Use of Mobile Biometric Devices in Border Patrol Operations

ANSI/NIST-ITL WORKSHOP

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Introduction

- ## A Quick History:

  - Subjects encountered by Border Patrol Agents in the field have weak or absent identities and commonly misrepresent themselves upon initial inspection. Field interview techniques are timely and yield marginal results.

  - Once an identity is confirmed and the subject is arrested, they are transported to a local station in order to be processed and booked. This creates operational inefficiencies by removing an agent from his/her assigned area of responsibility for a significant period of time.

  - A need exists to biometrically identify and process subjects in a remote environment.

Current Devices and Uses

- **Devices:**
  - Four Cross Match SEEK II devices deployed at Tucson, San Diego and Grand Forks Border Patrol Sectors
  - Each SEEK programmed with the e3Lite user interface and uses COTS Mission Oriented Biometric Software (MOBS) program for biometric capture
  - One Motion tablet w/Windows 7 at HQ

- **Users:**
  - Five users at each location were trained on the SEEK device, e3Lite interface and MOBS program

- **Use Cases:**
  - Checkpoint operations, transportation check operations, station intake (future), detainee management (future)

General Characteristics (1)

- **Purpose:**
  - Collect biometrics in the field via remote device and identify subjects through the captured data
  - Cache collected data in interoperable format (future)
  - Remotely process subjects, synch to local system of record and biometrically search/enroll through common databases
- **Desired enrollment/identification capabilities:**
  - Enrollment: Remote, synch to local database
  - Identification:
    - Location: in metropolitan or rural areas – under all indoor and outdoor environments.
    - Processing time: Start to finish including enrollment, 5 minutes
    - Operation type: Habituated operator will complete all tasks with device and detained subject

General Characteristics (2)

- **Database enrollment/identification:**
  - Enrollment
    - Biographic data, synch and enroll in EID database
    - Biometric data, synch and enroll in IDENT/IAFIS databases
    - Response time: 2 minutes once transaction has been submitted
    - Connectivity: WIFI, internal 3G/4G, LAN cable, remote access to CBP Network via VPN tunnel
  - Identification
    - Return enrollment number and FIN number to device from EID/IDENT upon completion
    - Return previous enrollments and identification to device; to include responses from IDENT, IAFIS, ABIS
    - Connectivity: WIFI, internal 3G/4G, LAN cable, remote access to CBP Network via VPN tunnel
    - Response requirements: 2 min once transaction is submitted

Mobile Unit Description

- **Mobile Unit Data Captured:**
  - Fingerprints (10 rolled)
  - Photograph
  - Basic Biographic Information
  - Iris capture (future)
- **Form Factor / User Interface**
  - Box type device 4"x 8"x 4", built in fingerprint scanner, fixed focal length iris scanner with NIR and digital camera (current)
  - Tablet type device with built in camera and fingerprint scanner (sled), milSpec case for tablet and sled (Future).
  - Current devices programmed with the e3Lite user interface and use COTS Mission Oriented Biometric Software (MOBS) program for biometric capture
  - "Lite" User Interface used for minimal data pull and entry to create record in local database

Data Exchange Requirements (Details)

- **Fingerprints and facial images sent to government databases for searching against all galleries**
  - Biographic information and unique identifier (CIV ID) sent along with transaction
- **Collected data cached on device in interoperable format for later extraction and sharing (future)**
- **Facial image quality to allow facial recognition in other government databases**
- **Face and fingerprint image meet quality standards of ANSI/NIST-ITL with associated metadata to ensure traceability and filtering capabilities for later use (future)**
- **Images geo-tagged for metadata filtering (future)**

Lessons Learned

- Current device requires multiple log-ins which frustrates users; need direct connect to network and single sign on
- Need the ability to capture biometrics offline and cache in a standard format for later extraction and use
- SEEK QWERTY keyboard and screen on current device is small; makes data entry tedious and time consuming
- SEEK daylight viewable screen is poor, both direct and indirect sunlight dissolve screen resolution
- Current tablet tested requires external keyboard for log-in

Future Plans

- Incorporate direct connect to DHS Network and single sign on for application access

- Capture and submit iris images to government databases

- Cache biometric data on device in standard format and make available for extraction and additional sharing

- Incorporate e3Lite user interface onto a tablet type device with biometric capabilities for additional use cases (TABB program w/DHS S&T)