



NEXT GENERATION IDENTIFICATION

IMPLEMENTING THE FUTURE OF IDENTIFICATION & INVESTIGATIVE SERVICES



The Federal Bureau of Investigation's (FBI's) Criminal Justice Information Services (CJIS) Division operated and maintained the Integrated Automated Fingerprint Identification System (IAFIS), which became the world's largest person-centric biometric database when it was implemented in July 1999. Since then, advancements in technology and the changing business needs of IAFIS's customers necessitated the next generation of identification services. To further advance biometric identification services, the CJIS Division, with guidance from the user community, established the vision for the Next Generation Identification (NGI).

The NGI system was developed over multiple years, and it is an incremental replacement of the IAFIS that provides new functionality and improves existing capabilities. This technological upgrade accommodates increased information processing and sharing demands from local, state, tribal, federal, and international agencies. The NGI system offers state-of-the-art biometric identification services and compiles core capabilities that serve as the platform for multimodal functionality.

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Advanced Fingerprint Identification Technology (AFIT)

The AFIT objectives are to enhance fingerprint and latent processing services, increase the accuracy and daily fingerprint processing capacity, and improve system availability. AFIT was deployed on February 25, 2011. This deployment implemented a new fingerprint matching algorithm which has improved matching accuracy from approximately 92% to over 99.6%. This improvement resulted in over 900 additional matches during the 5-day parallel operations period immediately after deployment. Additionally, the improved accuracy resulted in a 90% reduction in the number of manual fingerprint reviews required by our service providers.

Repository for Individuals of Special Concern (RISC)

The RISC was deployed on August 25, 2011. This deployment implemented the RISC rapid search supporting mobile identification. This capability enables officers and agents in the field to screen detainees and criminal suspects against a repository of Wanted Persons, Sex Offenders Registry Subjects, Known or appropriately Suspected Terrorists, and other persons of special interest for rapid identification. Currently, 21 agencies are using this capability. Latest performance metrics show a red hit rate between four to seven percent, proving this capability is a valuable first check allowing officers to quickly assess the level of threat an encountered individual poses.

Interstate Photo System

The Interstate Photo System (IPS) is a compilation of all photos received by the FBI with tenprint transactions. The repository holds over 23 million front-facing photos. Authorized law enforcement agencies may submit a photo image (probe) for a face recognition search in the IPS. Search results are processed automatically (no human intervention) and returned in a ranked candidate list. Information returned in the response is provided as an investigative lead only and is not to be considered a positive identification.

Latents and National Palm Print System (NPPS)

In 2013 the NGI System deployed the new NPPS which contains millions of palm prints that are now searchable on a nationwide basis. The NPPS and improvements in latent fingerprint search performance are providing powerful new and enhanced crime-solving capabilities for more than 18,000 local, state, tribal, and federal law enforcement agencies across the country. In addition, NGI has expanded criminal and civil searches against the Universal Latent File, potentially generating new investigative leads in unsolved and/or cold cases as well as latent enrollment and search enhancements.

Rap Back Service

The Rap Back Service provides authorized agencies with notification of criminal, and, in limited cases, civil activity of individuals that occurs after the initial processing and retention of criminal or civil transactions. The Rap Back Service does not provide new authority to agencies, including the FBI, for collection of biometric and biographical information. The NGI Rap Back Service, however, implements new response services to notify agencies of subsequent activity for individuals enrolled in the service. This feature provides a more timely process of confirming suitability of those individuals placed in positions of trust and notifying users of criminal activity for those individuals placed on probation or parole.

Iris Recognition (IR)

As the iris of the eye gains momentum as a strong biometric capability, IR is poised to offer law enforcement a new tool to quickly and accurately determine identity. The NGI iris pilot follows the recommendations of the NGI stakeholders and evaluates the technology in an operational setting.



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