

ACITS-3 FORM

PART 1 - TASK ORDER INFORMATION

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Task Requester Email: (b) (6)		Name: Ernie Moralez		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)				NO
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 (9/12/2017)			CO SIGNATURE: Anjennette Contreras-Rodriguez (9/18/2017)	

ACITS-3 FORM (Continued)

PART 2 - TASK ORDER PLAN PROPOSAL				
Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
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				

ACITS-3 FORM (Continued)

PART 3 - APPROVAL SUMMARY

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Approved By	Name	Date	Email	Phone
1. COTR Moralez	Kirsten Nagel	9/12/2017	(b) (6)	(b) (6)
2. CO Moralez	Anjennette Contreras-Rodriguez	9/18/2017		

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		

Task Background:

The U.S. Army Aviation Development Directorate (ADD) manages and conducts the Army's aviation-related Science and Technology (S&T) activities as the aviation arm of the Aviation and Missile Research Development and Engineering Center (AMRDEC). The ADD mission is to lead the discovery, development and integration of Aviation technologies that transform Warfighter needs into capabilities. We accomplish this vital mission by empowering a distributed workforce of technical leaders to discover new technologies and approaches, develop advanced concepts, and demonstrate technical maturity and military usefulness, enabling the Army to deliver game changing Aviation capabilities to the battlefield.

ADD's S&T portfolio supports both the current and future Army Aviation fleet. Although a large portion of our investment is focused on future fleet, most of our technology development will also help keep our existing fleet relevant and capable for years to come.

The ADD Human-Systems Interface Technical Area researches and develops technologies to allow safe rotorcraft operations in degraded visual environments and develops symbology and interface concepts to reduce training time and workloads for both manned and unmanned operators.

Statement of Work - Requirements, part 1:

The purpose of this task is the design, integration, testing, and evaluation of software and hardware used for aviation human factors and human-systems interface research as applied to helicopter crew stations and unmanned aerial system operations from a helicopter air mission commander station. This task shall support the human-systems interface research efforts of scientist and engineers with the U.S. Army Aviation Development Directorate (NASA Ames Research Center Code Y). The subtasks to be performed in the execution of this task are as follows:

1. Manned-Unmanned Teaming computer interface development
2. Flight guidance engineering support
3. Military aviation operations analysis
4. Unmanned aerial system (UAS) research support
5. ICE cueing symbology integration with MAA ARP-OFN route planner
6. Pilot helmet head tracker integration

Statement of Work - Requirements, part 2:

1. Manned-Unmanned Teaming computer interface development: Develop application and graphics software for various pilot-vehicle interfaces that will be used to interface to manned-unmanned teaming (MUM-T) unmanned aerial systems (UAS) assets.

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		

2. Flight guidance engineering support: Continue to improve the existing (b) (7)(E) that are currently used to inform the helicopter pilot (via a display) of the required horizontal and vertical speed during the approach to landing in a Degraded Visual Environment (DVE).

3. Military aviation operations analysis: Apply knowledge of U.S. military aviation tactics, techniques and procedures to analyze mission scenarios that are applicable to manned-unmanned teaming (MUM-T) operations.

4. Unmanned aerial system (UAS) research support: Plan and conduct multiple, piloted MUM-T flight simulation experiments in the HSI Tech Area flight simulation laboratory that support both the SCORCH and SUMIT programs. The HMI designs and the test results will be documented and provided to the program managers for both programs. The results and lessons learned from the SCORCH 6.2 experiment will be transitioned into the SUMIT 6.3 program.

(b) (7)(E)

6. The Thales Scorpion HMD (helmet-mounted display) system is used to output helmet orientation and helmet position measurement data over Ethernet networks to various devices on board the U.S. Army Aviation Development Directorate (b) (7)(E) (AATD Ft. Eustis, Virginia) and numerous ground simulators (AFDD Moffett Field, Calif.; Ft. Rucker, Ala.; and Ft. Eustis, Va.). The objective of this work is to upgrade and expand the existing head tracker systems already purchased and operational at the Aviation Development Directorate. This work is for the Degraded Visual Environment Mitigation (DVE-M) Program, which is an Aviation Development Directorate program within the Aviation and Missile Research, Development and Engineering Center (AMRDEC). This work will be executed via a subcontract to Thales Visionix, Inc.

7. ASRC Federal personnel are required to fly as an observer or flight test engineer onboard the Aviation Development Directorate Ft. Eustis research helicopters. This flying requirement will require ASRC Federal personnel to obtain an FAA third-class medical certificate as well as yearly hearing testing and eye exams.

Personnel Skill Sets:

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		

Computer programming, software engineering, military helicopter aviation piloting and operations, electrical engineering, aerospace engineering.

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Specific Deliverables and Deliverable Dates				
No.	Type of Deliverable	Description of Deliverable		Date Required
1.	Performance	Application software (including utilities, scripts, modifications, etc.)		
2.	Performance	Test and evaluation software and data (including test scripts, results, etc.)		
3.	Performance	Operating procedures and checklists		
4.	Performance	Software description documents		
5.	Performance	Support Services		
6.	Performance	Monthly reports		

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Travel, Training, and Materials Requirements				
No.	Type of Requirement	Description		Date Required
1.	Travel	Five trips to Huntsville, Alabama to support SUMIT and SCORCH		10/15/2017
2.	Travel	Six trips to Ft. Rucker, Alabama to support DVE-M Cueing Experiments		10/15/2017
3.	Travel	Five trips to Ft. Rucker, Huntsville, Santa Barbara, Seattle, Ft. Eustis to support MUM-T briefings		11/15/2017
4.	Travel	Two trips to Ft. Eustis, Virginia to support DVE-M flight tests.		2/15/2018
5.	Material	FAA Class 3 flight physical for personnel to fly on EH-60L Black Hawk		1/15/2018

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		
Charge Points				
Charge Number	Description			
001	Manned-Unmanned Teaming computer interface development			
002	Flight guidance engineering support			
003	Military aviation operations analysis			
004	Unmanned aerial system (UAS) research support			
005	(b) (7)(E)			
006	Pilot helmet head tracker integration			

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C	Contract Title: ACITS 3 NASA AMES			
Date: 8/28/2017	Task Title: Human-Systems Interface Research			
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		

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?: NO

If yes, specialized training requirements are described as follows:

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

If yes, what level of clearance is required?:

A Secret clearance may be required.

- 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:

ACITS-3 FORM (Continued)

Contract No: NNA13AB88C		Contract Title: ACITS 3 NASA AMES		
Date: 8/28/2017		Task Title: Human-Systems Interface Research		
Task Order No.: Y44	Task Mod No.: Original	Service Request No.:	Customer Code: NASA/Ames Research Center	SOW Reference: C.3.1.5
Order Type: Cost Plus Fixed Fee		Funding Level: Task Level Funding		

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		