

2. Contract (Proc. Inst. Ident) No. W56HZV-04-C-0774	3. Effective Date 2004SEP27	4. Requisition/Purchase Request/Project No. SEE SCHEDULE
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5. Issued By TACOM WARREN AMSTA-AQ-ABGA JEFFREY BEAN (586)574-7860 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL e-mail address: BEANJ@TACOM.ARMY.MIL	Code W56HZV	6. Administered By (If Other Than Item 5) DCMA DETROIT U.S. ARMY TANK & AUTOMOTIVE COMMAND (TACOM) ATTN: DCMAE-GJD WARREN, MI 48397-5000 SCD C PAS NONE ADP PT HQ0337	Code S2305A
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7. Name And Address Of Contractor (No. Street, City, County, State, And Zip Code) SOAR TECHNOLOGY INC. 3600 GREEN COURT, SUITE 600 ANN ARBOR, MI. 48105-2588 TYPE BUSINESS: Other Small Business Performing in U.S.	8. Delivery <input type="checkbox"/> FOB Origin <input checked="" type="checkbox"/> Other (See Below) SEE SCHEDULE
	9. Discount For Prompt Payment
	10. Submit Invoices (4 Copies Unless Otherwise Specified) Item To The Address Shown In: 12
Code 1C4L4	Facility Code

11. Ship To/Mark For SEE SCHEDULE	Code	12. Payment Will Be Made By DFAS - COLUMBUS CENTER DFAS-CO/NORTH ENTITLEMENT OPERATION P.O. BOX 182266 COLUMBUS OH 43218-2266	Code HQ0337
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13. Authority For Using Other Than Full And Open Competition: <input checked="" type="checkbox"/> 10 U.S.C. 2304(c)(1)) <input type="checkbox"/> 41 U.S.C. 253(c)()	14. Accounting And Appropriation Data ACRN: AA 21 42040000046N6N7EP622601255Y S20113 W56HZV
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15A. Item No. SEE SCHEDULE	15B. Schedule Of Supplies/Services CONTRACT TYPE: Cost-Plus-Fixed-Fee	15C. Quantity	15D. Unit	15E. Unit Price	15F. Amount
KIND OF CONTRACT: Research and Development Contracts					
15G. Total Amount Of Contract					\$424,790.00

16. Table Of Contents							
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X	H	Special Contract Requirements	21				

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 2 signed 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. <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)	20A. Name Of Contracting Officer DEREK MCALEER MCALEERD@TACOM.ARMY.MIL (586)574-7197
19B. Name of Contractor	20B. United States Of America
19c. Date Signed	20C. Date Signed 2004SEP27
By _____ (Signature of person authorized to sign)	By _____ /SIGNED/ (Signature of Contracting Officer)

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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

SECTION A - SUPPLEMENTAL INFORMATION

Regulatory Cite	Title	Date
A-1 52.204-4016 (TACOM)	TACOM-WARREN ELECTRONIC CONTRACTING	JUL/2003

(a) TACOM is now operating in an electronic contracting environment. All TACOM solicitations and awards are now distributed on the TACOM Warren Business Opportunities web page (<http://contracting.tacom.army.mil/opportunity.htm>) and are no longer available in hard copy. The TDPs and other documents, when available electronically, will be an attachment or linked to the solicitation package on the web. Please see submission guidelines at <http://contracting.tacom.army.mil/userguide.htm> and <http://contracting.tacom.army.mil/ebidnotice.htm> for more information. Any requirements included in the solicitation take precedence over guidance found on the TACOM contracting web page.

(b) You may need to use special software to view documents that we post on the home page. This viewing software is freeware, available for download at no cost from commercial web sites like Microsoft and Adobe. In cases where such software is required, we provide a link from our page to the commercial site where the software is available. Once you arrive at the software developer's site, follow their instructions to download the free viewer. You then can return to the TACOM home page.

(c) You are required to submit your offer, bid, or quote electronically. See the provision entitled "Electronic Offers (or 'Quotes' or 'Bids') Required in Response to This Solicitation (or 'Request for Quotations')" for more specific information.

(d) Any award issued as a result of this solicitation will be distributed electronically. Awards posted on the TACOM Warren Business Opportunities web page represent complete OFFICIAL copies of contract awards and will include the awarded unit price. This is the notice required by Executive Order 12600 (June 23, 1987) of our intention to release unit prices in response to any request under the Freedom of Information Act (FOIA), 5 USC 552. Unit price is defined as the contract price per unit or item purchased as it appears in Section B of the contract and is NOT referring to nor does it include Cost or Pricing data/information. If you object to such release, and you intend on submitting an offer, notify the PCO in writing prior to the closing date identified in this solicitation and include the rationale for your objection consistent with the provisions of FOIA. A release determination will be made based on rationale given.

(e) If you have questions or need help in using the Acquisition Center Home Page, call our Electronic Contracting Help Desk at (586) 574-7059, or send an email message to: acqcenweb@tacom.army.mil

(f) If you have questions about the content of any specific item posted on our home page, please call the buyer or point of contact listed for the item. Additional help is available to small businesses from Government-funded Electronic Commerce Regional Centers (ECRCs) to implement EDI. Information on ECRC is available at <http://www.ecrc.ctc.com>

[End of Clause]

A-2 52.204-4232 (TACOM)	PUBLIC ACTIVITY INVOLVEMENT	DEC/2002
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Subcontract opportunities under this solicitation and any resulting contracts are open to competition between Department of Defense activities and private firms. In addition, Army Industrial Facilities are available to sell manufactured articles or to perform work at such Facilities on behalf of Offerors, in certain circumstances and as permitted by law. Rock Island Arsenal, Watervliet Arsenal, Anniston Army Depot, Sierra Army Depot, and Red River Army Depot have expressed interest in securing subcontracting opportunities under this RFP. For information related to the capabilities of these facilities, and Points of Contact, see www.gsie.army.mil

[End of Notice]

1. The purpose of this contract is for Soar Technology Inc of Ann Arbor, Michigan to develop an intelligent control framework that shall provide for adjustably autonomous robotic control of ground vehicles. This contract is awarded by the US Army Tank-automotive and Armaments Command on behalf of the US Army Tank-automotive Research Development and Engineering Center. This award is made based on a proposal received in response to solicitation W56HZV-04-R-0686.

*** END OF NARRATIVE A 001 ***

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
0001	<p>SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS</p> <p><u>RESEARCH AND DEVELOPMENT SERVICES</u></p> <p>NOUN: SOFTWARE DEVELOPMENT SECURITY CLASS: Unclassified</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>1</td> <td>30-SEP-2005</td> </tr> </table> <p style="text-align: right;">\$ 424,790.00</p>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	1	30-SEP-2005	1	LO		\$ 424,790.00
DLVR SCH		PERF COMPL												
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	1	30-SEP-2005												
000101	<p><u>RESEARCH AND DEVELOPMENT SERVICES</u></p> <p>NOUN: VETRONICS PRON: R342C284R3 PRON AMD: 01 ACRN: AA AMS CD: 622601T2611 (AMOUNT: \$ 424,790.00)</p>													
0002	<p><u>DATA ITEMS</u></p> <p>SECURITY CLASS: Unclassified</p>													
A001	<p><u>CONTRACTOR PROGRESS STATUS AND MGMT REPORT</u></p> <p>SECURITY CLASS: Unclassified</p> <p>The contractor shall deliver Progress Status and Management Reports in accordance with data item A001 of the Contract Data Requirements List, Exhibit A.</p> <p style="text-align: center;">(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>			\$ ** NSP **	\$ ** NSP **									

CONTINUATION SHEET

Reference No. of Document Being Continued
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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT																									
A002	<p><u>INTERIM/SIGNIFICANT ACTIVITY REPORT</u></p> <p>SECURITY CLASS: Unclassified</p> <p>The contractor shall deliver Interim/ Significant Activity Reports in accordance with data item A002 of the Contract Data Requirements List, Exhibit A.</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p>			\$ <u> ** NSP ** </u>	\$ <u> ** NSP ** </u>																									
A003	<p><u>ANNUAL/FINAL ACTIVITY REPORT</u></p> <p>SECURITY CLASS: Unclassified</p> <p>The contractor shall deliver an Annual/ Final Activity Report in accordance with data item A003 of the Contract Data Requirements List, Exhibit A. A DD250 is required.</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DOC</td> <td>SUPPL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>REL CD</td> <td>MILSTRIP</td> <td>ADDR</td> <td>SIG CD</td> <td>MARK FOR TP CD</td> </tr> <tr> <td>001</td> <td></td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>DEL REL CD</td> <td>QUANTITY</td> <td>DEL DATE</td> <td></td> <td></td> </tr> <tr> <td>001</td> <td>1</td> <td>SEE DD FORM 1423</td> <td></td> <td></td> </tr> </table> <p>FOB POINT: Destination</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00003) SEE NARRATIVE ON DD 1423</p>	DOC	SUPPL				REL CD	MILSTRIP	ADDR	SIG CD	MARK FOR TP CD	001				3	DEL REL CD	QUANTITY	DEL DATE			001	1	SEE DD FORM 1423			1	EA	\$ <u> ** NSP ** </u>	\$ <u> ** NSP ** </u>
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Reference No. of Document Being Continued
 PIIN/SIIN W56HZV-04-C-0774 MOD/AMD

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT																														
A004	<p><u>COMPUTER SOFTWARE PRODUCT</u></p> <p>SECURITY CLASS: Unclassified</p> <p>The contractor shall deliver Computer Software Products in accordance with data item A004 of the Contract Data Requirements List, Exhibit A. A DD250 is required.</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DOC</td> <td>SUPPL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><u>REL CD</u></td> <td><u>MILSTRIP</u></td> <td><u>ADDR</u></td> <td><u>SIG CD</u></td> <td><u>MARK FOR</u></td> <td><u>TP CD</u></td> </tr> <tr> <td>001</td> <td></td> <td></td> <td></td> <td></td> <td>3</td> </tr> <tr> <td><u>DEL REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DEL DATE</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>001</td> <td>1</td> <td>SEE DD FORM 1423</td> <td></td> <td></td> <td></td> </tr> </table> <p>FOB POINT: Destination</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00003) SEE NARRATIVE ON DD 1423</p>	DOC	SUPPL					<u>REL CD</u>	<u>MILSTRIP</u>	<u>ADDR</u>	<u>SIG CD</u>	<u>MARK FOR</u>	<u>TP CD</u>	001					3	<u>DEL REL CD</u>	<u>QUANTITY</u>	<u>DEL DATE</u>				001	1	SEE DD FORM 1423				1	EA	\$ ** NSP **	\$ ** NSP **
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A005	<p><u>ICF DOCUMENTATION</u></p> <p>SECURITY CLASS: Unclassified</p> <p>The contractor shall deliver ICF Documentation in accordance with data item A005 of the Contract Data Requirements List, Exhibit A. A DD250 is required.</p> <p>(End of narrative B001)</p> <p><u>Packaging and Marking</u></p>	1	EA	\$ ** NSP **	\$ ** NSP **																														

CONTINUATION SHEET**Reference No. of Document Being Continued**

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MOD/AMD

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.**B.1** ESTIMATED COST AND PAYMENT

B.1.1 The total negotiated estimated cost for performance of the work required under this contract is \$424,790 and this amount shall constitute the estimated cost for the purpose of the Contract Clause in Section I entitled "Limitation of Funds" (FAR 52.232-22).

B.1.2 The contractor will be paid for the fixed fee stated in Section B.3 for the performance of work under the contract and in accordance with the terms of the Contract Clause in Section I entitled "Fixed Fee" (FAR 52.216-8). The fixed fee together with the reimbursement of cost shall constitute full and complete consideration for the contractor's service in connection with the work required and performed under this contract.

B.1.3 Allowable cost shall be determined, and payment thereof shall be provided, in accordance with the Contract Clause in Section I entitled "Allowable Cost and Payment" (FAR 52.216-7). See also 'PAYMENT' in Section G.

B.1.4 The estimated cost and fixed fee for each year of the contract are as follows:

	ESTIMATED COST	FIXED FEE
B.1.4.1 Year 1 date of award through 2005 SEP 30	\$388,945	\$35,845
B.1.4.2 Year 2 (if exercised) 2005 OCT 1 - 2006 SEP 30	\$1,783,976	\$164,408
B.1.4.3 Year 3 (if exercised) 2006 OCT 1 - 2007 SEP 30	\$1,786,629	\$164,653

B.1.5 This contract contains an advance agreement regarding payment for rights in certain software. See section H.2 "Advance Agreement on Contractor-Developed Software."

B.2 PAYMENT

B.2.1 The contractor may submit public vouchers biweekly for payment under this contract. The fee will be payable at the time of reimbursement of cost at the same rate to such cost as the total fee of this contract bears to the total estimated cost thereof, subject to any withholding pursuant to provisions of this contract.

*** END OF NARRATIVE B 001 ***

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 BACKGROUND:

C.1.1

The Army's vision of the future for armored and mechanized military structure includes the use of mixed teams of human and robotic forces on a dynamic and rapidly changing battlefield. Successful implementation of this vision will require autonomous and semi-autonomous robotic forces and a command and control infrastructure that will allow human, robotic, and mixed teams to be controlled quickly and easily. For maximum effectiveness this infrastructure should allow human commanders to control the robot teams in a manner similar to how they command human teams, that is, in the language of the military, not the language of robotic control theory. Furthermore, the human interface for robotic command and control must simplify the controller's tasks and automate processes in such a way that the cognitive workload is reduced, situational awareness is enhanced, and situational control is preserved.

C.1.2

The Intelligent Control Framework (ICF) contract is intended to conduct applied research to explore intelligent software solutions that will facilitate adjustably autonomous robotic control. The applied research requirements identified in this document were established by the Government in order to develop and validate requirements, specifications, and an architecture in time to impact the Human Robot Interaction STO (contract award planned FY05) and provide subsequent usefulness in time for FCS software builds & FCS critical design reviews (2nd Quarter FY06).

C.1.3

The primary goals are concept exploration, determining future mission needs, developing the science that will enable adjustable autonomy in intelligent user interfaces, and creating a proof-of-concept prototype component(s) within an ICF.

C.1.4

The contractor shall leverage research and critical technologies developed from other government efforts and transition these technologies into the government provided resources to explore, develop, and test technologies within the intelligent control framework (ICF). The technology for leverage shall include Mixed-Initiative Interaction Reasoner (MIIR), Goal Operators Methods (GOMS) Language Evaluation and Analysis (GLEAN) human performance model, Cooperative Interface Agent Framework (CIAF), Automated Synthesis of Plan Recognition Networks (ASPRN) Bayesian recognition system, Cooperative Interface Agents for Networked Command, Control and Communications (CIANC3), and Digital Executive Officer (DxO).

C.1.5 General:

The contractor, as an independent contractor and not as an agent of the Government, shall transition critical technological components and development of research prototype(s) into a cohesive design and development of an overall intelligent control framework to facilitate adjustable autonomy for robotic control and mission execution. The overall objective of this effort is to explore how adjustably autonomous systems would be used in a military context. The contractor shall be responsible for overall program management synchronization, which includes, as a minimum, the leveraging technologies from other efforts, coordinating issues with the government, and transitioning of products into government provided resources. The contractor shall perform research and development across 1 base year and 2 option years as described below.

C.2 BASE YEAR 1 RESEARCH TASKS AND REQUIREMENTS:

The contractor shall research, define, and develop architecture of architectures for the ICF. Research will be performed in the following critical areas; SMI/CIAF Interface and scenario investigation, Plan Recognition and Prediction research, and ICF architecture. This research will leverage concurrent work being done as part of SBIR Plus funded efforts entitled: Auto Wingman for work under the SMI/CIAF Interface and scenario task, BINAH for work under the Human and Task Modeling research task, and CIANC3 for work under the Mixed-Initiative Interaction and adjustable Autonomy Architecture task. Results and outcomes of these tasks will be integrated into the mainline research performed under this SOW. The contractor shall be responsible for the overall research tasks as stated below.

C.2.1 ICF Research:

The contractor shall research, define, and develop architecture for plan recognition and prediction, and an initial architecture of architectures for the intelligent control framework (ICF). The main goals are to determine warfighter's current situation and develop an architecture by which disparate technologies can be applied to the problem. The refinements to architecture(s) shall include re-route interfaces (links between components), add/delete/modify components (functionality), and Application Process Interface (API) Mods (Data between components).

C.2.2 ICF Requirements:

The following features and capabilities shall be incorporated into the ICF to facilitate adjustable autonomous control of robots:

C.2.2.1 SMI/CIAF Interface and scenario investigation

C.2.2.1.1 Scenario Research:

The contractor shall develop a militarily significant scenario that illustrates future unit of action

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techniques, tactics, and procedures to support the development, demonstration, and validation of the ICF. The contractor shall define a high level scenario that includes plan recognition and predication that includes the necessary unit organizational structures and span of control for two virtual unmanned robotic vehicles.

C.2.2.1.2 SMI/CIAF Interface

The contractor shall perform further development on the SMI/CIAF interface leveraged from other government efforts to define and incorporate an Application Process Interface (API) for the plan recognition system.

C.2.2.2 Plan Recognition and Prediction Intelligent Interface

C.2.2.2.1 GUI Functionality Model

The contractor shall develop and incorporate into the ICF a graphical user interface (GUI) to generate actions to create Bayesian plan recognition models.

C.2.2.2.2 ASPRN GLEAN Interface

The contractor shall integrate the ASPRN Bayesian recognition system with the GLEAN human performance architecture to perform recognition and prediction of user tasks, ensure necessary data representations and transformations, timing, and controls and to define information and control interfaces for running ASPRN using GOMS models from GLEAN.

C.2.2.2.3 Recognition Models

The contractor shall create recognition models by mixing task models, contextual information and human data. The recognition models will be integrated into the plan recognition system and the ICF.

C.2.2.2.4 Plan Recognition Engineering Prototype

The contractor shall develop an engineering prototype of the Plan Recognition system to demonstrate a task execution and plan recognition scenario as part of the ICF. The engineering prototype will be demonstrated using a simulation environment (i.e. OneSAF OTB). The plan recognition prototype shall demonstrate the ability of the software to recognize a specific task the user is working on in the context of the overall scenario.

C.2.2.3 Integrated Intelligent Control Framework

The contractor shall design and document an initial architecture of architecture design for an Intelligent Control Framework. This includes the Plan Recognition and Prediction architecture from this effort, and Mixed Initiative Interaction Reasoner, SMI/CIAF Interface, Human and Task Modeling architectures from other government efforts.

C.2.3 Year 1 Travel:

C.2.3.1

The contractor shall visit TARDEC (estimated six trips of three persons each) to 1) coordinate and analyze the research in adjustable autonomy and mixed initiative interaction, 2) review research, analysis and design products, particularly those products related to the TARDEC Vetronics Technologies, and 3) develop requirements and review research, analysis and design products.

C.2.3.2

The contractor may visit Unit of Action Maneuver Battle Lab (UAMBL) at Ft. Knox and other sites as needed (estimated three trips of three persons each) to perform requirements gathering, knowledge acquisition, usability analysis and architecture research for the intelligent control framework architecture and system.

C.2.3.3

The contractor shall travel to TARDEC to perform the demonstration as required in section C.2.5.

C.2.4 Year 1 Meetings:

C.2.4.1 Start of work meeting:

The contractor shall host a Start of Work meeting within thirty (30) days after contract award for each phase of the contract at TARDEC. At the meeting, the contractor shall present their proposed plan for accomplishing the contract requirements.

C.2.4.2 In-Process review (IPR):

The contractor shall host a semi-annual IPR to take place approximately six (6) months after contract award. The contractor shall provide a summary of the program progress and status to include: research, overall system development, technical performance, cost and schedule. The contractor shall describe those accomplishments and problems that have occurred during the first six months of the year 1 project, including the current status of unresolved problems. The contractor shall document meeting minutes and action items during meetings and reviews, and

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shall be provide them to the government in contractor format within five (5) business days from the date of the meeting.

C.2.4.3 Annual review meeting:

An annual review meeting of this contract shall be held at the contractor's facility no later than two (2) weeks prior to the end of the base contract year. The review shall summarize project efforts, accomplishments and results. If schedule coordination precludes the annual review meeting from happening in the timeframe specified herein, the government agrees to grant a no cost extension to the period of performance of the contract of thirty (30) days after the date of the annual review meeting so that government feedback can be incorporated into the final report at the end of the base contract year.

C.2.5 Demonstration:

During the final month of the base year, the contractor shall install, compile, execute, and demonstrate the Plan Recognition and Prediction Engineering Prototype on government hardware at TARDEC.

C.2.6 Year 1 Deliverables:

C.2.6.1 Reports:

C.2.6.1.1 Monthly reports:

The contractor shall prepare and submit monthly Contractor's Progress, Status and Management Reports starting one month after contract award, however, no report shall be due along with the Final Report or within the last month of the contract whichever occurs sooner. These reports shall indicate the progress of work, the status of the program and of the assigned tasks, man-hours and dollars expended in the period, and shall inform the customer of existing or potential problem areas together with proposals for resolution. Reference Exhibit A, CDRL, data item A001.

C.2.6.1.2 Annual report:

The contractor shall submit a draft report in contractor format to include a summary of contract activities due at the annual review meeting. The contractor shall incorporate government feedback into the final report and deliver at the end of the contract year. The final report shall include: summary of the research and development activities, conclusions drawn from their efforts, performance of the prototype(s), and state recommendations for improvements and future development. Reference Exhibit A, CDRL, data item A003.

C.2.6.1.3 Significant Activities Status:

The contractor by every other COB Friday shall email a short bullet list of bi-weekly significant items accomplished. Reference Exhibit A, CDRL, data item A002.

C.2.6.2 Software:

The contractor shall deliver to the government the Plan Recognition and Prediction Prototype specified in section C.2.2.4. The contractor shall deliver all software (including source code, executables, and libraries) for complete operation of the Plan Recognition and Prediction Engineering Prototype. The contractor shall also deliver changes made to virtual environments such as OneSAF OTB. The software shall be delivered at the annual review meeting. Reference Exhibit A, CDRL, data item A004.

C.2.6.3 ICF Documentation

Documentation will be delivered concurrently with the software at the Annual Review Meeting. The contractor shall deliver contractor developed documentation including Plan Recognition and Prediction Engineering requirements definitions, specification definitions, and preliminary ICF architecture design, Interface control documents to/from all components in the ICF architecture, model designs including agent model descriptions, simulation environment(s) modifications, task and usability analysis report, software development documentation, and technical demonstration summary, configuration, and operation documentation. Reference Exhibit A, CDRL, data item A005.

C.3 OPTION: YEAR 2 RESEARCH TASKS AND REQUIREMENTS:

If the Government exercises the option for Year 2, as provided for in section H.1, the contractor shall perform the work effort described in the following section.

This research will leverage the Plan Recognition and Prediction and the SMI/CIAF from year 1 of this effort, and Mixed Initiative Interaction Reasoner, and Human and Task Modeling architectures from Auto Wingman, BINAH, and CIANC3. Year 2 tasks will research enhancements to the architecture developed in year 1.

C.3.1 ICF Research:

The Year 2 Option period will consist of applied research in simulation, and developing an integrated engineering prototype of the ICF framework including architecture. The main goals of the research are on defining and predicting when the warfighter needs assistance. The refinements to architecture(s) shall include re-route interfaces (links between components), add/delete/modify components (functionality), and API Mods (Data between components).

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

C.3.2 ICF Requirements: The ICF shall incorporate the following features and capabilities:

C.3.2.1 SMI/CIAF Interface and scenario investigation

The contractor shall expand on the year 1 scenario to increase the span of control to four units, further develop the high level scenario and develop vignettes to conduct experiments and tests to collect data for the purpose of evaluating the reduction of operator workload.

C.3.2.2 Human and Task Modeling

The contractor shall conduct usability analysis, discourse modeling, task analysis and human error tasks with the GLEAN models to facilitate the system to understand what tasks the user is attending or should be attending, and where and how the system should assist. Each type of model will typically consist of a static component that represents doctrinal information, dynamic model instances that represent the current situation, and executable components that can be simulated for value judgments on future courses of action. Newly sensed information is used to update existing instances of dynamic models and create new dynamic models as necessary.

C.3.2.3 Plan Recognition and Prediction

The contractor shall further define and develop the plan recognition and prediction architecture to support multiple user tasks and models. The contractor will define and develop additional user tasks and models to increase the span of control to four units. The contractor shall modify the graphical user interface (GUI) to allow for creation of additional Bayesian plan recognition models and to collect data from user tasks.

C.3.2.4 Mixed-Initiative Interaction Reasoner

The contractor shall perform further development on the mixed interaction and intelligent reasoner system leveraged from other government efforts including the definition of additional agent interaction capabilities to perform mixed interaction reasoning including event types and event rate.

C.3.2.5 Integrated Intelligent Control Framework

C.3.2.5.1 ICF Architecture

The contractor shall perform iterative re-design and developments on the integrated architecture for the Intelligent Control Framework to ensure a cohesive design between components. The contractor shall perform task analysis with the Intelligent Control Framework to evaluate adjustable autonomy of robot control.

C.3.2.5.2 ICF Engineering Prototype

The contractor shall develop an integrated engineering prototype of the Intelligent Control Framework system to demonstrate task execution scenarios and perform usability studies. The engineering prototype will be demonstrated using a simulation environment (i.e. OneSAF OTB) as a proof of principle at the customer's SIL laboratory.

C.3.3 Technology Transition Support

The Contractor shall provide software system integration technical support to transition contractor developed products to TARDEC identified resources and contractor(s). In the event the resources are not available, the contractor shall conduct usability analysis on the stand-alone ICF prototype. The technical support shall consist of one lead software engineer, providing 1 month of remote engineering support (does not require travel), and 1 week of on-site support at General Dynamics Robotic Systems in Westminster, MD.

C.3.4 Year 2 Travel:

C.3.4.1

The contractor may visit TARDEC (estimated six trips of three persons each) to 1) coordinate and analyze the research in adjustable autonomy and mixed initiative interaction, 2) review research, analysis and design products, particularly those products related to the TARDEC Vetronics Technologies, and 3) develop requirements and review research, analysis and design products.

C.3.4.2

The contractor may visit Unit of Action Maneuver Battle Lab (UAMBL) at Ft. Knox and other sites as needed (estimated three trips of three persons each) to perform requirements gathering, knowledge acquisition, usability analysis and architecture research for the intelligent control framework architecture and system.

C.3.4.3

The contractor shall travel to TARDEC to perform the demonstration as required in section C.3.6.

C.3.5 Year 2 Meetings:

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.**C.3.5.1 Start of Work Meeting:**

The contractor shall host a Start of Work at TARDEC within thirty (30) days after award of the Year 2 Option. At the meeting, the contractor shall present their proposed plan for accomplishing the contract requirements.

C.3.5.2 In-Process Review (IPR):

The contractor shall host a semi-annual IPR to take place approximately six (6) months after award of the Year 2 Option. The contractor shall provide a summary of the program progress and status to include: research, overall system development, technical performance, cost and schedule. The contractor shall describe those accomplishments and problems that have occurred during the first six months of the Year 2 Option, including the current status of unresolved problems. The contractor shall document meeting minutes and action items during meetings and reviews, and shall be provide them to the government in contractor format within five (5) business days from the date of the meeting.

C.3.5.3 Annual Review Meeting:

An annual review meeting of this contract shall be held at the contractor's facility no later than two (2) weeks prior to the end of the Year 2 Option period of performance. The review shall summarize project efforts, accomplishments and results. If schedule coordination precludes the annual review meeting from happening in the timeframe specified herein, the government agrees to grant a no cost extension to the period of performance of the contract of thirty (30) days after the date of the annual review meeting so that government feedback can be incorporated into the final report at the end of the Year 2 Option period of performance.

C.3.6 Demonstration:

During the final month of the Year 2 Option period, the contractor shall install, compile, execute, and demonstrate the preliminary ICF prototype on government provided hardware at the government site.

C.3.7 Year 2 Deliverables:**C.3.7.1 Reports:****C.3.7.1.1 Monthly Reports:**

The contractor shall prepare and submit monthly Contractor's Progress, Status and Management Reports starting one month after award of the Year 2 Option. However, no report shall be due along with the Final Report or within the last month of the contract period of performance. These reports shall indicate the progress of work, the status of the program and of the assigned tasks, man-hours and dollars expended in the period, and shall inform the customer of existing or potential problem areas together with proposals for resolution. Reference Exhibit A, CDRL, data item A001.

C.3.7.1.2 Annual Report:

The contractor shall submit a draft report in contractor format to include a summary of contract activities due at the Year 2 Option annual review meeting. The contractor shall incorporate government feedback into the final report and deliver at the end of the contract year. The final report shall include: summary of the research and development activities, conclusions drawn from their efforts, performance of the prototype(s), and state recommendations for improvements and future development. Reference Exhibit A, CDRL, data item A003.

C.3.7.1.3 Significant Activities Status:

The contractor by every other COB Friday shall email a short bullet list of bi-weekly significant items accomplished. Reference Exhibit A, CDRL, data item A002.

C.3.7.2 Software:

The contractor shall deliver to the government the ICF Engineering Prototype specified in section C.3.3.2. The contractor shall deliver all software (including operating system, source code, executables, and libraries) for complete operation of the preliminary ICF Engineering Prototype. The contractor shall also deliver changes made to virtual environments such as OneSAF OTB. The software shall be delivered at the Year 2 Option annual review meeting. Reference Exhibit A, CDRL, data item A004.

C.3.7.3 ICF Documentation:

Documentation will be delivered concurrently with the software at the Annual Review Meeting. The contractor shall deliver contractor developed documentation including ICF requirements definitions, specification and definitions, refined architecture(s) design, Preliminary integrated ICF Engineering Prototype include the individual component prototypes, Interface control documents to/from all components in the ICF architecture, user and task models, simulation environment(s) modifications, refined scenario(s), task and usability analysis report, software development documentation, and technical demonstration summary, configuration, and operation documentation. The contractor shall submit documents in contractor format at the Year 2 Option annual review meeting. Reference Exhibit A, CDRL, data item A005.

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.**C.4 YEAR 3 RESEARCH TASKS AND REQUIREMENTS:**

If the Government exercises the option for Year 3, as provided for in section H.1, the contractor shall perform the work effort described in the following section.

This research will leverage the Plan Recognition and Prediction, SMI/CIAF, Mixed Initiative Interaction Reasoner, and Human and Task Modeling architectures from this effort. Year 3 tasks will research enhancements to the architecture developed in the Base Year and the Year 2 Option.

C.4.1 ICF Research:

The Year 3 Option period will consist of applied research and testing in simulation, developing a finalized integrated engineering prototype of the ICF framework and a finalized integrated ICF architecture. The main goals of the research are on defining how the intelligent system should adjust the autonomy to assist the warfighter. The refinements to architecture(s) shall include re-route interfaces (links between components), add/delete/modify components (functionality), and API Mods (Data between components).

C.4.2 The contractor shall be responsible for the overall research tasks as stated below.

C.4.2.1 SMI/CIAF Interface and scenario investigation

The contractor shall modify scenarios developed in year 2 to create working scenarios that will enable intelligent agents and robotic entities to be controlled through the ICF and architecture. The contractor shall add additional capability to the SMI/CIAF interface to support agent and robotic control.

C.4.2.2 Human and Task Modeling

The contractor shall expand and develop additional models to address changes identified in the usability analysis. These models include, but are not limited to user models, task models, recognition models, GLEAN and GOMS models, plan recognition models and agent models.

C.4.2.3 Plan Recognition and Prediction

The contractor shall refine existing tasks, models and plan recognition and prediction architecture using results from usability analysis of the intelligent control framework.

C.4.2.4 Graphical User Interface

The contractor shall modify the graphical user interface (GUI) to allow for creation of additional Bayesian plan recognition models and to collect data from user performed tasks.

C.4.2.5 Mixed-Initiative Interaction Reasoner

The contractor shall further define architectural changes required for application of the mixed-initiative interaction reasoner to command and control of robotic vehicles and to finalize the architecture to include requirements to define how the system will help the operator, given current context and predicted need.

C.4.2.6 Integrated Intelligent Control Framework**C.4.2.6.1 ICF Architecture**

The contractor shall finalize the integrated architecture design for the Intelligent Control Framework to ensure a cohesive design between components and their functionalities based on usability analysis.

C.4.2.6.2 ICF Engineering Prototype

The contractor shall refine the integrated engineering prototype (developed in the Year 2 Option) of the Intelligent Control Framework system to demonstrate adjustable autonomous robotic control. The engineering prototype will be used to collect data for usability studies and testing of various scenarios with live information needs in an instrumented simulation environment (i.e. OneSAF OTB).

C.4.3 Technology Transition Support

The Contractor shall provide the necessary technical support to transition contractor developed products to TARDEC identified resources and contractor(s). In the event the resources are not available, the contractor shall conduct usability analysis on the stand-alone ICF prototype. For the purpose of cost estimates, the contractor may provide 1 month of engineering support (does not require travel) and 1 week of on-site support at General Dynamics Robotic Systems based in Westminster, MD.

C.4.4 Year 3 Travel:**C.4.4.1**

The contractor may visit TARDEC (estimated six trips of three persons each) to 1) coordinate and analyze the research in adjustable autonomy and mixed initiative interaction, 2) review research, analysis and design products, particularly those products related to the TARDEC Vetronics Technologies, and 3) develop requirements and review research, analysis and design products.

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.**C.4.4.2**

The contractor may visit Unit of Action Maneuver Battle Lab (UAMBL) at Ft. Knox and other sites as needed (estimated three trips of three persons each) to perform requirements gathering, knowledge acquisition, usability analysis and architecture research for the intelligent control framework architecture and system.

C.4.4.3

The contractor shall travel to TARDEC to perform the demonstration as required in section C.4.6.

C.4.5 **Year 3 Meetings:****C.4.5.1** **Start of Work Meeting:**

The contractor shall host a Start of Work meeting within thirty (30) days after the exercise of the Year 3 Option, at the government facility. At the meeting, the contractor shall present their proposed plan for accomplishing the Year 3 Option requirements.

C.4.5.2 **In-Process Review (IPR):**

The contractor shall host a semi-annual IPR to take place approximately six (6) months after award of the Year 3 Option. The contractor shall provide a summary of the program progress and status to include: research, overall system development, technical performance, cost and schedule. The contractor shall describe those accomplishments and problems that have occurred during the first six months of the Year 3 Option, including the current status of unresolved problems. The contractor shall document meeting minutes and action items during meetings and reviews, and shall be provided to the government in contractor format within five (5) business days from the date of the meeting.

C.4.5.3 **Annual Review Meeting:**

An annual review meeting of this contract shall be held at the contractor's facility no later than two (2) weeks prior to the end of the Year 3 Option period of performance. The review shall summarize project efforts, accomplishments and results. If schedule coordination precludes the annual review meeting from happening in the timeframe specified herein, the government agrees to grant a no cost extension to the period of performance of the contract of thirty (30) days after the date of the annual review meeting so that government feedback can be incorporated into the final report at the end of each contract year.

C.4.6 **Demonstration:**

During the final month of the Year 3 Option period, the contractor shall install, compile, execute, and demonstrate the final ICF prototype on government provided hardware at the government site.

C.4.7 **Year 3 Deliverables:****C.4.7.1** **Reports:****C.4.7.1.1** **Monthly Reports.**

The contractor shall prepare and submit monthly Contractor's Progress, Status and Management Reports starting one month after award of the Year 3 option. However, no monthly report shall be due along with the Final Report or within the last month of the contract. These reports shall indicate the progress of work, the status of the program and of the assigned tasks, man-hours and dollars expended in the period, and shall inform the customer of existing or potential problem areas together with proposals for resolution. Reference Exhibit A, CDRL, data item A001.

C.4.7.1.2 **Annual Report:**

The contractor shall submit a draft report in contractor format to include a summary of contract activities due at the Year 3 Option annual review meeting. The contractor shall incorporate government feedback into the final report and deliver at the end of the contract year. The final report shall include a summary of contract activity. The final report shall include: summary of the research and development activities, conclusions drawn from their efforts, performance of the prototype(s), and state recommendations for improvements and future development. Reference Exhibit A, CDRL, data item A003.

C.4.7.1.3 **Significant Activities Status:**

The contractor by every other COB Friday shall email a short bullet list of bi-weekly significant items accomplished. Reference Exhibit A, CDRL, data item A002.

C.4.7.2 **Software:**

The contractor shall deliver to the government the ICF Engineering Prototype specified in section C.4.2.6.2. The contractor shall deliver all software (including operating system, source code, executables, and libraries) for complete operation of the final ICF Engineering Prototype. The contractor shall also deliver changes made to virtual environments such as OneSAF OTB. Reference Exhibit A, CDRL, data item A004. The software shall be delivered at the

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Year 3 Option Annual review meeting.

C.4.7.3 ICF Documentation:

Documentation will be delivered concurrently with the software at the Year 3 Option annual review meeting. The contractor shall deliver contractor developed documentation including ICF requirements definitions, specification and definitions, ICF architecture design, Interface control documents to/from all components in the ICF architecture, user and task models, simulation environment(s) modifications, refined scenario(s), usability and adjustable autonomous analysis report, software development documentation, and technical demonstration summary, configuration, and operation documentation. Reference Exhibit A, CDRL, data item A005.

C.5 PERIOD OF PERFORMANCE

The program includes a base period of 12 months after contract award, and two option periods of 12 months each (called "Year 2 option" and "Year 3 option").

C.6 SECURITY

This contract shall remain unclassified. No classified data to be stored or handled.

*** END OF NARRATIVE C 001 ***

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SECTION E - INSPECTION AND ACCEPTANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1	52.246-9	INSPECTION OF RESEARCH AND DEVELOPMENT (SHORT FORM)	APR/1984

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SECTION F - DELIVERIES OR PERFORMANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
F-1	52.242-15	STOP WORK ORDER--(ALTERNATE I dated APR 1984)	AUG/1989
F-2	52.247-34	F.O.B. DESTINATION	NOV/1991

F.1. BASE YEAR

F.1.1 Period of performance:

The base year specified in section C.2 shall have a period of performance commencing from the date of contract award through 2005 SEP 30.

F.1.2 Deliverables:

F.1.2.1 The contractor shall deliver monthly Contractor Progress Status and Management Reports, as specified in section C.2.6.1.1 and Data Item A001 of Exhibit A, Contract Data Requirements List.

F.1.2.2 The contractor shall deliver biweekly Interim/Significant Activities Reports, as specified in section C.2.6.1.3 and Data Item A002 of Exhibit A, Contract Data Requirements List.

F.1.2.3 The contractor shall deliver an Annual/Final Activity Report, as specified in section C.2.6.1.2 and Data Item A003 of Exhibit A, Contract Data Requirements List.

F.1.2.4 The contractor shall deliver Intelligent Control Framework Software, as specified in section C.2.6.2 and Data Item A004 of Exhibit A, Contract Data Requirements List.

F.1.2.5 The contractor shall deliver Intelligent Control Framework Software Documentation, as specified in section C.2.6.3 and Data Item A005 of Exhibit A, Contract Data Requirements List.

F.2 YEAR 2 OPTION

F.2.1 Period of performance:

The Year 2 Option specified in section C.3 shall have a period of performance from 13 - 24 months after contract award.

F.2.2 Deliverables:

F.2.2.1 The contractor shall deliver monthly Contractor Progress Status and Management Reports, as specified in section C.3.7.1.1 and Data Item A001 of Exhibit A, Contract Data Requirements List.

F.2.2.2 The contractor shall deliver biweekly Interim/Significant Activities Reports, as specified in section C.3.7.1.3 and Data Item A002 of Exhibit A, Contract Data Requirements List.

F.2.2.3 The contractor shall deliver an Annual/Final Activity Report, as specified in section C.3.7.1.2 and Data Item A003 of Exhibit A, Contract Data Requirements List.

F.2.2.4 The contractor shall deliver Intelligent Control Framework Software, as specified in section C.3.7.2 and Data Item A004 of Exhibit A, Contract Data Requirements List.

F.2.2.5 The contractor shall deliver Intelligent Control Framework Software Documentation, as specified in section C.3.7.3 and Data Item A005 of Exhibit A, Contract Data Requirements List.

F.3 YEAR 3 OPTION

F.3.1 Period of performance:

The Year 3 Option specified in section C.4 shall have a period of performance from 25 - 36 months after contract award.

F.3.2 Deliverables:

F.3.2.1 The contractor shall deliver monthly Contractor Progress Status and Management Reports, as specified in

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section C.4.7.1.1 and Data Item A001 of Exhibit A, Contract Data Requirements List.

F.3.2.2 The contractor shall deliver biweekly Interim/Significant Activities Reports, as specified in section C.4.7.1.3 and Data Item A002 of Exhibit A, Contract Data Requirements List.

F.3.2.3 The contractor shall deliver an Annual/Final Activity Report, as specified in section C.4.7.1.2 and Data Item A003 of Exhibit A, Contract Data Requirements List.

F.3.2.4 The contractor shall deliver Intelligent Control Framework Software, as specified in section C.4.7.2 and Data Item A004 of Exhibit A, Contract Data Requirements List.

F.3.2.5 The contractor shall deliver Intelligent Control Framework Software Documentation, as specified in section C.4.7.3 and Data Item A005 of Exhibit A, Contract Data Requirements List.

*** END OF NARRATIVE F 001 ***

Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

SECTION G - CONTRACT ADMINISTRATION DATA

PRON/ LINE AMS CD/ OBLG	JOB ORDER ACCOUNTING OBLIGATED
<u>ITEM</u> <u>MIPR</u> <u>ACRN</u> <u>STAT</u> <u>ACCOUNTING CLASSIFICATION</u>	<u>NUMBER</u> <u>STATION</u> <u>AMOUNT</u>
000101 R342C284R3 AA 2 21 42040000046N6N7EP622601255Y S20113 622601T2611	42C284 W56HZV \$ 424,790.00
	TOTAL \$ 424,790.00

SERVICE <u>NAME</u>	<u>TOTAL BY ACRN</u> <u>ACCOUNTING CLASSIFICATION</u>	<u>ACCOUNTING</u> <u>STATION</u>	<u>OBLIGATED</u> <u>AMOUNT</u>
Army	AA 21 42040000046N6N7EP622601255Y S20113	W56HZV	\$ 424,790.00
		TOTAL	\$ 424,790.00

<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
G-1 252.232-7003	ELECTRONIC SUBMISSION OF PAYMENT REQUESTS	JAN/2004
G-2	*** THIS REFERENCE (GS6651) IS NO LONGER VALID ***	

(a) Communications on technical matters pertaining to the contract shall be direct between the contractor and the Technical Representative. Communications for the Technical Representative shall be addressed to:

Name: Sanjiv Dungrani
e-mail: sanjiv.dungrani@us.army.mil

(b) The Administrative Contracting Officer's (ACO) name and email address are also provided if known at this time:

ACO: Carrie Zunk
e-mail: carrie.zunk@dcma.mil

(c) Please see the appointment letters prepared at time of contract award for functions the Technical Representative and ACO will perform on this contract.

[End of Clause]

G-3	252.201-7000	CONTRACTING OFFICER'S REPRESENTATIVE	DEC/1991
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(a) Definition. Contracting Officer's Representative means an individual designated in accordance with subsection 201.602-2 of the Defense Federal Acquisition Regulation Supplement and authorized in writing by the contracting officer to perform specific technical or administrative functions.

(b) If the Contracting Officer designates a contracting officer's representative (COR), the Contractor will receive a copy of the written designation. It will specify the extent of the COR's authority to act on behalf of the contracting officer. The COR is not authorized to make any commitments or changes that will affect price, quality, quantity, delivery, or any other term or condition of the contract.

[End of Clause]

G-4	52.227-4004 (TACOM)	RELEASE OF INFORMATION	OCT/2003
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The contractor shall ensure that he complies with the requirements of Chapter 5, page 22, paragraph 5-48, of AR 360-1, The Army Public Affairs Program, dated 15 Oct 2000, prior to contemplated release of any procurement information. Approval of the Contracting Officer is required prior to release of any such information. AR 360-1 may be found at http://www.usapa.army.mil/pdffiles/r360_1.pdf

[End of clause]

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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

G-5

52.232-4005
(TACOM)

INVOICE INFORMATION REQUIREMENT

JAN/1988

On each payment request submitted, the Contractor shall identify each affected Contract Line Item Number (CLIN), sub-CLIN, and/or work directive, together with the related dollar amounts. This requirement does not diminish or restrict any other requirement of this contract.

CONTINUATION SHEET**Reference No. of Document Being Continued**

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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
H-1	252.204-7000	DISCLOSURE OF INFORMATION	DEC/1991
H-2	252.204-7002	PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED	DEC/1991
H-3	252.205-7000	PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS	DEC/1991
H-4	252.225-7001	BUY AMERICAN ACT AND BALANCE OF PAYMENTS PROGRAM	APR/2003
H-5	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	APR/2003
H-6	252.225-7004	REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES	APR/2003
H-7	252.225-7013	DUTY-FREE ENTRY	JAN/2004
H-8	252.226-7001	UTILIZATION OF INDIAN ORGANIZATIONS, INDIAN-OWNED ECONOMIC ENTERPRISES, AND NATIVE HAWAIIAN SMALL BUSINESS CONCERNS	OCT/2003
H-9	252.227-7036	DECLARATION OF TECHNICAL DATA CONFORMITY	JAN/1997
H-10	252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA	SEP/1999
H-11	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
H-12	252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT	SEP/1999
H-13	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	MAR/2003
H-14	252.246-7001	WARRANTY OF DATA	DEC/1991
H-15	252.227-7039	PATENTS -- REPORTING OF SUBJECT INVENTIONS	APR/1990

The Contractor shall furnish the Contracting Officer the following:

(a) Interim reports every twelve (12) months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing subject inventions during that period and stating that all subject inventions have been disclosed or that there are no such inventions.

(b) A final report, within three (3) months after completion of the contracted work, listing all subject inventions or stating that there were no such inventions.

(c) Upon request, the filing date, serial number and title, a copy of the patent application and patent number, and issue data for any subject invention for which the Contractor has retained title.

(d) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(End of clause)

H-16	52.204-4005	REQUIRED USE OF ELECTRONIC CONTRACTING	JUN/2004
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H-17	52.216-4008 (TACOM)	STATUS OF FUNDS ON COST REIMBURSEMENT CONTRACTS/CLINS	JUN/1989
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(a) The Contractor shall review the funding as it relates to work performed on the cost-reimbursement Contract Line Item Numbers (CLINs) under this contract and shall provide to the Procuring Contracting Officer (PCO) a written determination of what, if any, funds are excess to requirements (leaving a reasonable amount for final overhead rate negotiations and other reasonably predicted requirements) and are available for deobligation. This review shall be coordinated with the Administrative Contracting Officer (ACO), and the written determination shall be accomplished within 120 days of completion of performance under the CLIN. The report shall be prepared in terms of dollars available per Purchase Request Order Number (PRON), unless requested otherwise by the PCO.

(b) This report may be requested in writing by the PCO on additional occasions during the course of performance of work on cost-reimbursable CLINS contained in this contract. On such occasions, the written report shall be provided to the PCO within 14 days of Contractor receipt of the written request.

(End of clause)

H-18	52.246-4026 (TACOM)	LOCAL ADDRESSES FOR DD FORM 250	JAN/2002
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(a) The contractor must provide a copy of each Material Inspection and Receiving Report (DD 250) pertaining to this contract, to the addresses given below, using either of the following methods:

(1) Our first preference is for you to use electronic mail (e-mail), using the following e-mail address: DD250@tacom.army.mil

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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

(2) Our second preference is for you to use data facsimile (datafax) transmission, using this fax number: (586) 574-5527 and use "DD250 mailbox" in the "to:" block of your fax cover or header sheet.

In either method, do not mix DD250s from more than one contract in a single transmission. That is, you may submit multiple DD250s in a single transmission, but they must all be against the same contract.

(b) These copies meet the requirements for the Purchasing Office copy and the Army Inventory Control Manager copy listed in tables 1 and 2 of DFARS Appendix F.

(c) The DD250 form may be found, in three different formats, on the World Wide Web at <http://webl.whs.osd.mil/icdhome/DD-0999.htm>

[End of Clause]

SPECIAL PROVISIONS

H.1 OPTION FOR ADDITIONAL YEARS OF EFFORT

H.1.1 The Government shall have the unilateral right to call forth up to two additional years of effort, as follows:

H.1.1.1 The Government may call forth the work effort described in section C.3 "Year 2 Research Tasks and Requirements" any time during the period from contract award through 30 SEP 2005. The cost and fee shall be as set forth in section B.

H.1.1.2 The Government may call forth the work effort described in section C.4 "Year 3 Research Tasks and Requirements" any time during the period from 1 OCT 2005 through 30 SEP 2006. The cost and fee shall be as set forth in section B. The Government may not exercise the option for Year 3 unless the option for Year 2 has also been exercised.

H.1.1.3 The Government may exercise the options by adding to any existing CLIN, or by establishing a new CLIN.

H.2 Advance Agreement on Contractor-Developed Software

H.2.1 The contractor has proposed using the following software tools in the development of the computer software product (data item A004) and related documentation (data item A005), or as components to be integrated into the software and documentation to be delivered to the government:

GLEAN
Generic SOAR Kernal Interface (gSKI)
Visualization Toolkit for Agents (VISTA)
Situational Awareness Panel (SAP)
Agent Test Environment (ATE)
Heuristic Formalism
Cooperative Interface Agent Framework (CIAF)
Onto2Soar Ontology to Soar Interface
SoarTech Goal System (STGS)

H.2.2 The Government understands that the software listed in H.2.1 was developed at contractor expense, and therefore agrees to pay a one time license fee of \$25,000 for a license to the government to use, in any way protected by copyright, this software, and products containing this software, including products to be delivered to the government under this contract. The contractor agrees that the incorporation of this software into Data Items A004 and A005 shall not be used as a basis for delivering the Data Items A004 and A005 with less than government purpose rights.

H.2.3 "Government purpose rights" shall be as defined in the clause "Rights in noncommercial computer software and noncommercial computer software documentation (DFARS 252.227-7014), except that the parties agree that the government purpose rights shall remain in effect for a period of ten years.

H.2.4 The contractor may claim the \$25,000 upon commencement of work on this contract. This charge shall be made only once.

*** END OF NARRATIVE H 001 ***

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Name of Offeror or Contractor: SOAR TECHNOLOGY INC.

SECTION I - CONTRACT CLAUSES

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 address: <http://farsite.hill.af.mil/>

[End of Clause]

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1	52.202-1	DEFINITIONS	JUL/2004
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL/1995
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	JUL/1995
I-6	52.203-8	CANCELLATION, RESCISSION AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	JUN/2003
I-9	52.204-4	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER	AUG/2000
I-10	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	JUL/1995
I-11	52.211-5	MATERIAL REQUIREMENTS	AUG/2000
I-12	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	SEP/1990
I-13	52.215-2	AUDIT AND RECORDS - NEGOTIATIONS	JUN/1999
I-14	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-15	52.215-10	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA	OCT/1997
I-16	52.215-12	SUBCONTRACTOR COST OR PRICING DATA	OCT/1997
I-17	52.215-14	INTEGRITY OF UNIT PRICES (ALTERNATE I, (OCT 1997))	OCT/1997
I-18	52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS	JAN/2004
I-19	52.215-17	WAIVER OF FACILITIES CAPITAL COST OF MONEY	OCT/1997
I-20	52.215-18	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS	OCT/1997
I-21	52.215-19	NOTIFICATION OF OWNERSHIP CHANGES	OCT/1997
I-22	52.216-7	ALLOWABLE COST AND PAYMENT	DEC/2002
I-23	52.216-8	FIXED FEE	MAR/1997
I-24	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	MAY/2004
I-25	52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES	FEB/1997
I-26	52.222-19	CHILD LABOR--COOPERATION WITH AUTHORITIES AND REMEDIES	JUN/2004
I-27	52.222-20	WALSH-HEALEY PUBLIC CONTRACTS ACT	DEC/1996
I-28	52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB/1999
I-29	52.222-26	EQUAL OPPORTUNITY	APR/2002
I-30	52.222-35	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	DEC/2001
I-31	52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	JUN/1998
I-32	52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	DEC/2001
I-33	52.223-6	DRUG FREE WORKPLACE	MAY/2001
I-34	52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JAN/2004
I-35	52.227-1	AUTHORIZATION AND CONSENT (ALTERNATE I dated April 1984)	JUL/1995
I-36	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	AUG/1996
I-37	52.227-11	PATENT RIGHTS--RETENTION BY THE CONTRACTOR (SHORT FORM)	JUN/1997
I-38	52.228-7	INSURANCE--LIABILITY TO THIRD PERSONS	MAR/1996
I-39	52.229-4	FEDERAL, STATE, AND LOCAL TAXES (NONCOMPETITIVE CONTRACT)	APR/2003
I-40	52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR/1984
I-41	52.232-17	INTEREST	JUN/1996
I-42	52.232-20	LIMITATION OF COST	APR/1984
I-43	52.232-23	ASSIGNMENT OF CLAIMS	JAN/1986
I-44	52.232-25	PROMPT PAYMENT	OCT/2003
I-45	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION	OCT/2003
I-46	52.233-1	DISPUTES	JUL/2002
I-47	52.233-3	PROTEST AFTER AWARD -- (ALTERNATE I, dated JUN 1985)	AUG/1996
I-48	52.242-1	NOTICE OF INTENT TO DISALLOW COSTS	APR/1984
I-49	52.242-3	PENALTIES FOR UNALLOWABLE COSTS	MAY/2001
I-50	52.242-4	CERTIFICATION OF INDIRECT COSTS	JAN/1997

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	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-51	52.242-13	BANKRUPTCY	JUL/1995
I-52	52.243-2	CHANGES--COST-REIMBURSEMENT (ALTERNATE V, dated April 1984))	AUG/1987
I-53	52.243-7	NOTIFICATION OF CHANGES	APR/1984
I-54	52.244-2	SUBCONTRACTS (ALT I--AUG 1998)	AUG/1998
I-55	52.244-5	COMPETITION IN SUBCONTRACTING	DEC/1996
I-56	52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (Deviation, per DAR Tracking Number 99-00008, 13 July 99)	MAY/2004
I-57	52.246-23	LIMITATION OF LIABILITY	FEB/1997
I-58	52.247-1	COMMERCIAL BILL OF LADING NOTATIONS the notation set forth in paragraph (a) of the clause applies in this contract. The agency name in line one of the notation shall read:US ARMY TANK-AUTOMOTIVE & ARMAMENTS COMMAND	APR/1984
I-59	52.247-67	SUBMISSION OF COMMERCIAL TRANSPORTATION BILLS TO THE GENERAL SERVICES ADMINISTRATION FOR AUDIT	JUN/1997
I-60	52.249-6	TERMINATION (COST-REIMBURSEMENT)	MAY/2004
I-61	52.249-14	EXCUSABLE DELAYS	APR/1984
I-62	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-63	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE CONTRACT-RELATED FELONIES	MAR/1999
I-64	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992
I-65	252.209-7000	ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY	NOV/1995
I-66	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98	MAR/1998
I-67	252.215-7000	PRICING ADJUSTMENTS	DEC/1991
I-68	252.215-7002	COST ESTIMATING SYSTEM REQUIREMENTS	OCT/1998
I-69	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	JUN/2004
I-70	252.225-7014	PREFERENCE FOR DOMESTIC SPECIALTY METALS (ALT 1)	APR/2003
I-71	252.225-7031	SECONDARY ARAB BOYCOTT OF ISRAEL	APR/2003
I-72	252.227-7013	RIGHTS IN TECHNICAL DATA --NONCOMMERCIAL ITEMS	NOV/1995
I-73	252.227-7014	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION	JUN/1995
I-74	252.227-7016	RIGHTS IN BID OR PROPOSAL INFORMATION	JUN/1995
I-75	252.227-7017	IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS	JUN/1995
I-76	252.227-7019	VALIDATION OF ASSERTED RESTRICTIONS--COMPUTER SOFTWARE	JUN/1995
I-77	252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT	MAR/2000
I-78	252.227-7034	PATENTS--SUBCONTRACTS	APR/1984
I-79	252.227-7036	DECLARATION OF TECHNICAL DATA CONFORMITY	JAN/1997
I-80	252.227-7037	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA	SEP/1999
I-81	252.243-7002	REQUESTS FOR EQUITABLE ADJUSTMENT	MAR/1998
I-82	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DoD CONTRACTS)	MAR/2000
I-83	52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS ````(ALTERNATE III (OCT 1997))	OCT/1997

(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts of subcontracts for commercial items.

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(A) If--

- (1) the original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition, or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item, and
- (2) the modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

- (1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price or recent sales in quantities similar to the proposed quantities.
- (2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.
- (3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.
- (4) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(c) Submit the cost portion of the proposal via the following electronic media: Electronic spreadsheet files compatible with MS-DOS/Windows versions Excel 5.0 or earlier, with *.xls, *.wbl, or *.wk3 the preferred formats.

[End of Clause]

I-84

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 amount to be negotiated or the overtime premium is paid for work--

- (1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdown 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.

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(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.

(End of clause)

I-85

52.225-8

DUTY-FREE ENTRY

FEB/2000

(a) Definition. "Customs territory of the United States" means the States, the District of Columbia, and Puerto Rico.

(b) Except as otherwise approved by the Contracting Officer, the Contractor shall not include in the contract price any amount for duties on supplies specifically identified in the Schedule to be accorded duty-free entry.

(c) Except as provided in paragraph (d) of this clause or elsewhere in this contract, the following procedures apply to supplies not identified in the Schedule to be accorded duty-free entry:

(1) The Contractor shall notify the Contracting Officer in writing of any purchase of foreign supplies (including, without limitation, raw materials, components, and intermediate assemblies) in excess of \$10,000 that are to be imported into the customs territory of the United States for delivery to the Government under this contract, either as end products or for incorporation into end products. The Contractor shall furnish the notice to the Contracting Officer at least 20 calendar days before the importation. The notice shall identify the--

(i) Foreign supplies;

(ii) Estimated amount of duty; and

(iii) Country of origin.

(2) The Contracting Officer will determine whether any of these supplies should be accorded duty-free entry and will notify the Contractor within 10 calendar days after receipt of the Contractor's notification.

(3) Except as otherwise approved by the Contracting Officer, the contract price shall be reduced by (or the allowable cost shall not include) the amount of duty that would be payable if the supplies were not entered duty-free.

(d) The Contractor is not required to provide the notification under paragraph (c) of this clause for purchases of foreign supplies if--

(1) The supplies are identical in nature to items purchased by the Contractor or any subcontractor in connection with its commercial business; and

(2) Segregation of these supplies to ensure use only on Government contracts containing duty-free entry provisions is not economical or feasible.

(e) The Contractor shall claim duty-free entry only for supplies to be delivered to the Government under this contract, either as end products or incorporated into end products, and shall pay duty on supplies, or any portion of them, other than scrap, salvage, or competitive sale authorized by the Contracting Officer, diverted to nongovernmental use.

(f) The Government will execute any required duty-free entry certificates for supplies to be accorded duty-free entry and will assist the Contractor in obtaining duty-free entry for these supplies.

(g) Shipping documents for supplies to be accorded duty-free entry shall consign the shipments to the contracting agency in care of the Contractor and shall include the--

(1) Delivery address of the Contractor (or contracting agency, if appropriate);

(2) Government prime contract number;

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(3) Identification of carrier;

(4) Notation ``UNITED STATES GOVERNMENT, _____ [agency], _____ Duty-free entry to be claimed pursuant to Item No(s) _____ [from Tariff Schedules] _____, Harmonized Tariff Schedules of the United States. Upon arrival of shipment at port of entry, District Director of Customs, please release shipment under 19 CFR part 142 and notify [cognizant contract administration office] for execution of Customs Forms 7501 and 7501-A and any required duty-free entry certificates.'';

(5) Gross weight in pounds (if freight is based on space tonnage, state cubic feet in addition to gross shipping weight); and

(6) Estimated value in United States dollars.

(h) The Contractor shall instruct the foreign supplier to--

(1) Consign the shipment as specified in paragraph (g) of this clause;

(2) Mark all packages with the words ``UNITED STATES GOVERNMENT'' and the title of the contracting agency; and

(3) Include with the shipment at least two copies of the bill of lading (or other shipping document) for use by the District Director of Customs at the port of entry.

(i) The Contractor shall provide written notice to the cognizant contract administration office immediately after notification by the Contracting Officer that duty-free entry will be accorded foreign supplies or, for duty-free supplies identified in the Schedule, upon award by the Contractor to the overseas supplier. The notice shall identify the--

(1) Foreign supplies;

(2) Country of origin;

(3) Contract number; and

(4) Scheduled delivery date(s).

(j) The Contractor shall include the substance of this clause in any subcontract if--

(1) Supplies identified in the Schedule to be accorded duty-free entry will be imported into the customs territory of the United States; or

(2) Other foreign supplies in excess of \$10,000 may be imported into the customs territory of the United States.

[End of Clause]

I-86

52.223-11

OZONE-DEPLETING SUBSTANCES

MAY/2001

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

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

(2) Class II, including but not limited to, hydrochlorofluorocarbons.

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

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

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

[End of Clause]

I-87

52.244-6

SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS

JUL/2004

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(a) Definitions. As used in this clause--

(1) "Commercial item" has the meaning contained in Federal Acquisition Regulation 2.101, Definitions.

(2) "Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c)

(1) The contractor shall insert the following clauses in subcontracts for commercial items:

(i) 52.219-8, Utilization of Small Business Concerns (May 2004)(15U.S.C. 637(d)(2) and (3)), in all subcontracts that offer subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$500,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (APR 2002)(E.O. 11246);

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Dec 2001) (38 U.S.C. 4212(a));

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998)(29 U.S.C. 793);

(v) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (APR 2003) (46 U.S.C. Appx 1241 and 10 U.S.C. 2631) (flow down required in accordance with paragraph (d) of FAR clause 52.247-64).

(2) While not required, the Contractor may flow down to subcontracts for commercial items a minimum number of additional clauses necessary to satisfy its contractual obligations.

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

[End of Clause]

I-88 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 DoD FAR Supplement (DFARS) (48 CFR 2) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

[End of Clause]

I-89 252.204-7004 ALTERNATE A NOV/2003

As prescribed in 204.1104, substitute the following paragraph (a) for paragraph (a) of the clause at FAR 52.204-7:

(a) Definitions. As used in this clause--

"Central Contractor Registration (CCR) database" means the primary Government repository for contractor information required for the conduct of business with the Government.

"Commercial and Government Entity (CAGE) code" means--

(1) A code assigned by the Defense Logistics Information Service (DLIS) to identify a commercial or Government entity; or

(2) A code assigned by a member of the North Atlantic Treaty Organization that DLIS records and maintains in the CAGE master file. This type of code is known as an "NCAGE code."

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"Data Universal Numbering System (DUNS) number" means the 9-digit number assigned by Dun and Bradstreet, Inc. (D&B) to identify unique business entities.

"Data Universal Numbering System +4 (DUNS+4) number" means the DUNS number assigned by D&B plus a 4-character suffix that may be assigned by a business concern. (D&B has no affiliation with this 4-character suffix.) This 4-character suffix may be assigned at the discretion of the business concern to establish additional CCR records for identifying alternative Electronic Funds Transfer (EFT) accounts (see Subpart 32.11 of the Federal Acquisition Regulation) for the same parent concern.

"Registered in the CCR database" means that-

(1) The Contractor has entered all mandatory information, including the DUNS number or the DUNS+4 number, into the CCR database;

(2) The Contractor's CAGE code is in the CCR database; and

(3) The Government has validated all mandatory data fields and has marked the records "Active."

[End of Clause]

I-90 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA

MAY/2002

(a) Definitions. As used in this clause--

(1) Components means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) Department of Defense (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) Foreign flag vessel means any vessel that is not a U.S.-flag vessel.

(4) Ocean transportation means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) Subcontractor means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract. However, effective May 1, 1996, the term does not include a supplier, materialman, distributor, or vendor of commercial items or commercial components.

(6) Supplies means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) Supplies includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) U.S.-flag vessel means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b)

(1) The Contractor shall use U.S.-flag vessels when transporting any supplies by sea under this contract.

(2) A subcontractor transporting supplies by sea under this contract shall use U.S.-flag vessels if-

(i) This contract is a construction contract; or

(ii) The supplies being transported are-

(A) Noncommercial items; or

(B) Commercial items that-

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(1) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(2) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(3) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

(c) The Contractor and its subcontractors may request that the Contracting Officer authorize shipment in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

(1) U.S.-flag vessels are not available for timely shipment;

(2) The freight charges are inordinately excessive or unreasonable; or

(3) Freight charges are higher than charges to private persons for transportation of like goods.

(d) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum--

(1) Type, weight, and cube of cargo;

(2) Required shipping date;

(3) Special handling and discharge requirements;

(4) Loading and discharge points;

(5) Name of shipper and consignee;

(6) Prime contract number; and

(7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(e) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

(1) Prime contract number;

(2) Name of vessel;

(3) Vessel flag of registry;

(4) Date of loading;

(5) Port of loading;

(6) Port of final discharge;

(7) Description of commodity;

(8) Gross weight in pounds and cubic feet if available;

(9) Total ocean freight in U.S. dollars; and

(10) Name of the steamship company.

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(f) The Contractor shall provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

(1) No ocean transportation was used in the performance of this contract;

(2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;

(3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or

(4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY	TOTAL
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(g) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(h) In the award of subcontracts for the types of supplies described in paragraph (b)(2) of this clause, the Contractor shall flow down the requirements of this clause as follows:

(1) The Contractor shall insert the substance of this clause, including this paragraph (h) in all subcontracts that exceed the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

(2) The Contractor shall insert the substance of paragraphs (a) through (e) of this clause, and this paragraph (h), in subcontracts that are at or below the simplified acquisition threshold in Part 2 of the Federal Acquisition Regulation.

[End of Clause]

I-91 252.247-7024 NOTIFICATION OF TRANSPORTATION OF SUPPLIES BY SEA MAR/2000

(a) The Contractor has indicated by the response to the solicitation provision, Representation of Extent of Transportation by Sea, that it did not anticipate transporting by sea any supplies. If however, after the award of this contract, the Contractor learns that supplies, as defined in the Transportation of Supplies by Sea clause of this contract, will be transported by sea, the Contractor--

(1) Shall notify the Contracting Officer of that fact; and

(2) Hereby agrees to comply with all the terms and conditions of the Transportation of Supplies by Sea clause of this contract.

(b) The Contractor shall include this clause, including this paragraph (b), revised as necessary to reflect the relationship of the contracting parties

(1) In all subcontracts hereunder, if this contract is a construction contract; or

(2) If this contract is not a construction contract, in all subcontracts under this contract that are for--

(i) Noncommercial items; or

(ii) Commercial items that--

(A) The Contractor is reselling or distributing to the Government without adding value (generally, the Contractor does not add value to items that it subcontracts for f.o.b. destination shipment);

(B) Are shipped in direct support of U.S. military contingency operations, exercises, or forces deployed in humanitarian or peacekeeping operations; or

(C) Are commissary or exchange cargoes transported outside of the Defense Transportation System in accordance with 10 U.S.C. 2643.

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[End of Clause]

I-92 52.204-4009 MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATION JUN/1999
(TACOM)

(a) All references in the contract to the submission of written documentation shall mean electronic submission. All electronic submissions shall be in the formats and media described in the "Electronic Quotations/Offers/Bids Required in Response to this Request for Quotations/Proposals/Bids" clause elsewhere in this document. (See Section K for commercial acquisitions, Section L for RFPs, and Section I for RFQs.)

(b) This shall include all written unclassified communications between the Government and the Contractor except contract awards and contract modifications which shall be posted on the internet. Return receipt shall be used if a commercial application is available. Classified information shall be handled in full accordance with the appropriate security requirements.

(c) In order to be contractually binding, all Government communications requiring a Contracting Officer signature must be sent from the Contracting Officer's e-mail address. The Contractor shall designate the personnel with signature authority who can contractually bind the contractor. All binding contractor communication shall be sent from this contractor e-mail address(es).

(d) Upon award, the Contractor shall provide the Contracting Officer with a list of e-mail addresses for all administrative and technical personnel assigned to this contract.

(e) Unless exempted by the Procuring Contracting Officer in writing, all unclassified written communication after contract award shall be transmitted electronically.

[End of Clause]

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SECTION J - LIST OF ATTACHMENTS

<u>List of</u> <u>Addenda</u>	<u>Title</u>	<u>Date</u>	<u>Number</u> <u>of Pages</u>	<u>Transmitted By</u>
Exhibit A	CONTRACT DATA REQUIREMENTS LIST DD1423	15-SEP-2004	002	EMAIL
Attachment 001	DI-MGMT-80227	05-SEP-1986	002	EMAIL
Attachment 002	DI-MISC-80711A	21-JAN-2000	001	EMAIL
Attachment 003	DI-MCCR-80700	26-OCT-1988	001	EMAIL