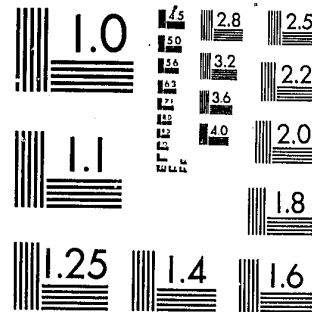


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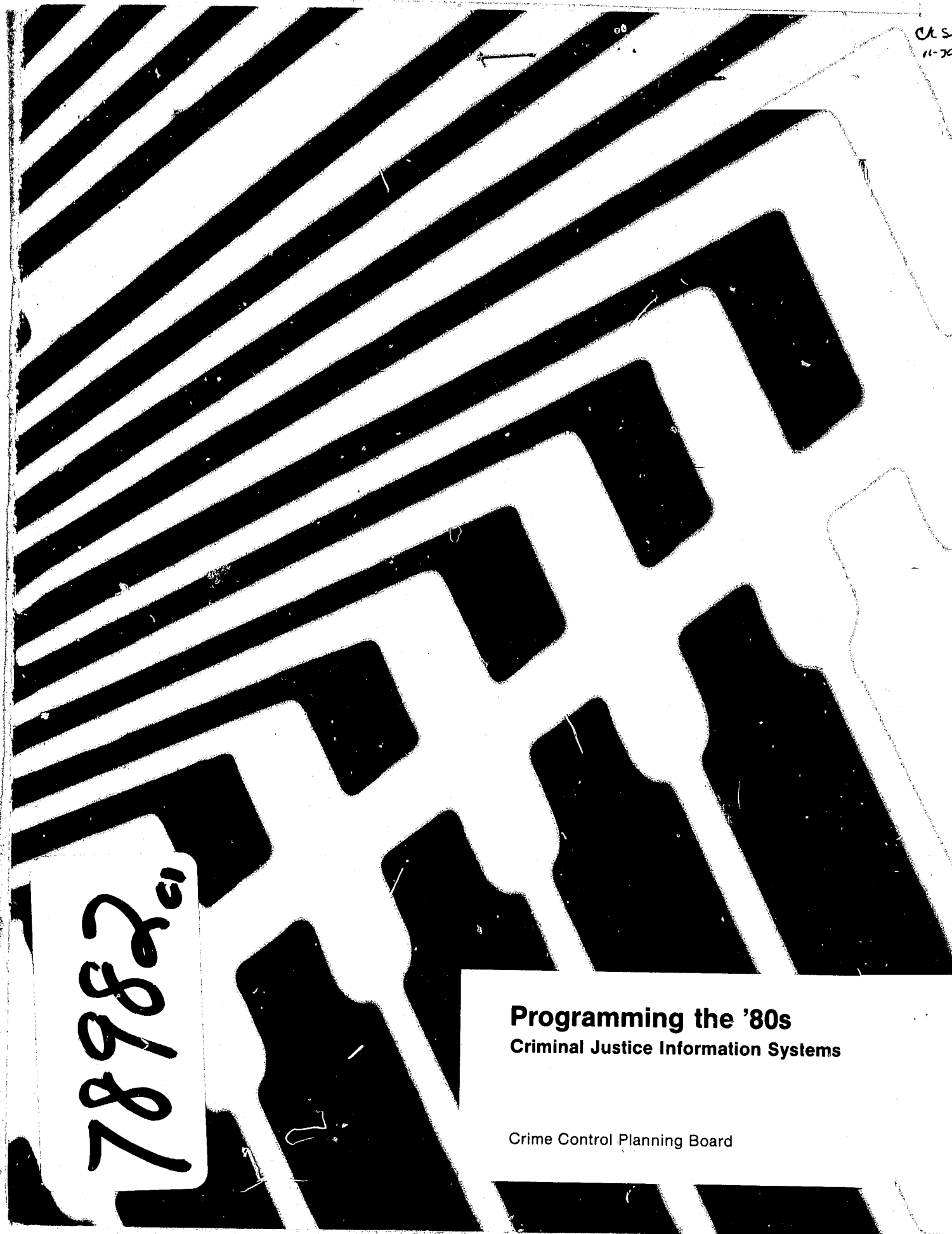
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Programming the '80s
Criminal Justice Information Systems

Crime Control Planning Board

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An Issue Paper
Produced by the
RESEARCH AND EVALUATION UNIT
of the
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444 Lafayette Road
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by
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PROGRAMMING THE '80S:
X
CRIMINAL JUSTICE INFORMATION SYSTEMS

NCJRS
JUN 16 1981
ACQUISITIONS

EXECUTIVE SUMMARY

1. Minnesota has no useful plan, conceptualization, or articulated philosophy to guide the future development and change of the overall criminal justice information system.

System development has differed significantly from original state policy; issues remain from previous coordination efforts; and the future will present new problems for which there is now neither consensus on solutions nor method for achieving such consensus.

2. Present state policy was established by a coordinating board composed of representatives of state and local criminal justice agencies--the Minnesota Justice Information Systems Advisory Council (MJISAC). The 1976 Master Plan proposed to bind together county and local systems with state agency systems through the Criminal Justice Datacommunications Network. The local systems were to be the primary data collectors with state agency systems to receive data as a by-product of the original local transaction. Local Subject-In-Process (SIP) systems (tracking criminal justice clients from arrest through correctional discharge) were critical to the conceptualization of the Criminal Justice Information System (CJIS). Many state and local system development projects were funded, under the guidance of MJISAC, with federal, state, and local monies totaling \$11,525,219. Along with the goal of providing operational information needs on a timely and efficient basis, these systems were intended to enable the aggregation of comprehensive criminal justice statistics to guide policy makers in long-range planning, assessing, and forecasting the impacts of policy changes, management of the criminal justice system as a whole, and evaluation of activities and programs.
3. The policy has not been implemented as planned. No local system has yet been implemented as foreseen by the Master Plan; SIP systems in Hennepin, Ramsey, and Olmsted counties are in various stages of planning and implementation. State level systems, however, are largely in place. The Criminal Justice Datacommunications Network serves nearly all the state's criminal justice operational agencies. Since MJISAC ceased to exist upon the expiration of Executive Order 100, there has been no formal review of the continued feasibility of the state's policy in information system development. Further, there is no existing formal mechanism to develop new policies to guide the continued coordination of this system through the 1980s.

4. Minnesota's Criminal Justice Information System faces significant issues and problems in the coming years:

- the clouded future of new Subject-In-Process systems;
- the impact of new computer technology;
- the vastly different funding potential for needed new system development and maintenance of existing systems;
- the future role of new developments such as the Minnesota Automated Fingerprint Identification Network;
- the unrealized potential value of criminal justice statistics for planning, management, and evaluation of the criminal justice system.

5. A permanent coordinating function to deal with the problems and issues of the 1980s should be established in the form of a user's group or association which would extend the current informal coordination among state agencies to include local and county agencies. The organization's functions should include promoting communication among state and local users of CJIS; problem identification, prioritizing, and solution; and the production of a plan for the future of CJIS.

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I. INTRODUCTION

The purpose of this paper is to summarize both the development history and the current status of the Minnesota Criminal Justice Information System and the various systems of which it is composed. In addition, issues will be raised concerning the effectiveness and efficiency of the system in order to guide future efforts at system improvement.

It is widely thought that coordinated development of information systems in criminal justice agencies results in both long-term cost savings and real improvements in criminal justice services. Data processing technology can be used to make current operations in line agencies more efficient while promoting better management of the entire criminal justice system. However, the absence of a long-range system plan and the present incomplete coordination among the various state and local criminal justice information systems inhibits full realization of the potential benefits of the existing information systems.

II. THE HISTORY OF THE MINNESOTA CRIMINAL JUSTICE INFORMATION SYSTEM

A. COMPREHENSIVE DATA SYSTEMS PROGRAM

Prior to the 1970's the various information systems and manual files used by state and local criminal justice agencies, manual files, and telecommunications links between law enforcement agencies were not recognized as parts of a whole but rather were planned, developed and operated as separate applications. This paralleled the typical view of the criminal justice system as being composed of separate and autonomous organizations.

While several states' agencies began to upgrade their telecommunications systems and operational information systems to take advantage of advanced computer technology there was a concurrent movement to use the data collected for statistical analysis. These efforts by individual states resulted in an LEAA program, Project SEARCH (System for Electronic Analysis and Retrieval of Criminal Histories) the primary purpose of which was to aid states in system development. State information systems were now expected to not only to produce statistics on occurrences of crime but to also collect complete criminal histories, thus effectively tracking the criminal careers of adult offenders from agency to agency. Since this implied simultaneous technical upgrading and increased coordination among agencies that previously only shared clients, LEAA created a new program of grants and standards to meet these

objectives. The Comprehensive Data Systems (CDS) program was developed and implementation began in 1972. States wishing to participate in CDS were required to produce systems to LEAA standards and to produce a CDS Action Plan outlining the various components and their planned development.

In Minnesota the CDS Action Plan and administration of the grant program were performed by the Governor's Commission on Crime Control and Prevention (currently the Crime Control Planning Board). Actual system design was the responsibility of each user agency. The major components of Minnesota's CDS plan included the Offender-Based Transaction Statistics System; the Computerized Criminal History system; the Uniform Crime Reports; the Statistical Analysis Center, Management and Administrative Statistics Systems (management information systems for police, courts and corrections); and a Technical Assistance component. The plan also provided for a CDS Policy Advisory group composed primarily of representatives of user agencies. Concurrent with this coordination effort were activities of two other advisory groups: REJIS (Regional Justice Information Systems-- for the metropolitan area) and MINCIS (Minnesota Crime Information Systems-- a law enforcement group).

B. MINNESOTA JUSTICE SYSTEMS ADVISORY COUNCIL

As development of the various systems evolved the Advisory Board was dissolved and Governor Wendell Anderson's Executive Order 100 established the Minnesota Justice Information Systems Advisory Council (MJISAC) to advise the Commissioner of Public Safety on matters pertaining to the development and coordination of what was beginning to be perceived as a statewide coordinated Criminal Justice Information System.

Responsibility for that coordination was vested in the Commissioner by that Executive Order.

In 1976 MJISAC produced a Master Plan which conceptually tied together local jurisdictions' information systems, state agency systems, and the statewide criminal justice telecommunications network into the Minnesota Criminal Justice Information System. The Plan provided for the following:

1. The statewide integrated Minnesota Criminal Justice Information System (CJIS) was to be based on local criminal justice information systems developed to meet the requirements of local agencies for Subject-In-Process (SIP) information. A standardized method was to be created for the collection and automated processing of information about individual offenders which would permit the automated transfer of appropriate information to pertinent state agency maintained files for statewide access and use. It was anticipated that the SIP orientation of these local systems would provide the daily operational information needed by participating agencies (i.e., police, courts, corrections) in addition to providing the summary data needed for statewide, systemwide planning and management. Local system development was to be a priority under the Plan.
2. The backbone of the statewide system, the mechanism that would link the various local and state systems, was to be the statewide telecommunications network. Telecommunication connections were planned between each local criminal justice information system and a state control center which would allow agencies to share information among themselves (via message switching) and report to various state files. This was essential for two primary reasons:
 - It is difficult, if not impossible for individual local agencies to maintain adequate offender files due to the high rate of offender mobility;
 - Law enforcement activities require daily information collected only by the state (e.g., persons wanted by other jurisdictions).

The key operational state files to be developed and linked by the telecommunications network included:

- Computerized Criminal History (CCH);

- Misdemeanor/Felony Warrant System;
- Uniform Crime Reporting System (UCR);
- Motor Vehicle Registration/Driver's License Systems;
- Stolen Property File;
- Statewide Judicial Information System (SJIS);
- Corrections Management Information System (CMIS).

3. Although not formally a part of CJIS, an additional function of data analysis and reports was to occur at the Statistical Analysis Center (SAC), currently integrated into the Research and Evaluation Unit of the Crimes Control Planning Board.

The Statistical Analysis Center was designed to be the primary consumer (for analytical purposes) of the data generated by the above named operational systems. Indeed it was the only activity set up to use CJIS data to support long-range (strategic) planning for the Criminal Justice System as a whole. An important activity of the SAC was to extract (not collect) data from the CCH system to report as Offender-Based Transaction Statistics to federal level agencies.

4. The state's role was to set standards for local systems to ensure data, software, and hardware compatibility; to maintain the data repositories and the communications links needed to share data among local and state agencies; and to perform appropriate and useful analyses of the systemwide data for management, evaluative, and planning purposes. An ongoing coordinating function was to be a key component of the implementation of this Plan, responsibility for coordination rested with the Commissioner of Public Safety.

III. THE EVOLUTION OF CJIS

A. LOCAL SYSTEMS

No local (county based) systems has yet been implemented as specified in the Master Plan. As mentioned above, local criminal justice information systems (LCJIS) were insofar as possible to be the basic data collection mechanism, feeding the state CJIS through automated data transfer. However, data collection for the state CJIS continues to be primarily through paper forms (with some computer tapes generated by large jurisdictions) and increasingly by computer terminal entry by local criminal justice operating personnel. Thus the collection of data for the state CJIS is sometimes separate from the collection and use of data for existing local agency information systems or manual files and continues to represent a burden on some local agency operations.

1. SIP Systems

As originally foreseen the LCJIS development was to be based on the Subject-In-Process (SIP) approach. This approach would integrate the information system needs of all local criminal justice agencies and track all juvenile and adult offenders from arrest through court scheduling, sentencing, and discharge from correctional programs. The future of this approach is in doubt given the difficulty in implementation experienced by the pioneer counties of Hennepin and Ramsey and the loss of federal grant programs in this area.

Hennepin County's development of its Criminal Justice Information System has evolved from the original concept of a relatively simple adult offender tracking system to a "model" SIP system. The requirements of such a system significantly increased the scope, complexity, and costs of the effort. Furthermore new demands on the system were added by state reporting requirements, Community Corrections Act participation, and time and staff resource accounting systems. This process of evolution has seriously delayed full implementation of the system. In retrospect the task of a "model" SIP system might better have been accomplished in a county of less size and complexity.

Currently none of Hennepin's subsystems has been implemented. The current implementation schedule lists the first subsystems to be completed (Law Enforcement and Adult Corrections) by February 28, 1981, and the final corrections subsystem by March 31, 1983. It is too soon to specify how data transfer to state systems will be implemented by this system.

Progress in Ramsey County is even less complete. A complete development proposal for an integrated system of systems is expected by February 22, 1981. This will include a PRIDE phase I study of the Municipal Court system and development proposals for District Court, County and City Attorneys, Public Defender, and Sheriff. Currently the St. Paul Police Department has an information system (with a high speed data communications link to the state wants/warrants system) as does the Community Corrections Department. Both systems may be included in planning for the Ramsey County Criminal Justice System in the near future. Thus, rather than an integrated Subject-In-Process System, Ramsey County is

developing more of a coordinated system of systems.

Finally, the most fully developed of SIP systems in Minnesota is the Olmsted County SIP. It is the only such project to be developed essentially within its original timeline and is scheduled for full system test during December of 1980. Currently, the system is designed to transfer data to the State Judicial Information System by tape, but no direct arrangements have been made to directly transfer arrest, jail booking, or correctional data.

While Olmsted County's relatively good experience with planning an SIP can be partially attributed to the fact that is a small and relatively simple, cohesive criminal justice system it also is perhaps true that the use of an already developed set of software which was converted to the county's needs aided the process. The software is PROMIS (Prosecution Management Information System) developed through LEAA and made available at low cost to criminal justice agencies throughout the country. There has been a definite trend within criminal justice (and, indeed, throughout the whole information systems field) toward the use of such transferable ("off-the-rack") systems rather than custom-planned software. It is too soon to tell if the advantages of this approach will, in the final analysis, outweigh certain inefficiencies in operation possible in this type of transfer. While no new SIP systems are known to be planned in Minnesota, agencies within local jurisdictions are planning the use of other types of transferable systems. Properly selected both to meet the operating needs of the agency and to allow future hookup to both other local and state systems these developments are clearly the most interesting developments in criminal

justice information systems in the 1980's.

2. POSSE

One such transferable system offered by LEAA is POSSE (Police Operations Support, Elementary). The Bureau of Criminal Apprehension of the Department of Public Safety is coordinating its transfer to Minnesota. POSSE is supplied as programs comprising: Arrest, Calls for Service, Incident, Investigation Support, Juvenile Offense, Personnel, and Property Modules. The Minnesota POSSE Users Group (composed of representatives of several law enforcement agencies) has converted POSSE system specifications to fit into the Minnesota law enforcement system (including future compatibility with the Criminal Justice Datacommunications Network), and a private company has been chosen to convert the POSSE software to both meet Minnesota's needs and operate on the specific minicomputer selected by the state Department of Administration. Agencies interested in POSSE will lease *both* hardware and software from BCA and will have essentially obtained a to go system. Test sites have been selected, and up to six police departments will be operating by July, 1981.

3. Trial Court Information Systems (TCIS)

The Trial Court Information System is being developed by the State Court Administrator's Office of the Minnesota Supreme Court. It is a series of system, program, and hardware specifications which will integrate under a single system the main work functions performed by a Clerk of Court's Office. It is organized around these four major subsystems: Intake, Case Management, Financial, and Reporting. All cases (criminal, juvenile, or civil; county or district) are processed through one or

more of these subsystems. Each can be implemented as computerized, or fully manual. Many smaller counties are converting their record keeping to use at least parts of manual TCIS. Six test sites for automated (computerized) TCIS have been selected for 1981 through 1983 implementation. The Reporting subsystem of TCIS will feed State Judicial Information System (SJIS) (and thus the state CJIS) either by tape or by copies of internal system forms.

TCIS and POSSE represent the new approach to local Criminal Justice Information Systems as opposed to the SIP philosophy. While both approaches emphasize transferable software for local use that interacts with the appropriate state systems to avoid data redundancy, there are two critical differences. First, the new systems are designed for single function activities (from the point of view of the criminal justice system) under control of one administrative structure. Thus only police activities are supported by POSSE, only court activities by TCIS. Further, each system operates in a realm with a clearly defined boss. Second, the system is transferred as a software-hardware combination. The latter point eliminates the problem of converting software to run on many different machines.

Thus rather than centralizing processing power and leaving decentralized the administrative structure within the local jurisdiction (as in the SIP systems) the new approach decentralizes the computers and works only within the existing clear organizational lines (this is now cost-effective because of the new minicomputer technology). Ironically, it may be possible at some later time to link together the several local systems, through the state network, to achieve many of the goals of the

Subject-In-Process concept.

There are applications remaining to be investigated using this newer approach. One is the area of the small to medium sized jail or correctional facilities, few of which are automated. The other is the local correctional administrative structure (such as a Community Corrections Unit) most of which are automated but are not capable of linking to the CJIS.

4. Community Corrections Units

Counties or multicounty areas participating in the Community Corrections Act (CCA) are required to develop management information systems to keep track of sentenced offenders in their areas. The units are also required to summarize each criminal justice transaction for each offender (such as sentencing, transfer, release, or discharge from probation) on machine readable media on a quarterly basis to the Department of Corrections.

The systems implemented vary widely from unit to unit in both sophistication and proven usefulness. At least two CCA unit systems have required redesign. Although conceptually these systems could have been designed to batch transfer certain data to the state CCH and Detention Information systems, the systems were never intended to be part of CJIS and were not designed with that capability in mind.

The summary data provided to DOC is designed to be stored in what is nominally a subsystem of the Department's Corrections Management Information System (CMIS), but what is in effect a separately conceived and operated application. Data was to be batch loaded quarterly to the

system and was designed primarily to monitor unit's activities. The summaries were also not intended to fall within the scope of CJIS. The summary system was never fully implemented and has been all but abandoned by DOC. The Department is known to be considering the elimination of the system and its current reporting requirements.

It is apparent that unless such single function systems are designed to be part of a larger system from the beginning, it is very difficult to integrate with CJIS effectively.

5. Other Systems

Many other information systems are known to exist in police departments, courts, and other agencies. As these are separately conceived applications on disparate hardware and software environments, their eventual interface with CJIS is questionable. Future system development in this vein will likely postpone or make more difficult eventual coordination of such systems. Recent developments in cheap powerful computer hardware (such as microcomputers) have made it relatively quick, cheap, and easy to install simple systems that not too many years ago would have represented major investments. Such system development should proceed with caution until questions of the future of CJIS, system coordination, and technical assistance have been more fully addressed.

B. STATE AGENCY SYSTEMS

The state agency systems act both to serve the management, planning and operational needs of the state agencies as well as to collect information from local criminal justice personnel for use by other agencies and the federal government.

1. Bureau of Criminal Apprehension

The Department of Public Safety, Bureau of Criminal Apprehension, Criminal Justice Information System Section clearly has the most operational responsibility for CJIS in its role as manager of the Criminal Justice Datacommunications Network, the Computerized Criminal History System, and the Criminal Justice Reporting System (which produces the Uniform Crime Reports).

The Criminal Justice Datacommunications Network (CJDN) is a series of computer terminals located in criminal justice agencies throughout the state and interconnected (to one another and to the state central computer) through a computer controller maintained by Information Services Bureau in St. Paul. These terminals support three major activities at the local level:

- Local agencies can make inquiries to state files (to check the wants/warrants, stolen property, the drivers licenses, and motor vehicle registration files among others).
- To report crime incident, arrest, or jail booking or other information to the state CJRS, CCH, and other files.
- To pass free form messages to any other or groups of other agencies (i.e., message-switching or electronic mail).

The systems and files served by the network are structured primarily to serve the everyday operational needs of local law enforcement.

These include:

- Computerized Criminal Histories (CCH). The centrally based computerized method of collecting criminal information from criminal justice agencies. A CCH file for an individual adult (or certified adult) offender is created when BCA

receives a fingerprint card from the arresting agency. Additional reports are required from agencies responsible for subsequent arrests, prosecution, sentences, and correctional disposition. Reports can be made on computer terminals or via paper forms.

There are known to be information gaps in the CCH files attributable to inadequate reporting by various individual agencies. This reduces the value of the system to law enforcement as an arrested suspect cannot be quickly and reliably checked for correctional status through this system. Further these gaps reduce the value of the file to researchers and planners. To remedy this situation consistent with past direction for system coordination the BCA has taken steps to obtain secondary source data from systems where data input requirements overlap. In general, many CCH report requirements have been replaced by data from the state Court Administrator and the Department of Corrections. (However, these reports still duplicate information processes of some local Criminal Justice Systems.) The result has been a considerable reduction in redundant and separate submission of identical data. There are still some overlapping and redundant requirements, and some data is still not always transmitted. But the net result should show considerable improvement in data coverage and quality.

- Minnesota Crime Information System (MINCIS). MINCIS is designed to serve as sort of an "electronic bulletin board" keeping up to date information instantly available to criminal justice agencies on wanted persons (warrants for arrest, fugitives), stolen vehicles, guns, boats, and other valuable property. The files obtain information from Criminal Justice agencies through computer terminals as well as motor vehicle and drivers license data from outside the criminal justice system and thus make it available (by computer terminal query) to all other agencies in the state. These queries are conducted by the same terminals as are used to report to CCH.
- Criminal Justice Reporting System (CJRS). Also supported by the network is the system which includes original criminal incidents reports, the disposition of associated stolen property, and the subsequent arrest (if any) associated with that original complaint. The CJRS starts with complaint and ends with arrest whereas the CCH system

begins with arrest and ends with correctional disposition. Formerly, these processes were formally linked into a continuum as the Offender Based Transaction Statistics (OBTS) system. Currently the two systems could be linked for research purposes via special identifiers on adult arrest records in both systems. Note that all arrests (juvenile *and* adult) are reported to the CJRS system whereas only adults are described in the CCH system. The CJRS system is used by BCA to prepare extensive crime statistics for intrastate use and the Uniform Crime Statistics for national use.

2. Department of Corrections

Two systems operated by the Department of Corrections (DOC) are relevant to the Criminal Justice Information System. The Corrections Management Information System is used by state correctional institutions, state field services (parole officers), and central office personnel to record and track client movement and behavior within the state correctional system--both juvenile and adult. Separate processes record client demographics, offense and sentencing history, institutional admission, releases and transfers, living and work assignments, and soon, medical, dental, and program histories. Although designed primarily to serve the operational needs of the Department (by eliminating much paper work) the data has been used both internally to aid in predicting the effect of policy changes on prison populations and other research questions and externally to report to certain federal programs (such as National Prisoner Statistics). The Criminal Justice Network of terminals is used by this system for data input and report.

The Detention Information System (sometimes referred to as the Jails and Lockups module of CMIS) exists to monitor the booking and release of both juveniles and adults at all of the nearly 200 local jails,

detention, or correctional facilities operated by counties, municipalities, or community corrections units. All admissions to and releases from these local facilities are to be reported on the Criminal Justice Network terminals to this system as the booking or releasing event occurs. The Department of Corrections monitors each day's jailing activity throughout the state and detects potential violations of state regulations pertaining to detention with this system. Monthly summary statistics are made available to the facilities for their own operating or planning purposes. This system is already operational for more than half the facilities in the state and will be extended to all but a few major county facilities by January of 1981. The final linkup of those larger facilities depends on the same type of technical and coordination problems mentioned above in the CJIS context, that is, problems of tape or high speed telecommunications data transfer.

At both the data entry and storage levels, there is considerable convergence between the two systems operated by DOC and the CCH system operated by BCA. The CJRS requires reports of admissions and releases from custody or supervision of all sentenced adult offenders. Those events comprise subsets of the events reported to CMIS (state supervision or institutional custody) or the Detention Information System (county level custody of sentenced adults). Most data entry of very similar or identical data formerly was performed on the same terminal by state or local operations personnel *separately*, then transmitted via the same network to files housed in the same computer. Currently increasing numbers of facilities are only reporting to the Detention System, this system then generates data for the CCH system. (Of course,

any local record keeping or management information system is still fed in a manner quite distinct from that described above.) The potential for and occurrence of some redundant data entry does exist. Some local sites previously dealt with that fact by neglecting to report one or another of the redundant requirements, causing gaps in information in the CJIS. Current procedures have eliminated much data redundancy.

A final convergence may not be readily apparent from a systemwide perspective but is apparent to many local personnel. One of the procedures followed when releasing (and often booking) a person into custody at either local or state level is a routine check of the state "wanted persons" (active warrants) file. Functionally, this resembles a data entry to the two systems mentioned above (via the same network and with identical data elements) and is ideally performed when the reports to state systems are done. The result (from the local perspective) is another redundant data entry of identical information to the state.

Effects have been made to exploit these convergences to telescope the data entry requirements at the local level to a single transaction. However, a lack of available funds and personnel in the state agencies involved--DOC and DPS--have postponed further development. Those local detention facilities reporting to the DOC via the network no longer report custody transactions to CCH (as described above). This is made possible by a simple procedure which reads the previous days' Detention System events and prints out likely qualifying transactions for BCA personnel to inspect and finally rekey into the CCH system. The amount of potential redundant data entry is nearly the same, but the burden has shifted to a state agency, the process made more efficient and probably

more complete reporting is the net result. The process could be improved (by reprogramming in a language supported by the state computer shop--ISB) and perhaps made more efficient (by allowing direct file-to-file transfers after record-by-record inspection and approval at BCA) with appropriate resources. A certain amount of parallel data manipulation between the state correctional institutions and field service and CCH (now representing duplicate data entry) certainly could be eliminated by file-to-file (with a human review and edit stage) transfer between DOC and DPS. This would require programming CMIS to automatically format CCH admission and release reports as a by-product of the CMIS data entry process, instead of requiring a separate human to computer transaction.

Finally, the systems should be programmed to interact on-line with the wanted persons file such that reports of bookings in local or state institutions would automatically initiate a search of the active warrants file (and conversely where a new posting to the wanted persons file would search the active jail populations throughout the state) freeing up local operating personnel from considerable busywork.

All the above enhancements have been discussed by the two state agencies but await either necessary funding and/or the freeing up of personnel from the pressing demands of the individual systems. However, one should note that the perception of the need for such enhancements is probably more acutely felt at the local than at the state level.

3. State Supreme Court

The state Court Administrator's office (a division of the Minnesota Supreme Court, a nonexecutive branch of government) is implementing a reporting system which requires all Minnesota court activity to be reported

to their office. Effectively, the system tracks individual persons (adult and juvenile) through the charge, prosecution, sentencing, and discharge from court jurisdiction process. The data is prepared on pre-coded multipart forms on the local level and forwarded to the state Court Administrator's office for data entry on a system not using the Criminal Justice Datacommunications Network.

Clearly there exists in this system considerable convergence with those of the two state agencies mentioned above. As does CCH, the SJIS reports on prosecution, sentencing, and eventual discharge. As does the CMIS the particulars of the sentence itself, description of offense and length are captured. Currently converging data is shared by SJIS with CCH using the SJIS forms. Eventually a more automated sharing--either using tape or the network itself--is possible. Whether such an approach would be cost effective is a question that would have to be answered through careful systems analysis. Currently, automated sharing of SJIS data with CCH is not considered to be cost-effective because LEAA Criminal Justice Information Systems Regulations (Title 20) mandate manual verification of all data entered in CCH, thus leaving relatively little of the process possible for automation. However, should current trends of relative decreases in computer costs and increases in labor costs continue, the initial design and implementation investment of such a system would presumably at some future time pay off.

C. THE STATISTICAL ANALYSIS CENTER

The Statistical Analysis Center (SAC), although not technically part of CJIS, is meant to be the primary analytical client of the data generated by CJIS (chiefly the CJRS and CCH data). The data is presumed to have a

use beyond the everyday operational needs of line criminal justice agencies and beyond the reporting of summary data to federal agencies such as the Federal Bureau of Investigation or the Bureau of Justice Statistics. The data should serve the state's needs for policy analysis, evaluative research, and planning (both short-term and long-range) of the future of the criminal justice system. Unfortunately, these activities are not yet fully developed in Minnesota. This is partly because of many of the data problems discussed at length above, such as gaps in data, no data on juveniles, and the current inability to tie together the process from complaint to correctional discharge.

The Statistical Analysis Center (currently an integrated part of the Crime Control Planning Board (CCPB) Research and Evaluation Unit) does limited analysis and dissemination of the Uniform Crime Reports data forwarded to it by the Bureau of Criminal Apprehension. However, there is currently no access to usable Offender-Based Transaction Statistics (OBTS) nor comparable data on juvenile offenders to use in a comprehensive planning effort. Thus much of the value of the data painstakingly gathered at the local and state institutional level for systemwide planning and management is not yet apparent due to the incomplete realization of the coordinated Criminal Justice Information System.

OBTS summary data was prepared and disseminated by the SAC during 1975 and 1976. However, changes in file structures at the state level and changes in federal OBTS report specifications created problems in continuing that service. The project was suspended pending both the full implementation of the State Judicial Information System (to reduce data gaps) and the finalization of federal report requirements (still pending). It is clear that activities at the state level now make the production

of a useful OBTS for analytical purposes a possibility. With the assistance of the Federal Bureau of Justice Statistics (BJS) and the Bureau of Criminal Apprehension, the CGPB intends to summarize the CJIS adult data into a true Offender-Based Transaction Statistics File, useful for internal state use as well as for reporting to the BJS.

The data set, if made available to researchers in both government and academic, should be invaluable in aiding planning impact analysis and modeling of the adult criminal justice system. A similar data set describing juvenile offenders will be provided to the Crime Board by the state Court Administrator from the State Judicial Information System. Finally, the acquisition or development of state demographic and resources data bases (as planned by the Crime Board) combined with the adult and juvenile files should allow models of the entire criminal justice system to be developed. Thus basic questions such as the future impact on specific crime rates to be expected due to the gradual increase in average age of our society will be answerable. This should result in increased efficiency in allocating resources to meet the needs of the state.

Other systems are operated by the Crime Control Planning Board which are not part of CJIS but relevant to the context of the use of criminal justice data for system planning. The Client Oriented Evaluation Data (C.O.D.E.) contains information on certain juveniles (and potentially adults) who have participated in community treatment programs and their subsequent performance in the community. The Grants Management Information System (GMIS) tracks the awarding of federal and state grants to criminal justice agencies and monitors subsequent awards and project

payments on those grants.

D. THE COST OF CRIMINAL JUSTICE INFORMATION SYSTEMS

The development of CJIS since 1969 was largely financed by federal (LEAA) grant money. A summary of those monies together with state Legislative Appropriation Committee (LAC) share and agency contributions are provided for state agency systems in Table 1. System development and the funding of CJIS Advisory Groups are included in this table.

TABLE 1
AUTOMATED INFORMATION SYSTEM DEVELOPMENT AWARDS ACTIVE
DURING THE PERIOD 1969 THROUGH 1980 RECEIVED
BY STATE CRIMINAL JUSTICE DEPARTMENTS^a

| DEPARTMENT | FEDERAL SHARE (LEAA) | STATE SHARE ^b | DEPARTMENT SHARE ^c | TOTAL AWARDS |
|--------------------------------|-----------------------|--------------------------|-------------------------------|-------------------------|
| Department of Corrections | \$ 863,437 77.75% | \$ 27,845 2.50% | \$ 219,228 19.75% | \$ 1,110,510 100.00% |
| Department of Public Safety | \$1,761,500 81.10% | \$180,509 8.31% | \$ 230,133 10.59% | \$ 2,172,142 100.00% |
| Office of the Attorney General | \$ 46,304 80.12% | \$ 4,217 7.30% | \$ 7,271 12.58% | \$ 57,792 100.00% |
| Supreme Court | \$1,029,004 80.89% | \$ 63,476 4.99% | \$ 179,594 14.12% | \$ 1,272,074 100.00% |
| TOTAL | \$3,700,245 80.22% | \$276,047 5.98% | \$ 636,226 13.80% | \$ 4,612,518 100.00% |

^aAward figures have been rounded to the nearest dollar. Where possible, find award figures instead of original award figures have been utilized.

^bThrough the Legislative Advisory Committee.

^cDoes not include in-kind donations.

The figures reported in Table 1 are the final revised grant awards based on project expenditures reported by those agencies for the system development purposes, not the original grant awards. Insofar as these

agencies have accounted for all the in-house effort expended in the system development, these figures probably fairly reflect the initial development costs of the systems described above. Not reported are subsequent revisions, enhancements, and "fixes" to the system financed by the agencies (system maintenance) and the actual costs of daily operations incurred. No description of the CJIS can be truly complete without a firm understanding of its continuing costs. Future research planned by the Crime Control Planning Board will address these areas.

What can be shown from Table 1 is that for \$912,273 (total of LAC and agency share) the state of Minnesota has received \$4,612,518 worth of information systems development, a \$4.05 subsidy for every state dollar spent in systems development.

It is probable that the amount of initial development cost has been incurred once over in additional modifications and enhancement and certainly again in operations. However, the continuing cost of this development effort must await a more complete analysis of detailed agency expenditures.

Table 2 describes the costs of local system development as funded by LEAA since 1964.

The types of systems covered by Table 2 include Subject-In-Process Systems (SIP), Computer Aided Dispatch (CAD), and local crime analysis systems. For every state and local dollar spent on local system development, there has been a \$4.75 federal subsidy. Local systems (\$6,912,701 total) and state systems (\$4,612,518 total) sum up to \$11,525,219 in CJIS and related projects since 1969.

| UNIT OF GOVERNMENT | FEDERAL SHARE (LEAA) | STATE SHARE (LAC) ^b | LOCAL SHARE ^c | TOTAL AWARDS |
|----------------------|------------------------|--------------------------------|--------------------------|-------------------------|
| Anoka County | \$ 128,117 73.91% | \$ 2,613 1.51% | \$ 42,614 24.58% | \$ 173,344 100.00% |
| City of Duluth | \$ 366,107 88.48% | \$ -0- .0% | \$ 47,677 11.52% | \$ 413,784 100.00% |
| City of Fridley | \$ 12,600 90.00% | \$ -0- .0% | \$ 1,400 10.00% | \$ 14,000 100.00% |
| Hennepin County | \$ 901,481 66.29% | \$ 31,823 2.34% | \$ 426,700 21.37% | \$ 1,360,004 100.00% |
| Metropolitan Council | \$ 955,937 85.43% | \$ 7,625 .68% | \$ 155,465 13.89% | \$ 1,119,027 100.00% |
| City of Minneapolis | \$ 2,042,651 69.73% | \$ 93,603 3.65% | \$ 425,761 16.62% | \$ 2,562,015 100.00% |
| City of New Hope | \$ 41,766 100.00% | \$ -0- .0% | \$ -0- .0% | \$ 41,766 100.00% |
| Olmsted County | \$ 136,940 89.71% | \$ 7,609 4.99% | \$ 8,093 5.30% | \$ 152,642 100.00% |
| Ramsey County | \$ 62,768 90.00% | \$ 3,487 5.00% | \$ 3,487 5.00% | \$ 69,742 100.00% |
| St. Louis | \$ 17,241 89.99% | \$ 736 3.84% | \$ 1,181 6.17% | \$ 19,158 100.00% |
| City of St. Paul | \$ 905,396 91.71% | \$ 40,903 4.14% | \$ 40,920 4.15% | \$ 987,219 100.00% |
| TOTAL | \$ 5,571,004 80.59% | \$ 188,399 2.73% | \$ 1,153,298 16.68% | \$ 6,912,701 100.00% |

^aAward figures have been rounded to the nearest dollar. Where possible, final award figures instead of original award figures have been utilized.

^bLegislative Advisory Commission (LAC).

^cLocal share figures do not reflect in-kind donations or local expenditures not required by the original award document. As a result, local expenditures may be understated.

IV. ISSUES IN CRIMINAL JUSTICE INFORMATION SYSTEMS

A. THE LOSS OF THE FORMAL COORDINATION FUNCTION

Except in an historical context, references to the Minnesota Criminal Justice Information System as a formally unified system of systems are incorrect since the formal coordinating mechanism, and responsibility and accountability for the coordination of same, dissolved with the expiration of Executive Order 100 upon the beginning of Governor Perpich's administration. Thus CJIS (in a formal sense) ceased to exist.

However, on a practical level the various state and local systems planned as parts of CJIS have continued to develop and be implemented and are beginning to interact and share data in a way somewhat consistent with the Master Plan. Viewed from a national perspective, Minnesota has one of the very best coordinated criminal justice information systems, and the process of improvement continues. However, some of the principles outlined in the Plan have been neglected as a consequence of the need for each user agency to concentrate on the development of its own system to meet its own operational needs. Coordination has continued but has been on an informal basis, with projects pertaining to data sharing being treated as of less priority than projects needed within house. This may be a natural result of the fact that no one is responsible for intraagency information system coordination.

B. A MANAGERIAL PERSPECTIVE

Probably the most pervasive and certainly the most perplexing problem inhibiting further criminal justice information system development as it evolved from the planning stage to the operational stage of the system development life cycle is that no one person or organizational unit was responsible or accountable for the operation or the efficiency of that system as a whole. Indeed, this problem haunts the management needs of the entire criminal justice system. And since the information system is simply the communications linkage that holds the whole system together, the problem is engendered at that level.

The parallels between the criminal justice system operations and that of a private enterprise are worth exploration. As in a private enterprise, the criminal justice system is actually a system of systems. For example, a private business system contains such subsystems as marketing, accounting, financial, production, and inventory control; all of which are under control of the Chief Executive Officer (CEO). In the criminal justice system, we also have subsystems--law enforcement, prosecution, defense, adjudications, and corrections; but without the CEO. The criminal justice system functions like a hydra; many heads but no one in charge. Other studies have made it particularly clear that the criminal justice system is not compatible with CEO type control. Any effort to do would violate a fundamental precept of the Constitution--the separation of powers. From a managerial sense, the CEO holds a private enterprise together. What else then, from an operational perspective, links these systems together? We know that each cannot operate autonomously. This would invite disaster. In a business we can observe

what are essentially two flows--one the flow of product or service and the other the flow of information. The product or service flow through a business can be monitored, measured, etc., from the raw material through processing to finally a finished product. This flow is also monitored through the criminal justice system, the criminal event is monitored, measured, etc., from the point of criminal incident report to the arrest and release from custody of its perpetrator.

The second flow is that of information through the organization. In business, this flow begins with a purchase order and ends with receipt of final payment for the goods or services purchased. In the criminal justice system, this information flow begins with a report of a crime and concludes with an individual's release from custody notice.

What makes this problem of not having a CEO responsible for the system so pervasive is that no one is available to do strategic planning for this system. In order to plan effectively, planners need data--data generated by the information system(s) in a form amenable for planning purposes. Without this data, planning can be no better than decisions based on intuition, personal experience, politics, or chance. In the past, each operating system (corrections et al.) developed its own information system, collected data and planned for itself. Linkages were developed so that some compatibility occurred, but it was not an integrated system.

As described above, the Minnesota Justice Information Systems Advisory Council (MJISAC) recognized these problems in developing its Master Plan. The MJISAC, which was created by Executive Order 100 by Governor Wendell Anderson assisted the Commissioner of Public Safety in performing the criminal information system management function. However, it

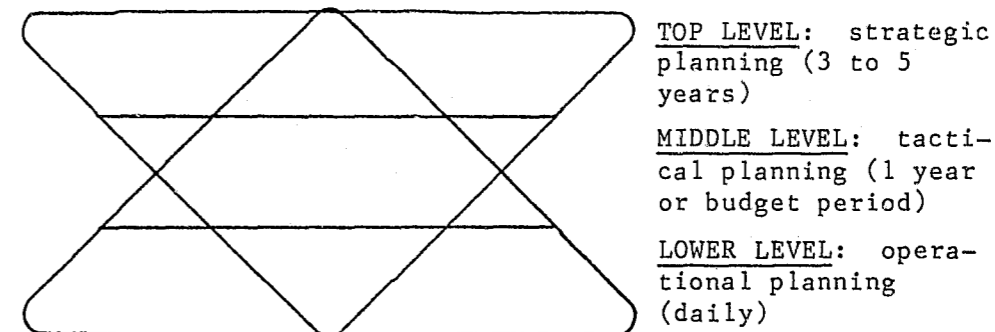
immediately recognized its own limitations. In the Master Plan, published by MJISAC in January 1977, which in part sought to, ". . . bring about as quickly as possible an integrated criminal justice information system that where possible, builds on existing foundations created by the development and implementation of such a system throughout the State," MJISAC stated that the fundamental principles on which the Master Plan was developed were *cooperation* and *coordination*. The MJISAC realized that it could not facilitate an integrated criminal justice information system by *controlling* the system. Rather, it emphatically stated that, "Criminal Justice in our society is a shared responsibility and must be coordinated by mutual consent and cooperation if it is to succeed."

However, even a governor's executive order proved inadequate to facilitate the institutionalization of system integration. The MJISAC dissolved when the executive order creating it expired and was not renewed when a new governor took office. It is apparent that if an integrated criminal justice information system is to become realized and survive, it must be founded in authority or structure that transcends changes in power. The MJISAC effort also fell short for a second reason. It was housed in, staffed by, and advisory to an operating criminal justice agency which had primary responsibility for one part of the system.

Several questions can be raised. Is there a need to control criminal justice information systems at a level higher than that of the component parts? This question could be posed another way. *Is there a need to integrate the criminal justice information system?* Other questions follow. Would it not be better to focus efforts and resources at the component levels instead to ensure that these components operate at an optimal level?

Who then, or how, for that matter, should integration of the criminal justice system be accomplished?

In order to respond to these questions it is necessary to review the parallels to private enterprise. Information and information systems in private enterprise are used not only for the operational purposes that we previously described but also for planning purposes. Information generated at the lower levels of an organization finds its way up to higher levels altered into a form amenable for planning purposes. At the highest level of a business, the CEO and his staff engage in strategic planning. Strategic planning can generally be defined as long-range (3 to 5 years) planning to develop organizationwide goals, strategies and policies. Presently, strategic planning for the criminal justice systems does not occur. Consider the following model:



The triangle with its base on the bottom represents a typical organizational structure stated in terms of planning requirements. Superimposed on this triangle is another, inverted, with its base at the top. This second triangle illustrates the source of information needed to engage in

various types of planning. This model illustrates the following observations:

1. The higher the decision level, the greater the reliance on externally generated information and less the reliance on internally generated information.
2. The higher the decision level, the greater the emphasis upon planning and the use of longer trend information.
3. The higher the decision level, the greater the necessity to ask, "What if" questions as part of the decision process.

Consider this model and its application to the entire criminal justice system. Some information needed to engage in strategic planning is only available from outside the system; demographic, socio-economic, and behavioral factors affect the system and information concerning these factors are gathered from sources outside the criminal justice system by such organizations as, the Bureau of the Census, the Department of Public Welfare, the Department of Education, and others. Further, no one agency controls all the criminal justice information necessary for system-side planning.

Several conclusions may be drawn from this analysis. First, information systems are vital to the operations of any organization be it public or private. Second, information systems must be integrated if they are to optimize overall system services and operations. Third, information systems form the backbone of management decision-making based on the ability of an organization or a system of organizations to plan strategically, tactically, and operationally. To plan effectively, planners need timely and accurate information. And this information is generated from the data collected from organizational operations. Fourth, single no operating agency is in the position to engage in strategic planning for the criminal

justice system and still effectively manage its own affairs. Fifth, we recognize the need to manage the system from a *cooperation* and *coordination* perspective. There appears to be a need for a permanent entity responsible for coordinating and facilitating cooperation among criminal justice information systems.

G. INFORMATION SYSTEM EFFICIENCY

It is shown above that the relative immaturity of systemwide coordination has adverse consequences to the individual agencies providing the primary data collection. The perception of a "burden" due to state reporting requirements is vigorously noted at the local level. In fact the collective memory and expectations of these line personnel regarding plans for CJIS coordination is probably fresher than that of the administrators of state level systems simply because the inefficiencies are felt daily. Although this assertion has not been sufficiently documented or objectively analyzed, line agency personnel have expressed concern over this issue.

D. INFORMATION SYSTEM CHANGE

Information systems are not static; in fact typical system life expectancies in private industry are often quoted as less than a decade. The consequences of the natural change of individual information systems can have a major effect on the harmonious working of the system of systems described as CJIS. It seems reasonable to assume that as organizations continue to change and develop information systems in the absence of an active coordination function, the systems may "drift" away from being parts of an integrated whole.

Several factors will tend to prevent such a disintegration, but they operate in a passive manner and are no permanent guarantee of future system coordination. The fact that all major state systems share a telecommunications network which can be upgraded is one such factor. The use of a single standardized complaint form by the Bureau of Criminal Apprehension, the state Court Administrator, and even the Sentencing Guidelines can be maintained as a contributing factor. Federal reporting requirements on these state systems are another factor. Most importantly, the managers of these systems do interrelate and try to coordinate the development of their systems on an informal basis. The questions raised are whether those factors will continue and are they sufficient?

Those forces working against system coordination in the foreseeable future will be the same factors that have caused change in nearly every other information system, whether public or private. These are:

1. Technological Change

Dramatic improvements in computer technology, particularly the proliferation of cheap and powerful mini- and micro-computers, will tend to heighten the trend toward separately conceived applications. Duplication of development effort, fragmentation of criminal justice functions, and continued data reporting redundancies may continue as smaller agencies automate for the first time. This situation could tend to make information exchange even more difficult due to a resulting increase in hardware and software incompatibilities. Efforts such as the POSSE planning conducted by BCA can turn this technological change into a benefit for system coordination.

Some systems (e.g., CMIS) are moving to a distributed data processing

concept (the use of many small computer to at least partially replace the traditional large computer). Others may well profit from such a move for reasons of economy, data security, or better managerial control of the system itself. What will be the impact of new technology on the entire CJIS? How can the new technology be exploited to increase the efficiency or usefulness of the data?

2. Organizational Change

While major organizational changes are topics for speculation, organizations are certain to change internally. As they change their information needs change. Furthermore, legislative changes in public criminal justice policy (such as the Community Corrections Act) may change the information demands on systems. These changes will directly impact the future development and enhancement of existing and new systems. It is almost axiomatic that the very existence of information systems changes the organization itself. Increased resources are devoted to their development and maintenance; departments and divisions are restructured to house the technically skilled personnel needed. The perceived value of timely and valid data for informed decision making is presumed to rise. In fact, increased use of information systems by management may lead to increased demands on those systems as decision makers increasingly utilize information resources or demand data in different formats and/or on a more timely basis. For example, the Department of Corrections has made use of simulation techniques and data from CMIS to predict the impact of certain internal policy changes on future prison populations. Increased use of "what if?" techniques of decision making may require quicker and easier access to the data with implications on how the data is to be stored and retrieved.

3. Economic Change

Although complete data is not yet available, it is clear that the development costs of an information system are only the entry costs. Continuance of the system requires a financial commitment for both operation and for the process of system change (enhancement and maintenance). Enhancement of a system allows the system to change in order to respond to new organizational needs in an evolutionary manner, until such time as the needs of the organization or the technical obsolescence of the system require revolutionary change--the design of a new system.

Existing systems face a future of inevitable enhancement and then redesign. Much system development is still not complete on important parts of the CJIS--particularly the local systems. The present tight economic situation, particularly the loss of federal funding for system development, thus poses critical issues for the future.

Individual agencies will probably cope with dwindling resources by concentrating on their own in-house operational needs. Perhaps the development of new uses for data in decision making, research, and planning may be sacrificed to cope with the day-to-day demands of operational data flow. The degree of enhancement that may be possible to meet new organizational needs will depend on available funds as will the inevitable need to replace obsolete systems.

Given the always demanding task facing managers of individual information systems, especially in an era of cutback management, it comes as no surprise that projects involving system coordination--whose benefits are not directly felt by that agency--would be of low priority to that agency. Systems which are currently being developed may feel the pinch

of scarce dollars and may stagnate or be scaled down such that they will meet neither organizational nor system needs.

E. PRIVACY AND SECURITY OF CRIMINAL JUSTICE INFORMATION SYSTEMS

With the establishment of the Minnesota Government Data Practices Act, much attention has been placed on the privacy of criminal justice information. These concerns address who, in the *normal* operation of the system, can have access to the information and for what purposes. This state law, together with relevant federal law, has outlined the framework for a consistent privacy policy. The application and interpretation of that policy on a day-to-day basis, however, is less clear. This may be a topic of considerable interest to criminal justice agencies in the near future.

What is also likely to be of serious discussion is the security of criminal justice data and criminal justice information system. Security involves *abnormal* occurrences to data bases and systems:

1. Security against Improper Access. Improper access, theft or destruction of data by unauthorized personnel is a subject well discussed in the trade literature of system professionals. The various systems are well protected by the criminal justice network from unauthorized access from remote sites through telephone lines. However, disgruntled employees of either criminal justice agencies or of the agency which maintains the central computer and files could cause much mischief. Expansion of ISB's telecommunications capabilities might lead to the increased chance of a breach of system security by outsiders. Events in the recent news of such occurrence to both private and governmental computer installations, including at least one blackmail attempt, lend increased credibility to these risks.
2. Security against Catastrophic Destruction. Both data and systems exist as fragile magnetic structures on physical media at some particular site. The destruction of that media, due to fire, terroristic bombing, or natural disaster is always a possibility. Of course, elaborate

precautions are taken at these sites to avoid such catastrophies, but the possibility of such requires attention be paid to system recovery procedures. Three things must be protected or duplicated to restore the system, data (which changes by the second in these on-line real-time systems), software (which, although not obviously, also changes as systems are enhanced), and the operating environment (the working combination of machine and system software unique to each major installation).

The precise vulnerability of any one system is not known at this time. All have provided for backup and recovery procedures in initial system design. However, the operating environment and probably the application software have been enhanced and changed over time. The difficulty, expense, and feasibility of successful recovery from catastrophic system loss for any given system is probably unknown at this time.

F. THE FUTURE OF CJIS

The previous sections presented the argument that the various systems comprising CJIS and the fabric of interaction and coordination making it a system of systems will certainly change in the near future. There will likely be a movement toward small computers and distributed data processing as described above. This raises the key question: will the total sum of changes in those systems aid in the coordination and efficiency of the system as a whole or hinder it? It is possible that economizing measures within agencies will simply shift costs to other users of CJIS and increase the total sum of costs across all agencies.

There is now no valid plan to guide future development in CJIS nor is there any one person or agency specifically responsible for the continued coordination and development of the statewide Criminal Justice Information System. Further, aside from published standards for shared data formats, there is no active technical assistance available to planners of new systems particularly at the local level. Informal coordination does exist, however, the total pace of change may well outstrip

the ability of any informal network, based largely on personal relationship, to adequately ensure the full realization of interagency and cross-system needs.

Other issues have and will likely continue to develop for which there is no ready means of cross-system discussion. These include the most feasible direction of local system development, the future of the SIP concept in Minnesota, the future of the Minnesota Automated Fingerprint Identification Network and whether it should be viewed as part of CJIS, and whether information on juvenile offenders should be more centrally available. Operational and technical problems should be resolved as they occur, such as possible problems with the availability and technical reliability of the Criminal Justice Datacommunications Network (the problem of system crashes and data loss) and the cost and capacity of the host environment of the network (whether it might save money to migrate the network to a mini-computer environment). Finally, problems with the use of CJIS forms and procedures affecting the accuracy of the data should be dealt with, such as the current problem of deriving objective and accurate descriptions of court sentences from free form narrative source documents.

There are alternative approaches to coping with future change and current issues while improving the coordination, efficiency, and usefulness of CJIS. Among these are:

1. Vesting one operational agency with responsibility for the coordination of CJIS, this would, in effect, create a "CJIS Czar" in the person of the head of that agency. Under Executive Order 100, the Commissioner of Public Safety was given this power. He, in turn, was advised by an advisory commission (MJISAC) made up of users of CJIS from various agencies. The location of this function in that department makes certain sense, it manages both the Criminal Justice Network (and thus must issue standards on data format and protocol) and

manages the Criminal Justice Reporting System (and can issue data reporting standards for that). However, it should be noted that the MJISAC effort was not successful as a permanent coordinating function and there has been little or no impetus to revive it from either DPS or any other user agency.

2. Housing a permanent coordinating function in the state criminal justice agency that has as its purpose coordination of the Criminal Justice System also has some merit. Crime Control Planning Board is by definition representative of the entire system and thus would not be likely to let one agency's internal operational activities conflict with its coordination responsibility. However, the Crime Board, with its diminished role in funding system development, may find it difficult to assert a credible leadership role without the traditional authority of an operating agency.
3. Institutionalizing the current informal coordination and extending it to include personnel from local systems by forming a User's Association is another approach. The primary purpose of this group would be to promote communication among all state and local users of CJIS, to identify common operational problems, prioritize and recommend solutions and to develop recommendations for the future of CJIS.

The means to these ends would be periodic membership meetings open to representatives of operational CJIS agencies and users of CJIS data. The attendees would likely be persons who work with CJIS data on a day-to-day basis, not highly placed representatives of user agencies. Presentations and workshops would be held to familiarize the participants with current and planned system changes in data reporting requirements, future needs and newly available technology. Task forces would report on assigned projects in problem identification and resolution. Open forums to discuss common problems, straighten out misunderstandings and reach consensus on future directions would be held. The preparation and approval of a plan for the future of CJIS (to be presented to the governor or legislature) would be an appropriate priority for this group. Such an association would require seed money and a start-up staff. These services could be, at least initially, provided by the CCPB. Since the participation of local agency personnel would be critical to this effort some funding for travel expenses is also desirable.

4. Of course none of the above proposals directly address the need for scarce funds for further system evolution. The full benefits of the data collected may be delayed if the key components of the system, its overall coordination and/or more sophisticated uses of the data are not fully developed. Since the benefits to be derived from full coordination accrue to the system as a whole, the establishment of funding for continued system development through a state aid program should be considered. Recommendations and guidelines for the use of

that money can be a product of any coordinating mechanism, although the administration of the funds should remain with the Crime Control Planning Board due to its expertise in this area.

G. THE VALUE OF CRIMINAL JUSTICE INFORMATION SYSTEMS

Issues that are related to the discussions above but deserve independent inquiry and discussion relate to the benefits and uses of Criminal Justice Information System. Although cost-benefit justifications for system developments generally quantify the proposed savings due to decreased paper work, reduction in clerical staff and the general benefits associated with automation, it is clear that these systems were advocated and sold with additional benefits in mind. Those benefits range from increased efficiency and/or services due to faster information flow, improved decision making in the management of criminal justice services due to better and more timely information, and finally major improvements in the entire criminal justice system itself as better planning methods are applied to public policy decisions. The extent to which all these benefits have accrued is an issue which is yet unaddressed.

Obviously a great deal of paper work and clerical filing expense has been saved due to information automation. Police clearly benefit from MINCIS as daily operation support. A large number of reports are issued periodically to supervisory and managerial personnel at all levels. Federal reporting requirements are met. And undoubtedly there have been many policy decisions which have been better informed due to the use of data from CJIS. But, *in the main*, are decisions in criminal justice agencies made differently now than before the systems were developed? If so, are they better decisions? Have information systems influenced change

within the criminal justice system itself? If they haven't, the full benefit of information system technology has not been realized.

END