(U//FOUO) Voice Biometrics Capability Proven During Recent Technology Demonstration

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(U//FOUO) If a Crime Scene Investigator can recover forensic evidence, such as a portion of a fingerprint, characterize the patterns that make up that print, compare those fragments to a national database, identify a culprit, solve the crime and wrap-up a conviction in less than an hour-long television show, why couldn't the same occur with a voice snippet recorded at an entry control point or even during a patrol in a hostile area? A Joint Capability Technology Demonstration (JCTD) project, called Coordinate Operational Resources for Voice Exploitation Technology (CORVET), managed by the Expeditionary SIGINT Services Office (ESSO), External Programs Branch, recently demonstrated a solution that promises to do just that.

(U) About Biometrics

(U//FOUO) Over 100 years ago, the Calcutta Anthropometric Bureau in India approved using fingerprints as a means to identify people. The Henry Classification System, developed by Azizul Haque and Hem Chandra Bose, and formalized by the United Kingdom's Edward Richard Henry, was the basis of the world's first accurate method to identify people based on quantifiable physical characteristics. The field of biometrics, which includes fingerprints, has expanded to include iris scans, hand geometry, facial recognition and DNA analysis as methods available for this purpose.

(U//FOUO) CORVET's Goals

(U//FOUO) The External Programs Branch (S14R2) has been involved in ***establishing a capability for a new method, or modality, of biometrics using voice characteristics to determine the identity of a subject.*** In CORVET, a model, based on an initial recording taken from a person of interest, is created and associated with other biometric data from that person and stored in a database. Subsequent voice collections can be compared with the stored models and used to identify the person of interest at a later time. Under these circumstances, voice biometrics will play a pivotal role in Department of Defense's goal of attaining "identity dominance." As a result, the adversary will no longer be able to hide behind false representations.

(U//FOUO) CORVET interview station

(U//FOUO) Past and Future Steps for the CORVET Project

(S//REL) S14R2 serves as the Technical Manager (TM) for CORVET. This project integrates present technology to identify a person based on their voice characteristics. Current efforts combine software developed at the Air Force Research Laboratory (AFRL) and existing biometric collection hardware to provide a means for warfighters to identify subjects that have had voice biometrics collected and processed. Under the two-year project, the demonstration focuses on detention operations and force-protection scenarios, where the tools' ability to distinguish among the individuals who come and go can be tested. As the capability refines, other scenarios will be explored.

(U//FOUO) The next step for the CORVET team will be to participate in a "limited utility assessment" (LUA), scheduled to take place at the INSCOM Detainee Training Facility (IDTF) Camp Bullis, San Antonio, Texas, during 22- 26 September 2008. The purpose of the LUA is to

conduct a formal, objective assessment of the voice biometric speaker-identification technology capability against stated U.S. Central Command requirements. If successful, CORVET will progress to a final technology demonstration and a final "operational utility assessment" (OUA) scheduled for summer/fall 2009.

(U//FOUO) After the OUA, the technology will have matured to the level and rigor required to place the capability into the hands of the warfighter. When the capability and utility are validated, the technology will transition into a "program of record," move into the acquisition phase, and delivered to the warfighter. Ultimately, CORVET provides another arrow in the warfighter's quiver. Its goal is to accelerate the warfighter's ability to find, fix, and finish the enemy.

(U) **Possible Applications for SIGINT?**

(S//SI//REL) Current technology integrated for the CORVET project is aimed at supporting ongoing HUMINT operations; however, there are a number of SIGINT applications that stand out as possible benefactors to successful demonstration of this capability. For example, identification of a known subject using a previously unknown communication channel could aid in establishing maps of communication and social networks needed to facilitate counter-terrorism operations. CORVET is taking systematic steps in its approach to enable the SIGINT system. Its vision is to have this intelligence capability provide a two-way windfall: where SIGINT enables HUMINT and similarly, HUMINT enables SIGINT. Once that challenge is achieved, CORVET will provide tremendous warfighter utility.

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