

Identity Resolution in Law Enforcement

“Entity resolution and analysis was previously an obscure technology that has come to the forefront as a result of world events and market forces where it is used to identify the use of false identities and networks of individuals who are attempting to hide their relationships to each other.”

– Gartner Research
“Hype Cycle for Master Data Management”
June 2009

Make Critical Connections Across Systems at Lower Cost

More than a decade since the 9/11 hijackers covered their plotting with 30 different state-issued IDs among 19 men, domestic and foreign criminals alike have become ever smarter and more sophisticated in obscuring their true identities and activities. Although IT often helps law enforcement agencies improve their ability to prevent, respond to, and investigate crime in the face of onerous budget cuts, the current state of technology creates as many problems as it solves.

Traditional Data Mining Produces Sub-Optimal Results

Currently, law enforcement agencies commonly store information about individuals, groups, or events across multiple siloed systems and formats. With few ways to correlate or integrate the data, analysts struggle to identify relevant information and recognize its potential relationships to other data points. They may not even know whether the data is incomplete, inaccurate, or both. This lack of comprehensive and authoritative information slows investigation, hinders prevention, and puts additional burdens on already limited resources.

Traditional data mining, which assumes the presence of complete and correct data, is less useful when dealing with threats, aliases, and other deliberately falsified information and disparate events. The need to aggregate data before mining it also creates unnecessary and potentially dangerous delays in situations that demand real-time assessment to support fast action.

Making Critical Connections with Identity Resolution

Today, law enforcement is overcoming the deficiencies of traditional data mining by turning to entity/identity resolution technology. This technology works in real time to:

- Integrate records from many sources
- Resolve conflicts between records
- Correct errors and complete missing fields

With identity matching capabilities, law enforcement agencies can identify and match individuals, groups, events, and other critical data accurately and quickly across systems, regardless of language, structure, format, location, duplication, omissions, or errors. Identity matching enables law enforcement to gather, correlate, match, and share disparate data in ways not previously possible. Using solutions from Informatica, agencies can readily create a more holistic view of law enforcement data—resolving identities, discovering hidden relationships, and connecting seemingly unrelated individuals, entities, and events for more precise insights when they count the most.

Shifting Processes from System-Centered to Identity-Centered

To detect imminent threats and prevent crime, law enforcement agencies must quickly and correctly identify individuals and groups of many sizes and characteristics: citizens, legal residents, international visitors, gang members, employers or employees, registered organizations, multinationals, and others.

The ability to share information and correlate data, both internally and between agencies, can make all the difference in solving a crime promptly and accurately—or stopping one before it occurs. Law enforcement organizations therefore need to ensure that this data is as accurate and complete as possible and make it available across departments, systems, and agencies.

Breaking Down Barriers Between Systems

When data is “stovepiped” in separate applications for incident management, evidence, task force management, and so on, connecting two seemingly separate records to reveal previously invisible patterns can be almost impossible.

Any entity’s critical characteristics can change dramatically based on the information being viewed. Breaking down system and organizational data silos to create a single view, or “golden record,” is critical to seeing law enforcement issues clearly and addressing them appropriately.

Florida Department of Law Enforcement Florida Crime Information Center II (FCIC)



“On a daily basis, FCIC II catches multiple wanted, missing and runaway persons—even when there are name permutations and altered dates of birth. We have had successes ranging from the U.S. Coast Guard apprehending a wanted boat crew member on boarding to officers running a juvenile’s name to find that he has been reported as a runaway.”

Jerilyn Ammons, Data Processing Manager, Florida Crime Information Center II, Florida Department of Law Enforcement

The Florida Department of Law Enforcement needed a sophisticated solution that would empower officers and investigators with a high-performing and reliable search facility against criminal records and multiple hot files. In addition, it needed to support subscriber agencies by providing a reliable identity checking and resolution service. Plagued with poor-quality data, false hits, a growing number of multicultural names, and intentional misrepresentations of identity, the FDLE implemented Informatica Identity Resolution. Every day, the new system uncovers wanted and missing people despite name permutations and multiple dates of birth.

Resolving Errors, Variations, and Duplications

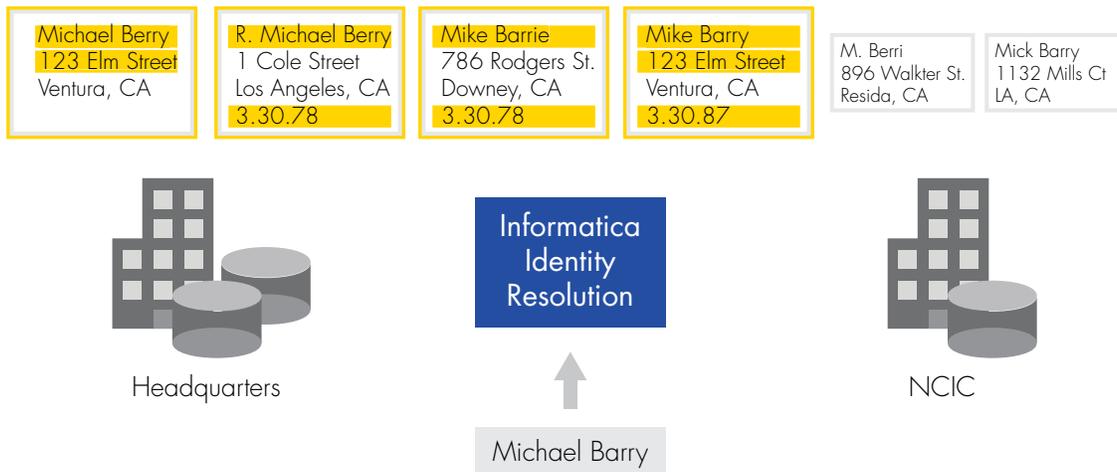
Identity data is unavoidably riddled with spelling and typographical errors, transliteration differences, nicknames, abbreviations, and outdated or incomplete information. In law enforcement, this data also includes deliberate fabrications. Basic search-and-match processes often respond with false positives or entirely missed matches.

To accurately identify individuals, associations, aliases, and criminal histories, law enforcement agencies need more sophisticated matching algorithms capable of resolving complex identities across languages, jurisdictions, and systems.

Enhancing the Precision of Identity Search Matching

Informatica® Identity Resolution enables law enforcement organizations to search and match identity attributes across multiple systems, from criminal justice information systems and criminal history systems to stolen property databases, case management systems, and address and location records.

Informatica Identity Resolution can perform reliable matching on very large data volumes, regardless of data format, quality, or completeness. It delivers a trusted, consolidated, single view of data ready to be searched and analyzed.



Using Informatica Identity Resolution technology to search for "Michael Barry" returns additional matches that might otherwise have been missed.

Informatica Identity Resolution Technology for Law Enforcement

The Informatica Platform provides core capabilities for integrating disparate data, resolving identities, improving data quality and completeness, and furnishing real-time alerts. Using these capabilities, law enforcement agencies can more effectively discover, distill, and deliver comprehensive identifying information in real time.

Informatica’s identity resolution technology allows law enforcement agencies to leverage existing data in new ways that support and enhance their ability to detect, prevent, and solve criminal activity:

- Perform high-precision, high-volume identity searches to identify matches accurately and quickly, regardless of structure, format, location, duplication, omissions, or errors
- Match identity data records across multiple countries and different alphabets, such as Latin, Arabic, and Cyrillic
- Perform complex, multilanguage search-and-match functions in real time with the highest accuracy
- Use intelligent algorithms and strategies to locate identity data records inside large databases, emulating an expert user’s ability to recognize matches
- Discover connections among people, accounts, and organizations that might be hidden in the data to deliver reliably accurate search, match, or grouping results
- Integrate both structured and unstructured information managed within the enterprise and from outside organizations
- Improve data quality to cleanse the data and ensure its trustworthiness
- Detect events and alert people about them in real time to support crime centers, investigators, and command centers for more efficient and cost-effective incident response, resource allocation and coordination, and investigation management across organizational boundaries

About Informatica

Informatica Corporation (Nasdaq:INFA) is the world’s number one independent provider of data integration software. Organizations around the world rely on Informatica to realize their information potential and drive top business imperatives. Informatica Vibe, the industry’s first and only embeddable virtual data machine (VDM), powers the unique “Map Once. Deploy Anywhere.” capabilities of the Informatica Platform. Worldwide, over 5,000 enterprises depend on Informatica to fully leverage their information assets from devices to mobile to social to big data residing on-premise, in the Cloud and across social networks.

Record 1 	Record 2 	Record 3 
Peg Mc Cary	Margaret MacClary	Grietje McCillary
Abdulaziz A Rahman Al Sugair	Abd A Rhman Hammed Al-Shugair	ريڤيصلنا ندمرحلادبع زيوعالادبع
George Papadopoulos	Georgios Papadopoulos	Γεώργιος Παπαδόπουλος
Saito Kyoko	齊藤 京子	Kyouko Saitou
William Kwok	W. Kwok Ki Hoh	Mr. Billy H Kwok

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