



NEXT GENERATION IDENTIFICATION

Implementing the future of identification & investigative services

FINGERPRINTS

RISC

PALMS & LATENTS

RAP BACK

SCARS MARKS &

TATOOS

FACIAL

IRIS





Integrated Automated Fingerprint Identification System (IAFIS)



IAFIS

- National fingerprint repository.
- Supports 18,000 Law Enforcement agencies...
 - Federal, State, Local, Tribal, and International
- More than 10 years old.
- Initial capacity = 62,500.
- Record high = 300,113.
- Accuracy = 92%.



- ▶ IAFIS has vastly exceeded performance expectations.
- ▶ Time to design for the future, rather than reacting to it.



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

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

FINGERPRINT CARD SORTING MACHINE

FINGERPRINT PROCESSING SUPERDOME

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

FACIAL RECOGNITION

THE FUTURE... TODAY

QCP IN THE FIELD

PALM PRINTS

IN 1999 THE INTEGRATED AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM (IAFIS) BECOMES OPERATIONAL PROVIDING THE FBI WITH AN ELECTRONIC ENVIRONMENT FOR FINGERPRINT PROCESSING.

THE FBI'S IDENTIFICATION DIVISION IS FORMED IN 1924

FINGERPRINT IMAGE COMPARISON (FIC)

FINGERPRINT CARD CLASSIFICATION

FIC WORKSTATIONS

ROLLING THE WRITERS RIDGE PRINT

REMOTE FINGERPRINTING

EYE SCANNING

FINGERPRINT FILES

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

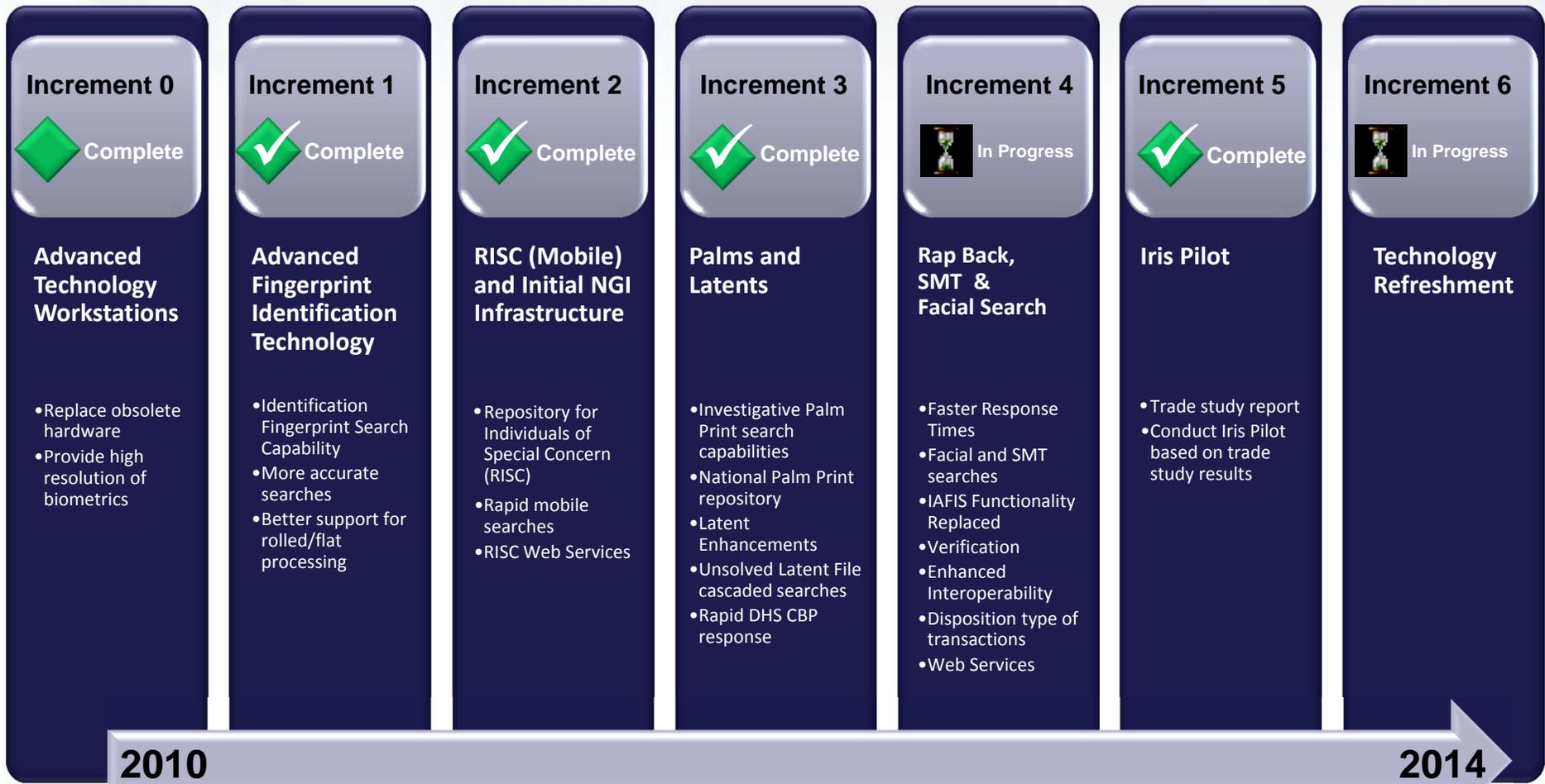
NEXT GENERATION IDENTIFICATION

Implementing the future of identification & investigative services





NGI Implementation Schedule



2010

2014





AFIT Successes

(Increment 1) **Completed 2/25/2011**

- Improved accuracy (99.6%) reduced the dependency on supplemental name checks and human examiner review
 - Reduced manual fingerprint reviews by 90%
- During the 5 Day parallel run of AFIS vs. AFIT, 910 additional candidates were identified by AFIT
- AFIT identified criminal subjects with current charges of...
 - Murder in the 1st Degree
 - Manslaughter
 - Assault on Police
 - Fugitive from Justice
 - Harboring Aliens
 - Smuggling Aliens
 - Felony Abduction





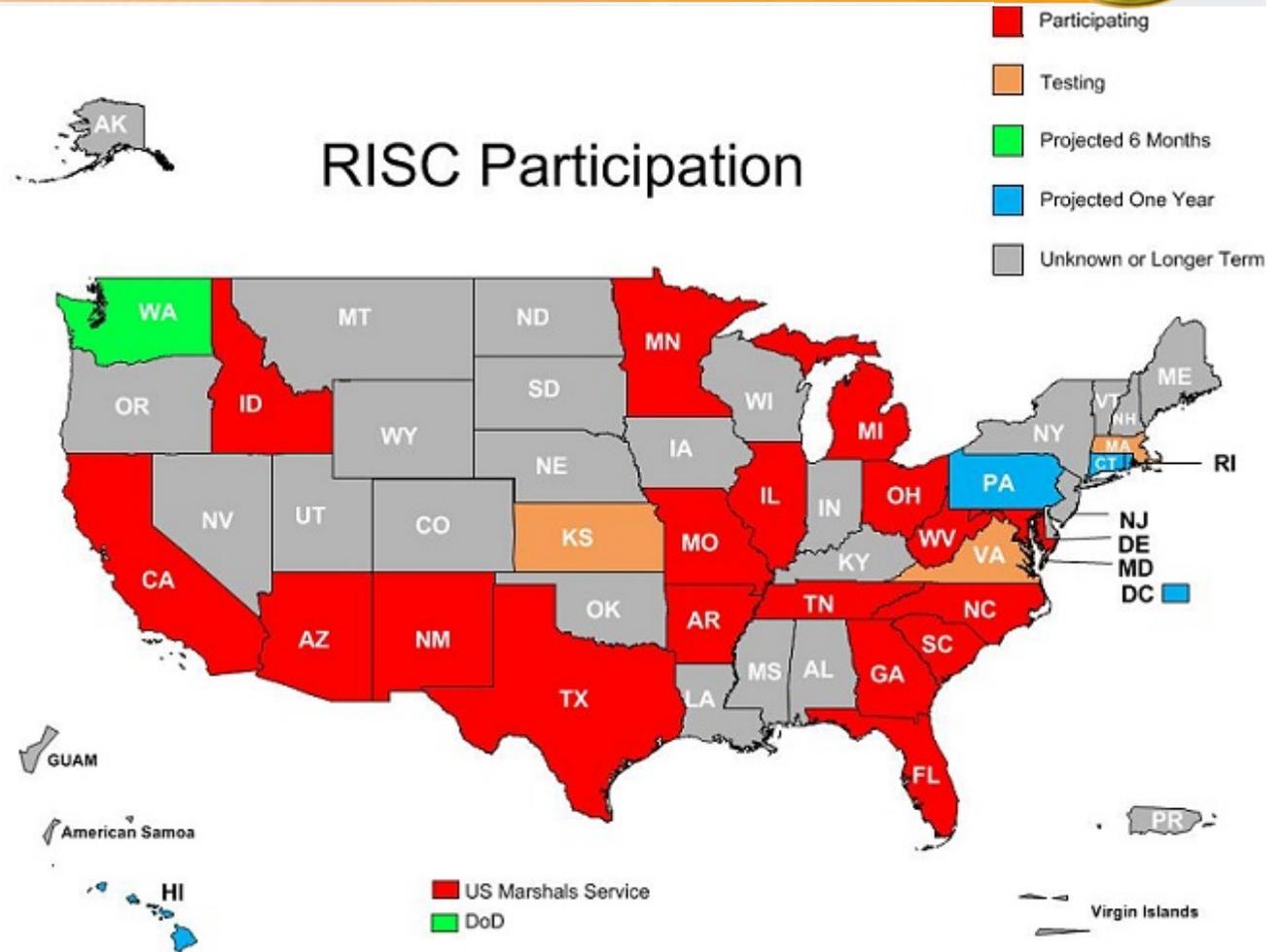
RISC and Initial NGI Infrastructure

(Increment 2) - **Completed 8/25/2011**



RISC Stats

- Average: ~1,500 searches per day
- Over 1 Million Total Searches
- Average **Red** Hit Rate: 6-10%
- Average Response Time: < 6 seconds





Multi-State RISC Success Story



RISC Check Identifies Georgia Murder Suspect

- A Florida State Trooper made a routine traffic stop around 8 p.m. when he witnessed a car driving with its headlights off near Ormond Beach.
- When the Trooper approached the car, he smelled marijuana. Following protocol, he asked the driver for his license.
- As the driver gave the Trooper a South Carolina license, the alert trooper noticed the driver had a bank card bearing a different name.





Multi-State RISC Success Story (cont.)



- The Trooper, using a rapid identification (ID) device, submitted a rapid ID transaction that searched the Florida state system and was also sent to the RISC.
- The FBI's RISC system returned a "red" response within 46 seconds, notifying the Trooper of an outstanding warrant for the subject within the National Crime Information Center (NCIC).
- The driver was wanted by the Gwinnett County Sheriff's Office in Georgia in connection with a murder and aggravated assault. The warrant had been outstanding for 8 years.





Latents, Palm Prints, & Rapid Response (Increment 3) – **Completed 5/5/2013**



- Latent: Three (3) times increased accuracy, expanded cascading, and event print searching
- Expanded cascaded searches already producing results...
 - 7,495 ULMs thru Jan. 2014
- Palm Prints: 2.7 million palm print sets are available in the national system as of 2/5/2014





NGI Increment 3 Feedback



- “Texas agency received an investigative lead in a 2009 homicide that had been in the ULF since the murder occurred.”
- “Texas agency received an investigative lead in a 1984 homicide based on a cascaded ULF search.”

Texas Department of Public Safety

- “First search with NGI resulted in arrest warrants for two individuals from New York for a home invasion in Watertown, Connecticut. If not for NGI, the case would still be unsolved.”

Connecticut Department of Emergency Services and Public Protection

- “NGI – A Workhorse in latent print identification!”

IRS National Forensic Laboratory

- “NGI matchers have proven to be superior to IAFIS.”

Caddo Parish, Louisiana



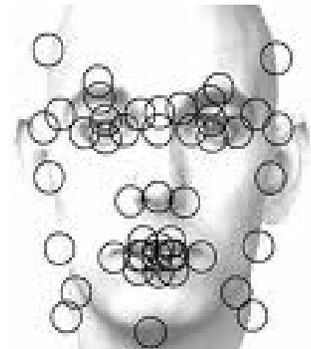
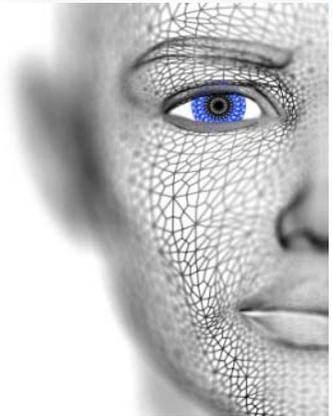


Facial Recognition

(Increment 4) Deployment Summer 2014



- Facial Recognition...
 - Searches by law enforcement agencies for law enforcement purposes
 - Reasonable suspicion or probable cause in accordance with laws investigative procedures
 - Search criminal history mug shots...
 - Criminal mug shots; taken at booking
 - Response: Investigative leads; not positive ID
- NGI Face Pilot – Currently Available...
 - Over 17 million criminal mug shot photos available for searching (as of 1/2014)
 - Over 48,000 search transactions processed
 - Michigan, Maryland, Texas, Maine, & New Mexico Are Connected





Rap Back, Facial, SMT

Remaining IAFIS Functionality (Increment 4)



- Rap Back
- Text Based Scars, Marks, And Tattoo (SMT) Searches
- Interstate Photo System (Facial Matching)
- Disposition Enhancements
- Biometric Interoperability
- Universal Face Workstation (UFW)
- Target Deployment - June, 2014





Facial Recognition Pilot Success



- On March 6, 2013, a MSP Trooper was investigating a multi-state, identity theft, and fraud case involving credit cards and traveler's checks.
- The Trooper was able to obtain a photo of the suspect from a credit card.
- He submitted the photo for a facial search.
- 'No Hit' from their local system, but NGI Facial Recognition Pilot returned a Georgia mug shot of an individual with a different name in the #1 position.
- "I had been trying to I.D. her for a long time without any luck, and it was the number one match on NGI."





IRIS PILOT

(Increment 5) **Completed 9/20/2013**

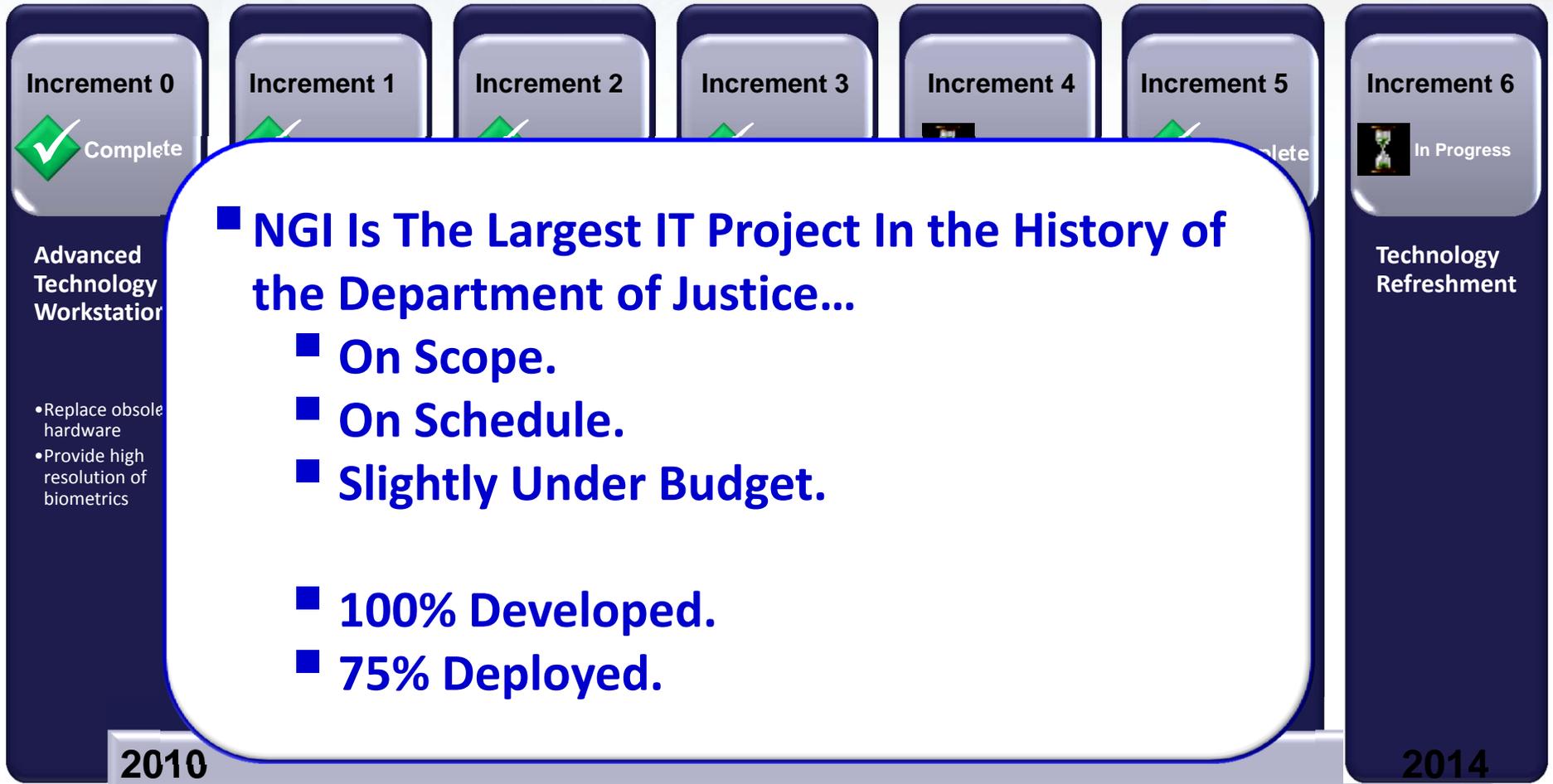


- Deployed an Iris Pilot System capable of performing Iris Image Recognition Services (9/20/2013)
- U.S. Probation successfully submitting searches and enrollments
- Participation MOU's signed with: Rhode Island SP, Texas DPS, Cal DoJ, U.S. Border Patrol, and U.S. Marshals Service
- Providing operational experience to assist the FBI in planning for NGI's Iris Service





NGI Implementation Schedule





Questions / Comments



Federal Bureau of Investigation

Criminal Justice Information Services Division

Nick Megna

Next Generation Identification Program

Telephone: (304) 625-2767

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

E-mail: nicky.megna@ic.fbi.gov

