

ACITS-3 FORM

PART 1 - TASK ORDER INFORMATION

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/17/2016		Task Title: Rotorcraft Signature and Simulation Software Tools Development and Support		
Task Order No.: Y36	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.4
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Task Requester Email: (b) (6)		Name: Gerardo Nunez		Phone: (b) (6)
Financial Manager Email: (b) (6)		Name: Charles Ingalls		Phone: (b) (6)
Computer Security Officer Email: (b) (6)		Name: Roy Shishido		Phone: (b) (6)
Task previously covered by another contract other than predecessor to incumbent? (If YES, provide in SOW)				YES
Does the task require access to government databases? (If YES, indicate in SOW)				YES
SECTION 508, ELECTRONIC AND INFORMATION TECHNOLOGY ACCESSIBILITY COMPLIANCE (EITAC)				
Does the task include EIT items? (Please review the EITAC documentation)				NO
<p>Upon receipt of this task order request, the contractor shall review the task requirement(s) and inform the Government, as part of its task order/modification response, any discrepancies between standards initially cited and those the contractor proposes to deliver to the Government. Examples of discrepancies include ODCs for which some other standard might be or become applicable and, as a result, require citation in the task order, as well as any cited standards that the contractor believes is not applicable (provide rationale). Note: If, by mistake, the task, including and ODC of the task, should not meet an applicable standard not cited by the requester, it is the requester, not the contractor who is a fault; and the requester must find a way (e.g., by modifying the task request) to bring the task into compliance. In such cases the requester shall complete the required agency forms (or equivalent) before the task order/modification is approved.</p>				
GOVERNMENT FURNISHED EQUIPMENT (GFE)				
<p>Government will provide all appropriate equipment and software necessary for the performance of this task unless otherwise noted in this task order. The contractor, in accordance with the contract can acquire equipment not presently available as GFE. Equipment identified as task unique will be expensed to the task in accordance with ASRC Federal Accounting policy, and will be defined as GFE in the Government inventory. All other equipment purchases will be depreciated and become contractor property. The contractor shall follow agency rules regarding assignment of government owned equipment and other government supplied equipment. The contractor shall provide information, such as, Property Assignments, Property Location and Unused Equipment, upon request.</p>				
AFFIRMATIVE PROCUREMENT (See http://www.epa.gov/cpg/products.htm)				
<p>The item(s) being purchased are NOT on any of the EPA's Comprehensive Procurement Guideline lists. - AND -</p> <p>They meet the minimum recycled/recovered content.</p>				
COTR SIGNATURE: Kirsten Nagel (9/23/2016)			CO SIGNATURE: Anjennette Contreras-Rodriguez (9/26/2016)	

ACITS-3 FORM (Continued)

PART 2 - TASK ORDER PLAN PROPOSAL				
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Categories	Current Request	Prior Cumulative Estimate Without Current Request	Total Cumulative Task Estimate	
Onsite Hours	(b) (4)			
Offsite Hours				
Total Hours				
Onsite Labor				
Offsite Labor				
Subtotal ARTS Labor				
Teammate/Subcontractor Labor				
Subtotal Teammate/Sub Labor				
Total Labor				
Materials				
Equipment				
Travel				
Training				
Miscellaneous				
Other Direct Costs Subtotal				
Total Cost				
PMO				
Fee				
Total Price				

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PART 3 - APPROVAL SUMMARY

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Approved By	Name	Date	Email	Phone
1. COTR Nunez	Kirsten Nagel	9/23/2016	(b) (6)	(b) (6)
2. CO Nunez	Anjennette Contreras-Rodriguez	9/26/2016		

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Task Background:

The Survivability Technical Area (TA) assesses vertical lift survivability capabilities with the goal of providing enhanced operational benefit to the warfighter. The survivability of these platforms in relevant operational scenarios is an important consideration of any future Army or Joint Service aircraft concept. (b) (7)(E)

(b) (7)(E) Current high fidelity signatures prediction methodology relies on computationally intensive, first-principles techniques which fully capture the physics behind signature phenomenology. These analytic methods serve the community well for fixed designs which will typically be characterized infrequently. However, there exists a need for tools which can be used within the aircraft design cycle to identify design shortcomings that can be remedied in subsequent design iterations. In this context, signature predictions that are 85%-90% accurate are deemed sufficient to identify needed design changes.

Statement of Work - Requirements, part 1:

The purpose of this task is to continue develop and improve software tools that will be used by the US Army Aviation Development Directorate -AATD, Survivability TA in support of conceptual aircraft design and analysis. The tools will be used to generate signature data from the Concepts, Design, and Assessment (CD&A) TA or Industry developed aircraft models in support of Joint Multi-Role (JMR), Future Vertical Lift (FVL), Future Tactical Unmanned Aircraft System (FTUAS), or other design activities. Constructive simulation will be required using ATCOM to build operational scenarios and models.

Statement of Work - Requirements, part 2:

1. RF signatures: Develop methods for analyzing airframe blockage for user-defined sensor and antenna locations. Develop methods for easily adding a library of sensors and antennas onto aircraft Outer Mould Line (OML) geometries, and develop meshing techniques for including them in RF signature predictions. Build a database of existing radar absorbing materials to support anticipated future aircraft design studies. Build a database of frequency selective conducting materials, suitable for antenna and sensor coatings to support anticipated future aircraft design studies. Demonstrate the ability to apply a range of advanced radar absorbing to a candidate design and assess via mission effectiveness modeling.

2. EO Signatures: Assemble a database of sensor characteristics which are compatible with the existing IR Signature Model (field of view, minimum resolvable temp (MRT), minimum resolvable contrast (MRC), modulation transfer function (MTF), etc.) to enable rapid assessment of perception (no detection, detection, classification, identification) against a range of threat sensors as part of trade studies. Interact with CERDEC and other sensor experts

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to develop sensor models for ATCOM operational modeling.

3. ATCOM Behaviors. Conduct experimentation of key behaviors to determine effects under various bounding conditions. There are a large number of behavior types available within ATCOM, many requiring certain predicates to function properly. As such, this is a much more complex task than verifying parameter functionality. This task will then prioritize behaviours to be studied, based on perceived need, into multiple tiers. Tier 1 behaviors will be studied in this task period. Results of this study will be updated in ADD's ATCOM documentation. (b) (7)(E)

4. Vulnerability Tools Assessment: Assess the existing "Vulnerability Tool Kit" to include determination of the applicability of the various tools for efficient shot-line analysis of ballistic threat weapons systems for input into ATCOM. If application of the existing tool set does not meet required timelines for efficient ATCOM trades and analysis, then a recommended path forward to develop efficient vulnerability algorithms will be documented. Results of this assessment will be provided in a final "Vulnerability Tool Kit Assessment Report".

5. Documentation: Ensure all signature codes and ATCOM behavioral modeling is well documented

SOW Deliverables and Milestones (Continued from above):

Deliverables shall include training and demonstrations of the signature tools and ATCOM model assessment tool, and generation of the Vulnerability Tool Kit Assessment report.

Personnel Skill Sets:

Must have a experience developing and using RF/IR/EO signature tools
 Must have experience with ATCOM combat modeling
 Must have experience with FORTRAN

Government Furnished Property:

Government will provide all appropriate equipment and software necessary for the performance of this task unless otherwise noted in this task order. The contractor in accordance with the contract can acquire equipment not presently available as GFE. Equipment identified as task unique will be expensed to the task in accordance with ACITS3 accounting policy, and will be defined as GFE in the Government inventory. All other equipment purchases will be depreciated and be contractor property. The contractor shall follow NASA Ames rules regarding movement and assignment of government owned equipment and ACES supplied equipment and provide information upon request for the following: Property Assignments, Property

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Location, and Unused Equipment.

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Specific Deliverables and Deliverable Dates				
No.	Type of Deliverable	Description of Deliverable		Date Required
1.	Performance	Training and Demonstration of ATCOM and signature tools		09/30/2017
2.	Schedule	Vulnerability Tool Kit Assessment Report		09/15/2017

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Travel, Training, and Materials Requirements				
No.	Type of Requirement	Description		Date Required
1.	Travel	3Trips to Fort Rucker Alabama, 2-3 days each for 1 person in support for ATCOM Assessment		9/30/2017
2.	Travel	3 Trips LaRC/JBLE, Virginia, 4-5 days each for 1 person in support for ATCOM Assessment		9/30/2017
3.	Travel	3 Trips to Aberdeen, Maryland, 2-3 days each for 1 person in support for Signature Tools		9/30/2017

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Charge Points				
Charge Number	Description			
001	Rotorcraft Signature and Simulation Software Tools Development and Support			

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IT Security Requirements:

a. Are this task's activities covered under an organizational IT Security Plan?: YES

b. Does this task support applications that have been designated as a "Special Management Attention" application?: YES

If yes, please describe:

c. Is specialized security training required?: YES

If yes, specialized training requirements are described as follows:

U.S. Army Annual Information Assurance (IA) Awareness Training Other Army online IA training as directed

d. Is a security clearance needed for any personnel on this task? YES

If yes, what level of clearance is required?:

SECRET

e. IT Security Deliverables associated with this task:

- IT Risk Assessment: NO
- IT Security Plan: NO
- IT Contingency Plan: NO
- IT Security Vulnerability Test Results: NO
- Results of Periodic IT Security Reviews: NO
- Other Documentation as Follows: Report of Status of IT Security Plan, Contingency Plan, and Risk Assessment of Critical Services: NO
- Other Documentation:

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IT Security Requirements (Continued):

f. Periodic reviews of IT Security measures are necessary. What is the role of the contractor under this task in areas such as review of user accounts, account management, data backup and restoration, use of warning banner, use of encryption, vulnerability scanning, and security tools?

g. In the event of an IT Security incident associated with systems and data under this Task, the Chief Information Security Official, the Security Operations Center (SOC), and the Task Requester are to be notified immediately by the contractor. In order to ensure full coordination, the following individuals also are to be notified:

Title	Name	Phone
System Owner (Responsible for the applicable IT Security Plan)	Roy Shishido	(b) (6)
Organization's Computer Security Official	Roy Shishido	(b) (6)
Alternate System Owner		

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Are there any other IT Security requirements?:

No requirements. All work will be done on government furnished equipment.