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Automated Biometric Identification System (ABIS) Interoperability

Problem: Automated Biometric Identification Systems (ABIS) have been in use since the mid-1980s, electronically searching fingerprint and other biometric records for criminal suspect identification, criminal history reporting, forensic investigations, and civil background checks. Most ABIS systems in the U.S. take advantage of hierarchical record-sharing networks, where fingerprint records flow up from city, county, and state agencies, ultimately to the FBI Next Generation Identification (NGI) system. However, some jurisdictions do not participate in this hierarchical system while others who do participate do not submit all their fingerprint records, resulting in some states and localities having records not found in NGI. Systems at the state level and below, for the most part, cannot perform searches in neighboring jurisdictions, potentially allowing a subject of interest to go unidentified, risking public safety

Goal: To resolve the interoperability problem, by providing a nationally mandated minimum interoperability standard among ABIS systems to ensure reliability, quality/suitability, timeliness, and accuracy of inquiries, and by providing federal grants to state, county, and local agencies to implement cross-jurisdictional ABIS searching and information retrieval, thereby increasing stakeholder confidence in ABIS.

Background:

ABIS interoperability has been a long-standing problem and a major concern for law enforcement agencies and forensic science service providers for many years. There are many manufacturers of ABIS, and there are no minimum standard requirements for these localized systems, including requirements for the various systems to be able to communicate with or search other vendors' databases. As a result, with different manufacturers' systems in place, agencies from across jurisdictional lines, including local governments and states, are not able to search and coordinate investigations with each other, creating the potential for investigative leads to be lost.

The Biometric Information Services subcommittee of the International Association for Identification (IAI) prepared a Report on ABIS Interoperability in 2022 that developed several key findings:

- Cross-jurisdictional ABIS searching by local governments and states is uncommon in the United States due to the lack of interoperability among vendor systems.
- Forensic and identification practitioners consider the lack of cross-jurisdictional searching an impediment to criminal investigations and background checks since not all records at the state level are included or complete in NGI.
- A complete and comprehensive set of biometric standards at the state-to-federal level have eliminated technical barriers to connecting disparate systems, yet to provide the necessary technical solutions requires leadership, governance, and funding to appropriately adhere to these standards.
- State, county, and local agencies purchase ABIS systems through a Request for Proposal (RFP) process, and often don't include specific interoperability requirements, presumably due to the cost to implement, the need to write technical specifications, the need to obtain access agreements with other jurisdictions, and the fact that upgrade cycles do not coincide with neighboring jurisdictions. These barriers tend to destroy cross-jurisdictional interoperability at the technical level by disrupting the design phase during system procurement due to their complexity beyond the expertise of the project and technical teams planning for system replacement.

Recommendations:

CFSO encourages the federal government to assist in remedying the interoperability issue in the following ways:

- Providing federal grants and other financial assistance to state, county, and local agencies to implement cross-jurisdictional ABIS searching and information retrieval.
- Requiring ABIS systems purchased with federal funding to be interoperable using mandated national minimum technical and quality standards.
- Performing a feasibility study for a nationwide 'Biometric Exchange Server' that would allow states to leverage a single technical interface for search with any other states that wish to participate. The study should address:
 - Types of cases appropriate for use of ABIS
 - Cross-jurisdictional issues, such as privacy laws and their impacts
 - Technical interface and response specifications
 - Security policies
 - Governance
 - Cost-benefit analysis.