FBI Next Generation Identification (NGI) Overview

Biometric Consortium Conference
Tampa, Florida
September 21, 2010
The BCOE is the FBI program for exploring new and advanced biometric capabilities to solve crimes and protect national security.

The Biometric Interoperability Program establishes interoperability between the FBI IAFIS and other biometric systems.

The NGI program will enhance the current IAFIS and offer state-of-the-art biometric identification services.
Integrated Automated Fingerprint Identification System (IAFIS)

IAFIS

- National fingerprint repository
- Supports over 18,000 Law Enforcement agencies
  - Local, State, Federal, Tribal, and International agencies
- Currently exceeding requirements
- Over 10 years old
- Initial capacity = 62,500
- Record high receipts = 300,113
- Accuracy = 92%

- IAFIS has lived up to and vastly exceeded performance expectations
- Now is the time to design for the future, rather than reacting to it
**NGI Implementation Schedule**

- **Increment 0**
  - Complete
  - **Advanced Technology Workstations**
    - Replace obsolete hardware
    - Provide high resolution of biometrics

- **Increment 1**
  - In Progress
  - **Initial Operational Capability**
    - Identification Fingerprint Search Capability
    - More accurate searches
    - Better support for rolled/flat processing

- **Increment 2**
  - In Progress
  - **RISC and Initial NGI Infrastructure**
    - Repository for individuals of special concern (RISC)
    - Rapid mobile searches
    - RISC Web Services

- **Increment 3**
  - In Progress
  - **Palms and Latents**
    - Investigative Palmprint search capabilities
    - National Palmprint repository
    - Latent Enhancements
    - Unsolved Latent File cascaded searches
    - Rapid DHS CBP response

- **Increment 4**
  - **Rap Back, Facial, Photo/SMT Search Capabilities**
    - Increased Response Times
    - Facial and SMT searches
    - IAFIS Functionality Replaced
    - Verification
    - Enhanced Interoperability
    - Disposition type of transactions
    - Web Services

- **Increment 5**
  - **Iris**
    - Conduct Iris Pilot based on trade study results

- **Increment 6**
  - **Full Operational Capability**
  - Technology refreshment

**NGI Implementation Schedule**

<table>
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<th>Increment</th>
<th>Year</th>
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<tr>
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<td>2010</td>
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<tr>
<td>6</td>
<td>2014</td>
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**Advanced Technology Workstations**

Increment 0 – Completed March 2010

**Resulting Benefits**

- Workstations include 30 inch monitors
- Higher resolution results in increased operational efficiency
- Cost effective way to accommodate future biometric technologies
- Upgraded towers, scanners, keyboards, and mice

“My productivity increased by 10 submissions per hour since the new ATWs were implemented. The bigger monitors make processing the work seem less stressful.” — CJIS Service Provider
Automated Fingerprint Identification Technology (AFIT) Deployment

Status
- Identification Fingerprint and Slap Fingerprint Segmentation Trade Study
  - Completed with contract awarded on July 17, 2009
- Currently in Implementation and Integration phase
- Operational Testing to begin Fall 2010

Resulting Benefits
- Increases fingerprint search accuracy to over 99%
- Reject less, process more
- Anticipate approximately 200 additional fingerprint hits per day
- Improves flat fingerprint searching
- Advanced matching algorithms
RISC and Initial NGI Infrastructure (Increment 2)

Status
- Currently in Final Design Stage
- Anticipate deployment 2011

Resulting Benefits
- Biometric searches of the worst of the worst – currently searching 1.2 million fingerprints of wanted persons, known or appropriately suspected terrorists, sex offenders, and persons of special interest
- Provides the “Street Cop” the ability to quickly assess subject’s threat level
- Response within seconds
- Supports mobile fingerprint identification operations on a national level
RISC Pilot – Implemented September 2007

- Pilot Agencies (Live)
  - Ohio Bureau of Criminal Identification and Investigation
  - Texas Department of Public Safety (Houston PD)
  - Florida Department of Law Enforcement
  - Maryland
  - Cleveland FBI
  - Cincinnati FBI

- Pilot Agencies (Test)
  - Minnesota Bureau of Criminal Apprehension
  - Houston PD apprehended 78 criminals within one year
    - Average response time 16 seconds
Establishes the National Palmprint System

Status
- Collected 1.4M palmprints to date
- Investigation (Latent) Fingerprint and Palmprint
  - Trade Study Report completed on January 22, 2010

Resulting Benefits
- Enable palmprints to be searched across the U.S.
- Palmprints have the potential of 30% higher conviction rates
- Provides rapid response for DHS Customs and Border Protection transactions
- More latent identifications to support terrorist and violent crime Investigations
Rap Back, Facial, SMT Search Capabilities Migration of Remaining IAFIS Functionality (Increment 4)

- Rap Back notification of criminal activity on previously enrolled individuals
- Facial Search
- Text based scars, marks, and tattoo (SMT) searches
- Enhanced Interoperability to include transition of shared services to NGI
- Fingerprint verification services
- Improved Response Times

**Resulting Benefits**

- Enhance public safety
- National level investigative searches of photos/SMTs
- More accurate and complete criminal history records
- Flexible and scalable architecture for future needs
## Response Time Improvements

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<tr>
<td></td>
<td>Response Time</td>
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<table>
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<th>NGI</th>
<th>Criminal</th>
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<td>10 minutes</td>
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<td>Routine</td>
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<td>Low</td>
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<td>Non-Urgent</td>
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<td>15 days</td>
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<tr>
<td>Verification</td>
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<td>15 minutes</td>
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Iris Pilot
(Increment 5)

Deploys all remaining NGI user functionality
- Iris Pilot

Resulting Benefits
- Enhanced correctional officer safety
- Less interaction
- Quicker acquisition
- Reliable
- Business value
Full Operational Capability (Increment 6)

- All performance specifications will be met
- Additional system tuning to meet non-functional requirements
- Technology Refreshment
NGI…The Key Piece
Next Generation Identification

Jerome M. Pender,  
Deputy Assistant Director  
CJIS  
1000 Custer Hollow Road  
Clarksburg, WV 26306  

Office: (304) 625-4200

THANK YOU!