

Advances in technology help boost the quality of electronic criminal history reporting

By Chris Humble

Since the mid-1990s the Illinois State Police (ISP) has been aggressively working to improve the usefulness and quality of criminal history record information (CHRI) in Illinois. This Trends and Issues Update focuses on recent and emerging technologies that are enhancing electronic criminal history reporting.

Many critical, day-to-day decisions by criminal justice officials, such as setting bail or determining an inmate's security risk, depend on CHRI. Incorrect information could lead to an innocent person being detained or a dangerous person being set free.

Since January 1991, the public also has had access to the CHRI system in Illinois. For a fee, employers, child care operators, and members of the public can request Illinois conviction information on any person.

The quality and timely processing of fingerprint information is critical to the system's success. An electronic fingerprinting system

Figure 1
Fingerprints submitted to ISP

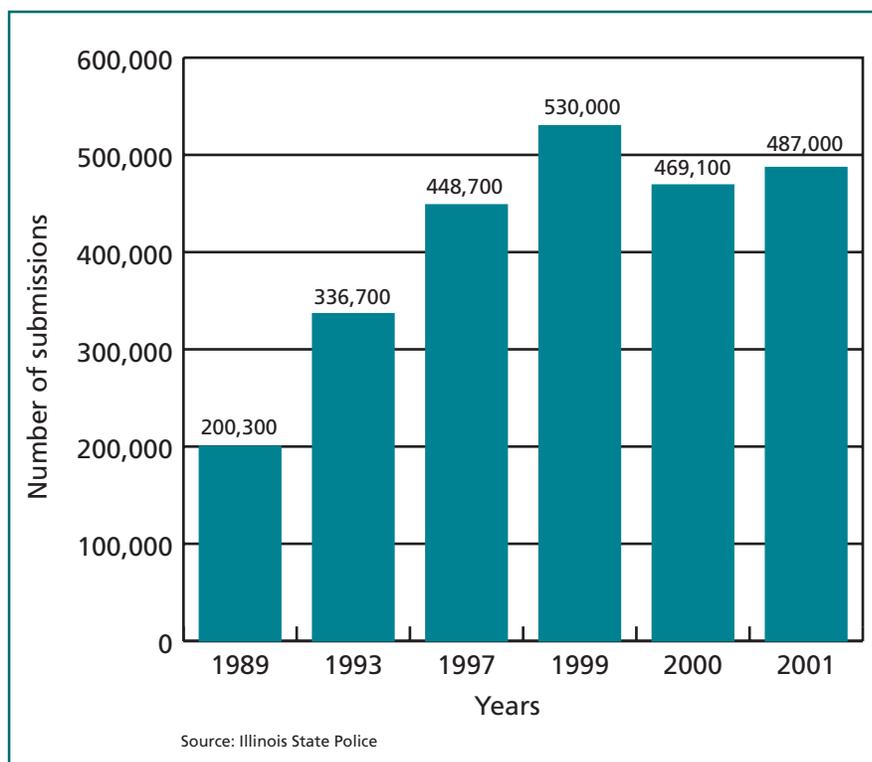
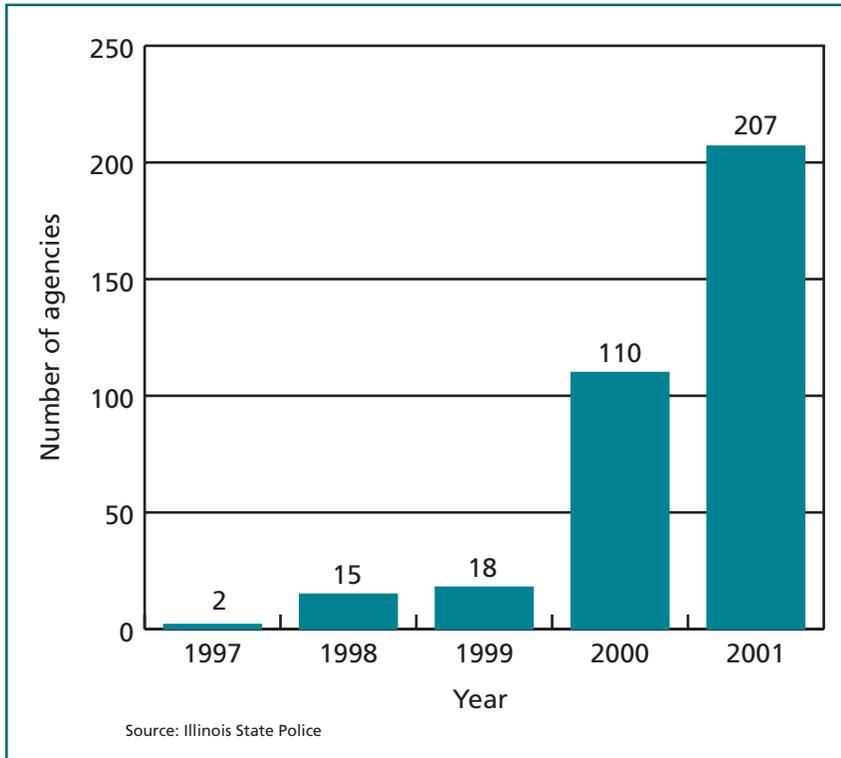


Figure 2
Livescan agencies in Illinois



called livescan has done much to enhance the quality of fingerprints and improve the time it takes to process them.

Livescan

With livescan, an optical scanner and imaging software capture a digital image as a finger is rolled over a clear faceplate. The fingerprint image is then displayed on a monitor so the operator of the device can determine if the print is of good quality. If the print is not acceptable it can be re-rolled until there is a good print. With traditional fingerprinting using ink, a fingerprint can easily be smudged. But with livescan, if a print is not acceptable, the finger is simply re-rolled until a good, clean print is

obtained. Livescan prints also can be sent to multiple databases, retaining the original quality and saving valuable time.

Acceptable prints are stored in a computer file, which includes related arrest and identification information. Entire livescan files can be sent electronically to ISP's Bureau of Identification, where they become part of the state's computerized criminal history database.

Use of livescan has expanded rapidly. In 1992, only one agency was using the system. By 2001 there were more than 200 agencies sending fingerprints to ISP using livescan images. Between July 2001 and February 2002, more than 400,000 livescan images were

submitted to ISP, accounting for about 67 percent of all fingerprint submissions to the agency.

AFIS

The Automated Fingerprint Identification System (AFIS) is a large database that stores fingerprints in a digital format. ISP began using the system in 1987. With the development of AFIS, the process of identifying fingerprints went from hours to minutes.

AFIS involves three primary steps: fingerprint input, fingerprint matching, and visual verification. The AFIS database consists of fingerprints taken from individuals and latent prints, which are typically retrieved by authorities from objects at crime scenes.

AFIS attempts to match prints by taking a search print and comparing it to others in the database. Additional information relating to the person also is kept with the fingerprint file, such as the state identification number (SID), sex, and year of birth. This information can help narrow searches to certain groups of people, and thus save time. Files for latent prints will contain information about the case.

The third step in the process is visual verification. An AFIS search will typically generate a list of possible matches, or "hits." But a trained fingerprint examiner must then take that list and visually determine if there is a positive match from among the hits.

Justice systems integration

Illinois has now initiated a process to encourage the integration of its justice information systems both at the state and local level. Last December, Gov. George H. Ryan

signed Executive Order No. 12 (2001), supporting justice systems integration and establishing an integration governing board. The board includes members from justice agencies and associations throughout Illinois. The Board is developing a strategic plan for justice systems integration in Illinois. This plan will be provided to the governor and General Assembly in December 2002, with findings and recommendations.

The Cook County Board of Commissioners recently passed a resolution in support of integration among Cook County Justice agencies. This resolution created a board to oversee integration in Cook County and named Circuit Court Clerk Dorothy Brown as chair. The Cook County and Illinois boards share many of the same members, which will be helpful for coordinating state and local integration projects.

The most frequently cited objective of integration is to allow justice agencies to electronically share and access critical information at key decision points. Integration should not only allow for more efficient exchange of information, but also should reduce or eliminate redundant data entry in the justice system. By facilitating the electronic transfer of information between agencies and eliminating human error associated with successively re-keying that information, integration should lead to greater availability of timely, accurate, and complete criminal history information.

Integration can have different attributes depending on the specific implementation, but according to SEARCH, the National Consortium for Justice Information and Statis-

tics, integration can provide five distinct functions:

- 1) To query local, regional, statewide and national databases.
- 2) To push information to another agency.
- 3) To pull information from other systems for incorporation into the recipient agency's system.
- 4) To publish information regarding people, cases, events, and agency actions.
- 5) To subscribe to a notification service, such as a service that would alert a probation agency that one of their clients has been arrested.

CHRIS/CLEAR

The Chicago Police Department has been developing an integrated information system and database, the Criminal History Record Information System (CHRIS), since 1995. The second phase of this project is the Citizen and Law Enforcement Analysis and Reporting (CLEAR) system, which allows immediate access to millions of law enforcement files. The department can use this data to look at overall crime patterns at different geographic levels, and to pinpoint suspects in individual cases.

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When fully implemented, CLEAR will:

- Merge CPD records with Illinois State Police (ISP) records, improving the quality of records in both systems.
- Redesign the current CPD rapsheet to make it easier to use and interpret.
- Make reporting of criminal history information more accurate.
- Web deploy CHRIS/CLEAR, allowing for easier access to criminal history information for department members and criminal justice partners.
- Develop a linkup with the Illinois Department of Corrections (IDOC) so that parole information can be linked to criminal history records.

CABS

The Cook County Sheriff's Office began operating the Criminal Apprehension and Booking System (CABS) in late 1998. This system provides a uniform booking system and statewide digital mugshot database. CABS provides law enforcement agencies in Cook County, including the Chicago Police Department, with an im-

proved system for quickly and accurately identifying individuals who have been arrested and are being booked. CABS combines basic identification and charge information with fingerprints and a digital photo.

One advantage of CABS is the fast turnaround time for fingerprint identification. The Sheriff’s office estimates that 60 percent of records are identified in less than 30 minutes. The remaining 40 percent are identified in under an hour. Many records are identified in less than 10 minutes.

Conclusion

This *Trends and Issues Update* focused on new technology and

trends in electronic reporting of criminal justice information. Livescan allows for improved speed and efficiency of fingerprint reporting, and AFIS makes the identification of fingerprints easier. Integrating criminal justice information systems is expected to improve the exchange of information and make the criminal justice system more efficient.

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