

JUSTIFICATION FOR SOLE SOURCE (Simplified Acquisitions <\$150K)

The service or material listed on (Document number) N63285-13-SU-10126 is sole source and competition is precluded for reasons indicated below. There are no substitutes available for this material.

Restricted to the following source. Provide *original manufacturer's* name. (If a sole source manufacturer distributes via dealers, *ALSO* provide dealer information.)

Manufacturer: TRACER TECHNOLOGIES, INC

Manufacturer POC & Phone Nr.

Mfr. Address: P.O. BOX 189 WINDSOR, PA 17366

Manufacturers Dealer/Rep \_\_\_\_\_

Dealer/Rep Address/Phone Number \_\_\_\_\_

\_\_\_\_ Description of the item or service required, the estimated cost, and required delivery date. The proposed acquisition is to purchase Easy Voice Biometrics software that is used for voice identification and analysis. The Easy Voice Biometrics product is designed for Law Enforcement Agencies to perform the following tasks:

1. Facilitating voice expert identification analysis in the performance of multi-target forensic audio investigation by eliminating imposters and ranking the top-in-the list speakers according to the biometric traits likelihood probability.
2. Express attribution of the investigated speakers voices by the proximity degree.
3. The product is designed to assist in two ways: - For multi-target voice analysis cases to arrange the speakers by match probability.
4. 1 vs 1 comparison
5. Easy Voice Biometrics uses a total variability method; the following steps are applied for comparison using this method: Speaker's voice model calculation.
6. On that stage, there are MFCC (Mel Fourier Cepstrum Coefficients, cepstral coefficient by Mel scale) speeches features calculated- the features, describing spectral representation of speech signal in different moments. Density of identification features distribution is modeled by using of GMM. Using the specifically adapted factor analysis, the feature of GMM-model are represented as an I-vector of small dimension in the space of "total variability", which includes subspaces of "own channels" and "own voices", which are used in JFA (Joint Factor Analysis Distinctive feature of such GMM-model representation is its high self-descriptiveness and small data size.
7. Making the decision about the identification, on stage of I-vectors comparison the SVM-classifier is used, which provides high speed and good quality of identification. By the resulting SVM distance, there are FR/FA errors calculated)

\_\_\_\_ Specific characteristics of the material or service that limit the availability to a sole source (unique features, function of the item, etc). Describe in detail why only this suggested source can furnish the requirements to the exclusion of other sources.

Market research determined that there are no other forensic voice biometric software programs that have the multi-target capability that easy voice biometrics features. The other products only conduct a 1 to 1 comparison of sample voices. A market survey was conducted to determine the availability of like voice based biometric software. The survey included Internet searches, searches of forensic science product websites, and of products displayed at the recently concluded National Technical Investigators Association conference. The Majority of voice biometric identification system were for commercial call center services and could not be adapted for forensic analysis. Of those that were designed for forensic purposes, they were designed for one on one matching.

\_\_\_\_\_The requested material or service represents the minimum requirements of the government.

**CHECK & FILL IN ALL APPLICABLE BLANKS BELOW**

\_\_\_\_\_The material/service must be compatible in all aspects (form, fit and function) with existing systems presently installed. Describe the Equipment you have now and how the new item/service

NASUPINST 4200.85D  
25 April 2005

must coordinate, connect, or interface with the existing system.

---

---

---

---

---

\_\_\_\_\_A patent, copyright or proprietary data limits competition. The proprietary data is \_\_\_\_\_

---

---

---

---

---

\_\_\_\_\_These are "direct replacements" parts/components for existing equipment.

\_\_\_\_\_Other information to support a sole-source buy:

The prime requirement for this procurement was a system that can also analyze multiple samples against more than one sampling. The survey concluded the Easy Voice Biometrics met this requirement and was the only system that was identified with this attribute. Tracer Technologies in York, PA is the sole North American distributor for Easy Voice Biometrics.

**I CERTIFY THAT STATEMENTS CHECKED, AND INFORMATION PROVIDED ABOVE, ARE COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I**

UNDERSTAND THAT THE PROCESSING OF THIS SOLE-SOURCE JUSTIFICATION  
PRECLUDES THE USE OF FULL AND OPEN COMPETITION.

Signature Albert L. Alford Activity NC75HQ / Tech Service  
Title Program Asst  
Date 3/4/2013

---

Contracting Officer Signature Cynthia J. J...  
Date 3/6/13  
SAP Sole Source