Use of Mobile Biometric Devices in Border Patrol Operations
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
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)