

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO P00001	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO. RSHF-12-00025	5. PROJECT NO. (if applicable)
6. ISSUED BY U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Division 245 Murray Lane, SW, #0115 Washington DC 20528-0115	CODE DHS/OPO/S&T/EXBOR	7. ADMINISTERED BY (if other than Item 6) U.S. Dept. of Homeland Security Office of Procurement Operations S&T Acquisition Division 245 Murray Lane, SW, #0115 Washington DC 20528-0115	CODE DHS/OPO/S&T/EXBOR
8. NAME AND ADDRESS OF CONTRACTOR (No. street, county, State and ZIP Code) RESEARCH TRIANGLE INSTITUTE PO BOX 12194 RESEARCH TRIANGLE PARK NC 277092194		(x) 9A. AMENDMENT OF SOLICITATION NO	
CODE 0048681050000 FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x 10A. MODIFICATION OF CONTRACT/ORDER NO SS-10F-0097L HSHQDC-11-F-00087	
		10B. DATED (SEE ITEM 13) 09/14/2011	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended,  is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

**12. ACCOUNTING AND APPROPRIATION DATA (if required)**

See Schedule

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 45.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return \_\_\_\_\_ 1 \_\_\_\_\_ copies to the issuing office.

**14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)**

DUNS Number: 004868105-0000  
 Division/PBA: Human Factors/Behavioral Sciences Division  
 Thrust: Personal Identification Systems  
 Program: Biometrics  
 Project: Biometrics  
 Performer: Research Triangle Institute (RTI)  
 Project Manager: Dr. Richard Legault, (b)(6)

ALC: 70-08-15.1

The purpose of this modification is to change the Contracting Officer's Technical  
 Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Duane Schatz	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED (b)(6)	16C. DATE SIGNED 3/20/2012	

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
 GS-10F-C097L/HSHQDC-10-F-00087/P00001

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NAME OF OFFEROR OR CONTRACTOR  
 RESEARCH TRIANGLE INSTITUTE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Representative (COTR) from Ji Sun Lee to Dr. Richard Legault at no additional cost to the Government.</p> <p>The COTR should read as follows:</p> <p>Dr. Richard Legault                      Human Factors/Behavioral Sciences Division                      Science and Technology Directorate                      Department of Homeland Security                      Washington, DC 20582</p> <div data-bbox="162 588 698 682" style="border: 1px solid black; padding: 2px;">(b)(6)</div> <p>All other terms and conditions remain unchanged.                      AAF Number: N/A DO/DPAS Rating: NONE                      Period of Performance: 09/14/2011 to 03/13/2013</p>				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

CONTRACT ID CODE

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1 AMENDMENT REFERENCE NO

3 EFFECTIVE DATE

4 REQUESTION/PURCHASE REQ NO

5 PROJECT NO (Agency Use)

P00002

02/13/2013

DHP-13-00034

ISSUED BY

POINT

HSN/CPI/NV/CP/CP/CP

ADMINISTERED BY (Other than Item 6)

CODE

HSN/CPO/S&T/CP/CP/CP

U.S. Dept. of Homeland Security  
Office of Procurement Operations  
S&T Acquisition Division  
245 Murray Lane, SW, #0115  
Washington DC 20528-0115

U.S. Dept. of Homeland Security  
Office of Procurement Operations  
S&T Acquisition Division  
245 Murray Lane, SW, #0115  
Washington DC 20528-0115

7 NAME AND TITLE OF CONTRACTING OFFICER (No, street, county, State and ZIP code)

8 A. ORDER NUMBER OF SOLICITATION NO

RESEARCH TRIANGLE INSTITUTE

9 DATE RECEIVED

ATTN: (b)(6)

10 A. MODIFICATION OF CONTRACT ORDER NO

PO BOX 12134

HSNCP 11-F-00087

RESEARCH TRIANGLE PARK NC 277092134

9. DATE RECEIVED

0048681050000

FACILITY CODE

09/14/2011

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of offers  is extended  is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 9 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and the amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND OTHER INFORMATION DATA (if required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

- CHECK ONE
- A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT. ORDER NO. N13M10A
  - B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, approbator, date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.100(b).
  - C. THIS SUBMITTANT AGREEMENTS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 52.249-14, Excusable Delays
  - D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor  is not  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. POINT OF CONTACT INFORMATION MODIFICATION (Organized by OPI section headings. If applicable, include contract subject matter where feasible)

PTNS Number: 004868105+0000

Division: ITTA: Human Factors/Behavioral Sciences Division

Thrust: Personal Identification Systems

Program: Biometrics

Project: Biometrics

Performer: Research Triangle Institute (RTI)

Project Manager: Dr. Richard Leffitt, (b)(6)

CPFA: Michael Cox, (b)(6)

ALN: 70-08-1514

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 2A or 10A, as heretofore changed, remains unchanged and in full force and effect.

(b)(6)	15A. NAME AND TITLE OF CONTRACTING OFFICER (Agency Use)
(b)(6)	15B. DATE SIGNED
(b)(6)	15C. DATE ISSUED

NSN 7540-01-152-6000  
Previous edition unusable

STANDARD FORM NO. 64 (11-83)  
Prescribed by GSA  
FAR (48 CFR) 53.243

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
 GS-10F-0097L/HSHQDC-11-F-00087/P00002

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NAME OF OFFEROR OR CONTRACTOR  
 RESEARCH TRIANGLE INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>The purpose of this modification is to change the Contracting Officer and extend the task order base period of performance through 31 December 2013 at no additional cost to the Government, in accordance with the attached revised Statement of Work (10 pages).</p> <p>Contracting Officer should read as follows:                      Duane Schatz                      DHS S&amp;T OPO Stop 0210                      245 Murray Lane                      Washington, DC 20528-0210                      (b)(6)</p> <p>The total amount obligated remains at \$905,586.00 and the total value of the task order remains at (b)(4)</p> <p>All other terms and conditions remain unchanged.                      AAP Number: N/A DO/DPAS Rating: NONE                      Period of Performance: 09/14/2011 to 12/31/2013</p>				

## **Statement of Work for Program Evaluations**

### **U.S. Department of Homeland Security Science & Technology Directorate Resilient Systems Division**

**Task Order HSHQDC-11-F-00087 Modification P00002  
PR No. RSHF-13-00034**

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

#### **I. BACKGROUND**

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

The Quadrennial Homeland Security Review (2010) has identified Maturing and Strengthening the Homeland Security Enterprise (HSE) as a key DHS programmatic goal. DHS S&T provides those technologies, processes and expertise to the HSE in order to assist them in fulfilling their missions. However, DHS S&T has no formal, scientifically sound, program evaluation process to ensure that the mission is being met in a meaningful and efficient manner. Current S&T evaluation programs only test and consider the quality of the technology to be transitioned. A program evaluation approach that places a technology or other innovation within an operational context, and thus enables decision makers to assess the entire operational approach in which the technology or innovation is embedded, ultimately improving technology transition to the customer component agencies.

This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program, gathering and analyzing evidence, and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.

## II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program and the technology being evaluated and;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation's results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

## III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

### *Identify and Engage Stakeholders*

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in conjunction with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.

### *Description of the Program*

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-

practice implications of the technology or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

### *Focus Evaluation Design*

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results, and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

### *Identify, Assess, and Gather Data*

As part of the design stage, the Vendor will be responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data will be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

### *Analyze Data and Reach Conclusions*

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

### *Final Report*

The Vendor will generate a final written report and provide any accompanying presentation slides, that sets forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including, where appropriate, tables, key statistical outputs or other information, summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate, statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will be held by DHS.

This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD. The

basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

### *Projects to be Evaluated*

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period -- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. All projects are described in additional detail below:

#### *SOW Task 1.0 until/1.4: Program Evaluation for Rapid DNA Project (Base Period-- Task 1)*

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receives half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of \$300 to \$400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications, and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under \$100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions, and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate.

*SOW Task 2.0 until 2.2: Program Evaluation for DHS Biometric Exit Pilots  
(Base Period-- Task 2)*

The future of U.S. immigration policy has been an issue of long discussion by officials in several Administrations, in the media, on Capitol Hill, and among the general public. Much of this discussion has focused on "overstays," i.e. individuals who enter the United States lawfully, but who stay longer than their authorized period of admission. One of the most common reasons for denial of a U.S. visa is that the visa applicant fails to convince the U.S. consular officer that he or she will adhere to the admission period.

Establishing an effective Validated Exit program would allow DHS to meet its mission goals to protect the American public and enforce immigration laws. DHS currently faces a difficult decision for a Validated Exit system. Exit data collection is necessary to ensure that the Department knows who has not left on time, but there are varying opinions on how to best collect and track this information. Statutory mandates require DHS to implement a *biometric* exit program, however, it is unclear if previously conducted pilots and studies have answered questions necessary to formulate a long-term path forward regarding biometric exit and subsequently Validated Exit.

The objective of this effort is to work with DHS and contractor staff to aggregate all previous DHS evaluations of operational concepts for biometric exit, analyze available requirements, lead a methodological review to assess the validity of previous studies, and lead the design of research and pilot activities for candidate technologies to answer research questions necessary to inform a formulate a long-term path forward regarding biometric exit and subsequently Validated Exit. The initial target customer is senior DHS leadership.

*SOW Task 3.0 until 3.3: Mobile Biometrics Project  
(Option Period-- Task 3 -- 12 Months)*

The Homeland Security Act of 2002 (Public Law 107-296) states that DHS S&T will "support basic and applied homeland security research to promote revolutionary changes in technologies; advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities." Pursuant to this mission, the Resilient Systems Division (RSD) of the Department of Homeland Security (DHS) Science and Technology Directorate recognizes the need for commercially available hand-held biometric acquisition devices that can effectively collect data samples from subjects under a variety of conditions. The DHS is responsible for the biometric identification of persons to achieve the statutory and regulatory missions of the components. To accomplish these tasks, DHS components require the ability to positively identify/screen individuals in a secure, efficient, accurate, and timely manner. This ability encompasses the collection, storage, transmission, and receipt of biometric and biographic data to support the component missions. The capability must be portable and operable in a wide variety of areas regardless of existing infrastructure (i.e. offshore, foreign, and remote locations, ports of entry, detention centers... etc) and conditions (i.e. day/night, arid/humid climates, hot/cold temperature extremes). The capability must also accommodate operators with varying levels of technical ability and subjects with varying levels of physical ability.

The output from these mobile acquisition devices must be usable for searches of large-scale biometric databases (1 to many) and/or verification against a previously taken biometric sample (1 to 1). In order to assure maximum interoperability and efficiency of operation, DHS requires that the data output from these acquisition devices conform to pre-established standards. This program focuses on the integration of various biometric modules into a single hand-held device or system. Modules may include but are not limited to: a four finger slap module for fingerprints, visible wavelength camera (with optional flash/illuminator) for face acquisition, and a near-infrared, dual iris capture camera. Additional biometric modules such as for voice and other technologies, such as card readers, etc. may be included in the final hand-held system. Multiple mobile devices currently are being piloted in the field among various component agencies as well as police departments throughout the country. Several police departments have conducted independent evaluation prior to this SOW and will provide additional input into this evaluation process. The Vendor should be familiar with the U.S. National Institute of Standards and Technology (NIST) *Mobile ID Device Best Practices Recommendation*, Sept 2008 report and should design a plan for evaluating the implementation of this device in the field. The plan should describe how the data capture methods, signal processing (image normalization, segmentation, feature extraction, quality assessment, template creation, output record formatting...), matching algorithms for each modality, decision for match/no-match and the accuracy of displayed results function when the device is operationally deployed and should assess how the device users employ the device and interpret the information it provides to what effect. The design should provide for the assessment of the strengths and weaknesses of the device as operated in the field and to the extent possible should determine the degree to which the availability of the new multimodal biometric tool improves on prior identification technologies.

#### **IV. STAFFING**

See Attachment 2 -- HSAR 3052.215-70 Key Personnel or Facilities (DFC 2003), which identifies Project Manager and Chief Technical Representative as Key Personnel.

## V. DELIVERABLES/MILESTONE PAYMENT SCHEDULE

Deliverables				(b)(4)
SOW Task	Deliverable	Description	Due Date	
1.0	Project Management Plan	A project management plan that will accomplish the program's objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.	7 months from Date of Award Base Period Task 1 Submitted and paid	
1.1	Draft of Data Collection Instruments	Draft of all data collection instruments. Final version requires approval by the RSD Program Manager.	3/10/2013	
1.2	Evaluation Framework for Rapid DNA Project	A path forward for the program evaluation that is specifically tailored to the USCIS program and technology being evaluated. Final version requires approval by the RSD Program Manager.	6/15/2013	
1.3	Summary of Data Collection Activities	A summary report of data collection activities and observations	8/31/2013	
1.4	Final Report for Rapid DNA Project	A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager	12/31/2013	
2.0	Baseline Assessment for Biometric Exit Pilots	A summary of the previously conducted pilots as it stands. The Vendor will work with RSD to aggregate all previous DHS evaluations of operational concepts for biometric exit, and analyze available requirements.	3 months from Date of Award Base Period Task 2	
2.1	Evaluation Framework for Biometric Exit Pilots	A methodological review to assess the validity of previous studies in answering research questions necessary to inform a DHS strategy for biometric exit	5 months from Date of Award Base Period Task 2	
2.2	Final Report for Biometric Exit Pilots	A formal report that communicates a long-term path forward for the program evaluation that is specifically tailored to inform senior DHS leadership decisions. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.	6 months from Date of Award Base Period Task 2	
3.0	Baseline Assessment for Mobile Biometrics Project	A summary of the program as it stands. Final version requires approval by the RSD Program Manager	4 months from exercising Option Period Option Period Task 3	
3.1	Evaluation Framework for Mobile Biometrics	A path forward for the program evaluation that is specifically tailored to the program and technology being evaluated. Final version requires approval by the RSD Program Manager.	6 months from exercising Option Period Option Period Task 3	
3.2	Monitoring and Evaluation of Mobile Biometrics Project	Implementation and monitoring of the evaluation framework.	4 to 5 months from exercising Option Period Option Period Task 3	
3.3	Final Report for Mobile Biometrics Project	A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages. The final version requires approval by the RSD Program Manager.	12 months from exercising Option Period Option Period Task 3	

\*Due to rounding, grand total at Firm Fixed Price is (b)(4)

\* COIR shall determine, at his discretion, how long after receipt of the draft deliverable RIT has to deliver the final version and how long the Government will review the draft, before providing comments.

## VI. Other Task Order Details

1. **Period of Performance.** The base period of performance is from 14 September 2011 through 31 December 2013. If exercised, the option period of performance is 12 months from the option exercise date.
2. **Travel.** Domestic travel on the part of the Vendor's staff may be required in the performance of the duties that are listed herein. It is expected that the Vendor will reimburse non-government participants for those travel expenses that they might incur.
3. **DHS-Furnished Information.**
  - a. DHS will provide certain DHS information, materials, and forms unique to DHS to the vendor to support certain tasks under this SOW.
  - b. The DHS S&T Contracting Officer's Technical Representative, identified in this SOW, will be the point of contact (POC) for the identification of any required information to be supplied by DHS.
  - c. The Vendor will prepare any documentation according to the guidelines provided by DHS.
4. **Place of Performance.** The Vendor will perform the work under this SOW at their place of business and the workshop location.
5. **DHS-Furnished Property.** DHS property will not be provided to the Vendor.
6. **Deliverables.** The Vendor will provide all deliverables identified in this SOW directly to the task-specific DHS S&T Technical Representatives and to the S&T Contracting Officer.

7. **Program Status Report.** The Vendor will deliver monthly program status reports. The reports will be submitted on the 15th day of the month. The reports shall include the following:

- a. Summary of progress during the reporting period (including any significant technical information).
- b. Unanticipated technical or management problems of significance.
- c. Problems anticipated in future reporting periods.
- d. Summary of important meetings, briefings, trips and conferences during the period of the report and those planned in the following period.

All reports shall be submitted to the task-specific COs and to the DHS S&T Contracting Officer electronically.

8. **Funding Requirements.** DHS will provide funding that is outlined in the Task Order, at the discretion of the Government, subject to the availability of funds.

9. **Security Requirements.**

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. If classified work is required under this SOW, DHS will provide specific guidance to the Vendor as to which work will be conducted in a classified manner and at which classification level. The Vendor will also adhere to other applicable Government orders, guides, and directives pertaining to classified work. This SOW may require access to information at the unclassified level.
- c. The Contractor shall not publish, permit to be published, or distribute for public consumption, any information, oral or written, concerning the results or conclusions made pursuant to the performance of this Task Order, without the prior written consent of the Contracting Officer. An electronic or printed copy of any material proposed to be published or distributed shall be submitted to the Contracting Officer.

## VII. Points of Contact

Contracting Officer:

Duane Schatz

Science and Technology Acquisitions Division

Office of Procurement Operations

Department of Homeland Security

Washington, DC 20582

(b)(6)

Contracting Officer's Technical Representative (COTR):

Richard Legault

Resilient Systems Division

Science and Technology Directorate

Department of Homeland Security

Washington, DC 20582

(b)(6)

DHS S&T Invoicing:  
U.S. DHS, ICE  
Attn: S&T RSD Invoice  
Burlington Finance Center  
P.O. Box 1000  
Williston, VT 05495-1000  
[ice.dhs.gov](mailto:ice.dhs.gov)



NAME OF OFFEROR OR CONTRACTOR  
RESEARCH TRIANGLE INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
1002	<p>ALC: 7C-08-1513 TAS: 7030800</p> <p>The purpose of this modification is to add and fully fund Task 4, increase the task order ceiling, and extend the period of performance through 30 June 2014, in accordance with the attached revised Statement of Work (SOW) (11 pages).</p> <p>As a result of this action, the total obligated amount is increased by (b)(4) from (b)(4)</p> <p>As a result, the task order ceiling is increased by (b)(4) from (b)(4)</p> <p>All other terms and conditions remain unchanged. AAP Number: N/A DO/DPAS Rating: NONE Delivery: 06/30/2014 Discount Terms:     Net 30 Delivery Location Code: S&amp;T MURRAY LANE DHS S&amp;T 245 Murray Lane Building 410 Washington DC 20528</p> <p>FOB: Destination Period of Performance: 09/14/2011 to 06/30/2014</p> <p>Add Item 1002 as follows:</p> <p>Task 4: TSA Personnel Evaluation</p>				(b)(4)

## **Statement of Work for Program Evaluations**

### **U.S. Department of Homeland Security Science & Technology Directorate Resilient Systems Division Biometrics**

**Task Order HSHQDC-11-F-00087 Modification P00003  
PR No. RSHF-13-00041**

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

#### **I. BACKGROUND**

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

The Quadrennial Homeland Security Review (2010) has identified Maturing and Strengthening the Homeland Security Enterprise (HSE) as a key DHS programmatic goal. DHS S&T provides those technologies, processes and expertise to the HSE in order to assist them in fulfilling their missions. However, DHS S&T has no formal, scientifically sound, program evaluation process to ensure that the mission is being met in a meaningful and efficient manner. Current S&T evaluation programs only test and consider the quality of the technology to be transitioned. A program evaluation approach that places a technology or other innovation within an operational context, and thus enables decision makers to assess the entire operational approach in which the technology or innovation is embedded, ultimately improving technology transition to the customer component agencies.

This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program, gathering and analyzing evidence, and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.

## II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project and an option for the evaluation of search capabilities for the Transportation Security Administration. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology, performance, or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program, personnel performance or the technology being evaluated and;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation's results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

## III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

### *Identify and Engage Stakeholders*

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in conjunction with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.

### *Description of the Program*

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-

practice implications of the technology, performance, or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

#### *Focus Evaluation Design*

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results, and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

#### *Identify, Assess, and Gather Data*

As part of the design stage, the Vendor will be responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data may be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

#### *Analyze Data and Reach Conclusions*

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

#### *Final Report*

The Vendor will generate a final written report and provide any accompanying presentation slides that sets forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including, where appropriate, tables, key statistical outputs or other information summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate, statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will be held by DHS.

This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD. The

basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

### *Projects to be Evaluated*

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period 1-- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. Option Period 2-- the Vendor will design the evaluation framework of the TSA Personnel Evaluation Project (Task 4), upon option exercise. All projects are described in additional detail below:

#### *SOI Task 1.0 until/1.4: Program Evaluation for Rapid DNA Project (Base Period-- Task 1)*

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receives half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of \$300 to \$400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications, and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under \$100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions, and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate.

*SOW Task 2.0 until/2.2: Program Evaluation for DHS Biometric Exit Pilots  
(Base Period-- Task 2)*

The future of U.S. immigration policy has been an issue of long discussion by officials in several Administrations, in the media, on Capitol Hill, and among the general public. Much of this discussion has focused on "overstays," i.e. individuals who enter the United States lawfully, but who stay longer than their authorized period of admission. One of the most common reasons for denial of a U.S. visa is that the visa applicant fails to convince the U.S. consular officer that he or she will adhere to the admission period.

Establishing an effective Validated Exit program would allow DHS to meet its mission goals to protect the American public and enforce immigration laws. DHS currently faces a difficult decision for a Validated Exit system. Exit data collection is necessary to ensure that the Department knows who has not left on time, but there are varying opinions on how to best collect and track this information. Statutory mandates require DHS to implement a *biometric* exit program, however, it is unclear if previously conducted pilots and studies have answered questions necessary to formulate a long-term path forward regarding biometric exit and subsequently Validated Exit.

The objective of this effort is to work with DHS and contractor staff to aggregate all previous DHS evaluations of operational concepts for biometric exit, analyze available requirements, lead a methodological review to assess the validity of previous studies, and lead the design of research and pilot activities for candidate technologies to answer research questions necessary to inform a formulate a long-term path forward regarding biometric exit and subsequently Validated Exit. The initial target customer is senior DHS leadership.

*SOW Task 3.0 until/3.3: Mobile Biometrics Project  
(Option Period 1-- Task 3 -- 12 Months)*

The Homeland Security Act of 2002 (Public Law 107-296) states that DHS S&T will "support basic and applied homeland security research to promote revolutionary changes in technologies; advance the development, testing and evaluation, and deployment of critical homeland security technologies; and accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities." Pursuant to this mission, the Resilient Systems Division (RSD) of the Department of Homeland Security (DHS) Science and Technology Directorate recognizes the need for commercially available hand-held biometric acquisition devices that can effectively collect data samples from subjects under a variety of conditions. The DHS is responsible for the biometric identification of persons to achieve the statutory and regulatory missions of the components. To accomplish these tasks, DHS components require the ability to positively identify/screen individuals in a secure, efficient, accurate, and timely manner. This ability encompasses the collection, storage, transmission, and receipt of biometric and biographic data to support the component missions. The capability must be portable and operable in a wide variety of areas regardless of existing infrastructure (i.e. offshore, foreign and remote locations, ports of entry, detention centers... etc) and conditions (i.e. day/night, arid/humid climates, hot/cold temperature extremes). The capability must also accommodate operators with varying levels of technical ability and subjects with varying levels of physical ability.

The output from these mobile acquisition devices must be usable for searches of large-scale biometric databases (1 to many) and or verification against a previously taken biometric sample (1 to 1). In order to assure maximum interoperability and efficiency of operation, DHS requires that the data output from these acquisition devices conform to pre-established standards. This program focuses on the integration of various biometric modules into a single hand-held device or system. Modules may include but are not limited to: a four finger slap module for fingerprints, visible wavelength camera (with optional flash/illuminator) for face acquisition, and a near-infrared, dual iris capture camera. Additional biometric modules such as for voice and other technologies, such as card readers, etc. may be included in the final hand-held system. Multiple mobile devices currently are being piloted in the field among various component agencies as well as police departments throughout the country. Several police departments have conducted independent evaluation prior to this SOW and will provide additional input into this evaluation process. The Vendor should be familiar with the U.S. National Institute of Standards and Technology (NIST) *Mobile ID Device Best Practices Recommendation*, Sept 2008 report and should design a plan for evaluating the implementation of this device in the field. The plan should describe how the data capture methods, signal processing (image normalization, segmentation, feature extraction, quality assessment, template creation, output record formatting...), matching algorithms for each modality, decision for match/no-match and the accuracy of displayed results function when the device is operationally deployed and should assess how the device users employ the device and interpret the information it provides to what effect. The design should provide for the assessment of the strengths and weaknesses of the device as operated in the field and to the extent possible should determine the degree to which the availability of the new multimodal biometric tool improves on prior identification technologies.

*SOW Task 4.0 until 4.6: TSA Personnel Evaluation  
(Option Period 2-- Task 4 -- 12 Months)*

The goal of this work is to enhance TSA OSO's existing Officer Performance Studies project in three areas through evaluation. These areas will improve aviation security, improve the efficiency and effectiveness of TSA's officer performance studies, improve TSA's officer training programs, and improve TSA's standard operating procedures at airport checkpoints. First, examine possible benefits of remote screening -- having TSA X-ray operators perform searches away from the terminal (There are current conversations and debates with DHS and TSA about the cost and benefits of having TSA Officers work remotely. This task will examine whether performance is better or worse when conducted remotely). Second, enhance the assessment and training of specific search strategies employed by TSA Officers when conducting X-ray screening (This task will assess search strategies used by different TSOs to see if some styles are more effective than others and will determine whether effective strategies can be trained). Thirdly, determine the impact on threat detection performance of specific Intel or briefing information provided by Superiors (This task will help determine on how best to inform TSA Officers of newly discovered threats so as to improve overall performance).

#### **IV. STAFFING**

See Attachment 2--HSAR 3052.215-70 Key Personnel or Facilities (DEC 2003), which identifies Project Manager and Chief Technical Representative as Key Personnel.

## V. DELIVERABLES/MILESTONE PAYMENT SCHEDULE

Deliverables				(b)(4)
SOW Task	Deliverable	Description	Due Date	
1.0	Project Management Plan	A project management plan that will accomplish the program's objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.	7 months from Date of Award Base Period Task 1 Submitted and paid	
1.1	Draft of Data Collection Instruments	Draft of all data collection instruments. Final version requires approval by the RSD Program Manager.	3/10/2013	
1.2	Evaluation Framework for Rapid DNA Project	A path forward for the program evaluation that is specifically tailored to the USCIS program and technology being evaluated. Final version requires approval by the RSD Program Manager.	6/15/2013	
1.3	Summary of Data Collection Activities	A summary report of data collection activities and observations	8/31/2013	
1.4	Final Report for Rapid DNA Project	A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager	12/31/2012	
2.0	Baseline Assessment for Biometric Exit Pilots	A summary of the previously conducted pilots as it stands. The Vendor will work with RSD to aggregate all previous DHS evaluations of operational concepts for biometric exit, and analyze available requirements.	3 months from Date of Award  Base Period Task 2	
2.1	Evaluation Framework for Biometric Exit Pilots	A methodological review to assess the validity of previous studies in answering research questions necessary to inform a DHS strategy for biometric exit	5 months from Date of Award  Base Period Task 2	
2.2	Final Report for Biometric Exit Pilots	A formal report that communicates a long-term path forward for the program evaluation that is specifically tailored to inform senior DHS leadership decisions. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages but excluding appendices, if any. The final version requires approval by the RSD Program Manager.	6 months from Date of Award  Base Period Task 2	
3.0	Baseline Assessment for Mobile Biometrics Project	A summary of the program as it stands. Final version requires approval by the RSD Program Manager	4 months from exercising Option Period  Option Period Task 3	
3.1	Evaluation Framework for Mobile Biometrics	A path forward for the program evaluation that is specifically tailored to the program and technology being evaluated. Final version requires approval by the RSD Program Manager.	6 months from exercising Option Period  Option Period Task 3	
3.2	Monitoring and Evaluation of Mobile Biometrics Project	Implementation and monitoring of the evaluation framework.	4 to 5 months from exercising Option Period  Option Period Task 3	
3.3	Final Report for Mobile Biometrics Project	A formal report that communicates the evaluation procedures and findings to relevant audiences. The length of the final report is anticipated to about 25 pages, including an executive summary of no more than two pages. The final version requires approval by the RSD Program Manager.	12 months from exercising Option Period  Option Period Task 3	

4.0	Project Management Plan	A project management plan that will accomplish the program's objectives as outlined by RSD personnel. The final version requires approval by the RSD Program Manager.	1 month from exercising Option Period. Option Period Task 4	(b)(4)
4.1	Prepare Experiments	A path forward for the personnel performance evaluation that is specifically tailored to the areas being evaluated. Final version requires approval by the RSD Program Manager.	3 months from exercising Option Period. Option Period Task 4	
4.2	Test Subjects	Implementation and monitoring of the evaluation framework. Collect and analyze data.	11 months from exercising Option Period. Option Period Task 4	
4.3	Prepare manuscripts/presentations	Manuscripts and publications for both scientific audiences (where appropriate) and TSA stakeholders that communicates the evaluation procedures and findings to relevant audiences. The final versions require approval by the RSD Program Manager.	12 months from exercising Option Period. Option Period Task 4	
4.4	Quarterly Reports	Quarterly report formats will be approved as part of the PMP (Task 4.0) but will, at a minimum, include budget expenditure and task progress.	3, 6, & 9 months from exercising Option Period. Option Period Task 4	
4.5	Draft Final Reports	A draft version of a final report that communicates the evaluation procedures and findings to relevant audiences.	11 months from exercising Option Period. Option Period Task 4	
4.6	Final Reports	A formal report that communicates the evaluation procedures and findings to relevant audiences. The final version requires approval by the RSD Program Manager.	12 months from exercising Option Period. Option Period Task 4	

\*Due to rounding, grand total at Firm Fixed Price is (b)(4)

\* COTR shall determine, at his discretion, how long after receipt of the draft deliverable RFI has to deliver the final version and how long the Government will review the draft, before providing comments.

## VI. Other Task Order Details

1. **Period of Performance.** The task order period of performance is from 14 September 2011 through 30 June 2014. If exercised, the period of performance for each option period is 12 months from the option exercise date.
2. **Travel.** Domestic travel on the part of the Vendor's staff may be required in the performance of the duties that are listed herein. It is expected that the Vendor will reimburse non-government participants for those travel expenses that they might incur.
3. **DHS-Furnished Information.**
  - a. DHS will provide certain DHS information, materials, and forms unique to DHS to the vendor to support certain tasks under this SOW.
  - b. The DHS S&T Contracting Officer's Technical Representative, identified in this SOW, will be the point of contact (POC) for the identification of any required information to be supplied by DHS.
  - c. The Vendor will prepare any documentation according to the guidelines provided by DHS.
4. **Place of Performance.** The Vendor will perform the work under this SOW at their place of business and the workshop location.
5. **DHS-Furnished Property.** DHS property will not be provided to the Vendor.
6. **Deliverables.** The Vendor will provide all deliverables identified in this SOW directly to the task-specific DHS S&T Technical Representatives and to the S&T Contracting Officer.

7. **Program Status Report.** The Vendor will deliver monthly program status reports. The reports will be submitted on the 15th day of the month. The reports shall include the following:

- a. Summary of progress during the reporting period (including any significant technical information).
- b. Unanticipated technical or management problems of significance.
- c. Problems anticipated in future reporting periods.
- d. Summary of important meetings, briefings, trips and conferences during the period of the report and those planned in the following period.

All reports shall be submitted to the task-specific COTRs and to the DHS S&T Contracting Officer electronically.

8. **Funding Requirements.** DHS will provide funding that is outlined in the Task Order, at the discretion of the Government, subject to the availability of funds.

9. **Security Requirements.**

- a. All work performed under this SOW is unclassified unless otherwise specified by DHS.
- b. If classified work is required under this SOW, DHS will provide specific guidance to the Vendor as to which work will be conducted in a classified manner and at which classification level. The Vendor will also adhere to other applicable Government orders, guides, and directives pertaining to classified work. This SOW may require access to information at the unclassified level.
- c. The Contractor shall not publish, permit to be published, or distribute for public consumption, any information, oral or written, concerning the results or conclusions made pursuant to the performance of this Task Order, without the prior written consent of the Contracting Officer. An electronic or printed copy of any material proposed to be published or distributed shall be submitted to the Contracting Officer.

## VII. Points of Contact

Contracting Officer:  
Duane Schatz  
Science and Technology Acquisitions Division  
Office of Procurement Operations  
Department of Homeland Security  
Washington, DC 20582

(b)(6)

Contracting Officer's Technical Representative (COTR):  
Richard Legault  
Resilient Systems Division  
Science and Technology Directorate  
Department of Homeland Security  
Washington, DC 20582

(b)(6)

DHS S&T Invoicing:  
U.S. DHS, ICE  
Attn: S&T RSD Invoice  
Burlington Finance Center  
P.O. Box 1000  
Williston, VT 05495-1000  
[invoicesat.consolidation@ice.dhs.gov](mailto:invoicesat.consolidation@ice.dhs.gov)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT NO. CODE

2. PAGE OF PAGES

3. AMENDMENT/MODIFICATION NO.

3. EFFECTIVE DATE

4. REQUISITION/PURCHASE NO.

5. PRODUCT NO. (if applicable)

6. ISSUED BY

CODE

7. CONTRACTING OFFICER

7. ADMINISTERED BY (if other than agency)

CODE

U.S. Department of Homeland Security  
Office of Acquisition Operations  
PMA Acquisition Management  
240 Maryland Drive, 205, #6113  
Washington DC 20535-1113

8. NAME AND ADDRESS OF CONTRACTOR (Use street, county, State and ZIP Code)

9A. AMENDMENT OF SOLICITATION NO.

9B. PARCEL OR PARTIAL QUANTITY

9C. (b)(6)

9B. DATE (MM/DD/YYYY)

9D. (b)(6)

9A. MODIFICATION OF CONTRACT ORDER NO.

9B. DATE (MM/DD/YYYY)

9C. (b)(6)

9D. DATE (MM/DD/YYYY)

9E. (b)(6)

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers \_\_\_\_\_ is extended \_\_\_\_\_ is not extended. Offerors will acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 9, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or other rapid delivery telegram or other means (reference to the solicitation and this amendment) and is effective prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (required)

Not Applicable

(b)(4)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO., AS DESCRIBED IN ITEM 14.

- A. THIS CHANGE ORDER IS ISSUED PURSUANT TO \_\_\_\_\_ THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 14.
- B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in buying price) SET FORTH IN ITEM 14 PURSUANT TO THE AUTHORITY OF FAR 43.117.
- C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO \_\_\_\_\_ THEORY OF \_\_\_\_\_
- D. THE SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO \_\_\_\_\_
- E. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor's sign. A is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Originated by OIG, section readings, including solicitation/contract subject matter where feasible)

Contracting Office: (b)(6)

Contracting Office: Human Factors/Behavioral Sciences Division

Contracting Office: (b)(6)

Except as provided herein, all terms and conditions of the document referenced in item 14 of this CA as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNOR (Type or print)

(b)(6)

15B. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)

(b)(6)

16. CONTRACTING OFFICER

(b)(6)

17. DATE SIGNED

July 26, 2013

(b)(6)

18. DATE SIGNED

7/29/2013

NSN 7540-01-152-8070  
Previous editions obsolete

STANDARD FORM 35 REV 11-82  
Prescribed by GSA  
FAR 48 CFR 53.249

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
 CS-10F-00976/HHSRQDC-11-F-00087/200004

PAGE OF  
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NAME OF OFFEROR OR CONTRACTOR  
 RESEARCH TRIANGLE INSTITUTE

ITEM NO (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
1003	<p>ALC: 70-08-1513                      TAS: 70350800</p> <p>The purpose of this modification is to add and fully fund Task 5 and increase the task order ceiling, in accordance with the attached revised Statement of Work (SOW) (11 pages).</p> <p>As a result of this action, the total obligated amount is increased by (b)(4) from (b)(4)</p> <p>As a result, the task order ceiling is increased by (b)(4) from (b)(4) to (b)(4)</p> <p>All other terms and conditions remain unchanged.                      AAP Number: N/A DG/DPAS Rating: NONE                      Delivery: 01/31/2015                      Discount Terms:                          Net 30                      Delivery Location Code: S&amp;T MURRAY LANE                      DHS S&amp;T                      245 Murray Lane                      Building 410                      Washington DC 20528</p> <p>FOB: Destination                      Period of Performance: 09/14/2011 to 01/31/2015</p> <p>Add Item 1003 as follows:</p> <p>Task 5: CHRNE Standards for First Responders</p>				(b)(4)

## **Statement of Work for Program Evaluations**

### **U.S. Department of Homeland Security Science & Technology Directorate Resilient Systems Division Biometrics**

**Task Order HSHQDC-11-F-00087 Modification P00004  
PR No. RSST-13-00032**

This Statement of Work (SOW) outlines the activities that are involved in acquiring technical and consulting services in the social, behavioral, and economic sciences. These services will be responsible for addressing the methods, models and technologies to conduct program evaluations on biometric technologies within the Resilient Systems Division (RSD) of the Science & Technology Directorate (S&T).

#### **I. BACKGROUND**

The U.S. Department of Homeland Security (DHS) is committed to using cutting-edge science and technology in its quest to make America safer. The DHS S&T is tasked with advancing the scientific, engineering, and technological resources of the United States and leveraging these resources into tools to help protect the homeland. The Resilient Systems Division (RSD) applies the social and behavioral sciences in order to improve the detection, analysis, and understanding of threats posed by individuals, groups, and radical movements; to support the preparedness, response and recovery of communities impacted by catastrophic events; and to advance national security by integrating human factors into homeland security science and technologies.

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This SOW summarizes the work that is planned for program evaluations in DHS S&T. This work will be conducted through engaging the technology stakeholders, focusing the evaluation design on the technology and the purpose of the overall operational program, gathering and analyzing evidence, and producing a final report that will result in an improved program. Those lessons learned will help inform future DHS S&T program conceptualization and execution, and will lead to improvement in the quality and effectiveness of programs transitioned to customer component agencies.

## II. SCOPE OF WORK

During the base period of performance, the Vendor will conduct program evaluations on the following DHS S&T programs: DHS Biometric Exit Pilots and the Rapid DNA project. In addition, there is an option for an evaluation of the Mobile Biometrics Project, an option for the evaluation of search capabilities for the Transportation Security Administration and an option for an evidence-based evaluation of Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) Standards for First Responders. The Vendor will develop and utilize a scientifically sound method to perform the following tasks:

- Identify and engage stakeholders;
- Determine evaluation needs;
- Develop measures of activities and outcomes;
- Identify, assess and gather data;
- Analyze the data;
- Reach operationally relevant conclusions; and
- Ensure the use and sharing of lessons learned.

Under this effort, the Vendor will be responsible for performing the following activities:

- Development of measures of progress;
- Assessment of the impact and effectiveness of the technology, performance, or innovation in the operational environment and identification of areas of improvement;
- Development of a baseline assessment of the operational program to inform the creation of an evaluation framework that is specifically tailored to the program, personnel performance or the technology being evaluated and;
- Preparation of a final report identifying lessons learned and provides both S&T and the operating agency with a road map for building on the evaluation's results. The report will be provided to the program managers of the component agency, RSD, and other DHS stakeholders.

## III. SPECIFIC TASKS

The specific tasks that are involved in the evaluation of DHS S&T technologies are provided in the following paragraphs:

### *Identify and Engage Stakeholders*

In consultation with RSD, the Vendor will identify and engage relevant stakeholders. These include those involved in program operations, those served or affected by the program, and the primary users of the evaluation (those in a position to make decisions about the program). Stakeholders will be systematically identified in conjunction with RSD. Stakeholders will have the purpose of the program evaluation explained to them, and how their participation in the process fits into the evaluation as a whole.

### *Description of the Program*

The Vendor, in consultation with RSD, will specifically identify the purpose of the project and the research questions that it intends to address, with necessary special emphasis on the in-practice implications of the technology, performance, or innovation on programmatic goals and objectives. The Vendor will then conduct a baseline assessment on the current program implementation or previously conducted pilots.

### *Focus Evaluation Design*

The Vendor will then tailor the evaluation to the specific program and purpose of the evaluation. The Vendor will need to clarify who will use the evaluation results, and how those results will be used. The Vendor will also consider the context of the program in order to determine the appropriate evaluation strategy that is best suited for the specific program. Where feasible and cost effective, the developed field experimental methods will be used by the Vendor, unless RSD approves another approach.

### *Identify, Assess, and Gather Data*

As part of the design stage, the Vendor will be responsible for the assessment of data needs and availability along with obstacles to and the necessary costs of data acquisition. The normal expectation from the Government is that both quantitative and qualitative data may be relevant to the conduct of an evaluation. Data of only one type will be used and collected if explained to the satisfaction of RSD. To keep costs low, data gathering by the Vendor will utilize existing program data to the extent feasible. To the extent that privacy and other rules permit, the data will be stored in a form that will allow the agency or S&T to reuse it in any follow-on or future work as appropriate without the payment of license or other fees.

### *Analyze Data and Reach Conclusions*

After the data have been gathered, the Vendor will analyze the data using appropriate statistical and qualitative methods in order to assess program performance and to identify any gaps or weaknesses in or strengths of the technology as operationally applied. The Vendor will also be responsible for tying any conclusions to program standards of performance and to the extent there are weaknesses in the operational application of the technology or innovation, the Vendor will propose mitigation strategies.

### *Final Report*

The Vendor will generate a final written report and provide any accompanying presentation slides, that sets forth the research goals, explains the research strategies, describes the research design as implemented and the data used with a discussion of their strengths and limitations, reports the methods and results of the analysis, including, where appropriate, tables, key statistical outputs or other information summaries and recommendations for actions in the form of a final report. The report will also include a brief executive summary and, if appropriate, statistical tables, summaries of the qualitative data or other appendices. The copyright for the report will be held by DHS.

This report will be made available to the program manager(s) of the component agency and to RSD. Any additional dissemination of the report will be made at the discretion of RSD. The basis for the recommendations, their rationales and the data behind them will be explained by the Vendor to the responsible program manager(s) and any relevant stakeholders or other potential users that have been identified by the program manager. Up to five such briefings of up to 90 minutes in length may be requested by RSD.

### *Projects to be Evaluated*

Base Period of the Task Order -- the Vendor will focus on the Rapid DNA Project (Task 1) and DHS Biometric Exit Pilots (Task 2). Option Period 1-- the Vendor will design the evaluation framework of the Mobile Biometrics Project (Task 3), upon option exercise. Option Period 2-- the Vendor will design the evaluation framework of the TSA Personnel Evaluation Project (Task 4), upon option exercise. Optional Task 5 -- the Vendor will design the evaluation framework of the CBRNE Standards for First Responders project (Task 5). All projects are described in additional detail below:

#### *SOW Task 1.0 until/1.4: Program Evaluation for Rapid DNA Project (Base Period-- Task 1)*

United States Citizenship and Immigration Service (USCIS) currently uses fingerprints to check for any criminal history or immigration violations on benefit applicants, but these biometrics do not determine if persons are related to one another. However, DNA (deoxyribonucleic acid) does allow for the determination of family relationships since children receives half of their DNA from each parent. Until recently, however, it required a laboratory full of equipment and a highly trained forensic analyst to interpret the results. Sending a sample to a lab and waiting for it to be processed could take weeks to months at the cost of \$300 to \$400 per sample. Rapid and low-cost DNA processing permits efficiencies in the processing of valid applicants, reduces the costs associated with processing, deters fraud in applications, and ultimately increases the number of legal immigrants admitted into the country.

Rapid and low-cost DNA processing may also prevent fraud and illegal profiteering with regard to kinship benefits. USCIS has identified the need for accurate DNA analysis to test kinship that would take less than one hour at a cost of under \$100. This testing needs to be done in field locations, rather than at external labs, on a desktop-size device which is easy for the adjudicator to operate.

In 2008, a DNA screening pilot program that tested DNA for kinship of hundreds of cases involving family reunification in East Africa found that a considerable number of kinship claims were contradicted by DNA testing. Currently, DNA analysis to determine identity and kinship is not widely feasible because of cost and time considerations. With document fraud an increasing concern for USCIS adjudicators, a technology that could provide validation of family relationship rapidly and accurately while in the field would help ensure the efficacy of the process. The primary objective is to verify family relationships (kinship), but Rapid-DNA will also allow the identification of known criminals among those seeking asylum or immigration, verify relationships in overseas adoptions, and provide for family reunification in mass-casualty situations. The initial target customer is USCIS Refugee, Asylum and International Operations Directorate