

The Context for Ident Automation

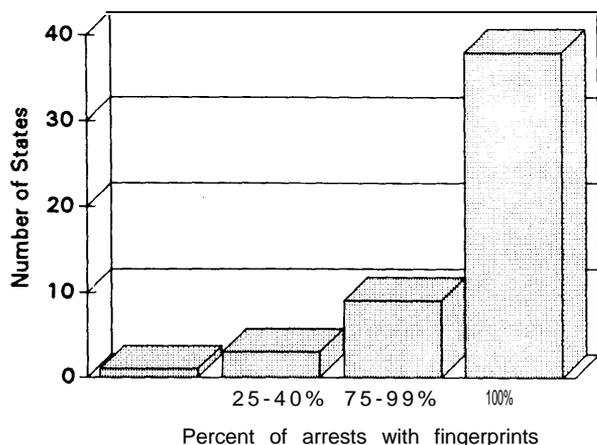
There is widespread agreement among Federal, State, and local law enforcement officials that automation of the fingerprint identification process is essential to improve law enforcement and enhance criminal justice in the United States.²

Fingerprint identification is the most practical and widely accepted method for positive biometric identification, and is likely to remain so for the foreseeable future.⁴ It is used to establish the identity of persons arrested or who are otherwise involved with the criminal justice process (see figure 1). Criminal records tied to fingerprints are used to track criminal cases from booking through adjudication, and, where applicable, through sentencing, incarceration, probation, and parole. Many criminal justice decisions—e. g., charging, sentencing, and paroling—are based in part on a defendant's prior criminal record. Federal and State

laws now require that repeat violent offenses and serious drug offenses carry longer, mandatory sentences with reduced opportunity for parole.

Fingerprints normally are taken by rolling the inked fingers over paper fingerprint cards that are then manually examined, processed, filed, stored, and exchanged. This is a time-consuming and labor-intensive process. Law enforcement agencies find, increasingly, that manual fingerprint identification is no longer workable. Resources required for manual fingerprint checks often exceed the staff and budgets available. Manual fingerprint checks can take too long for the law enforcement action required, particularly if a full fingerprint check must be conducted at the time of arrest, booking, or bail decisions. Manual comparison of prints from a crime scene with prints from a fingerprint file (known as a latent print search) is difficult and frequently impossible. Matching crime scene prints with those on file is like searching for the proverbial needle in a haystack—a job ideally suited for computers.

Figure 1—Arrests Supported by Fingerprints in State Criminal History Files, 1989



SOURCE: Bureau of Justice Statistics/SEARCH Group, Inc., 1991.

The Automated Fingerprint Identification System (AFIS) is a proven technology. AFIS is based on computer matching or comparison of the digitized physical identifiers from individual fingerprints (known as fingerprint minutiae).⁵ Most fingerprint cards processed by computer are still rolled manually and physically distributed or exchanged. Pilot tests indicate that the live scanning of fingerprints (with lasers or light, not ink) and transmission in digital form are technically feasible.⁶

The majority of States have some form of AFIS or plan to implement an AFIS system (see box B). States have found AFIS checks to be much more accurate, faster, and more cost-effective than manual fingerprint

²See, for example, T.F. Wilson and P.L. Woodard, SEARCH Group, Inc., *Automated Fingerprint Identification Systems: Technology and Policy Issues*, NCJ-104342 (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, April 1987); U.S. Department of Justice, Bureau of Justice Assistance (BJA), *Planning for Automated Fingerprint Identification Systems (AFIS) Implementation* (Washington, DC: U.S. Department of Justice, BJA, June 1988); National Crime Information Center Advisory* Policy Board (NCIC APB), III Ad Hoc Subcommittee, Identification Services Task Group, *Identification Division Revitalization*, August 1989, available from the FBI.

³Unique human descriptors such as retina scans, voice prints, and fingerprints.

⁴For discussion of biometric technologies, see U.S. Congress, Office of Technology Assessment, *Defending Secrets, Sharing Data: New Locks and Keys for Electronic Information*, OTA-CIT-310 (Washington, DC: U.S. Government Printing Office, October 1987); *Criminal Justice: New Technologies and the Constitution*, OTA-CIT-366 (Washington, DC: U.S. Government Printing Office, May 1988); and *Genetic Witness: Forensic Uses of DNA Tests*, OTA-BA-438 (Washington, DC: U.S. Government Printing Office, July 1990). Also see SEARCH Group, Inc., *Legal and Policy Issues Relating to Biometric Identification Technologies* (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, June 16, 1989).

⁵See Wilson and Woodard, *Automated Fingerprint Identification Systems*, op. cit., footnote 2.

⁶Federal Bureau of Investigation (FBI), Identification Division, *Final Report of the Pennsylvania State Police/FBI Live-Scan Pilot Test*, Aug. 31, 1990, and *Final Report of the Internal Revenue Service/FBI Pilot Test of Live-Scan Fingerprint Cards*, May 31, 1990, both available from the FBI.

Box B—A Year in the Life of a State AFIS

California has a State-wide automated fingerprint identification system (AFIS), known as the California Identification System or Cal-ID. Cal-ID provides automated fingerprint and criminal record services to local, county, and State law enforcement and criminal justice agencies.

Cal-ID includes an AFIS database covering arrestees and offenders, and an Automated Latent Print System (ALPS) data base with a subset of the AFIS database that can be searched against latent prints from crime scenes.

1989 was a typical year in the life of Cal-ID. In that year, Cal-ID:

- included fingerprint minutiae (for thumbs only) on 6.26 million persons in the AFIS database;
- Ž searched 295,949 criminal fingerprints against the AFIS database yielding 54,597 positive identifications (18.5 percent of searches);
- Ž searched 362,188 civil fingerprints against the AFIS database yielding 14,758 positive identifications (4.1 percent of searches);
- Ž included fingerprint minutiae (for 8 fingers) on 1.8 million persons in the ALPS database;
- searched 7,372 latent fingerprints against the ALPS database yielding positive identifications in 646 cases (8.8 percent of searches);
- Ž identified suspects through latent searches in 32 homicide cases, 33 narcotics cases, 33 robberies, 92 grand thefts, 9 sex crimes, and 9 assaults.

SOURCE: California Department of Justice, *California Identification (CAL-ID) System Remote Access Network (RAN) Status Report: 1989-1990* (Sacramento, CA: California DOJ, Division of Law Enforcement, Bureau of Criminal Identification, 1990).

checks.⁷The FBI has its own custom-designed AFIS, known as the Automated Identification System (AIS); but the FBI's system is obsolete and incompatible with

the AFIS systems used by the States. The average FBI fingerprint check time is 15 to 20 work days (mail delays can increase the average to 20 to 30 days) and is too slow for many criminal justice purposes.

The FBI's Ident revitalization program will upgrade the AFIS technology and make it compatible with State systems to provide a faster response.⁸This modernization is a part of Ident's planned move by 1995 from the J. Edgar Hoover Building in Washington, DC, to Clarksburg, West Virginia. State and local law enforcement and criminal justice agencies support the modernization of the FBI fingerprint identification operations.⁹

The Ident modernization plan is known as the Integrated Automated Fingerprint Identification System (IAFIS), and provides for the electronic transmission, storage, and processing of fingerprints.¹⁰During the transition from paper to electronic formats, traditional paper fingerprint cards will be scanned and converted to electronic images. All processing and matching of fingerprint images by Ident will be done electronically, with verification by fingerprint examiners. Ident expects that a significant percentage of fingerprints will be received electronically during the early years of IAFIS operation, but that full electronic transmission will take many years to implement—primarily due to limited State/local funding.

Several related key issues—besides technical design and funding—can affect the modernization program's ability to improve the Nation's overall criminal identification and record system. The Administration and Congress may wish to include these topics as part of the Ident modernization plan:

- expeditious implementation of the NFF/III concept;
- enactment of an interstate compact or Federal legislation on criminal justice record systems;
- further improvement in criminal history record completeness and disposition reporting; and
- setting of standards for security, privacy, and electronic interchange of fingerprints.

⁷AFIS systems typically achieve 97_ to 98-percent accuracy, compared with 75-percent accuracy for the old Henry system of manual fingerprint classification and comparison.

⁸FBI, *Automation Program for Identification Division Revitalization*, Aug. 30, 1990, available from the FBI.

⁹See minutes of relevant meetings of the National Crime Information Center Advisory Policy Board and SEARCH Group, Inc. Board of Directors, available from the FBI and SEARCH Group, Inc., respectively.

¹⁰For a detailed overview, see FBI, *Automation Program*, *Op. cit.*, footnote 8.

The National Fingerprint File/Interstate Identification Index (NFF/III) Concept

The States, the FBI, and others in the criminal justice community have long debated their roles in a national fingerprint identification/criminal history

record system. The debate has addressed a range of options, from a fully centralized FBI role to the substantially decentralized system that exists today.¹¹ The criminal justice community generally supports the so-called NFF/III concept (see box C), in which the FBI's Ident would: 1) receive one fingerprint card per criminal offender per State (instead of several cards), 2)

Box C—How the National Fingerprint File/Interstate Identification Index (NFF/III) Will Work

For a typical arrest situation, the NFF/III will work as follows, using San Diego, California, as an illustration:

The arresting officer in the San Diego County Sheriff's Department brings the suspect to the sheriff's office for booking.

The suspect is fingerprinted and interviewed, to obtain his/her name and other identifying information.

The suspect's name and identifiers are entered into the San Diego County Sheriff's computerized criminal record system to see if the suspect has a prior local criminal history record. If the suspect's name matches a name already on file, the suspect's fingerprints are compared with the fingerprints on file to make positive identification.

If the suspect's identity is verified through a fingerprint match, then the name and identifiers (including previously assigned criminal identification numbers) are checked against the California State Department of Justice (DOJ) criminal record system and the FBI's III to see if the person has a prior out-of-county or out-of-State criminal history record.

If the suspect's name does not match a name already in the San Diego County Sheriff's criminal record file, then the suspect's fingerprints are searched against the local automated fingerprint identification system (AFIS) database to see if the prints match anyone using a different name. If a match occurs, the suspect can be positively identified at the local level.

If the suspect's fingerprints do not match any prints in the San Diego AFIS, the suspect's prints are then transmitted to the California State DOJ in Sacramento for comparison against the larger State-wide AFIS database. If a match occurs, the suspect can be positively identified at the State level.

If the suspect's fingerprints do not match any prints in the State-wide AFIS, the prints are then transmitted to the FBI's AFIS in Clarksburg, West Virginia, to be searched against the FBI's much larger fingerprint database (known as the NFF). (Prints might also be transmitted to a regional AFIS, such as the Western Identification Network, Inc., that serves California and several other Western States.)

If an NFF match occurs, the FBI electronically notifies the California DOJ and San Diego Sheriff's Department of the suspect's true identify (including the FBI criminal identification number) that permits the requesting agency to query local and State criminal record systems and the III. The FBI updates the III to show that the suspect now has an arrest in California in addition to any other State(s) already listed. If no NFF match occurs, the FBI adds the suspect's fingerprints to the NFF, and adds the suspect's name and identifiers to the III.

The FBI's NFF will contain one fingerprint per offender; States will submit, as a general rule, only the first fingerprint per offender per State.

The FBI's III will list the State(s) in which each offender has a prior criminal record, but will not include the actual criminal record information, such as arrests and dispositions. (The exception will be Federal offender records available directly from the FBI.)

When the NFF/III is fully implemented, criminal history record information on State offenders will be maintained and provided by the States-not the FBI. The traditional FBI rap sheet will cease to exist, but instead will be an electronic composite drawn from individual States (and the FBI for Federal offenders).

SOURCE: Office of Technology Assessment, Federal Bureau of Investigation, California Department of Justice, San Diego County (California) Sheriff's Department, 1990, 1991.

¹¹See U.S. Congress, Office of Technology Assessment, *An Assessment of Alternatives for a National Computerized Criminal History System*, OTA-CIT-161 (Washington, DC: U.S. Government Printing Office, October 1982); and FBI, *Interstate Identification Index Phase Three Test Findings June-July 1987* (Washington, DC: Nov. 30, 1987) and *Interstate Identification Index Program: National Fingerprint File Operational Plan* (Washington, DC: July 10, 1990). Also see NCIC APB, *Identification Division Revitalization*, op. cit., footnote 2.



Photo credits: Federal Bureau of Investigation, 1991

An automated fingerprint identification system (AFIS) speeds up the matching of latent prints from crime scenes with prints of known offenders already on file. Latent prints are single or partial fingerprints from door handles, walls, firearms, clothing, and other items found at or near the scene of a crime. The AFIS computer compares the latent print with the large number of fingerprints on file and identifies any tentative matches. A fingerprint examiner then compares the prints on a computer screen to make the final match.

Left: A typical latent print on the left side of the screen is compared with a full fingerprint on the right.

Right: Latent and full prints are compared using a video display terminal and microcomputer keyboard. Print images are stored on optical disks.

retain no criminal history information on non-Federal offenders (except for basic identifiers such as date of birth and race), and 3) maintain an index (the III) of offenders with records in one or more States (but not the criminal history records themselves). The NFF/III is predicated on the basis that 60 to 70 percent of all offenders are repeat offenders.¹² These persons will already have a criminal history record based on positive fingerprint identification, and will have State and Federal identification numbers previously assigned. The out-of-State records of repeat offenders would be obtained from individual States by using III.

With full implementation of NFF/III, there would no longer be an FBI "rap sheet" per se, except for Federal offenders. Criminal history records on multi-State offenders would be compiled electronically by combining the criminal records from each State. Each entry into the III would be based on a positive fingerprint identification using the NFF.

Assumptions about NFF/III will affect the design of the Ident automation program. If fully implemented,

the NFF/III concept should significantly reduce the number of criminal fingerprints submitted to the FBI. The FBI currently receives duplicate fingerprint cards for many offenders, either for repeat offenses within the same State or for charging, sentencing, and correctional actions on the same offender. In some States, the fingerprint cards are routed through a central source (usually the State identification or criminal records agency); in others, fingerprint cards are sent through multiple channels. Some State/local agencies do not send all fingerprints to the FBI, and some fingerprints received by the FBI are rejected as illegible. The net result is an incomplete fingerprint system.

Implementation of NFF/III should considerably reduce the FBI's criminal history recordkeeping. The majority (about 80 percent) of criminal history records maintained by Ident duplicate records in State criminal justice repositories. Only about 20 percent of State offenders have multi-State records.¹³ Most record activity is within the home States. The quality (completeness and accuracy) of Ident records is a major

¹²FBI estimate, 1991. The FBI has assumed, for planning purposes, that 65 percent of offenders have multiple arrests.

¹³FBI estimate, 1991.

problem, because of disposition backlogs within Ident and incomplete disposition reporting by States. States face a major challenge as it is in maintaining high-quality criminal history records on their own. Trying to maintain complete and up-to-date records on about 24 million persons at the national level is even more difficult.

For the NFF/III to work, each State should have

1. a central Statewide fingerprint identification and criminal records repository;
2. centralized reporting of prints and records to this repository;
3. single-source reporting, meaning that only one agency per State—presumably the central repository—submits prints to the FBI;
4. a computerized criminal history records system so that III responses can be provided electronically within seconds;
5. adherence to uniform rules for the interstate exchange of criminal history records for non-criminal as well as criminal justice purposes; and
6. a basic AFIS capability (either at the State repository or accessible via a regional network) so that fingerprint checks can be processed expeditiously.

Full NFF/III implementation thus would reduce the demands on the FBI and the Ident automation program. The NFF/III should significantly reduce the number of criminal fingerprints submitted to the FBI; it also should greatly reduce the number of criminal fingerprints and criminal history records maintained by the FBI. Rejection or failure of the NFF/III, on the other hand, would put greater demands on the FBI, since Ident would need to process multiple duplicate fingerprint cards and maintain a large number of State criminal history records, as it does today. With partial NFF/III implementation, demands on the FBI would fall somewhere in between. In this case, the FBI would, in effect, provide computer and recordkeeping support for those States that did not have their own capabilities to participate in NFF/III. Only a few States appear able to assume full NFF/III responsibilities by 1995.¹⁴ Most States are not likely to fully participate in NFF/III for 5 to 10 years or longer, unless additional resources and incentives are provided.

Twenty-one States currently participate in III (not, however, in the NFF). These States account for about 80 percent of the Nation's criminal history records and fingerprints.¹⁵ The FBI is still maintaining duplicate records and fingerprint cards for these States. The FBI and Florida are conducting a pilot test of the full NFF/III concept. Florida is submitting only one fingerprint card per offender to Ident, and most Florida criminal history records are being consolidated in Florida. Florida is primarily responsible for responding to III inquiries, but the FBI continues to be responsible for residual Florida records maintained by Ident.

A successful Florida test would be a major step toward full NFF/III implementation. It would help provide direction for the FBI and the other 20 States that are III participants. Full NFF/III implementation will take several years. A 1991 FBI survey found that 25 States plan to participate in NFF by 1995, and 7 additional States by 2000. A recent FBI update found that State participation in NFF may proceed more slowly, with as few as 9 States by 1995 and 20 States by 2000:¹⁶

- 9 to 10 States by 1995, representing no more than 20 percent of total criminal fingerprint card submissions;
- 20 to 25 States by 2000, representing no more than 50 percent of fingerprint submissions; and all States by 2008.

Interim Florida pilot test results confirm the benefits of III but also confirm the problems and complexities of full NFF implementation that are likely to stretch out the schedule.

The III, in contrast, is a proven concept, and State participation is likely to progress faster. A 1990 FBI survey (updated in 1991) found that 14 States, in addition to the current 21, plan to participate in III by the end of 1993, and 4 States after 1993 (see table 1). Eight other States plan to participate but have no definite schedule, and three States have no plans or schedule. The FBI believes that full III participation is possible by 1995 or 1996.

Congress and the FBI may wish to include NFF/III implementation as an integral part of Ident automation. If so, then several further actions are necessary. First, an interstate compact or Federal legislation would be

¹⁴According to estimates of the FBI and the NCIC Advisory Policy Board, Identification Services Subcommittee.

¹⁵Based on the number of fingerprint cards submitted by the States to the FBI.

¹⁶FBI estimate, presented at the July 29, 1991, OTA workshop on the Ident automation program.

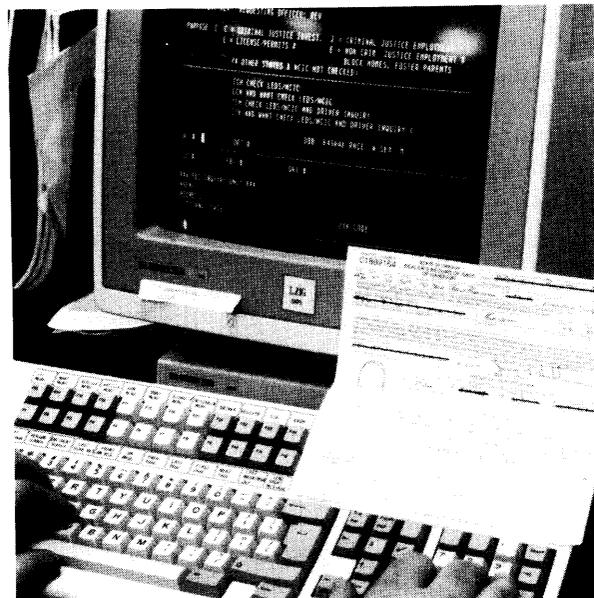
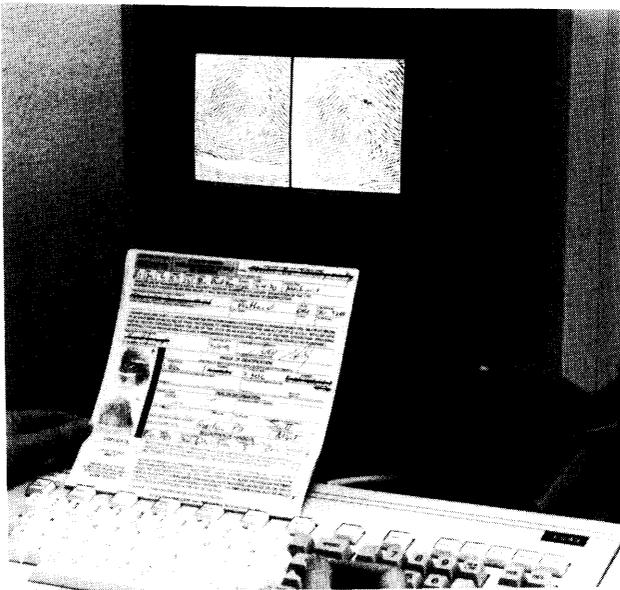


Photo credits: Oregon State Police, 1991

The National Fingerprint File/Interstate Identification Index (NFF/III) would facilitate the accurate and speedy identification of persons with prior out-of-State criminal history records. The NFF/III could be used for a variety of purposes—from reviewing the criminal records of arrestees when setting bail, to checking firearm purchasers for felony convictions, to screening employment and licensing applicants for disqualifying criminal records.

Right: The name and identifying information of a prospective handgun purchaser are entered into a local police computer system for checking against local, State, and national criminal record files—including the III.

Left: The thumbprints of a prospective handgun purchaser are compared with fingerprints of prior offenders in a regional AFIS—which in the future could be connected to the NFF. Here, a fingerprint examiner verifies a tentative match between the thumbprints of a purchaser with those of a prior offender, in order to establish positive identification.

required to establish uniform operating rules and designate responsibilities needed to make the NFF/III work, especially for noncriminal justice use of criminal history records. Second, this would require that the States be willing and able to change State laws on noncriminal justice use to be consistent with an interstate compact or legislation. Third, a detailed assessment of current and projected State capabilities to support NFF/III would be needed to ensure full implementation in an agreed-to time frame.¹⁷ This assessment should include consideration of regional AFIS networks for smaller States, such as the Western Identification Network that serves Alaska, California, Idaho, Nevada, Oregon, Utah, Washington and Wyoming.¹⁸ The FBI and BJS could collaborate with the States in preparing a detailed State-by-State NFF/III implementation plan.

Fourth, Federal grant programs for State/local criminal justice record systems should be reviewed to ensure that NFF/III implementation is given a priority. Congress included a provision in the Crime Control Act of 1990 requiring that 5 percent of Federal criminal justice block grants be used to improve State/local criminal justice record systems. This could amount to about \$20 million per year starting in fiscal year 1992, or perhaps \$100 million total through fiscal year 1996 or \$200 million through fiscal year 2001 (possible milestones for significant NFF/III implementation).¹⁹ Fifth, the States would need to make up the difference between their NFF/III cost and any Federal assistance through tax revenues and user fees.

¹⁷Two recent surveys provide useful information, but are not by themselves sufficient for developing a detailed NFF/III implementation plan. See SEARCH Group, Inc., *Survey of Criminal History Information Systems*, NCJ-125-620 (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, March 1991), and FBI, survey of State needs and capabilities for fingerprint identification and criminal history record checks, 1991, results available from the FBI.

Table I-State Plans for III Participation

State	Planned participation
Alaska	1991 (1 State)
Arkansas, Illinois, Kansas, Kentucky, Nebraska, Nevada, New Hampshire, North Dakota, South Dakota, Utah, Washington, West Virginia, and Wisconsin	1992-1993 (13 States)
Indiana, Maine, Mississippi, Vermont	After 1993 (4 States)
Alabama, Arizona, Hawaii, Iowa, Maryland, New Mexico, Oklahoma, Rhode Island	No schedule (8 States)
Louisiana, Massachusetts, Tennessee	No plans to participate (3 States)

^aTwenty-one States already participate.

SOURCE: Federal Bureau of Investigation, 1990, 1991.

Interstate Compact or Federal Legislation on Criminal Record Systems

If the NFF/III is fully implemented, and Ident no longer maintains State criminal history records, the interstate exchange of criminal justice information could be impeded in the absence of uniform rules. Agreement on uniform national rules for the use of criminal records for nonjustice purposes is especially important because about half of the requests for Ident fingerprint/criminal record checks historically are for such purposes—about 30 percent from Federal agencies and 20 percent from State/local agencies. Ident currently handles these requests without regard for widely varying State laws on noncriminal justice dissemination. Once the information is submitted to the FBI, it is subject to Federal—not State—laws. State laws differ on what types of criminal justice information (e.g., arrest record, convictions only) can be disseminated for specific purposes (e.g., employment, licensing). Current State laws would make national noncriminal justice record checks incomplete and

perhaps unworkable, since the information provided would be a “patchwork quilt” with some of the patches missing.

Representatives of many of the State criminal justice agencies agree on a proposed solution to the non-criminal justice problem—that the laws of the requesting (or recipient) State should take precedence. For instance, if California requested a criminal history check for employment or licensing purposes on someone who had a prior criminal record in Arizona and Texas, records would be used by California in accordance with its law—not the laws of Arizona or Texas. Similarly, if a Federal agency such as the Defense Investigative Service (DIS) requested a record check on a defense contractor employee with a prior record in Maryland and New York, the State records would be provided to DIS for use in accordance with Federal law.

During the 1980s, two major criminal justice advisory groups—the National Crime Information Center Advisory Policy Board (NCIC APB, chartered under the Federal Advisory Committee Act to advise the FBI) and SEARCH Group, Inc. (a not-for-profit State consortium on criminal justice information policy)—and the FBI developed policy proposals for the interstate exchange of criminal history information.²⁰ These initiatives included rules on criminal justice as well as noncriminal justice use of criminal records and specified State and Federal responsibilities for NFF/III implementation and oversight. The three proposals are similar in many respects but have a few differences.

The SEARCH Group and FBI policy proposals covered both criminal justice and noncriminal justice use of NFF/III, while the NCIC APB proposal was limited to noncriminal justice purposes. All three proposals included new advisory groups, but they differed in how these groups would be formed and would operate. The NCIC APB proposed that a new advisory group be responsible only for noncriminal justice uses of NFF/III, with criminal justice activities continued

¹⁸For further information, see *Bits & Hits*, a newsletter published by the Western Identification Network, Inc., 9343 Tech Center Drive, Suite 250, Sacramento, CA 95826.

¹⁹States correctly point out that the 5-percent set-aside is not new money, and must be transferred from other State/local criminal justice purposes. BJA/BJA have not yet issued guidelines on qualifying uses of the grant monies set aside.

²⁰For three interstate compact proposals, see SEARCH Group, Inc., “Interstate and Federal-State Compact on the Exchange of Criminal History Records,” July 20, 1989; FBI, “Interstate Compact on the Exchange of Criminal History Records,” working draft, Aug. 4, 1989; and NCIC APB, Interstate Identification Index Subcommittee, “Interstate and Federal-State Compact on the Exchange of Criminal History Records for Noncriminal Justice Purposes,” final draft, Nov. 16, 1989, and revised final draft, Dec. 6, 1990. The FBI Director approved the NCIC APB draft on May 16, 1991, and forwarded it to the U.S. Attorney General for action.

under the NCIC APB's purview.²¹ The FBI withdrew its proposal and supports the NCIC APB approach. SEARCH Group, Inc., has also endorsed the APB proposal compact, even though some SEARCH members prefer a broader approach.²²

The NCIC APB, SEARCH, and the FBI have endorsed an interstate compact to establish common procedures for the interstate exchange of criminal justice information. The FBI Director has approved the APB compact and forwarded it to the U.S. Attorney General for action. Any compact would have to be ratified by State legislatures and Congress. If Congress decides to make NFF/III implementation a part of Ident automation, and if an interstate compact proves difficult to ratify, Federal legislation could substitute for a compact. The FBI could ask the National Conference of State Legislatures, National Governors Association, National Criminal Justice Association, and other appropriate organizations to survey the views of State legislators and governors on criminal record policy. The survey could include questions about the content, timing, and feasibility of a compact, and preferences for a compact versus legislation. The compact may need to more explicitly address, for example, the completeness of criminal history records exchanged and the procedures by which persons can review and challenge adverse record check results.

The FBI will have to make major decisions over the next few months on the strategic direction of the Ident automation program. If the FBI bases its automation plans on full NFF/III implementation, it would have to ensure that binding operating rules and responsibilities would be agreed to on a timely basis—whether through interstate compact or Federal legislation. It will take time to adopt and ratify an interstate compact. A possible objective could be to begin the interstate compact ratification process during the 102d Congress. This would give the FBI a basis for planning, identifying any substantive problems with the proposed compact, and possibly formulating Federal legislation should an alternative to the compact be needed.

Criminal History Record Completeness and Disposition Reporting

Congress and criminal justice study groups, most recently in relation to the identification of felons attempting to purchase firearms, have emphasized the importance of record quality in criminal justice information systems.²³ Incomplete or inaccurate criminal history records can reduce the effectiveness of law enforcement and the criminal justice process, and jeopardize individual rights. Record quality problems can frustrate fully informed charging and sentencing decisions in criminal cases, and make it difficult to conduct accurate criminal record checks on applicants for government employment or licenses, child care providers or teachers, firearms purchasers, and the like, where authorized or required by law.

The FBI did not, until 1990, distribute criminal history records for State/local noncriminal justice purposes when the record showed an open arrest (i.e., no disposition listed) more than 1 year old. The FBI now distributes such records, although with a warning that applicants should be presumed innocent if no disposition is listed and should be given an opportunity to challenge record information if used against them.²⁴ This has not eliminated concern over possible civil rights violations if incomplete records are used for licensing and employment decisions. If records without dispositions are not used at all, on the other hand, some convicted offenders would be licensed or hired. Complete and accurate records are the only solution to this dilemma.

The FBI continues to have problems with missing dispositions, either because they are not reported by the States or because the FBI lags in entering the reported dispositions into the criminal history records. A significant percentage of reportable dispositions (roughly 30 to 50 percent) are never provided to the FBI. Ident currently has a backlog of about 2.5 million unprocessed

21 For further discussion, see NCIC APB, "Interstate and Federal-State Compact," Op. Cit., f00tnOte 20.

22 See SEARCH Group, Inc., resolution dated July 18, 1991, available from SEARCH Group, Inc., 7311 Greenhaven Drive, Suite 145, Sacramento, CA 95831.

23 See U.S. Congress, Office of Technology Assessment, *Automated Record Checks of Firearm Purchasers: Issues and Options*, OTA-TCT-497 (Washington, DC: U.S. Government Printing Office, July 1991); U.S. Department of Justice, Office of Justice Programs, *Attorney General's Program for Improving the Nation's Criminal History Records and Identifying Felons Who Attempt To Purchase Firearms*, NCJ-128131 (Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, March 1991); U.S. Department of Justice, Task Force on Felon Identification in Firearm Sales, *Report to the Attorney General on Systems for Identifying Felons Who Attempt To Purchase Firearms* (Washington, DC: U.S. Department of Justice, Assistant Attorney General for Justice Programs, October 1989).

24 FBI, Fingerprint Contributor Letter 90-4, "FBI Identification Division Services: One-Year Rule," Aug. 9, 1990.

dispositions. Full implementation of NFF/III would help solve this problem by getting the FBI out of the business of collecting and maintaining criminal history information-including dispositions-except for Federal offenders, and placing the responsibility for record quality with the States.

Until that can be done, magnetic computer tape can be used for disposition reporting, and additional staff can be assigned to reduce the FBI disposition filing backlog. Several States are submitting dispositions on magnetic tape, with good success. The Attorney General has approved an FBI request for additional resources to eliminate the disposition backlog over the next 2 years, but this is a small fraction of total missing dispositions.

Disposition reporting is also a problem at the State level, although the States are a step closer to the sources of dispositions (police, prosecutors, courts, correctional officials) than the FBI. Many States have taken various actions over the last decade to improve disposition reporting and record quality and automation. Surveys estimate overall disposition reporting and record automation rates of 60 to 70 percent, with some States achieving higher rates and others lower (see figures 2 and 3).²⁵ Whatever the actual rates, there is still room for improvement.

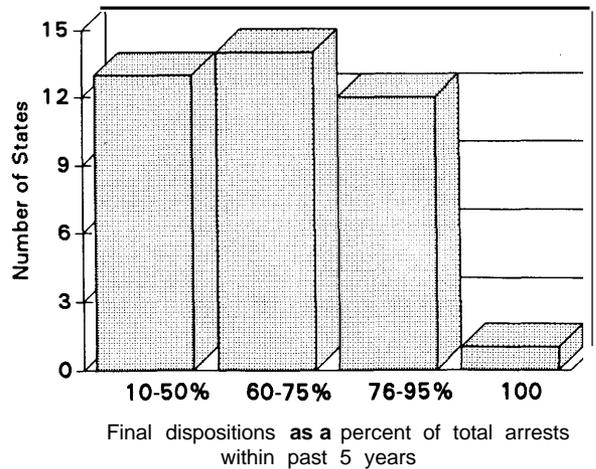
Both OTA and the Attorney General's Task Force on Felon Identification in Firearm Sales concluded that record quality problems are a major barrier to implementing automated checks of firearms purchasers.²⁶ Federal law prohibits convicted felons from obtaining or possessing firearms. If criminal history records are missing disposition information, then it is difficult or impossible to determine whether a person arrested for a felony offense was actually convicted and thereby disqualified from purchasing a firearm.

In recognition of the importance of improving criminal history record quality, the Attorney General authorized the expenditure of \$9 million per year for 3 years (FY91, FY92, FY93) in BJS/BJA grants to the States for criminal record system improvements related to record quality. These relatively modest sums appear to be having a beneficial impact on the States. Several States report that, in these times of tight State budgets, even a few hundred thousand dollars in "new" money

can fund projects that are critical to improving record quality. Typical projects include software upgrades to automate disposition reporting, record quality audits, and conversion of manual records to computerized formats.

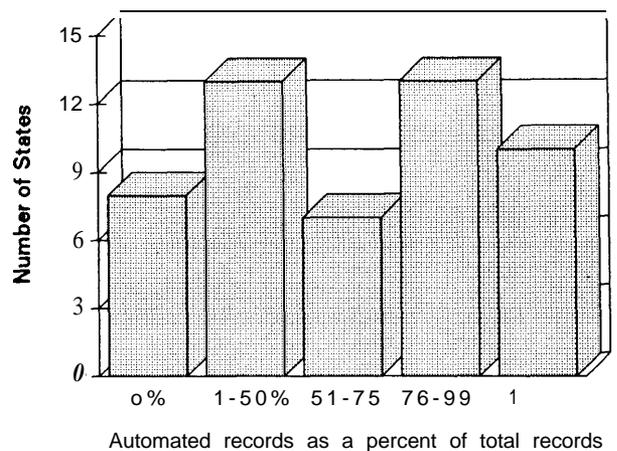
In addition, Congress included in the Crime Control Act of 1990 a 5-percent set-aside of Federal criminal

Figure 2—Final Dispositions in State Criminal History Records, 1989



SOURCE: Bureau of Justice Statistics/SEARCH Group, Inc., 1991.

Figure 3—Automation of State Criminal History Records, 1989

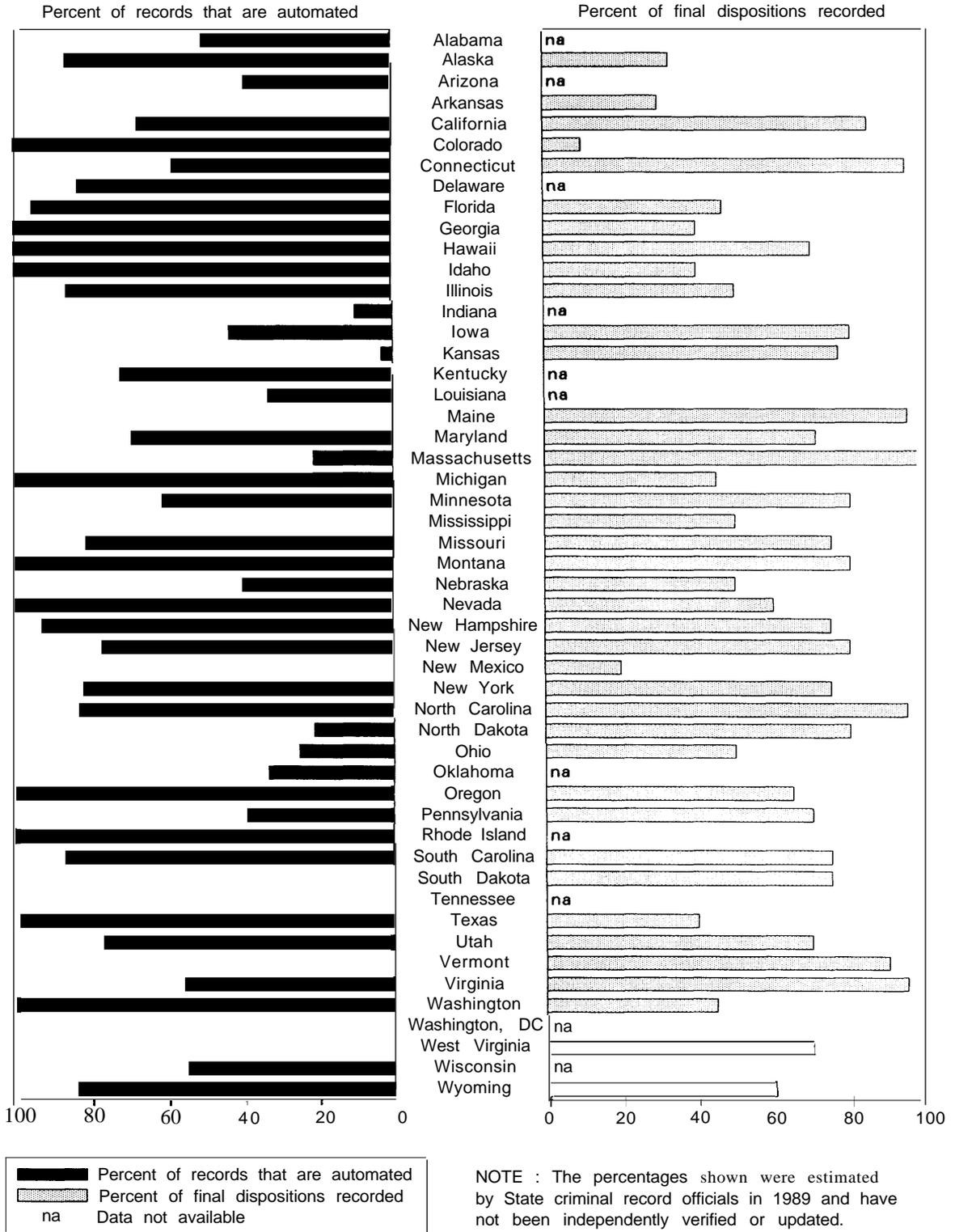


SOURCE: Bureau of Justice Statistics/SEARCH Group, Inc., 1991.

²⁵ EARCH Group, Inc., *Survey of Criminal History Information Systems*, Op. cit., footnote 17. Also see OTA, *Automated Checks of Firearm Purchasers*, op. cit., footnote 23.

²⁶ See OTA, *Automated Checks of Firearm Purchasers*, op. cit., footnote 23; U.S. Department of Justice, *Attorney General's program*, op. cit., footnote 23; and *Report to the Attorney General*, op. cit., footnote 23.

Figure 4-State-by-State Percentages of Automated Criminal History Records and Final Dispositions, 1989



justice block grant funds (an estimated \$20 million per year, starting in FY92) for criminal record system improvement related to record quality. This action also reflected the recognition that automated record checks of firearms purchasers require improved record quality. The Senate-passed version of the Violent Crime Control Act of 1991 includes authorization for \$100 million in additional Federal funds for State/local record quality and automation improvements needed to support automated firearm purchaser checks. This Act also establishes a nationwide minimum disposition reporting standard of 80 percent. This standard, if implemented, would modestly improve the national average and dramatically upgrade reporting in States with the lowest disposition levels (see figure 4).

Further record quality improvement actions could be included in the Ident automation program. For example, Ident could develop and implement a fingerprint identification and criminal history record audit program. The FBI's National Crime Information Center (NCIC) already conducts audits of State/local "hot file" record systems (e.g., the wanted persons and stolen vehicles files).²⁷ Each State is audited about every 3 years on a rotating basis. The audits include compliance with NCIC procedures, related training programs, and record quality of selected files. The record quality audits include a comparison of the entries in the NCIC national files with the corresponding entries in State/local files based on a random sample of records from each file. Incomplete or erroneous entries and other discrepancies are discussed with the appropriate State/local criminal justice officials, along with remedial actions that may be necessary.

Ident could conduct or require similar audits of State/local fingerprint and criminal history record systems. The audits themselves could be carried out by State/local auditing agencies, rather than Ident, with Ident providing guidelines and reviewing the results. The audits could include compliance with Ident procedures to be developed for use with the NFF/III and automated systems, within the framework of an interstate compact or statute. If the interstate transmission of fingerprints and criminal history records uses the NCIC telecommunications network, then compliance with NCIC operating procedures would likely be

audited as well. The audits also might include training programs, as they do for the NCIC hot files.

Development and implementation of an Ident record quality program need not wait on completion of Ident modernization or NFF/III. The program could be in place within 1 to 2 years, if it were assigned high priority and given adequate resources.²⁸

An accurate and responsive criminal records system today requires an automated system. Both the FBI and many States have gaps in the automation of their criminal history records (see figure 4). Ident still maintains about one-third of its records in manual format. As part of an effort to upgrade criminal record systems in support of automated firearm purchaser checks, the Attorney General has proposed funds to begin to computerize Ident's remaining manual records on active criminal offenders.²⁹ The FBI estimates, however, that it will take 4 years to convert these records. The BJS/BJA grant and set-aside funds can be used for similar upgrades at the State/local levels. These improvements will help facilitate the interstate exchange of criminal history information for a wide variety of purposes.

Standards for Security, Privacy, and Electronic Exchange of Fingerprints

Fingerprint identification files and criminal history records maintained by Ident are perhaps even more sensitive than the hot files (e.g., on wanted persons and stolen vehicles) maintained by NCIC. NCIC has developed procedures to protect the NCIC network from unauthorized use, sabotage, and other physical, technical, and personnel security breaches. Only authorized law enforcement and criminal justice personnel may access NCIC. The NCIC APB places a high priority on a secure, tightly controlled NCIC network. For this reason, the APB expressed reservations about proposals to permit gun dealers (and other noncriminal justice personnel) direct NCIC access. Noncriminal justice users may obtain NCIC information, but only for authorized purposes and with access provided through authorized law enforcement or criminal justice personnel. In addition, NCIC has procedures to protect the privacy of NCIC record information, including III and criminal history records transmitted over NCIC, by limiting their dissemination to authorized persons.

²⁷See NCIC audit reports for specific States, available from the FBI.

²⁸Full implementation of State-by-State audits and training could take longer, but the FBI should be able to define, develop, and initiate a record quality program within 2 years.

²⁹Records on older, inactive offenders will not be automated.

Similar security and privacy standards should be included in the Ident automation program. If Ident uses the NCIC telecommunications network for fingerprint and record transmission, as planned, the NCIC standards would apply as they already do today to III/Ident criminal history record dissemination. Security and privacy should be explicitly included in any Ident audit program that may be developed. Ident should consider issuing binding Federal regulations, or seeking legislation if necessary, to mandate procedures for persons to review and challenge the results of criminal history record checks used against them. This is especially important so long as a significant percentage of records are missing dispositions but are nonetheless disseminated and used for noncriminal justice purposes. Review and challenge procedures also could be included in an interstate compact; most States have such procedures, although the specifics vary. State record repositories could provide user agencies with two copies of the record check results, one for the agency and one to be passed on to the applicant, or a copy could be sent directly to the applicant.

The FBI recognizes the need to design the Ident automation program to be technically compatible with State/local fingerprint identification and record systems. NFF/III implementation depends on the exchange of fingerprints and criminal history records among the States/localities and the FBI. Electronic transmission is essential for timely, cost-effective exchange. Technical standards for the electronic exchange of documents such as criminal history records are widely used in the computer and telecommunications industries. These standards are incorporated into State/local systems that interface with the NCIC network and the National Law Enforcement Telecommunications System.

All States use different formats for criminal history records, whether manual or automated. This is a presentation problem and not a technical matter, and all of the formats contain adequate information for most criminal justice purposes. Nonetheless, efforts to standardize criminal history record formats are needed. Standardized formats could be important for proposed new record checks, such as automated firearm purchaser checks using III. The Virginia State Police, for example, have found that out-of-State criminal history

records can be obtained through III in 10 to 15 seconds. But because of differing record formats (and quality), it may take 15 to 20 minutes or longer to interpret the out-of-State records. This is longer than the State Police cart reasonably hold gun dealers on the telephone line awaiting a record check on firearms purchasers. Initial approval or disapproval decisions sometimes are based on whether there is a III "hit" (a match between the name of the gun purchaser and a name listed in the index of criminal offenders), not on the content of the criminal record. III entries may eventually be flagged to indicate persons with felony convictions, thus eliminating the need to review detailed criminal history records when checking firearm purchasers. But review of the actual records would still be needed for many other kinds of noncriminal justice record checks.

As for fingerprint transmission, the FBI is supporting an initiative by the National Institute of Standards and Technology (NIST) to develop standards for electronic transmission of fingerprint images.³⁰ Numerous vendors and users are participating in the NIST standard-setting activity. The standard is intended to permit the electronic capture of fingerprints (through live scanning with video or laser units)³¹ and transmission of the digitized print images to local, State, or Federal agencies with automated fingerprint identification systems. The receiving agency could store the prints on magnetic or—more typically—optical media, display the prints on a computer screen, and print the fingerprints out on paper if needed. Multiple copies of fingerprints could easily be sent in later transmissions of the electronic images. This process would make obsolete the time-consuming and error-prone rolled ink copies and the mail or hand delivery required for duplicate (or triplicate) manual fingerprints.

Finally, the FBI has determined that standardized fingerprint search algorithms, which would permit the exchange of fingerprint minutiae among different systems, are not needed. A standard or generic, nonproprietary search algorithm compatible with all major vendor proprietary systems would be difficult to develop. Successful implementation of the NFF/III and Ident automation depends not on a generic search algorithm but, instead, on standards for the electronic transmission of digitized fingerprint images and related information.³²

³⁰For an update on progress to date, see FBI, "proceedings of the May 1991 Workshop on the Fingerprint Image Transmission Standard," cosponsored by the FBI and NIST.

³¹Scanning can also be used to capture fingerprints of deceased crime victims.

³²AFIS vendors and users, the FBI, and the NIST have concluded that a generic algorithm is not feasible or necessary.