FA8750-06-C-0075		3. EFFECTIVE DATE 15 Mar 2005		4. REQUISITION / PURCHASE REQUEST / PROJECT NO. See Section G			
5. ISSUED BY AFRL/IFKD USAF, AFMC AIR FORCE RESEARCH LABORATORY 28 ELECTRONIC PARKWAY ROME NY 13441-4514 MARIE E. VISCELLI (315) 330-1954 Marie.Viscelli@rl.af.mil		CODE FA8750		6. ADMINISTERED BY (IF OTHER THAN ITEM 5) CODE S0802A DCMA DENVER ORCHARD PLACE 2 5975 GREENWOOD PLAZA BLVD STE 200 ENGLEWOOD CO 80111-4715 DCMADENVERSENIORSTAFF@DCMA.MIL SCD: C PAS: (NONE)			
7. NAME AND ADDRESS OF CONTRACTOR (NO., STREET, CITY, COUNTY, STATE AND ZIP CODE) FIDELITY COMTECH INC 2400 TRADE CENTRE AVE LONGMONT CO 80503-7600 (303) 678-8876				8. DELIVERY ☐ FOB Origin ☒ Other (see below)			
				9. DISCOUNT FOR PROMPT PAYMENT N			
CAGE CODE 3S4Z6		FACILITY CODE		10. SUBMIT INVOICES (4 COPIES UNLESS OTHERWISE SPECIFIED) TO THE ADDRESS SHOWN IN		ITEM See Block 12	
11. SHIP TO / MARK FOR See Section F		CODE		12. PAYMENT WILL BE MADE BY DFAS COLUMBUS CENTER DFAS-COMWEST ENTITLEMENT OPS P.O. BOX 182381 COLUMBUS OH 43218-2381 EFT: T		CODE HQ0339	
13. AUTHORITY FOR OTHER THAN FULL AND OPEN COMPETITION				14. ACCOUNTING AND APPROPRIATION DATA See Section G			
15A. ITEM NO See Section B		15B. SUPPLIES/SERVICES		15C. QUANTITY		15D. UNIT	
				15E. UNIT PRICE		15F. AMOUNT	
				15G. TOTAL AMOUNT OF CONTRACT		\$742,192.00	
16. Table of Contents							
	SEC	DESCRIPTION	PAGE(S)		SEC	DESCRIPTION	PAGE(S)
		PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES	
✓	A	SOLICITATION/CONTRACT FORM	1	✓	I	CONTRACT CLAUSES	13
✓	B	SUPPLIES OR SERVICES AND PRICES/COSTS	2			PART III - LIST OF DOCUMENTS, EXHIBITS & ATTACHMENTS	
✓	C	DESCRIPTION/SPECS./WORK STATEMENT	4	✓	J	LIST OF ATTACHMENTS	17
✓	D	PACKAGING AND MARKING	5			PART IV - REPRESENTATIONS AND INSTRUCTIONS	
✓	E	INSPECTION AND ACCEPTANCE	6		K	REPRESENTATIONS, CERTIFICATIONS	
✓	F	DELIVERIES OR PERFORMANCE	7			OTHER STATEMENTS OF OFFERORS	
✓	G	CONTRACT ADMINISTRATION DATA	9		L	INSTRS., CONDS., AND NOTICES TO	
✓	H	SPECIAL CONTRACT REQUIREMENTS	11		M	EVALUATION FACTORS FOR AWARD	
CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE							
17. ☒ Contractor's Negotiated Agreement (Contractor is required to sign this document and return 1 copies to issuing office). Contractor agrees to furnish and deliver all items or perform all 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 set forth in full above, is hereby accepted as to items listed above and on any continuation sheets. This award constitutes 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) Joseph M. Covey, President				20A. NAME OF CONTRACTING OFFICER TERESA M. CZERNIAK			
19B. Name of Contractor		19C. Date Signed		20B. United States of America		20C. Date Signed	
 (signature of person authorized to sign)		15 Mar 2005		 by (signature of Contracting Officer)		15 Mar 2005	

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

ITEM	SUPPLIES OR SERVICES	Qty Purch Unit	Unit Price Total Item Amount
0001		1	EST \$742,192.00
		Lot	EST \$742,192.00
	<i>Noun:</i>	SOFTWARE/HARDWARE	
	<i>ACRN:</i>	9	
	<i>NSN:</i>	N - Not Applicable	
	<i>Contract type:</i>	U - COST PLUS FIXED FEE	
	<i>Inspection:</i>	DESTINATION	
	<i>Acceptance:</i>	DESTINATION	
	<i>FOB:</i>	DESTINATION	
	<i>Descriptive Data:</i>		

A. Software/Hardware in accordance with paragraph 4.0 of Attachment No. 1, Statement of Work entitled "Physical Layer Information Assurance" dated 11 Feb 2005.

B. Payment instructions for the subline items shown below are contained in Section G.

000101	<i>Noun:</i>	FUNDING INFO ONLY	
	<i>ACRN:</i>	AA	\$375,000.00
	<i>PR/MIPR:</i>	G52509	\$375,000.00

0002	<i>Noun:</i>	DATA	
	<i>Exhibit:</i>	A	
	<i>NSN:</i>	U - Unknown	
	<i>DD1423 is Exhibit:</i>	A	
	<i>Descriptive Data:</i>		

Data in accordance with Exhibit A, Contract Data Requirements List dated 11 Feb 2005.
Quantity and delivery schedule shall be as specified on Exhibit A.

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

B054 IMPLEMENTATION OF LIMITATION OF FUNDS (FEB 2003)

(a) The sum allotted to this contract and available for payment of costs under 0001/0002 through 30 Sep 2005 in accordance with the clause in Section I entitled "Limitation of Funds" is \$357,142.00.

(b) In addition to the amount allotted under the "Limitation of Funds" clause, the additional amount of \$17,858.00 is obligated for payment of fee for work completed under CLINs 0001/0002.

B058 PAYMENT OF FEE (CPFF) (FEB 2003)

The estimated cost and fee for this contract are shown below. The applicable fixed fee set forth below may be increased or decreased only by negotiation and modification of the contract for added or deleted work. As determined by the contracting officer, it shall be paid as it accrues, in regular installments based upon the percentage of completion of work (or the expiration of the agreed-upon period(s) for term contracts).

Estimated Cost \$706,850.00
Fee \$35,342.00

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

C003 INCORPORATED DOCUMENTS/REQUIREMENTS (APR 1998)

1. The following documents, as they may be amended below, are a part of this contract:

(a) Attachment No. 1, Statement of Work entitled, "Physical Layer Information Assurance", dated 11 Feb 2005.

(b) Exhibit A entitled "Contract Data Requirements List," dated 11 Feb 2005 2005.

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

**AIR FORCE MATERIEL COMMAND FEDERAL ACQUISITION REGULATION SUPPLEMENT
CONTRACT CLAUSES**

5352.247-9007 SPECIFICATION COMMERCIAL PACKAGING (AFMC) (JAN 2000)

I. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated by reference:

A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.246-08 INSPECTION OF RESEARCH AND DEVELOPMENT -- COST-REIMBURSEMENT
(MAY 2001)

B. DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (MAR 2003)

II. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

E007 INSPECTION AND ACCEPTANCE AUTHORITY (APR 1998)

Inspection and acceptance for all Contract and Exhibit Lines or Subline Items shall be accomplished by the Program Manager, Air Force Research Laboratory, Rome, NY .

PART I - THE SCHEDULE
SECTION F - DELIVERIES OR PERFORMANCE

ITEM	SUPPLIES SCHEDULE DATA	QTY	SHIP TO	MARK FOR	TRANS PRI	DATE
0001		1	FA8750			14 Mar 2007

Noun: SOFTWARE/HARDWARE

ACRN: 9

Descriptive Data:

A Kickoff Meeting shall be held at AFRL Rome NY within 30 days after contract effective date.

Two Technical Interchange Meetings as coordinated between the Government and the Contractor at AFRL Rome NY

Final meeting to be held during final month of contract at AFRL Rome NY.

SHIP SOFTWARE TO:

ATTN: Mr. E. Ratazzi
AFRL/IFGB
Contract Number: FA8750-05-C-0075
525 Brooks Road
Rome NY 13441-4505

SHIP HARDWARE TO:

ATTN: Transportation Officer, FA8750
Air Force Research Laboratory/IFOLST
Marked For: AFRL/IFGB/E.Ratazzi/315 330-3766
Contract No.: FA8750-05-C-0075
120 Electronic Parkway
Rome NY 13441-4503

I. NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.242-15 STOP-WORK ORDER (AUG 1989) - ALTERNATE I (APR 1984)

II. NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

F005 DELIVERY OF REPORTS (OCT 1998)

(a) All data shall be delivered in accordance with the delivery schedule shown on the Contract Data Requirements List, attachments, or as incorporated by reference.

(b) All reports and correspondence submitted under this contract shall include the contract number and project number and be forwarded prepaid. A copy of the letters of transmittal shall be delivered to the Procuring Contracting Officer (PCO) and Administrative Contracting Officer (ACO). The addresses are set forth on the contract award cover page. All other address(es) and code(s) for consignee(s) are as set forth in the contract or incorporated by reference.

PART I - THE SCHEDULE
SECTION G - CONTRACT ADMINISTRATION DATA

<u>ACRN</u>	<u>Appropriation/Lmt Subhead/Supplemental Accounting Data</u>	<u>Obligation Amount</u>
AA		\$375,000.00
	57 53600 295 4702 663005 6FGB20 52509 65502F 503000 F03000	
	<i>Funding breakdown:</i> On CLIN 000101:	\$375,000.00
	<i>PR/MIPR:</i> G52509	\$375,000.00
	<i>Descriptive data:</i>	
	Job Order No.: 30055212	
	Funding Document No.: BA5-1	

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

G006 INVOICE AND PAYMENT - COST REIMBURSEMENT (FEB 1997) (TAILORED)

Invoices (or public vouchers), supported by a statement of cost for performance under this contract, shall be submitted to the cognizant Defense Contract Audit Agency (DCAA) office. Under the provisions of DFARS 242.803(b), the DCAA auditor, is designated as the authorized representative of the contracting officer (CO) for examining vouchers received directly from the contractor:

DCAA Denver Branch Office
7112 W. Jefferson Ave, Suite 200
Lakewood CO 80235-2327

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

OTHER CONTRACT CLAUSES IN FULL TEXT

H025 INCORPORATION OF SECTION K (OCT 1998)

Section K of the solicitation is hereby incorporated by reference.

H055 INSURANCE CLAUSE IMPLEMENTATION (FEB 2003)

The Contractor shall obtain and maintain the minimum kinds and amounts of insurance during performance of this contract as specified by FAR 28.307-2, Liability, and contemplated by FAR 52.228-5, Insurance--Work on a Government Installation, and/or 52.228-7, Insurance--Liability to Third Persons.

H057 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PHASE I AND PHASE II CONTRACT REQUIREMENTS (FEB 2003)

The following requirements of the FY 2002 Department of Defense (DoD) solicitation for the Small Business Innovation Research (SBIR) program are incorporated herein by reference:

(a) Definition. "United States", as used in this clause, means the fifty states, the Territories and possessions of the United States, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the District of Columbia.

(b) Primary Employment. The primary employment of the principal investigator must be with the small business firm during the conduct of the contract. Primary employment means that more than one-half of the principal investigator's time is spent with the small business.

(c) Purchase Of Equipment. It is the sense of Congress that an entity that is awarded a contract under the SBIR Program of a federal agency under Section 9 of the Small Business Act should, when purchasing any equipment or a product with funds provided through the contract, purchase only American-made equipment and products, to the extent possible in keeping with the overall purposes of that program.

(d) Sbir Phase I Contracts. (The following requirements apply only if this is a SBIR Phase I contract.)

(i) A minimum of two-thirds of the research and/or analytical effort required to perform the work specified in the attached Statement of Work (or Contractor's proposal, if incorporated herein by reference) shall be performed by the Contractor in the United States.

(ii) If requested by the Contracting Officer, proposals for Phase II shall, if submitted, be prepared in accordance with the attached "INSTRUCTIONS FOR SUBMISSION OF SMALL BUSINESS INNOVATION (SBIR) PHASE II PROPOSALS."

(iii) Six (6) copies of the Final Technical Report detailing all work performed under Phase I shall be submitted in accordance with the delivery schedule specified in Section F of this contract. The Final Technical Report shall include a completed SF 298 "Report Documentation Page" as the first page detailing the project objectives, work performed, results obtained, and estimates of technical feasibility. The summary shall not contain proprietary or classified material. Information used to report Phase I progress in a Phase II proposal, if submitted, may be used verbatim in the Final Technical Report with changes only to accommodate results obtained subsequent to Phase II proposal submission.

(e) SBIR Phase II Contracts. (The following requirements apply only if this is a SBIR Phase II contract.)

(i) A minimum of one-half of the research and/or analytical effort required to perform the work specified in the attached Statement of Work shall be performed by the contractor in the United States.

(ii) Patent search costs are allowable to the extent that they are incurred as a result of this contract.

IFK-H001 RECEIVING REPORT (DD FORM 250) MAILING ADDRESS (JAN 2005)

(a) Submit original DD Form(s) 250 for all items deliverable under this contract (e.g. hardware, software, services, exhibit line items unless otherwise specified on the Contract Data Requirements List (CDRL)), etc.) to the following address:

Air Force Research Laboratory/(IFGM)
FURTHER MARKED FOR: IFG/E.RATAZZI
525 Brooks Rd
Rome NY 13441-4505

(b) In addition, a copy of the DD Form 250 shall accompany each shipment for all deliverable items unless otherwise specified on the CDRL. Shipment addresses are specified in Section F of the schedule and/or on the CDRL.

(c) PROCESSING STATUS. Any inquiry as to the processing status of a DD Form 250 should be made to the following office:

Air Force Research Laboratory/IFGM
525 Brooks Rd
Rome NY 13441-4505
Telephone: (315) 330-7355

Contract Clauses in this section are from the FAR, Defense FAR Sup, Air Force FAR Sup, and the Air Force Materiel Command FAR Sup, and are current through the following updates:

Database_Version: 6.3.x.300; Issued: 1/19/2005; FAR: FAC 2001-27; DFAR: DCN20050113; DL: DL 98-021; Class Deviations: CD 2004o0001; AFFAR: 2002 Edition; AFMCFAR: AFMCAC 02-06; AFAC: AFAC 2004-1209; IPN: 98-009

I. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated by reference:

A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.202-01	DEFINITIONS (JUL 2004)
52.203-03	GRATUITIES (APR 1984)
52.203-05	COVENANT AGAINST CONTINGENT FEES (APR 1984)
52.203-06	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (JUL 1995)
52.203-07	ANTI-KICKBACK PROCEDURES (JUL 1995)
52.203-08	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)
52.204-04	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)
52.204-07	CENTRAL CONTRACTOR REGISTRATION (OCT 2003)
52.209-06	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (JAN 2005)
52.211-05	MATERIAL REQUIREMENTS (AUG 2000)
52.215-02	AUDIT AND RECORDS -- NEGOTIATION (JUN 1999)
52.215-08	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) - ALTERNATE I (OCT 1997)
52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2004)
52.215-17	WAIVER OF FACILITIES CAPITAL COST OF MONEY (OCT 1997)
52.215-18	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (OCT 1997)
52.215-19	NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)
52.216-07	ALLOWABLE COST AND PAYMENT (DEC 2002)
52.216-08	FIXED FEE (MAR 1997)
52.219-08	UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)
52.222-02	PAYMENT FOR OVERTIME PREMIUMS (JUL 1990) Para (a), Dollar amount is 'zero'
52.222-03	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)

52.223-06	DRUG-FREE WORKPLACE (MAY 2001)
52.223-14	TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (DEC 2003)
52.227-01	AUTHORIZATION AND CONSENT (JUL 1995) - ALTERNATE I (APR 1984)
52.227-02	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (AUG 1996)
52.227-11	PATENT RIGHTS -- RETENTION BY THE CONTRACTOR (SHORT FORM) (JUN 1997) Para (l), Communications: 'All documents and information required by the patent rights and/or patent reporting clauses set forth in Section I of this contract shall be submitted to the Administrative Contracting Officer and to Air Force Research Laboratory/IFOJ, 26 Electronic Parkway, Rome NY 13441-4514. The AFRL/IFOJ patent administrator can be reached at Area Code (315) 330-2087 or DSN 587-2087. This notice also constitutes a request (see FAR 52.227-12(f)(10) or DFARS 252.227-7039(c), as applicable) for submission of a copy of the patent application, when filed, along with the patent application serial number, filing date, subsequent U.S. patent number and issue date, as received.'
52.228-07	INSURANCE -- LIABILITY TO THIRD PERSONS (MAR 1996)
52.232-09	LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)
52.232-17	INTEREST (JUN 1996)
52.232-22	LIMITATION OF FUNDS (APR 1984)
52.232-23	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)
52.233-01	DISPUTES (JUL 2002)
52.233-03	PROTEST AFTER AWARD (AUG 1996) - ALTERNATE I (JUN 1985)
52.233-04	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)
52.242-01	NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)
52.242-03	PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)
52.242-04	CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)
52.242-13	BANKRUPTCY (JUL 1995)
52.243-02	CHANGES -- COST-REIMBURSEMENT (AUG 1987) - ALTERNATE V (APR 1984)
52.244-02	SUBCONTRACTS (AUG 1998) - ALTERNATE I (AUG 1998) Para (e), Contractor shall obtain the Contracting Officer's written consent before placing the following subcontracts: 'None' Para (k), Insert subcontracts which were evaluated during negotiations: 'None'
52.244-05	COMPETITION IN SUBCONTRACTING (DEC 1996)
52.244-06	SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2004)
52.245-05	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (DEVIATION) (MAY 2004)
52.246-23	LIMITATION OF LIABILITY (FEB 1997)
52.247-01	COMMERCIAL BILL OF LADING NOTATIONS (APR 1984)
52.247-67	SUBMISSION OF COMMERCIAL TRANSPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDIT (JUN 1997)
52.249-06	TERMINATION (COST-REIMBURSEMENT) (MAY 2004)
52.249-14	EXCUSABLE DELAYS (APR 1984)
52.253-01	COMPUTER GENERATED FORMS (JAN 1991)

B. DEFENSE FEDERAL ACQUISITION REGULATION SUPPLEMENT CONTRACT CLAUSES

252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE- CONTRACT-RELATED FELONIES (DEC 2004)
252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT (APR 1992)
252.204-7004	ALTERNATE A TO FAR 52.204-7, CENTRAL CONTRACTOR REGISTRATION (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)
252.225-7004	REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES (APR 2003)
252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES (JUN 2004)
252.225-7014	PREFERENCE FOR DOMESTIC SPECIALTY METALS (APR 2003)
252.225-7031	SECONDARY ARAB BOYCOTT OF ISRAEL (APR 2003)
252.226-7001	UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS (SEP 2004)
252.227-7016	RIGHTS IN BID OR PROPOSAL INFORMATION (JUN 1995)
252.227-7018	RIGHTS IN NONCOMMERCIAL TECHNICAL DATA AND COMPUTER SOFTWARE-- SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM (JUN 1995)
252.227-7019	VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE (JUN 1995)
252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT (MAR 2000)
252.227-7034	PATENTS--SUBCONTRACTS (APR 1984)
252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA (SEP 1999)
252.227-7039	PATENTS--REPORTING OF SUBJECT INVENTIONS (APR 1990)
252.231-7000	SUPPLEMENTAL COST PRINCIPLES (DEC 1991)
252.232-7003	ELECTRONIC SUBMISSION OF PAYMENT REQUESTS (JAN 2004)
252.235-7010	ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER (MAY 1995) Para (a), name of contracting agency(ies): 'United States Air Force' Para (a), contract number(s): 'FA8750-05-C-0075' Para (b), name of contracting agency(ies): 'United States Air Force'
252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT (NOV 2004)
252.242-7000	POSTAWARD CONFERENCE (DEC 1991)
252.243-7002	REQUESTS FOR EQUITABLE ADJUSTMENT (MAR 1998)
252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DOD CONTRACTS) (MAR 2000)
252.245-7001	REPORTS OF GOVERNMENT PROPERTY (MAY 1994)
252.247-7023	TRANSPORTATION OF SUPPLIES BY SEA (MAY 2002)
252.247-7024	NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA (MAR 2000)

II. **NOTICE:** The following contract clauses pertinent to this section are hereby incorporated in full text:

FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES IN FULL TEXT

52.211-15 DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS (SEP 1990)

This is a rated order certified for national defense use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).

52.252-02 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/>

52.252-06 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.

PART III - LIST OF DOCUMENTS, EXHIBITS & ATTACHMENTS
SECTION J - LIST OF ATTACHMENTS

DOCUMENT	PGS	DATE	TITLE
EXHIBIT A	7	11 FEB 2005	CONTRACT DATA REQUIREMENTS LIST (CDRL)
ATTACHMENT 1	5	11 FEB 2005	PHYSICAL LAYER INFORMATION ASSURANCE

CONTRACT DATA REQUIREMENTS LIST <i>(1 Data Item)</i>						Form Approved OMB No. 0704-0188			
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.									
A. CONTRACT LINE ITEM NO. CLIN 0002			B. EXHIBIT A		C. CATEGORY TDP _____ TM- _____ OTHER <u>MISC</u>				
D. SYSTEM/ITEM PHYSICAL LAYER INFORMATION ASSURANCE			E. CONTRACT/PR NO. FA8750-05-C-0075		F. CONTRACTOR G-5-2509				
1. DATA ITEM NO. A001		2. TITLE OF DATA ITEM RESEARCH AND DEVELOPMENT (R&D) PROJECT SUMMARY			3. SUBTITLE AFRL PROGRAM MANAGEMENT REPORT				
4. AUTHORITY (Data Acquisition Document No.) DI-MISC-81612A/T			5. CONTRACT REFERENCE SOW PARAGRAPH 4.2.1		6. REQUIRING OFFICE AFRL/IFGB				
7. DD250 REQ NO		9. DIST STATEMENT REQUIRED N/A	10. FREQUENCY MONTHLY	12. DATE OF FIRST SUBMISSION 40 DAYS AFTER AWARD	14. DISTRIBUTION				
8. APP CODE A		11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION MONTHLY	a. ADDRESSEE		b. COPIES			
16. REMARKS REFERENCE BLOCKS 2 AND 4, TAILORING. VERIFY PROJECT INFORMATION (1) AND NOTIFY THE REQUIRING OFFICE OF ANY DISCREPANCY DURING THE LIFE OF THE CONTRACT. FOR FUNDING REPORT (2) REQUIREMENTS, DOCUMENT THE ACTUAL COST FOR THE REPORTING PERIOD AND PROJECTED COST FOR THE FOLLOWING QUARTERLY PERIOD. THE CONTRACTOR SHALL UTILIZE THE AFRL PROGRAM MANAGEMENT SYSTEM, KNOWN AS JIFFY (https://jiffy.rl.af.mil) TO INPUT THE REQUIRED DATA. ESTABLISH CONTRACTOR USER ACCOUNTS THROUGH THE GOVERNMENT TECHNICAL POINT OF CONTACT IDENTIFIED IN BLOCK 6. ENTER THE FIRST REPORT WITHIN FORTY (40) DAYS AFTER CONTRACT AWARD AND MONTHLY THEREAFTER THROUGH CONTRACT COMPLETION. THE GOVERNMENT WILL FURNISH COMMENTS WITHIN FIFTEEN (15) DAYS, WHEN NECESSARY. SUPPLY UPDATES WITHIN FIFTEEN (15) DAYS AFTER RECEIPT OF GOVERNMENT COMMENTS, AS APPLICABLE. DO NOT INPUT DATA THAT IS CLASSIFIED OR SUBJECT TO EXPORT CONTROL TO JIFFY OR TRANSMIT CLASSIFIED DATA VIA E-MAIL. SUBMIT CLASSIFIED DATA AS HARD COPY OR VIA THE SIPRNET AS COORDINATED WITH THE REQUIRING OFFICE. INCLUDE THE FOLLOWING REPORTING DISTRIBUTION WITHIN JIFFY. GOVERNMENT TECHNICAL POINT OF CONTACT (REQUIRING OFFICE) GOVERNMENT BUYER (SF 26, BLOCK 5) ADMINISTRATIVE CONTRACTING POINT OF CONTACT (SF26, BLOCK 6) OTHER RECIPIENTS AS COORDINATED WITH THE REQUIRING OFFICE				Final		Reg		Repro	
				15. TOTAL					
G. PREPARED BY GEORGE E ARBOGAST			H. DATE 11 FEB 2005		I. APPROVED BY EDWARD P RATAZZI		J. DATE 11 FEB 2005		

CONTRACT DATA REQUIREMENTS LIST <i>(1 Data Item)</i>						Form Approved OMB No. 0704-0188		
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.								
A. CONTRACT LINE ITEM NO. CLIN 0002			B. EXHIBIT A		C. CATEGORY TDP _____ TM- _____ OTHER MISC			
D. SYSTEM/ITEM PHYSICAL LAYER INFORMATION ASSURANCE			E. CONTRACT/PR NO. FA8750-05-C-0075		F. CONTRACTOR G-5-2509			
1. DATA ITEM NO. A003		2. TITLE OF DATA ITEM SCIENTIFIC AND TECHNICAL REPORTS			3. SUBTITLE SBIR SUMMARY REPORT			
4. AUTHORITY (Data Acquisition Document No.) DI-MISC-80711A/T			5. CONTRACT REFERENCE SOW PARAGRAPH 4.2.3		6. REQUIRING OFFICE AFRL/IFGB			
7. DD250 REQ NO		9. DIST STATEMENT REQUIRED A	10. FREQUENCY TWO/R	12. DATE OF FIRST SUBMISSION SEE BLOCK 16		14. DISTRIBUTION		
8. APP CODE A		11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION SEE BLOCK 16		a. ADDRESSEE		b. COPIES	
16. REMARKS BLOCK 2 AND 4, REFERENCE ANSI Z39.18-1995: PAGE 14, ONLY PARAGRAPHS 4.2.4, 4.2.5 AND 4.2.6 APPLY. DO NOT INCLUDE CLASSIFIED, EXPORT CONTROLLED, PROPRIETARY, OR SENSITIVE INFORMATION IN SBIR SUMMARY REPORTS. THE CONTRACTOR SHALL SUBMIT AN INTERIM SUMMARY REPORT WITHIN TWELVE (12) MONTHS AFTER CONTRACT AWARD AND A FINAL SUMMARY REPORT AT THE COMPLETION OF CLIN 0001. MAIL TWO (2) PRINTED COPIES AND ONE (1) ELECTRONIC COPY ON PORTABLE MEDIA, SUCH AS COMPACT DISK - READ ONLY MEMORY (CD-ROM) OR MAGNETIC DISKETTE, AS COORDINATED WITH THE REQUIRING OFFICE. PREFER ELECTRONIC COPY DELIVERY IN MICROSOFT OFFICE SUITE COMPATIBLE FORMAT. CONCURRENTLY WITH EACH REPORT, FURNISH LETTERS OF TRANSMITTAL TO THE FOLLOWING ADDRESSEES: AFRL/IFB, JANIS NORELLI, Janis.Norelli@rl.af.mil AFRL/IFKD ATTN: MARIE VISCELLI 26 ELECTRONIC PARKWAY ROME NY 13441-4514 EMAIL: Marie.Viscelli@rl.af.mil THE GOVERNMENT WILL REVIEW AND RETURN COMMENTS AND RECOMMENDATIONS OR FINAL SUBMISSION APPROVAL WITH A PUBLIC AFFAIRS CLEARANCE NUMBER WITHIN FIFTEEN (15) DAYS AFTER RECEIPT OF EACH REPORT. REFERENCE THE SBIR VIRTUAL SHOPPING MALL FOR FINAL SUBMISSION INSTRUCTIONS TO THE MALL MANAGER FOR POSTING. (http://www.sbirsttmail.com)					Final		Reg	Repro
					AFRL/IFGB		3	1
					SEE BLOCK 16			
15. TOTAL					3		1	
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE	

Page 5 of 7 Pages

CONTRACT DATA REQUIREMENTS LIST (1 Data Item)							Form Approved OMB No. 0704-0188			
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A. CONTRACT LINE ITEM NO. CLIN 0002			B. EXHIBIT A		C. CATEGORY TDP _____ TM- <u>TMSS</u> OTHER _____					
D. SYSTEM/ITEM PHYSICAL LAYER INFORMATION ASSURANCE			E. CONTRACT/PR NO. FA8750-05-C-0075		F. CONTRACTOR G-5-2509					
1. DATA ITEM NO. A006	2. TITLE OF DATA ITEM COMMERCIAL OFF-THE-SHELF (COTS) MANUAL AND ASSOCIATED SUPPLEMENTAL DATA				3. SUBTITLE					
4. AUTHORITY (Data Acquisition Document No.) DI-TMSS-80527A		5. CONTRACT REFERENCE SOW PARAGRAPH 4.3.1.5			6. REQUIRING OFFICE AFRL/IFGB					
7. DD250 REQ NO	9. DIST STATEMENT REQUIRED TBD	10. FREQUENCY AS REQUIRED	12. DATE OF FIRST SUBMISSION SEE BLOCK 16		14. DISTRIBUTION					
8. APP CODE N/A		11. AS OF DATE 0	13. DATE OF SUBSEQUENT SUBMISSION SEE BLOCK 16		a. ADDRESSEE		b. COPIES			
16. REMARKS THE CONTRACTOR SHALL SUBMIT ORIGINAL MEDIA COTS MANUALS AND SUPPLEMENTAL DATA CONCURRENT WITH EACH DELIVERY OF ASSOCIATED SOFTWARE OR HARDWARE AS APPLICABLE.							Final			
							Draft			
							Reg		Repro	
					AFRL/IFGB		1			
					SEE BLOCK 16					
					15. TOTAL					
G. PREPARED BY			H. DATE		I. APPROVED BY		J. DATE			

AIR FORCE RESEARCH LABORATORY
ROME RESEARCH SITE
ROME NEW YORK

STATEMENT OF WORK
FOR
PHYSICAL LAYER INFORMATION ASSURANCE FOR WIRELESS NETWORKS
USING PHASED ARRAY TECHNOLOGY

PCSN. G-5-2509

11 FEBRUARY 2005

(Contract Number FA8750-05-C-0075)

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1.0 OBJECTIVE

1.1 The objective of this effort is to develop phased array technology for Wireless Local Area Networking (WLAN). The further objective is to make said technology more applicable to mobile and nomadic situations faced by the United States military.

2.0 SCOPE

2.1 The scope of this effort is to enhance the performance of a commercially available Phased Array Terminal designed for IEEE 802.11 Wireless LANs, thereby extending its applicability to the mobile networking scenarios of the United States military.

3.0 BACKGROUND

3.1 Commercial Wireless LAN products have recently been able to achieve performance levels of 54MBit/sec and higher at prices of only a few hundred dollars. Previously this level of performance was only accessible by spending tens of thousands of dollars.

3.2 The Department of Defense, and the Air Force in particular, desire to take advantage of the capability offered by widely available commercial products.

3.3 The Air Force requires performance enhancements to these commercial products that improve reliability and security.

4.0 TECHNICAL REQUIREMENTS. The contractor shall accomplish the following:

4.1 Investigate, develop and demonstrate phased array technology for WLAN.

4.1.1 Quantify the performance improvement achieved using a Phased Array Terminal vs. an omnidirectional antenna in an ad-hoc networking environment.

4.1.2 Further develop the network management interface for the Phased Array Terminal.

4.1.3 Demonstrate and quantify the ability of the Phased Array Terminal to produce low sidelobe patterns.

4.1.4 Develop software to enable the phased array to track a moving target when that target is a cooperative partner station.

4.1.5 Investigate the possibility of performing geolocation based on signal measurements made using the phased array antenna.

4.1.6 Investigate the concept of “Spatial Data Striping,” whereby information is fragmented and transmitted by separate Access Points, then recombined at the receiver.

4.2 Reporting.

4.2.1 Continually determine the status of the effort and report progress toward accomplishment of contract requirements. (See CDRL, A001)

4.2.2 Conduct oral presentations at such times and places designated in the contract schedule. Provide status of technical progress made to date in performance of the contract during presentations. (See CDRL, A002)

4.2.3 Develop interim and final summary reports that include a description of the technology advanced during this acquisition, as well as the anticipated applications and benefits for Government and private sector use, as appropriate. (See CDRL, A003)

4.2.4 Document all technical work accomplished and information gained during the performance of this acquisition. This shall include all pertinent observations, nature of problems, positive as well as negative results, and design criteria established, where applicable; also, procedures followed, processes developed, "Lesson Learned", etc. The details of all technical work shall be documented to permit full understanding of the techniques and procedures used in evolving technology or processes developed. Separate design, engineering, or process specifications delivered during this acquisition shall be cross-referenced to permit a full understanding of the total acquisition. (See CDRL, A007)

4.3 Software.

4.3.1 Deliver all computer software developed, assembled, or acquired to the Government in accordance with the Contract schedule and the following:

4.3.1.1 Deliver all computer software developed under this effort as source and object (executable) code. Include the commented source listings and source code. (See CDRL, A005)

4.3.1.2 Document all software in the form of installation, maintenance and user's instructions. (See CDRL, A004)

4.3.1.3 Delivered software under this effort is to be completely maintainable and modifiable with no reliance on any non-delivered computer programs or documentation.

4.3.1.4 Evaluate the planning performed for the use of non-developmental software (e.g., commercial off-the-shelf (COTS), reusable, or Government furnished) to fulfill SOW requirements. Determine whether the software performs as documented before incorporating acquired software into software being developed under this effort. Determine whether documentation is adequate for the intended purpose.

4.3.1.5 For all software purchased or licensed for use as a component of the software to be delivered, arrangements shall be made for licensing and maintenance agreements to be transferred to the Government upon the completion of this effort. (See CDRL, A006)