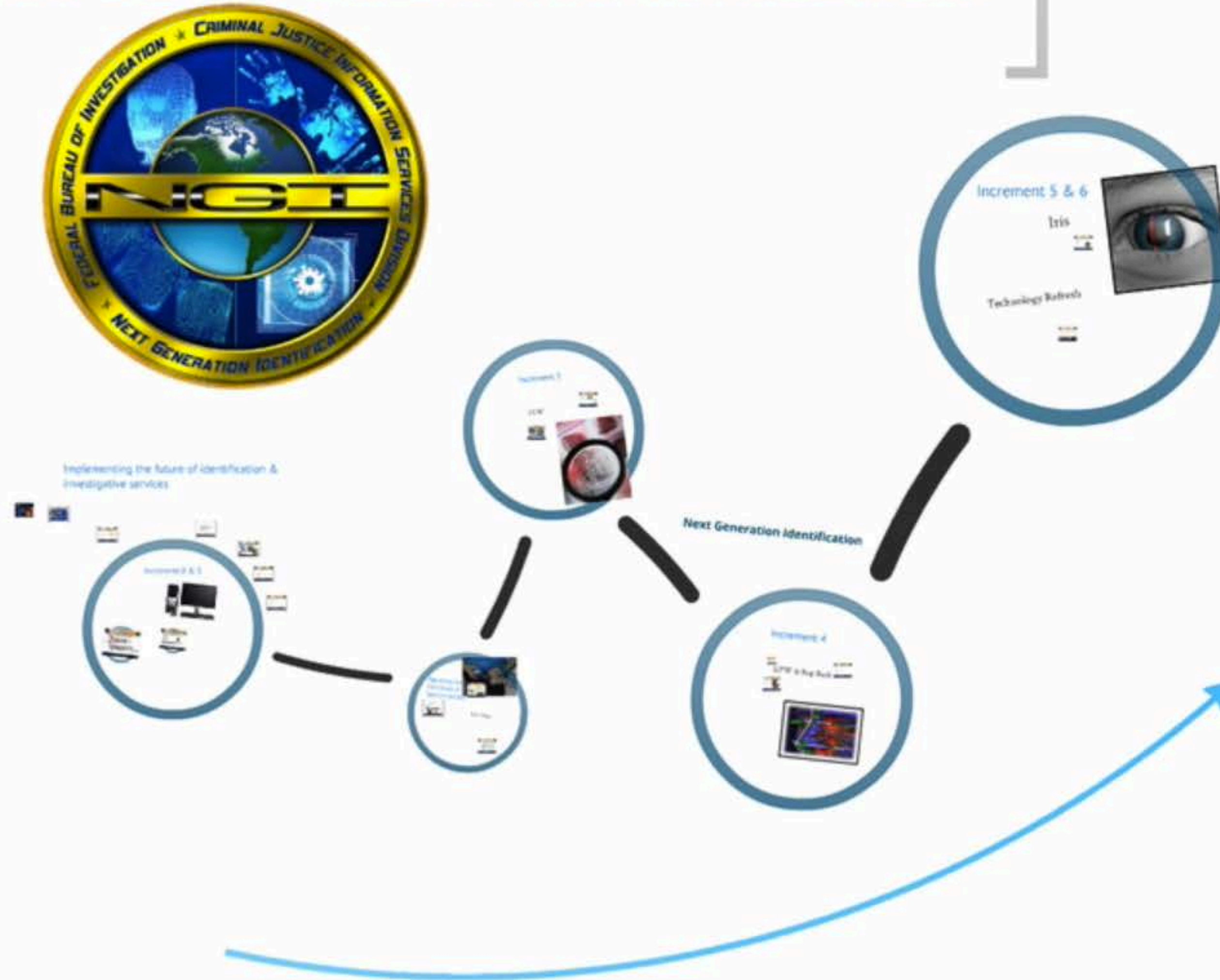


# Next Generation Identification





# Next Generation Identification



Increment

Technology





# NEXT GENERATION IDENTIFICATION

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RAP BACK

RAPID MOBILE ID

IRIS

FACIAL

LATENTS

PALMS





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WHERE WE'VE BEEN — WHERE WE ARE — WHERE WE'RE GOING

# BIOMETRIC TECHNOLOGY

**THE FIRST BIOMETRICS**  
AROUND 1870 FRENCH ANTHROPOLOGIST ALPHONSE BERTILLON DEvised A SYSTEM TO MEASURE AND RECORD CERTAIN BODY PARTS OF THE BODY.

**FINGERPRINT CARD SORTING MACHINE**

**FINGERPRINT PROCESSING SUPERROOMS**

**FINGERPRINT IMAGE COMPARISON (FIC)**

**THE QUICK CAPTURE PLATFORM (QCP)**  
PROVIDES FINGERPRINTING SERVICES VIA SATELLITE LINK IN HOSTILE AREAS.

**FACIAL RECOGNITION**

**THE FUTURE.... TODAY**

**QCP IN THE FIELD**

**PALM PRINTS**

**IN 1929 THE INTEGRATED AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (IAFIS) BECAME OPERATIONAL, PROVIDING THE FBI WITH AN ELECTRONIC ENVIRONMENT FOR FINGERPRINT PROCESSING.**

**THE FBI'S IDENTIFICATION DIVISION IS FORMED IN 1924**

**FINGERPRINT FILES**

**FINGERPRINT CARD CLASSIFICATION**

**FIC WORKSTATIONS**

**ROLLING THE WRITERS RIDGE PRINT**

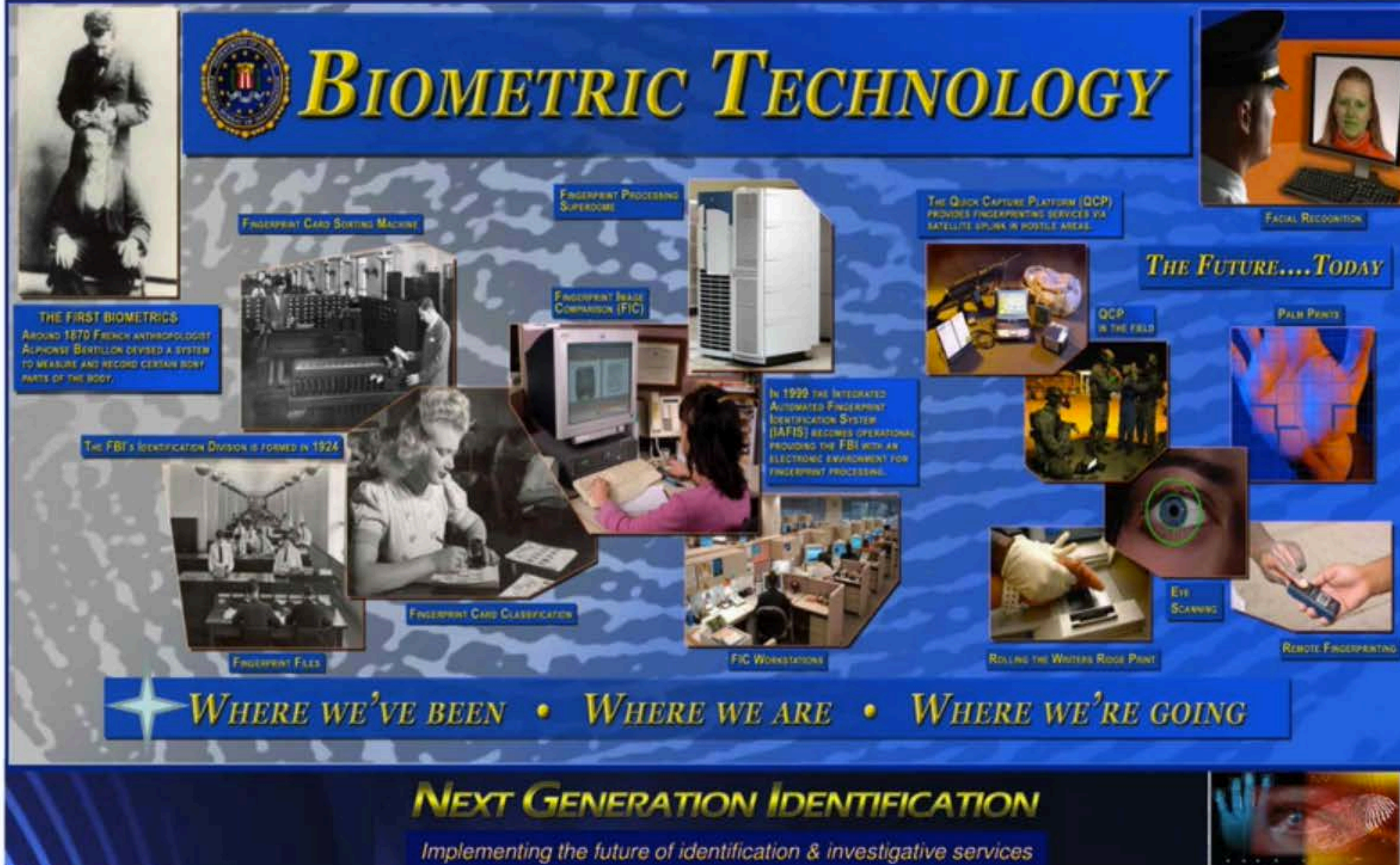
**EYE SCANNING**

**REMOTE FINGERPRINTING**

**WHERE WE'VE BEEN • WHERE WE ARE • WHERE WE'RE GOING**

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# The Path to NGI

## Mission Evolution

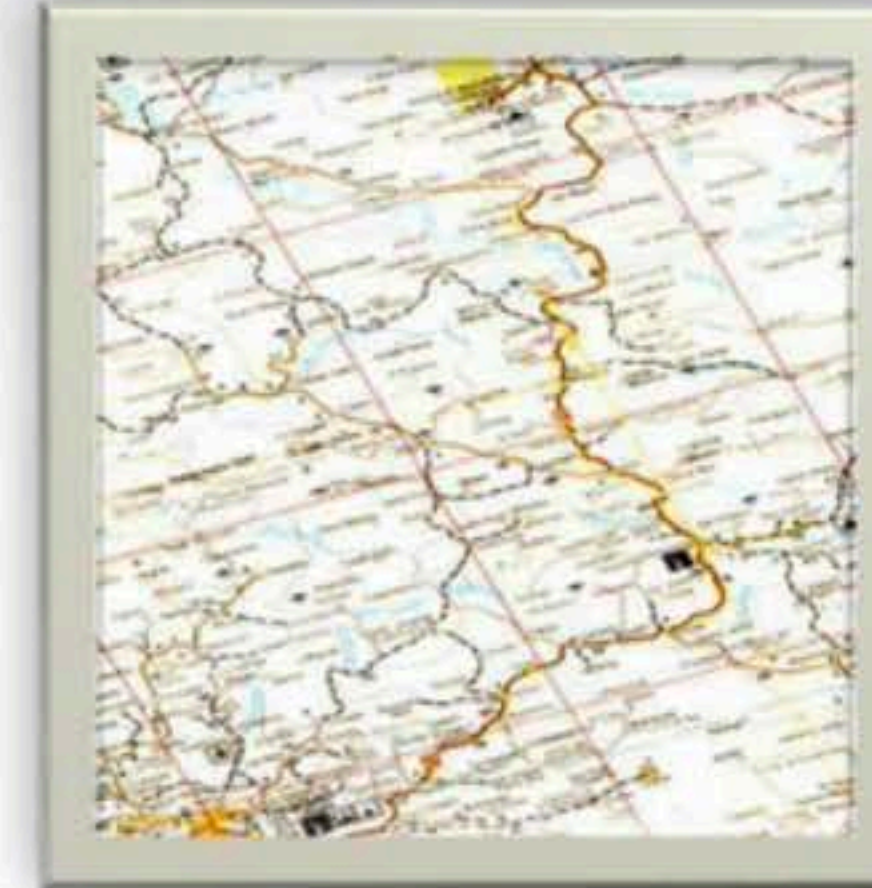
- ▶ Changed since IAFIS went live in 1999
- ▶ Supports both criminal and noncriminal justice requirements
- ▶ Counterterrorism mission

## Changing Business Needs

- ▶ Increased federal, state and local demand for identification services
- ▶ New legislation has significantly increased background checks
- ▶ Interoperability

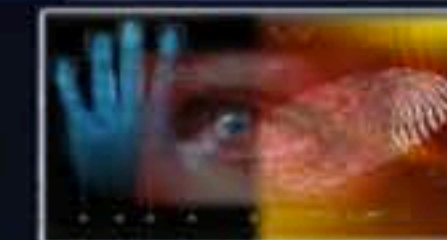
## Focus on Technology Advancements

- ▶ Improve biometric services
- ▶ Enhanced CJIS services
- ▶ Technological advancements to improve the system



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# Terrorist Sniper Footage

RT 3:00

You Tube





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## Stakeholder Concepts

State & Territory Agencies Canvassed	111
Federal Agencies Canvassed	54
<b>FBI</b>	<b>27</b>
<b>Non-FBI Federal</b>	<b>27</b>
Authorized Non-Criminal Justice Agencies	18
Special Interests	10
Total Completed	193



Over 1,000 Individuals Represented  
Over 1,000 Stakeholder Concepts Identified

So, What Is NGI.....What NGI is NOT

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# Shared Management

## Governance



## Drivers & Requirements



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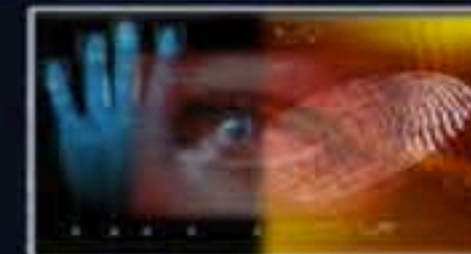


# Stakeholder Buy-In

- NGI is focusing on the customer
  - Continue to engage customer buy-in and value
    - The NGIPO conducts and receives regular user feedback from designated state representatives
  - Continue to form relationships with 4 major LE associations and state/local LE associations
    - IACP
    - MCC
    - MCSA
    - NSA
  - 4th Annual NGI User Conference – Scheduled for 08/14/2013
  - Continue to assess workload and demand requirements that could require additional scalability in the future
  - Rap Back Focus Group
  - US VISIT CBP 30 seconds to 10 seconds
  - Continued RISC expansion

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# NGI Implementation Schedule



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# Biometric Search Analysis Study

**NGI contract included a series of biometric search analysis studies  
(Trade Studies)**

- Assess biometric technology
- Provide recommendations for biometric implementation

**Five specific technologies :**

- Identification fingerprint and Slap fingerprint segmentation
- Palmprint
- Investigation (latent) fingerprint
- Face
- Iris

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# Increment 0 & 1







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## Increment 0 and Increment 1 **Completed**

- **Increment 0 – Advanced Technology Workstations...**
  - **(Completed March 2010)**
  - **Results:**
    - Workstations include 30-inch monitors
    - Higher resolution increased operator efficiency
- **Increment 1- Initial Operating Capability...**
  - **(Completed February 2011)**
  - **Results:**
    - New Equipment and Advanced matching algorithms
    - Increased fingerprint search accuracy to 99.6% (vice 92%)
    - Improved flat fingerprint searching
    - **110 Million + transactions processed by AFIT since implementation**
      - 59 Million + Criminal transactions
      - 51 Million + Civil transactions

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# AFIT Successes (Increment 1)

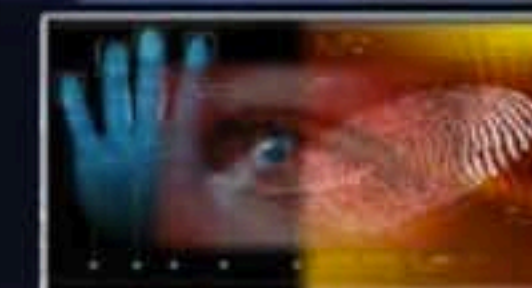
## AFIT identified criminal subjects with current charges of:

- Murder in the 1<sup>st</sup> degree
- Manslaughter
- Assault on Police
- Fugitive from Justice
- Harboring Aliens
- Smuggling Aliens
- Felony Abduction



## Additionally, during civil background investigations, AFIT identified subjects with prior charges of;

- Assault with a Deadly Weapon
- Masked Armed Robbery
- Immigration violation





# Repository for Individuals of Special Concern



RISC Video







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## RISC and Initial NGI Infrastructure (Increment 2) - **Completed**

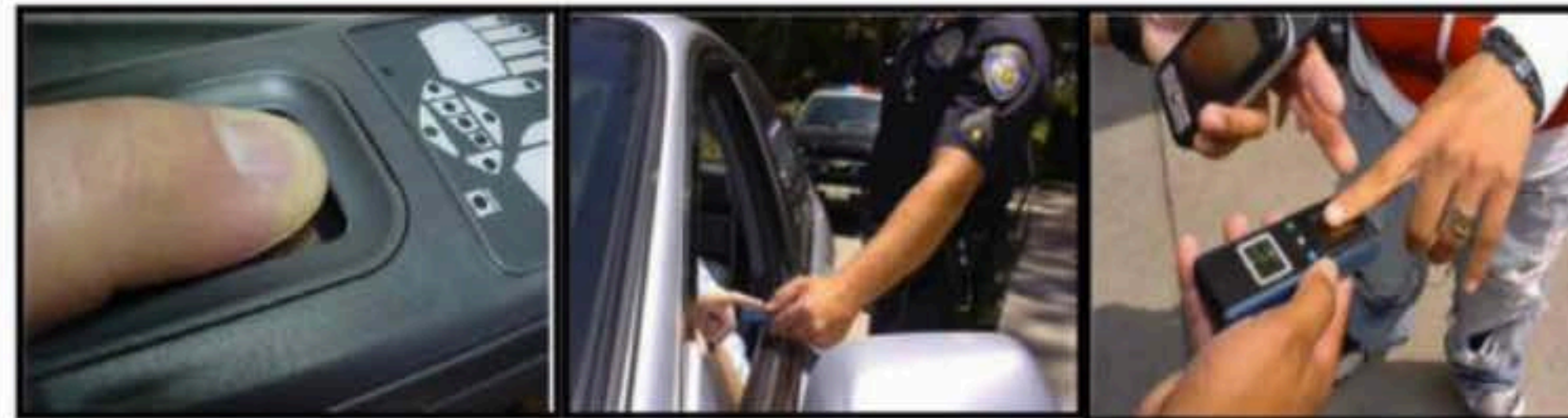


### Status

- Nationally available as of August 25, 2011

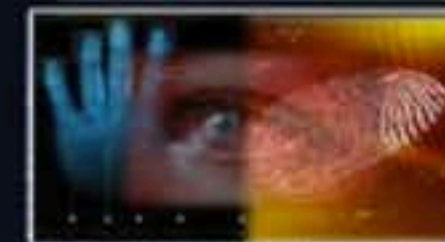
### Resulting Benefits

- Supports mobile fingerprint identification operations on a national level
- Biometric searches of the worst of the worst – Wanted persons ([including the Immigration Violator File](#)), Known or Appropriately Suspected Terrorists, & the National Sex Offenders Registry
- Provides the “Street Cop” the ability to quickly assess subject’s threat level



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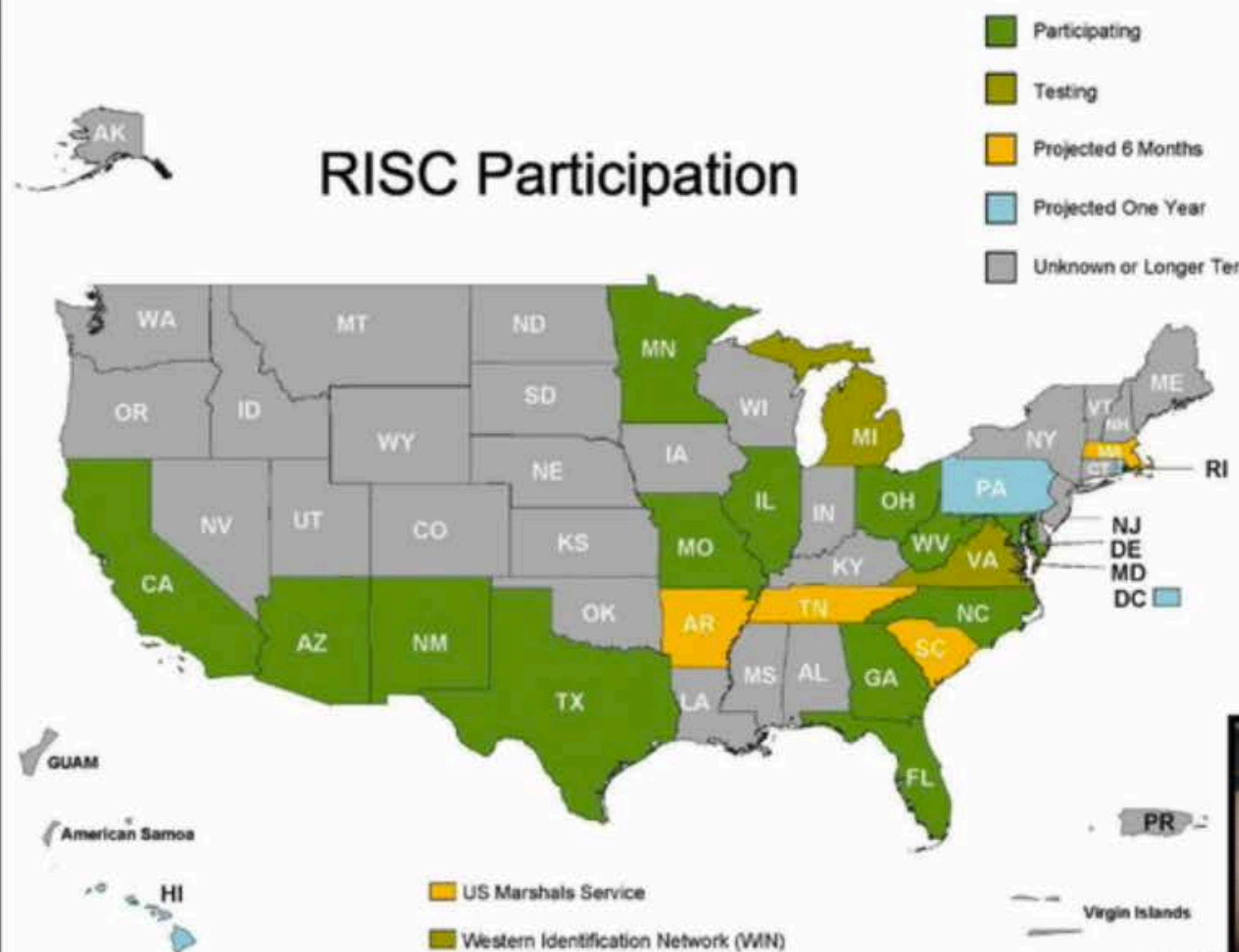


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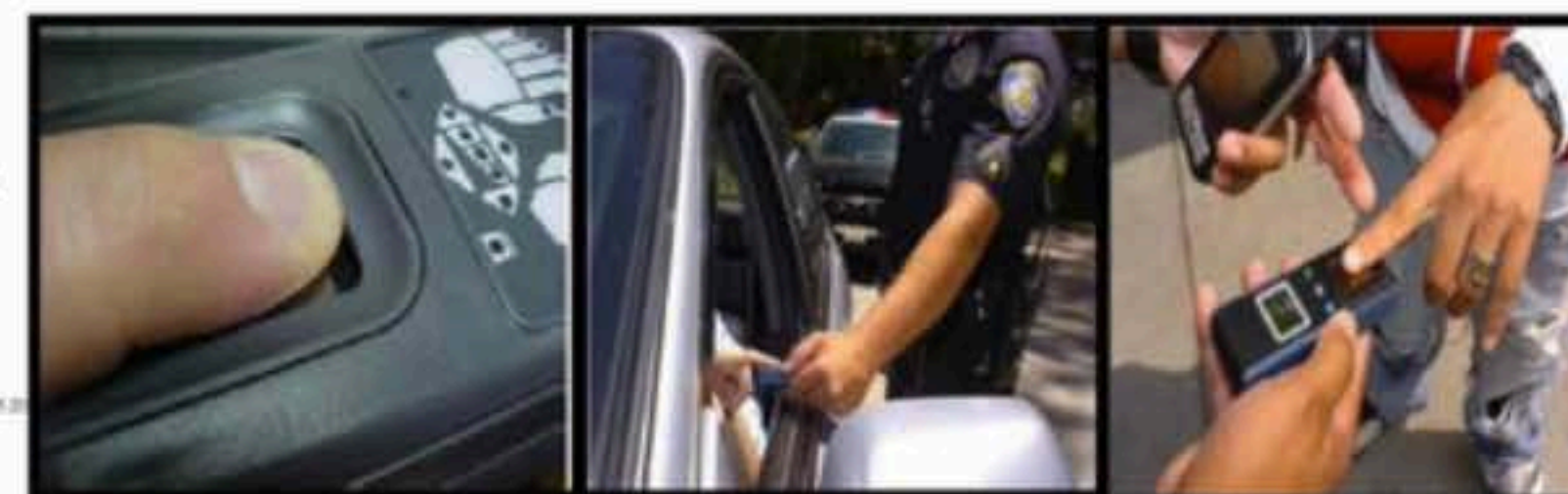


# RISC and Initial NGI Infrastructure (Increment 2) – **Completed**

## Repository for Individuals of Special Concern (Completed August 2011)



- Status
  - 13 States participating – 530+ agencies
  - States in process...
    - VA, SC, PA, HI, MI, TN, DC, RI & MA
  - Working with FBI, ATF, USMS, & DEA
- Resulting Benefits
  - Averaging approximately 800+ submissions per day
  - Average Red Hit Rates: 6-10%
  - Average response times: < 7 Seconds



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With each passing day

You Tube





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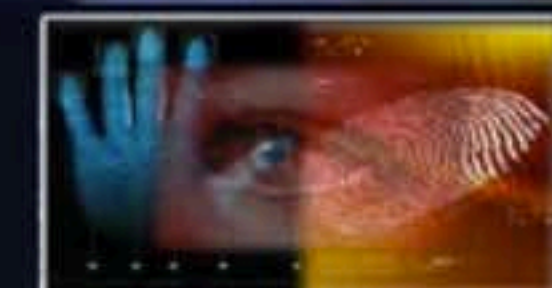
# RISC Success Story

## Houston, Texas

- Houston PD officers were working traffic stop at night when they noticed a subject riding a bicycle without proper headlight equipment
- Officers observed the subject had gang tattoos on his face and body
- Upon questioning the subject, it was revealed that he did not have proper identification

## Mobile ID

- The subject's fingerprints were scanned using a Mobile ID device. A hit was returned on the FBI RISC
- Within 2 minutes a hit was returned from the FBI RISC indicating the subject had felony wants from Wichita Falls, TX and Malheur County, Oregon





## Increment 3

ULW







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# Palm Prints, Latents and Rapid Response (Increment 3) – Completed 5/5/13



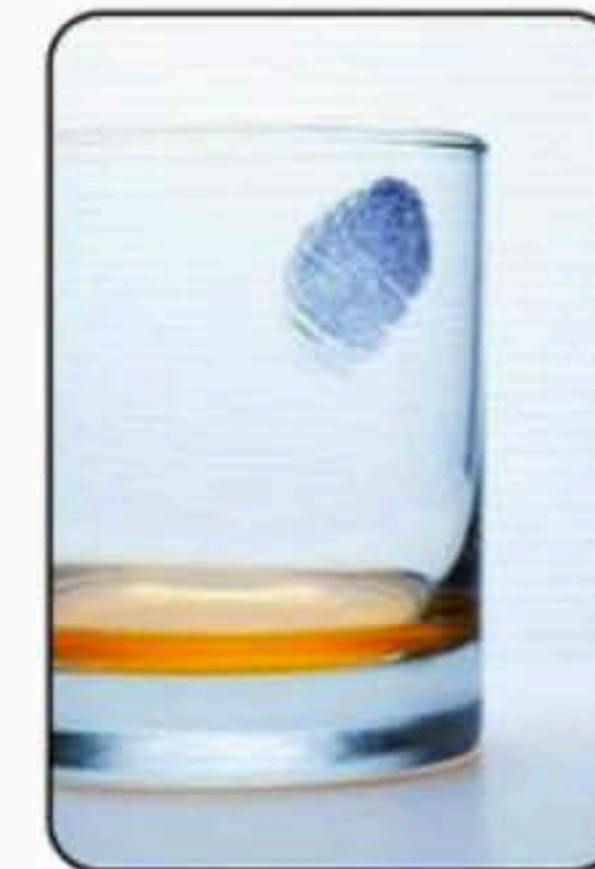
## Status

- **Completed** - May 5, 2013
- EBTS 9.3 - Published
- ULW 6.3 available



## Resulting Benefits

- Enables palm prints to be searched across the U.S.
- Provides rapid response for DHS Customs and Border Protection transactions
- More latent identifications to support terrorist and violent crime investigations
- Upgraded Universal Latent Workstation software



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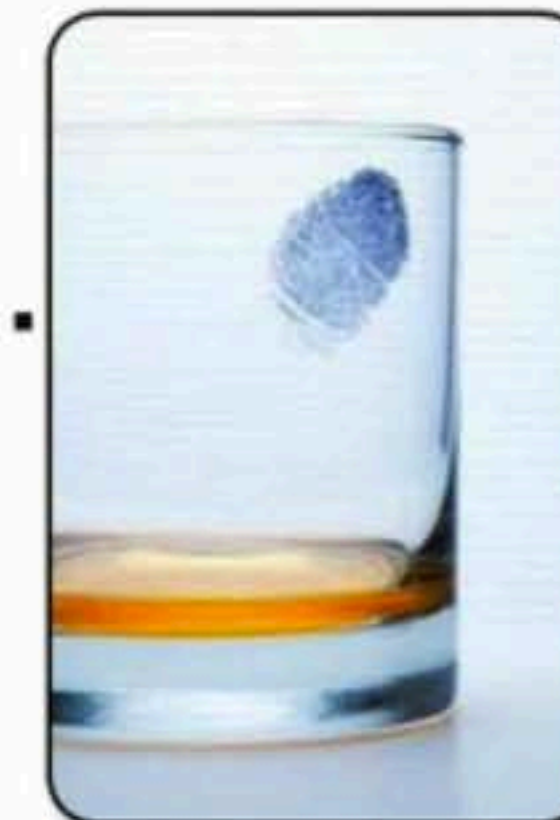


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# Palm Prints, Latents and Rapid Response (Increment 3)

- **Status...**
  - Implemented
- **Expected Results...**
  - **Significantly Improved Latent Service...**
    - **Faster.**
    - **Accuracy improved by factor of three.**
    - **Cascade latent prints against civil file.**
    - **Remove 30% search limits.**
  - **Provides palm print search capability Nation-wide..**
    - Collected 6.5 million palm prints.
    - 32 States/Territories & 11 Federal Agencies.
  - **Upgraded Universal Latent Workstation software.**



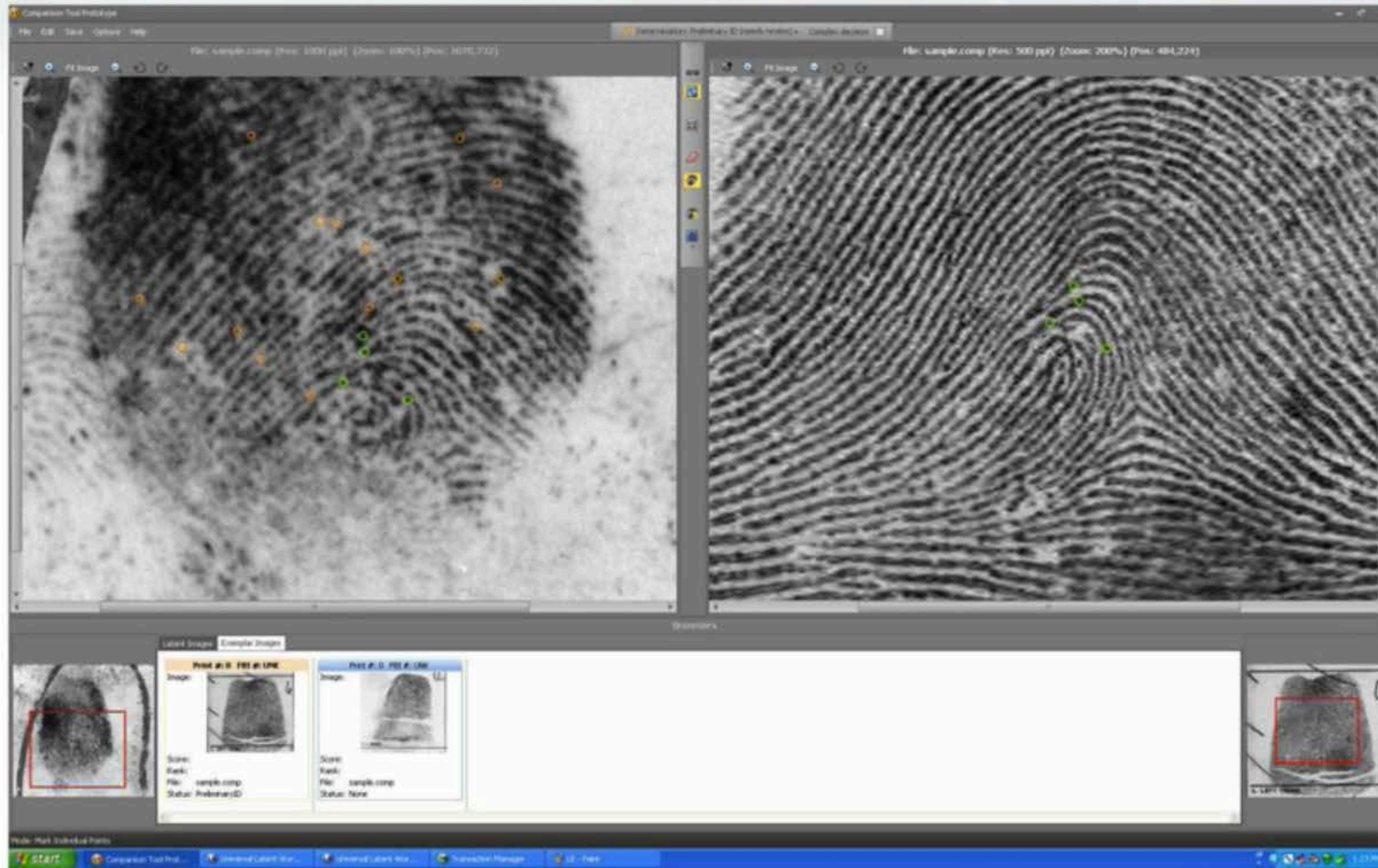
**NEXT GENERATION IDENTIFICATION**

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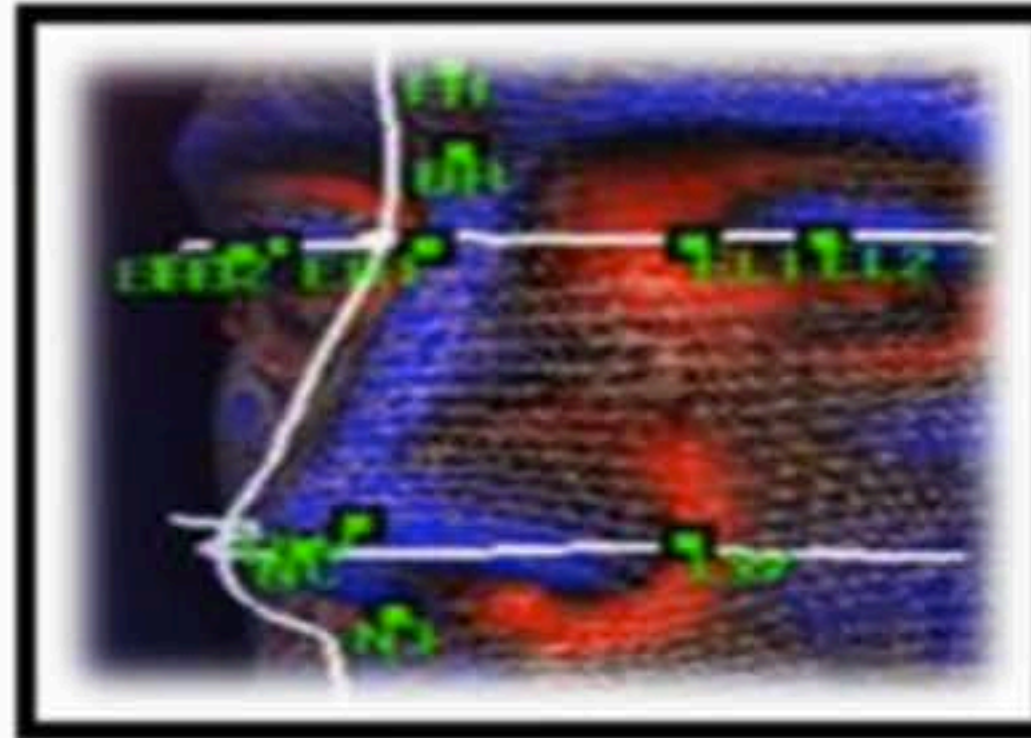
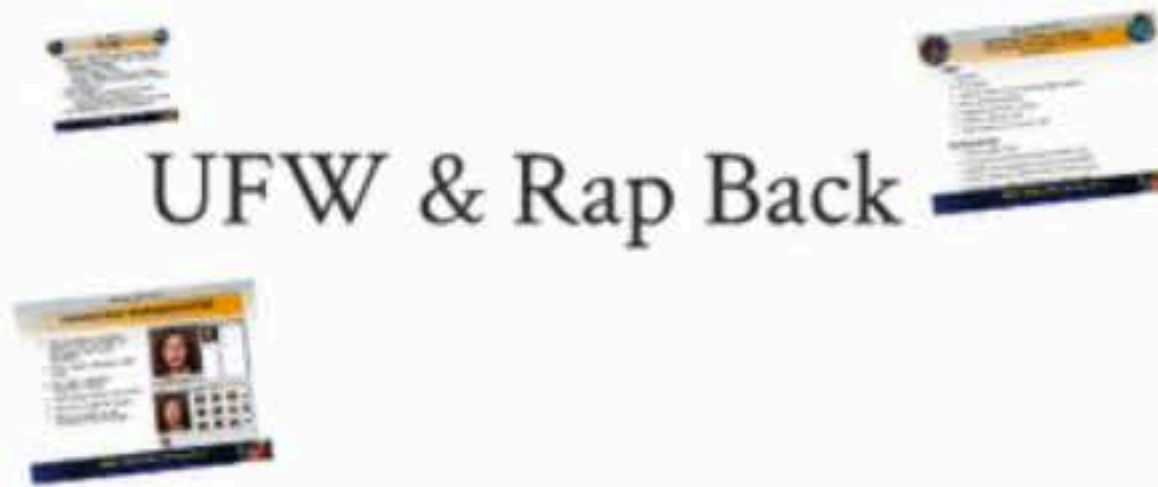
# Universal Latent Workstation





## Increment 4

UFW & Rap Back







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## Rap Back, Facial, SMT Search Capabilities, Migration of Remaining IAFIS Functionality (Increment 4 )



### Status

- Rap Back
- Facial Search
- Text based scars, marks, and tattoo (SMT) searches
- Enhanced interoperability
- Fingerprint verification services
- Improved response times
- Target deployment - Summer, 2014

### Resulting Benefits

- Enhance public safety
- Improved response time and system performance
- National level investigative searches of photos/SMTs
- More accurate and complete criminal history records
- Flexible and scalable architecture for future needs

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# Rap Back

(Increment 4)



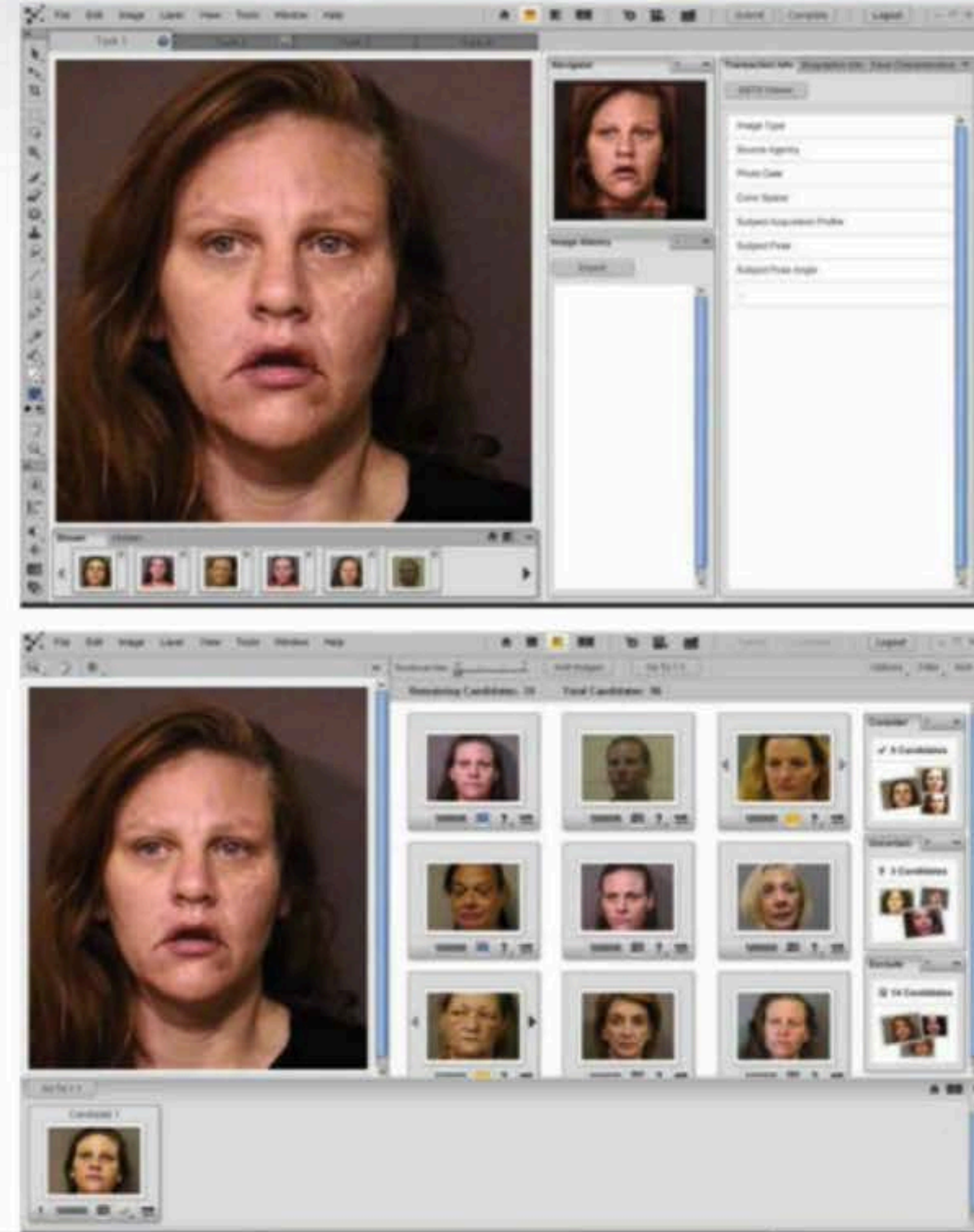
- **Continuous scrutiny of persons in positions of trust...**
  - **Person is enrolled in Rap Back at time of employment, appointment or enrollment...**
    - **Fingerprint Background Check.**
    - **Fingerprints searched with every criminal transaction.**
    - **Subscribing Agency is notified upon hit (Push notification).**
- **In Beta testing now...**
  - **Reviewing Best Practices and Lessons Learned.**
    - **31 states already use Rap Back (in-state).**
    - **Working National Alignment with Law Enforcement & SMEs.**
- **Full Privacy Review - PTA, PIA, SORN, ACLU.**





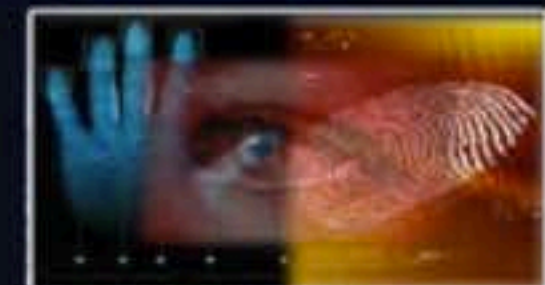
# Universal Face Workstation (UFW)

- FBI user software to support access to NGI Face Pilot and NGI System face search capabilities
- Cross Platform (Windows, OSX, Linux)
- Built upon a Biometric Integration Platform
- Built on open source frameworks
- Extensive support for plugins
- Will be available for law enforcement free of charge



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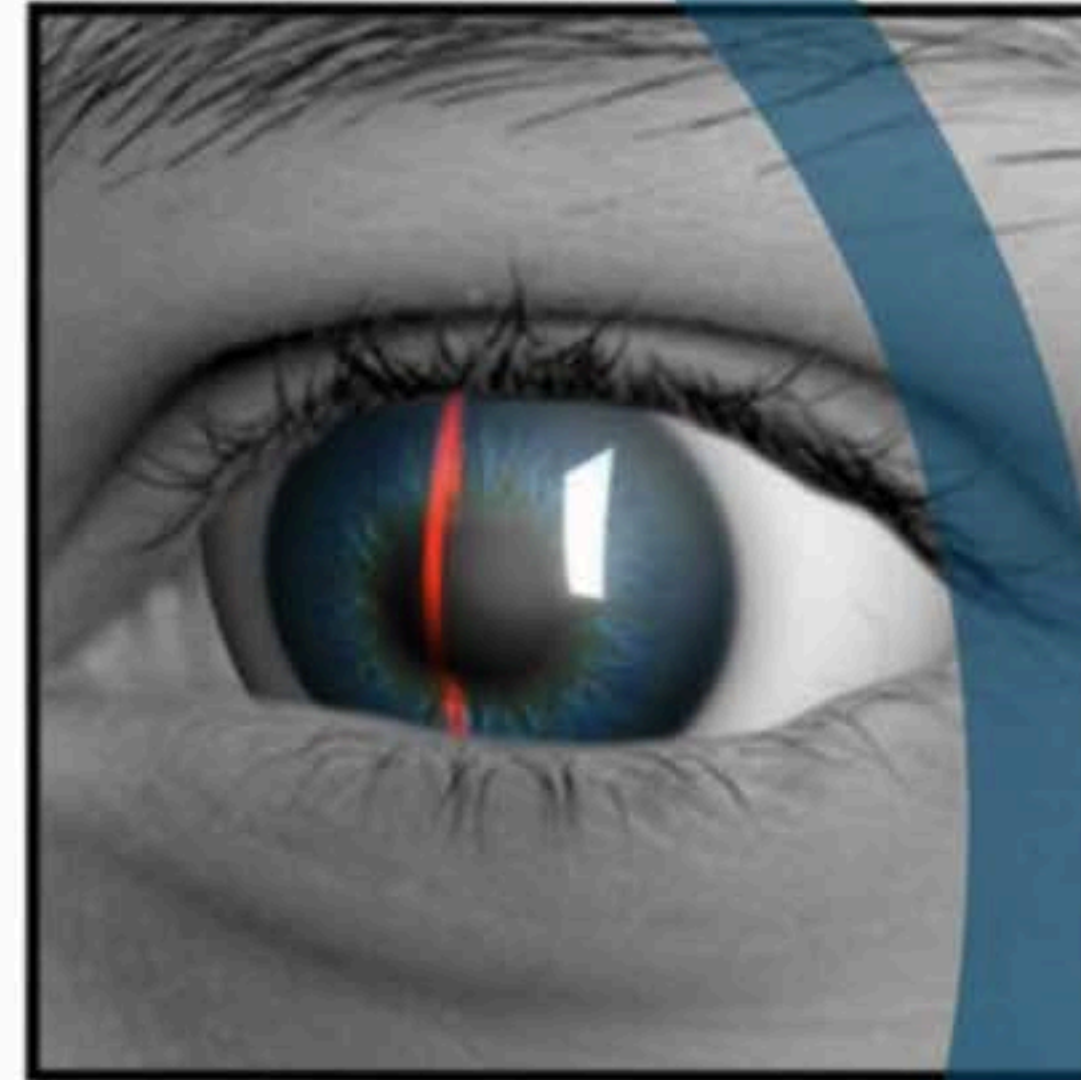


Increment 5 & 6

Iris



Technology Refresh







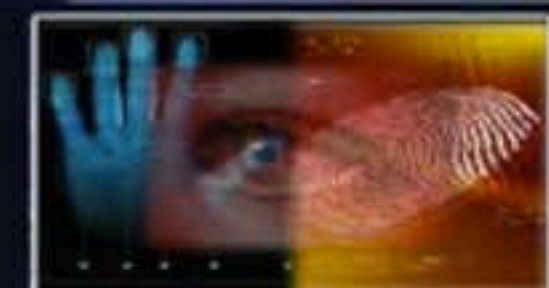
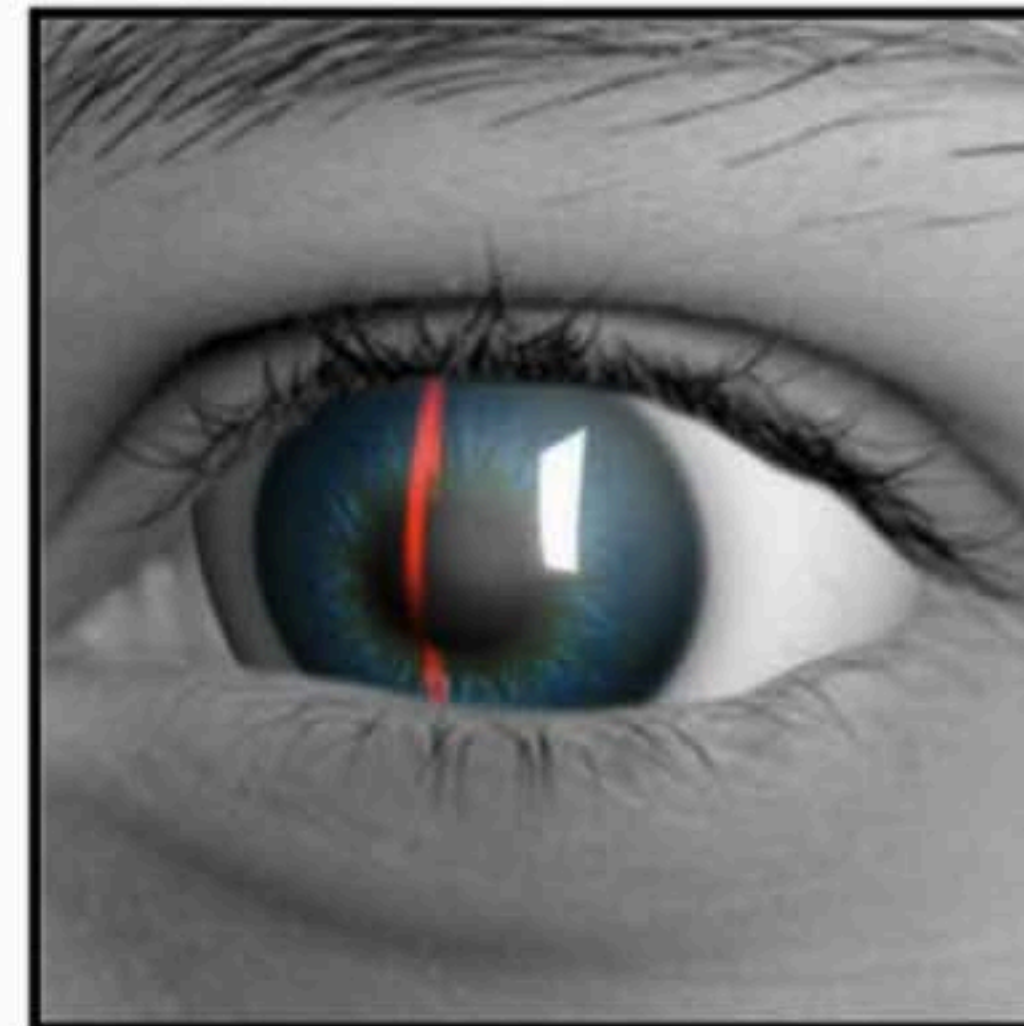
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# Iris Pilot

## Iris storage, search and verification functionality

- Iris Benefits
  - Quicker acquisition
  - Reliable
  - Accurate
  - Business value
  - Less interaction
  - Enhanced officer safety







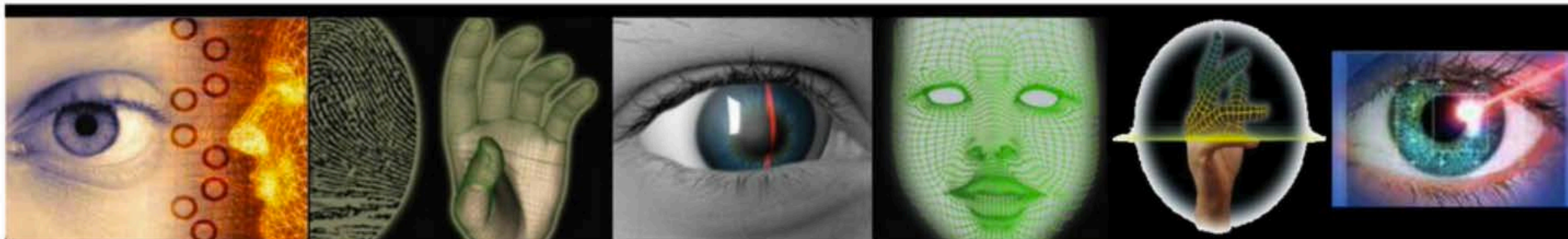
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# Technology Refreshment



All performance specifications will be met

Additional system tuning to meet non-functional requirements



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# Summary

## NGI Offers Bigger, Better, Faster Biometric Services to Support, Local State, & Federal Stakeholders

- Development of future services currently underway
- The time to begin planning for participation in future NGI Services is now

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# Questions / Comments

## Federal Bureau of Investigation

Criminal Justice Information Services Division

Next Generation Identification Program  
Services Evaluation & Analysis Unit

Nick Megna  
Unit Chief

Telephone: (304) 625-2767

NGI Web Page: <http://www.fbi.gov/hq/cjisd/ngi.htm>

[nicky.megna@ic.fbi.gov](mailto:nicky.megna@ic.fbi.gov)



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