Chapter 10

Major Structural Alternatives for a National Computerized Criminal History System

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Major Structural Alternatives for a National Computerized Criminal History System

Chapter Summary

Over the last 12 years, a wide range of structural alternatives have been proposed for a national computerized criminal history (CCH) system. These alternatives can be grouped into four categories: 1) national repository; *2)* single-State/multi-State; 3) national index; and 4) regional and "ask-the-network" systems. Each category has a number of possible variations.

From a technological systems perspective, three significant changes have occurred since the debate over CCH began. First, advances in computer and communication technology have reached the point where both centralized and decentralized system structures are possible. Second, many States and localities and several Federal agencies have developed their own CCH capability, and 49 of the 50 States now have their own criminal history record repositories. Third, the Federal Bureau of Investigation's (FBI) Identification Division (Ident) has made progress in automating its own operations through the Automated Identification Division System (AIDS) program. All of the CCH alternatives discussed below assume that Ident (or its equivalent) will continue to provide a national fingerprint identification capability.

National Repository

Both Ident and NCICICCH are currently structured as national repositories with records of single-State, multi-State, and Federal offenders for criterion offenses. Ident is, indeed, fully functioning as a national repository since all 50 States submit fingerprints. NCIC/CCH is operating much like a Federal repository with national access rather than a national repository, since all current Federal offenders are included but only eight States are contributing records. A national CCH repository could evolve from either the AIDS file of Ident or the CCH file of NCIC. In actual practice, the repository would likely draw on elements of both.

Single-State/Multi-State

The original FBI plan was eventually to implement the single-State/multi-State alternative with the switching of messages through the NCIC computer for both the record inquiry and the response. States would maintain single-State offender records. NCIC/CCH would include records of multi-State and Federal offenders, plus an index of single-State offender records. Inquiries against the index resulting in a hit would be routed through the NCIC computer and over the NCIC communication lines from the requesting State or agency to the originating State. The record of *interest* would be transmitted to the requesting State via the NCIC network. Some alternatives involving message switching have raised questions about the impact on Federal-State relations and the potential for monitoring and surveillance use. The FBI has argued that message switching would provide a legitimate service to the States that would improve efficiency and provide a faster response time. Nevertheless, Congress has continued to prohibit NCIC/CCH message switching.

Interstate Identification Index Pilot and Phase 1 Tests

In early 1980, the FBI advised Congress of an Interstate Identification Index (III) pilot project with Florida to demonstrate the functional equivalent of the single-State/multi-State alternative with no message switching, viewed as the first step toward implementing III. However, owing to problems with handling widely varying message formats and in verifying requests from the other States, a plan was developed for routing all inquiries to Florida through NCIC/CCH with records provided via NLETS. In December 1980, this inquiry referral plan was endorsed by the NCIC Advisory Policy Board and the NLETS Board of Directors. Thus, the pilot test conducted during July through September 1981 (as well as the Phase 1 test carried out in spring 1982) involved a partial message switching technique known as automatic inquiry referral.

National Index

The current III development plan calls for a national index. In a national index system, States would maintain both single-State and multi-State offender records. The NCIC/CCH file would then include only Federal offender records, plus a national index (sometimes known as a pure pointer index, a national criminal identification name index, and, more recently, III) of single-State and multi-State records. If implemented without any NCIC/CCH message switching, States or agencies making an inquiry would be advised only if the subject were listed in the index as having a record and, if so, in which State repository. The requesting agency would then obtain the record directly via NLETS or other means. The national index alternative could also be implemented with partial or complete message switching via NCIC/CCH. A national index would avoid the expense of duplicating records at both State and Federal levels and would preserve State control over in-State records.

Regional and "Ask-the-Network' Systems

In the 1979 OTA survey, several States listed decentralized regional systems between contiguous States as a secondary preference and "a better-than-nothing alternative. " However, most States contended that regional systems were infeasible or impractical. An analysis of NLETS and III pilot test traffic patterns indicates that Florida is receiving messages from distant States more often than from contiguous States.

In a completely decentralized national ask-the-network system, there would be no national index or repository. Instead, each State could poll any or all of the other 49 States when seeking CCH information. One option would tie all 50 States and the FBI together on a computerized "party line. " A more likely option would be the use of a national switcher similar to the one operated by NLETS in Phoenix, Ariz.

With its technology upgrade now complete, NLETS is operating at about 7 to 10 percent of capacity and could handle a substantial increase in CCH-related message traffic. However, the potential for use of NLETS in an ask-the-network mode must be tempered by the experience with ROIR (reply only if record) messages. Here, inquiring States looking for a record would send messages to all other States (or a large number). NLETS found that many States began to ignore messages when the probability of a hit was low and the effort (and cost) of checking out all inquiries was high. Also, the FBI and various State officials believe that an ask-the-network system would not be cost effective and would be harder to secure against unauthorized access.

National Repository

Both Ident and NCIC/CCH are currently structured as national repositories. That is, the criminal history files are designed to include full records of all offenders–single-State, multi-State, and Federal-for all criterion offenses.* However, NCIC/CCH was intended by the FBI to serve as a full record national repository only until the single-State/multi-State concept could be implemented.

In practice, Ident is fully functioning as a national repository since all 50 States submit fingerprints. The NCIC/CCH file falls far short, however, since only eight States currently maintain criminal history records in CCH. All Federal offenders are included in NCIC/CCH, and 49 of the 50 States can directly access the CCH file. All NCIC/CCH entries require an FBI identification number, which in turn must be based on positive fingerprint identification. Ident conducts the fingerprint identification and assigns the identification number.

Given the high rate of Federal agency participation in NCIC/CCH and the low rate of State participation, NCIC/CCH is operating much like a Federal repository with national access rather than as a national repository. About two-thirds of the non-Federal CCH traffic is with the eight fully participating States.

NCIC/CCH differs from Ident in three other major ways. First, the NCIC/CCH file uses the NCIC communication network for receiving and sending messages and can respond to inquiries from the States in a matter of seconds. Ident must depend primarily on the mails. Even if AIDS were able to substantially reduce the internal turnaround time for Ident, the total response time would still be measured in days (by mail) or hours (with facsimile transmission) rather than seconds, since Ident conducts fingerprint searches whereas NCIC/CCH involves only online computerized name searches. Indeed, all records in the NCIC/CCH file must be based on positive fingerprint identification.

Another difference between NCIC/CCH and Ident is in record format. Ident rap sheets and the automated AIDS rap sheets present criminal history information in chronological order, limiting contents to the offender's name, Federal and State identification numbers, arrest dates, charges, and dispositions (with dates). The NCIC/CCH format includes additional personal descriptor information (height, weight, identifying marks, etc.), presents charges and dispositions in summary as well as chronological order, and makes provision for additional judicial and custody information plus supplemental comments. Thus, the utility of a CCH record is presumed to be greater than that of an Ident/AIDS record, but the costs and difficulty associated with keeping a CCH record up to date are also higher.

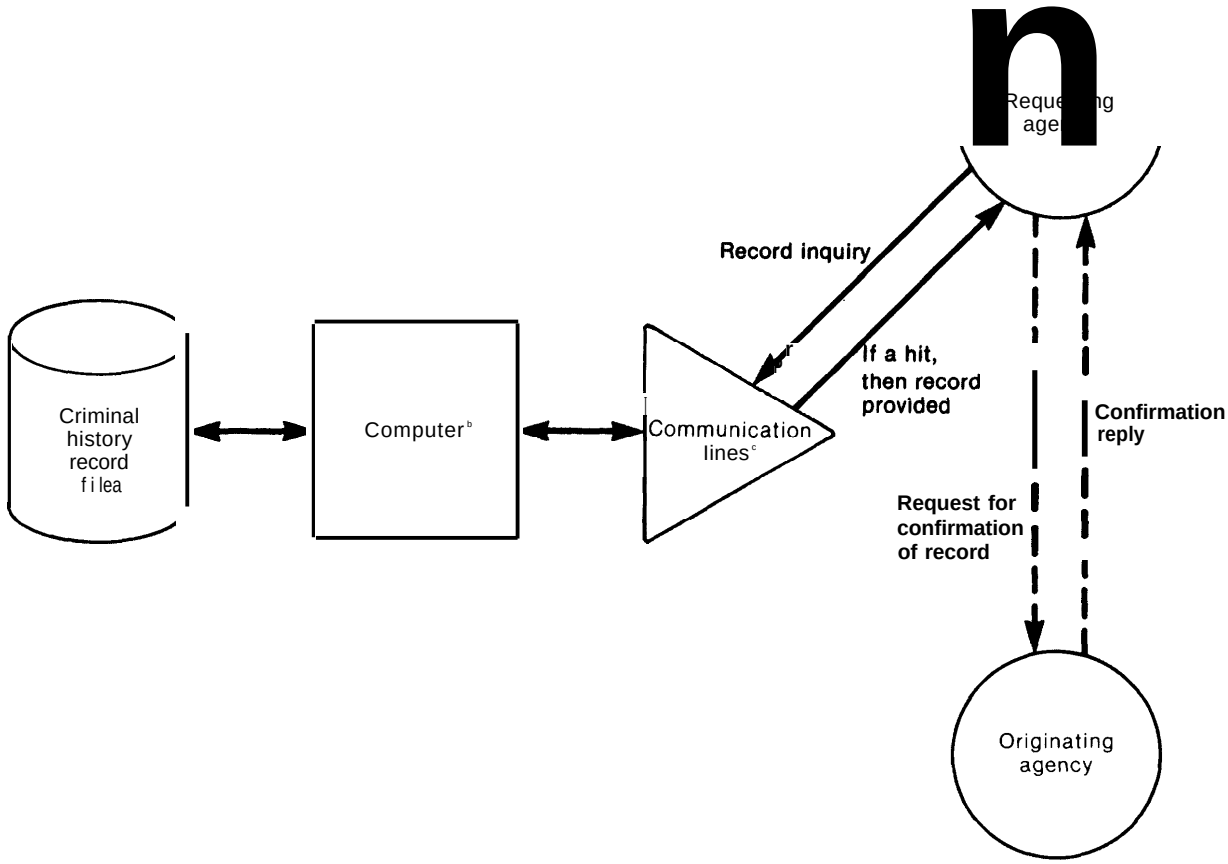
A third difference is in the area of privacy and security requirements. While both Ident and NCIC/CCH have the same statutory and regulatory frameworks for the use and dissemination of criminal history records, NCIC/CCH has developed a much more stringent set of operating procedures to protect the privacy and security of criminal history records, in part because CCH is an on-line file.

It is possible for a national CCH repository to evolve from either the AIDS file of Ident or the CCH file of NCIC. In actual practice, the repository would likely draw on elements of both, as shown in figure 7. In theory, a national repository would not require message switching. Since all States and agencies would enter criminal history records into the repository and update these records on a continuous basis, confirmation of hits (a match between an inquiry and a record) with the originating States or agencies would not be necessary. In practice, unless disposition reporting were virtually instantaneous, confirmation via NLETS

* Includes serious and/or significant offenses. Excludes the offenses of drunkenness, vagrancy, disturbing the peace, curfew violation, loitering, false fire alarm, nonspecific charges of suspicion or investigation, and traffic violations (other than manslaughter, driving under the influence of drugs or liquor, and hit and run). See 28 CFR $20.32.

or by some other means would be needed to ensure record accuracy and completeness. As long as the confirmations were carried out by the States and agencies themselves (as they are now), as illustrated in figure 7, there would be no need for the national CCH repository to conduct message switching.

Figure 7.— National Repository CCH Alternative



[a]Could contain all single-State, multi-State, and Federal offenders. Could use AIDS data base when fully automated, and AIDS or CCH record format. Or some combination.
[b]Could use NCIC or AIDS computer.
[c]Could use NCIC communication lines.

SOURCE: Office of Technology Assessment

Single-State/Multi-State

While the NCIC/CCH file currently serves as a national repository for the records of eight States plus all Federal offenders, this arrangement was originally viewed by the FBI as transitional. The plan was eventually to implement the single-State/multi-State alternative whereby States would maintain single-State offender records. A central repository would include records of multi-State and Federal offenders plus an index (composed of name and identifiers only) of all single-State offender records contained within the State repositor-

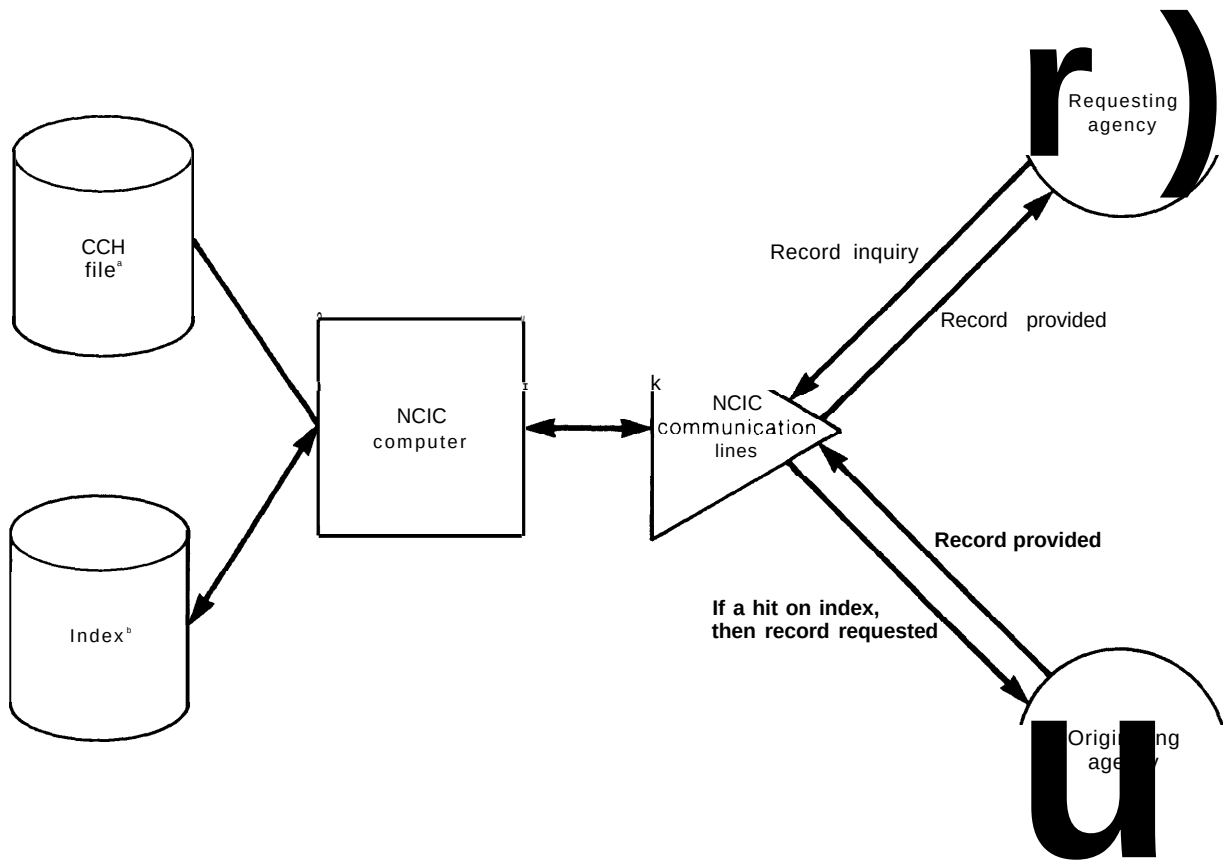
ies. When the NC IC/CCH program began 12 years ago, very few States had an in-State CCH capability for their own records. Thus, NCIC/CCH initially was to maintain single-State offender records (as well as multi-State and Federal), but would return single-State records to the States as they developed their own CCH systems. The functional equivalent of this concept was first tested in a 1981 pilot project with the State of Florida.[1] Approximately two-thirds of the 25 States that now have their own on-line CCH systems are not presently contributing records to NCIC/CCH.*

Under the single-State/multi-State alternative proposed by the FBI in 1970, inquiries against III resulting in a hit would be routed through the NCIC computer and over the NCIC communication lines from the requesting State or agency to the State where the record originated. The record of interest would then be sent back to the requesting State via the NCIC computer for both the record inquiry and the response, as illustrated in figure 8.

[1] For a discussion of the results, see FBI, *Interstate Identification Index Background and Findings for July-September 1981 Phase 1 Pilot Project, Dec. 4,* 1981.

*As of August 1981, seven of the eight States fully participating in NC IC/CCH had their own on-line State CCH file. Eighteen other States with on-line CCH files were not participating.

Figure 8.–Single-State/Multi. State CCH Alternative With Message Switching



[a] For multi-State and Federal offender records
[b] For single-State offender records located in State repositories

SOURCE Office of Technology Assessment

In 1973, the FBI proposed to have NCIC assume all law enforcement message switching (not just NCIC/CCH traffic), including messages sent over NLETS. This alternative, known as single-State/multi-State with full message switching, has generated policy questions about the impact on Federal-State relations and the potential for monitoring and surveillance use.[2] In the face of opposition, the FBI proposed to limit its message switching to NCIC/CCH-related traffic, and in 1975 circulated a "limited message switching implementation plan. " The FBI has argued that message switching is within FBI authority, would provide a legitimate service to the States, and would provide CCH records located in State systems faster and more efficiently. Nevertheless, Congress has continued to prohibit NCIC/CCH message switching. In 1979 and 1980, Congress conditioned approval of the NCIC technology upgrade (for the front-end processor and mainframe computer) on the strict prohibition of any message switching applications. *

[2]For a detailed review of the message switching controversy, see Donald A. Marchand, et al., *A History and Background Assessment of the National Crime Information Center and Computerized Criminal History Program,* Bureau of Governmental Research and Service, University of South Carolina, June 1979, sec. IV, pp. 122-167. See also related discussion in ch. 5 for further discussion. The FBI prefers to use the term "limited message switching" to mean full message switching of NCIC-related messages, and "full message switching" to refer to full message switching of all inter-State criminal justice messages.

*See ch. 5 for further discussion,

Interstate Identification Index Pilot and Phase 1 Tests

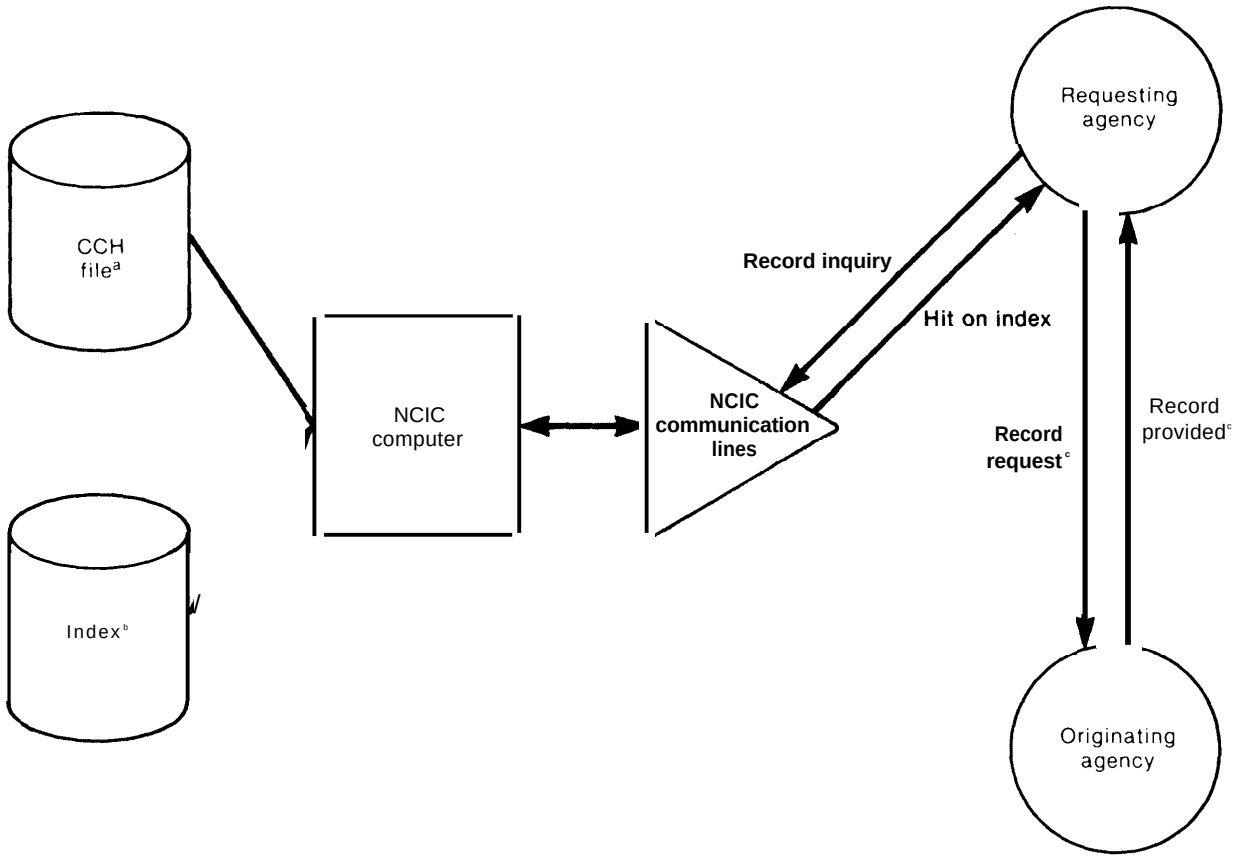
In early 1980, the FBI officially advised Congress of a III pilot project to demonstrate the functional equivalent of the single-State/multi-State alternative with no 'message switching, viewed as the first step toward implementing 111.[3] The plan was for NCIC/CCH to return all single-State offender records to selected State repositories and establish an index to these records in NCIC/CCH. Thus, when a request would come in for one of these records, the NCIC/CCH index would indicate that a CCH record existed in a particular State and that the requesting agency should contact that State directly (via telephone, mail, or teletype), as illustrated in figure 9. It was anticipated that most agencies would use NLETS, which would perform the message switching function for both inquiries and record responses.

Florida was selected as the pilot State. However, early in the planning stage, Florida concluded that it would encounter a number of problems in handling the incoming record inquiries from agencies in the other States because the formats of the requests would vary widely and verification of agency authorization would be difficult. Therefore, a plan was developed for routing all inquiries to Florida through NCIC/CCH. In this way, NCIC/CCH would use a consistent message format and verify agency requests. This, in effect, would give NCIC/CCH a partial message switching role, in that inquiries (messages) eliciting hits on the index would be switched through the NCIC computer and over the NCIC communication lines to Florida, which in turn would provide the CCH record to the requesting agency via mail and/or NLETS, as shown in figure 10.

The single-State/multi-State pilot test with partial message switching (known as "automatic inquiry referral" or AIR) was completed during July through September 1981. The test provided useful data on the number of inquiries, hits, and records provided, response time, and perceived value of the records ulti-

[3]See identical letters dated Jan. 7, 1980, from the FBI Director to the Chairman of the Senate Judiciary Committee and the Chairman of the House Judiciary Subcommittee on Civil and Constitutional Rights.

Figure 9.— Interstate Identification Index Pilot Test as Proposed in 1980



[a] For multi State and Federal offender records
[b] For single State offender records located in State repositories
[c] Via telephone mail or teletypee q N L E TS

SOURCE Office of Technology Assessment

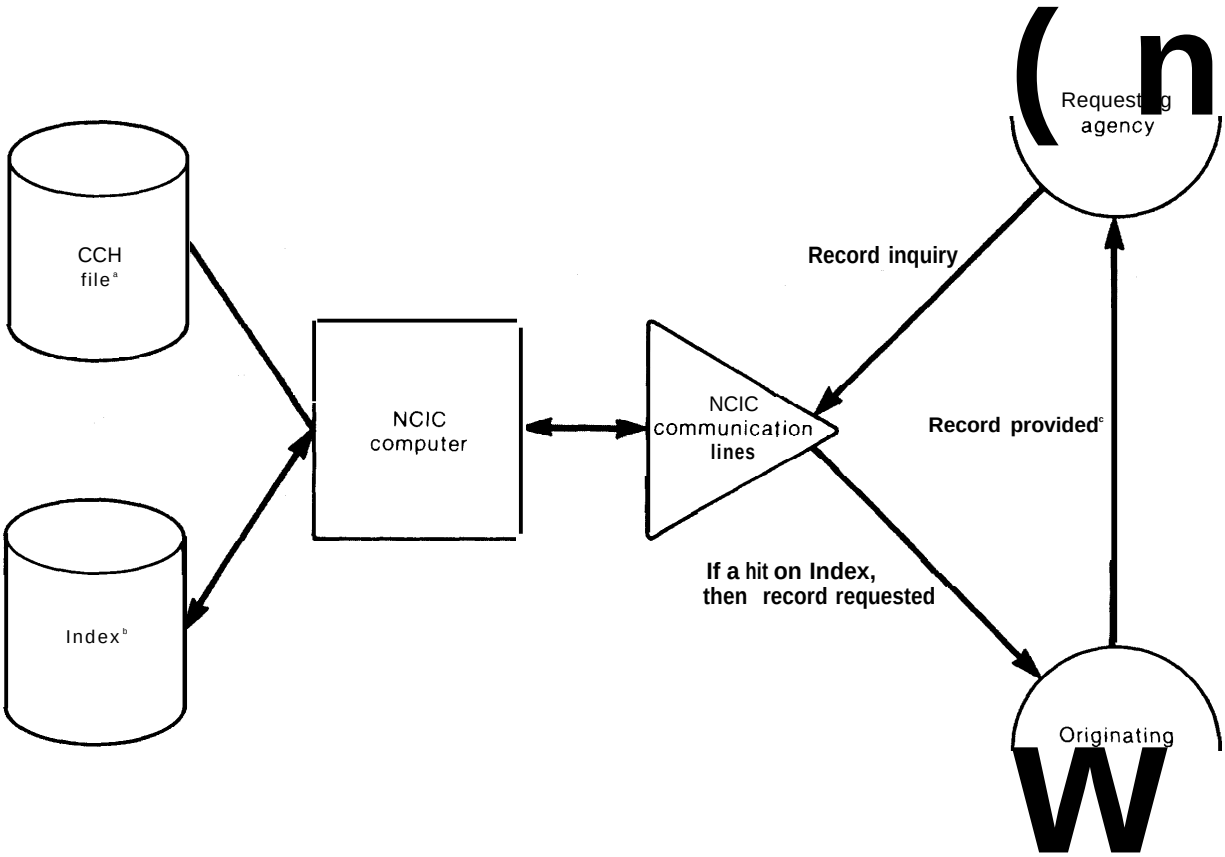
mately provided. Phase 1 of the III development plan extended the pilot test to include five additional States—Michigan, North Carolina, South Carolina, Texas, and Virginia-and was conducted in February and March 1982.

The FBI asserted that AIR does not involve message switching since the inquiries from requesting agencies are reformatted by NCIC. Some information is deleted and other information added before referring the inquiry to the State of record in the case of a hit (or a match between an inquiry and an index entry indicating a single-State record). In addition, the FBI noted that both the NCIC Advisory Policy Board and the NLETS Board of Directors had approved the use of AIR, and that the appropriate congressional committees were advised in advance of its use in the pilot project.'

The FBI concluded that AIR notification "is not message switching as defined by the DOJ (appropriation) Authorization Act, inasmuch as the notification message to be sent to

'See identical letters dated Mar. 2, 1981, from the FBI Director to the Chairman of the Senate Judiciary Committee and the Chairman of the House Judiciary Subcommittee on Civil and Constitutional Rights.

Figure IO.—Interstate Identification Index Pilot Test as Conducted in 1981



aFormu lt I. State and Federal offender records
bFsingle. state offender records located in State repositories
cVia telephone mail or teletype, e g ,NLETS

SOURCE Office of Technology Assessment

Florida (and, by inference, to the other States in the III Phase I test) will be created from the index record and transmitted in a set format. The inquiry will not be retransmitted or switched to Florida. ''[5] As defined in the act, message switching is "the technique of receiving a message, storing it in a computer until the proper outgoing line is available, and then retransmitting, with no direct connection between the incoming and outgoing lines. "[6]

During the 3-month III pilot test, about 973,000 CCH inquiries were received by NCIC. Of that total, 11,415 (or about 1.2 percent) resulted in a match (or hit) between the subject of the inquiry and a Florida single-State record.[7] For these matches, NCIC notified the inquiring agency of a hit and forwarded an AIR message[8] to Florida over the NCIC communication lines. Florida then provided a summary CCH record to the requesting agency via NLETS. A full record was provided by mail if requested. During the pilot test, agencies

'Ibid., p. 2.
'Quoted in FBI, *III Background and Findings,* op. cit., p. *63.* The House Report 96-628, dated Nov. 16, 1979, emphasizes that the conferees' definition of message switching is that used by the Office of Technology Assessment.

'Ibid., p. 144.
"Ibid., p. 143.

from 34 States (including Florida), 3 metropolitan agencies, and several Federal agencies (e.g., U.S. Customs, U.S. Postal Service) made record requests that resulted in hits on Florida single-State records.[9] During the 2-month III Phase 1 test, 10,934 CCH inquiries resulted in a hit. Agencies from 39 States made requests that resulted in hits on single-State records of one or more of the six States with entries in the index.[10]

Examination of sample message formats indicates that the AIR notification message does include some information that is different from that contained in the initial inquiry message. For example, AIR may include an out-of-State identification number that was not known by the inquiring agency but that was added by NCIC based on the index record match. However, some information is likely to be the same in both the inquiry and AIR, such as the name of the subject and the identifying number of the inquiring agency .11 Thus, AIR does involve the switching of some key information from the inquiring agency to the State of record. FBI officials have argued that only "housekeeping data, " such as originating case identifying number, purpose code, and mailing address, are taken from the inquiry message and included in the AIR message. According to the FBI, technically all "key information, such as the name of the subject and other descriptive information, is taken from the 111 record, even though such information may be a part of the inquiry message.

In the pilot test, the inquiries were switched from criminal justice agencies in 33 States, the District of Columbia, and the Federal Government through NCIC to the State of Florida. During the 111 Phase 1 test, inquiries were switched from inquiring agencies to any of the six States participating. However, since only some of the information in the inquiry message is actually switched, and since the record itself is transmitted via NLETS or the mail, AIR is properly considered a form of partial message switching.

AIR is clearly a change from the 1980 FBI III proposal that involved no message switching. The justification for AIR advanced by the FBI and the III Subcommittee of the NCIC Advisory Policy Board included the ability of NCIC to check inquiries to make sure that the requesting agency identifier, control terminal line, and purpose code were properly authorized. Also, NCIC already had developed standard inquiry message formats that could be used during the pilot test. Finally, the use of AIR would eliminate the need for inquiring agencies to send two messages—one to NCIC/CCH and, if a hit occurs, a second message via NLETS to Florida to request the record.

The NLETS Board of Directors had initially declined to support AIR, in part because of anticipated concerns over message switching. At that point the NCIC staff recommended against pursuing AIR further.[12]

However, on the recommendation of its III Subcommittee, the NCIC Advisory Policy Board endorsed AIR in December 1980, but only if it "was (also) endorsed by the NLETS Board of Directors and subsequently presented to the appropriate congressional representatives for their understanding and concurrence. In the event AIR proved to be unacceptable, the NCIC Board endorsed a pure pointer index with no NCIC message switching as a fullback. '3 The NLETS Board then reversed itself and endorsed AIR on December 17, 1980. On March 2, 1981, the FBI Director advised the House and Senate Judiciary Committees by letter of the plan to use AIR.

'I bid., pp. 158-159.

[10]NCIC Advisory Policy Board, *Interstate Identification Index Phase I Test: Report of III Evaluation Committee*, June 1982, pp. 10, 12, 13.

[11]Based on comparison of sample messages in Ibid., pp. 120-124.

"FBI, minutes of the Dec. 10-11, 1980, meeting of the NCIC Advisory Policy Board, pp. 48-50. At its Oct. 22-23, 1980 meeting, the NLETS Board voted 4 to 3 against supporting AIR.

"Ibid., p. 50.

National Index

In its 1980 proposal, the FBI indicated that the pilot project, if successful, might be extended to include the return to the States of multi-State as well as single-State offender records. The current III long-range development plan calls for the NCIC/CCH file to include only the records of Federal offenders, plus a national index[14] of all single-State and multi- State offender records. A National Fingerprint File (NFF) is considered to be an integral part of III. The NFF would contain no arrest or disposition data, would perform the technical fingerprint search and assign FBI identification numbers, and would be predicated on single-source submission policies.

States or agencies making an inquiry would receive either a hit or a no-hit response. If a hit response were received (indicating that the subject individual is listed in the national index as having a record in one or more State repositories), the requesting agency would also be provided with the name of the State (or States) holding the records. The requesting agency would contact the State repositories directly to obtain the records, as shown in figure 11. In this CCH alternative, NCIC/CCH message switching would not be required. This alternative is sometimes referred to as a "pure pointer index" because all the index does is point to the location of a record.

The national index also could be implemented with message switching. Nationwide implementation of phases 2 and 3 of the III development plan would be the equivalent of a national index with partial message switching. With partial switching, such as the AIR technique used in the III pilot test, NCIC/CCH would route inquiries through the NCIC computer to the States holding records. These States would provide records directly to the requesting State or agency. With complete message switching, both inquiries and records would be routed through NCIC/CCH. In effect, NCIC/CCH would query all States for which a hit is indicated (a record is held on the subject individual), collect all the records from the various States into a consolidated record, and provide it to the requesting agency.

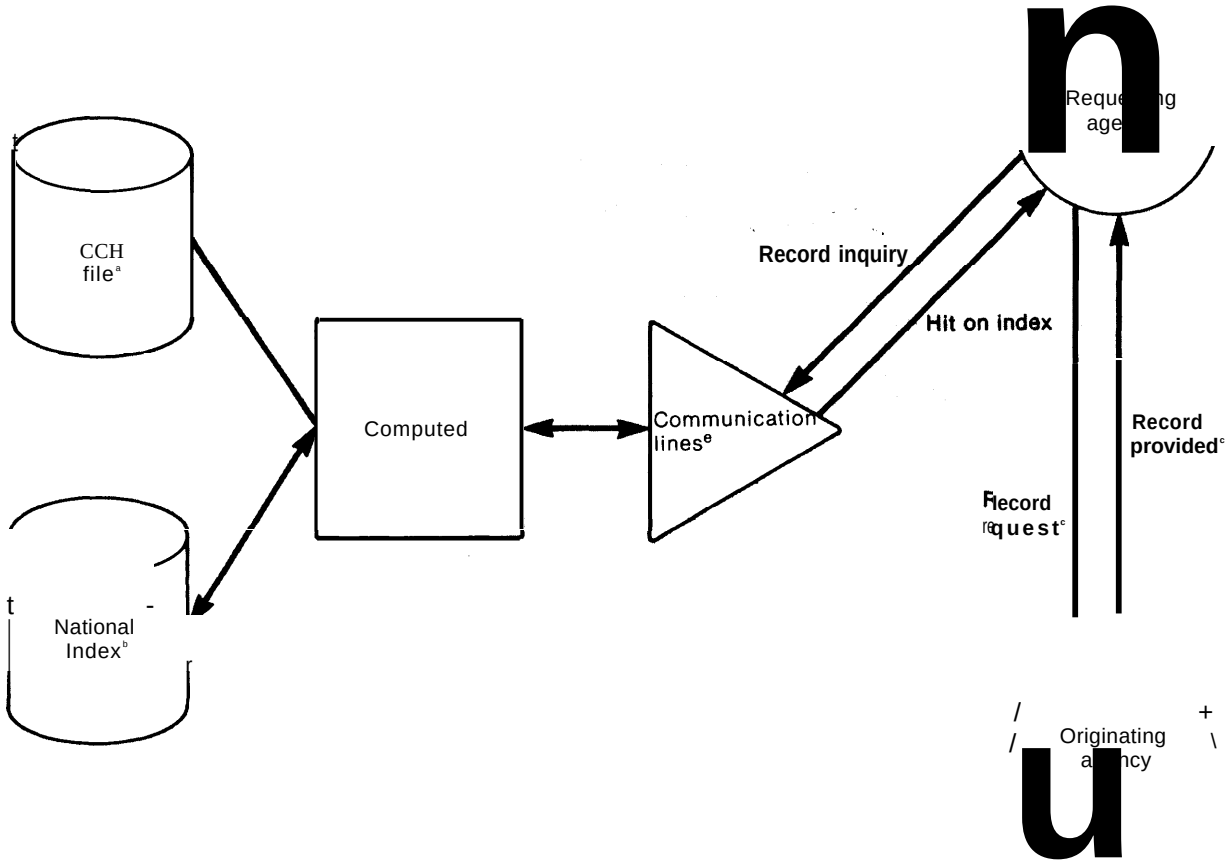
In a 1979 survey, OTA found that State repository personnel favored the national index CCH alternative (the single-State/multi-State alternative was a distant second choice).[15] A national index would avoid the expense of duplicating records at both State and Federal levels. In addition, a national index would preserve State control over in-State records.

A national index might have a somewhat slower total response time than the single-State/multi-State or national repository alternatives because in the case of a hit either the inquiring State or the index would subsequently have to contact the State(s) of record. There is a legitimate question as to how fast States would respond to out-of-State requests. Some States are not computerized (23 do not have CCH files, and 16 of these do not have even an automated name index); a few have no immediate plans to computerize. Even if computerized, out-of-State requests might be given low priority. This has not been the case to date with either the III pilot test or Phase 1 development. Florida (the pilot test State) and five other States participating in Phase 1 are among the more advanced computerized States, and have given both high priority and quick turnaround to out-of-State requests for records.

[14] Also known as a national criminal identification name file, and more recently as an Interstate Identification Index. See SEARCH Group, Inc., *A Framework for Constructing an Improved National Criminal History System* (Sacramento, Calif.: SEARCH Group, Inc., April 1978), p.6, and *Essential Elements and* Actions *for Implementing* A *Nationwide Criminal History Program* (Sacramento, Calif.: SEARCH Group, Inc., February 1979), p.7.

[15] Of 42 States responding, State repository personnel in 24 States favored the national index, 11 favored the single-State multi-State, 1 each favored the national repository, a decentralized system, and a regional system, and 4 indicated no preference. Steven W. Hays, et al., An *Assessment of the Uses of Information in in National Crime Information Center and Computerized Criminal History Program,* Bureau of Governmental Research and Service, University of South Carolina, October 1979, Sec. IV, pp. 178-179.

Figure 11.— National Index CCH Alternative With No Message Switching



[a] For Federal offender records
[b] For single State and multi State offender records
[c] Via telephone mail or teletype e g , NLETS
[d] could use NCIC or AIDS computer.
[e] could use NCIC communication lines

SOURCE Office of Technology Assessment

Regional and Ask-the-Network Systems

Regional CCH Systems

In the 1979 OTA survey of State repositories, [16] several States listed regional CCH systems as a secondary preference, but most contended that regional systems would be infeasible or impractical. The States that believed regional systems to be feasible viewed them primarily as "a better-than-nothing alternative." Few appeared willing to endorse regional systems enthusiastically. However, several noted that regional systems inevitably would develop if Congress does not decide on some national CCH alternative. Other States perceived regional systems as a possible transitional strategy until a more long-term solution is found.

Except for attitudinal data, few definitive indicators were found to support the feasibili-

[16] Ibid., Sec. IV, pp. 176-177.

ty of regional systems. Conversely, officials in seven States regarded regional criminal history files as feasible for most informational needs. NLETS traffic logs indicate that criminal history traffic between States does not conform to regional patterns. For example, Florida communicates most frequently with Midwestern and Western States.[17] These trends were confirmed by the results of the III pilot test. During the test period, excluding Florida intrastate traffic, almost three-quarters of the hits were on inquiries from the Midwest and West.[18]

Regional CCH systems are feasible from a technical perspective; however, the potential problems could be significant. Without formal coordination, jurisdictions on the borders between regions or adjacent to several regions might find themselves participating in several regional systems at a significantly higher total cost. If common standards for message formats and the like were lacking, automated exchange of criminal history records could prove to be difficult, if not impossible. The magnitude of the problem is illustrated by the decision in the single-State/multi-State pilot project to have all message inquiries pass through the FBI to ensure a common message format, based in part on the conclusion that it would be too difficult (and costly) to accommodate widely varying message formats.

Ask-the-Network System

Many of these technical problems could be overcome if all States agreed and were equipped to participate in a completely decentralized ask-the-network national CCH system. States would retain single-state offender records and the FBI would retain Federal offender records, as in the national index alternative. In the ask-the-network version, however, there would be no index. Instead, each State could poll any or all of the other 49 States plus the FBI when seeking CCH information.

There are several technical options for an ask-the-network design. One option would tie all 50 States and the FBI together on what would be a computerized "party line." Messages could be sent to everyone on the line. Another technical option would involve the use of a national switcher or several interconnected regional switchers, as illustrated in figure 12.

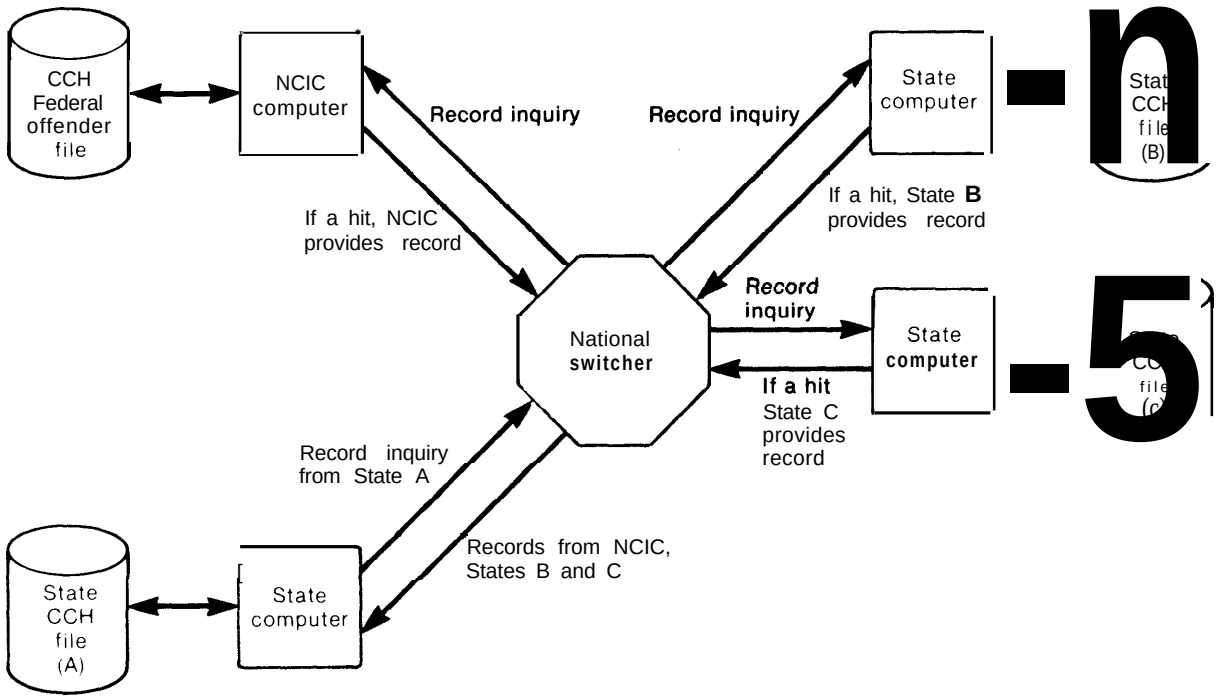
For example, State-to-State message traffic could be routed through the upgraded NLETS switcher in Phoenix, Ariz., and State-to-FBI traffic could be routed to Washington, D. C., through the NCIC network. Alternatively, a switcher located in Phoenix (or elsewhere) could handle both State-to-State and State-to-FBI traffic. For all practical purposes, NLETS presently offers this capability.

As of September 1981, NLETS was operating at about 7 to 10 percent of capacity and thus could handle a substantial increase in CCH-related message traffic. The NLETS response time (to switch a message from the sending State to the receiving State) is now less than 5 seconds. Also, NLETS users can send messages to any desired combination of States; for example, all Western States, all States contiguous with Colorado, or all 50 States plus the FBI (an "all points bulletin").

The potential for use of NLETS must be tempered by experience with ROIR messages, where inquiring States send messages to all other States (or a large number). Only those States with a record on the subject individual need reply. This is similar to an ask-the-network capability. However, NLETS found that many States began to ignore the messages, especially where the probability of a hit was very low. In many cases the effort (and cost) of checking out all inquiries apparently does not justify the results. This is particularly true for smaller States, those that are not yet computerized, and those that, while computerized, still maintain a significant number of manual records (and consequently have to check both manual and computerized files).

[17] Ibid., p. 181.
[18] FBI, *III Background and Findings*, op. cit., pp. 158-159.

Figure 12.— Decentralized "Ask-the-Network" CCH Alternative With a National Switcher



SOURCE: Office of Technology Assessment

A major problem is that, based on 1979 OTA record quality research, a high percentage (about 75 percent for Ident)* of multi-State offenders had arrests in at least one noncontiguous State; and about 43 percent of multi-State offenders had arrests in three or more States.** Thus, it appears that in an ask-the-network system, all States and the FBI would have to be polled every time in order to make sure arrests were not missed. However, the inquiry-to-hit ratio would then be very low. As noted above, under similar circumstances NLETS found that manv States began to ignore the inquiries. Also, the FBI and various State criminal justice officials believe that an ask-the-network approach would not be cost effective, due to the increased communications and processing requirements, and would be harder to secure against unauthorized access. In addition, the FBI has pointed out that the preparation and mailing of fingerprint cards to all 50 States would be costly and time-consuming and that, furthermore, several State identification bureaus do not have the capability to conduct fingerprint searches. Nonetheless, ask-the-network systems are used successfully in the defense intelligence community and in the private sector, and their potential use in a national CCH system is an area of possible further research.

*Of the 168 Ident records with verifiable arrest events (See ch. 8), 51 records showed arrests in multiple States, and 38 of the 51 records showed arrests in at least one noncontiguous State.

Of the 51 Ident multi-state offender records, **22 showed arrests in 3 or more States.