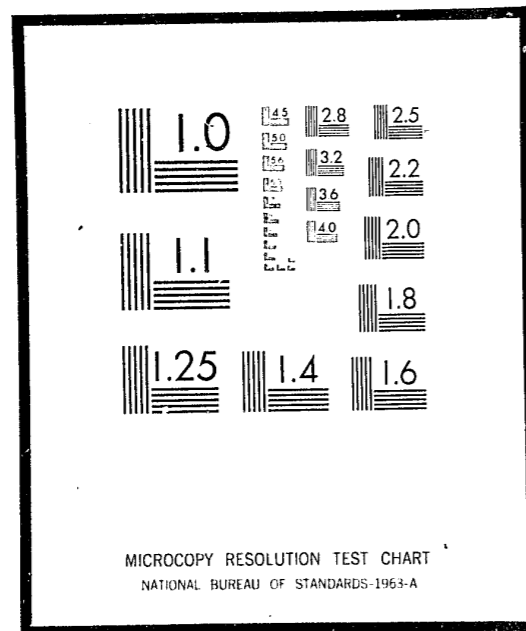


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FINAL REPORT ON THE 1972 NISIS/LEAA SURVEY OF AUTOMATED CRIMINAL JUSTICE

INFORMATION SYSTEMS - Final Report

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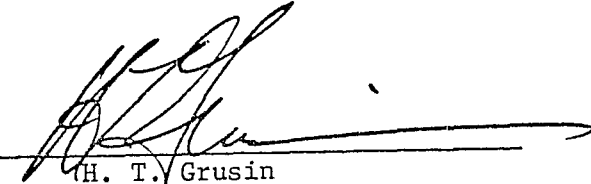
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30 SEPTEMBER 1972

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THE
MITRE
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WASHINGTON OPERATIONS

MITRE Department
and Project Approval:


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ABSTRACT

From April, 1972, until September, 1972, a survey of automated criminal justice information systems was performed. The survey was funded through a grant from the Law Enforcement Assistance Administration (LEAA) to the National Association for State Information Systems (NASIS). Under a contract with NASIS, The MITRE Corporation survey team collected data from 153 state and local jurisdictions and prepared the data for computer processing. The data were published by LEAA as the 1972 Directory of Automated Criminal Justice Information Systems. This report describes the process of performing the survey and presents a limited analysis of the survey results. The report also discusses a number of problems encountered during the data collection effort. The report makes the following recommendations regarding follow-on and related work:

- LEAA should perform an annual update and republication of the directory.
- LEAA should conduct, and encourage others to conduct, analysis of the survey data.
- LEAA and NASIS should continue to encourage the transfer of systems, plans, designs or concepts among jurisdictions.
- LEAA and NASIS should encourage the regular use of the survey data by officials in charge of reviewing or managing criminal justice information system projects.
- LEAA and NASIS should encourage the use of the survey data as a basis for developing seminars and workshops.
- LEAA should consider development of a comprehensive, well-defined set of criminal justice functions.
- LEAA should perform an analysis of specific areas of state-level information systems planning.

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	1
1.1 The Survey Team	1
1.2 Performing the Survey	2
1.3 The LEAA Directory	4
2.0 SUMMARY OF THE SURVEY RESULTS	7
2.1 General Summary Information	7
2.2 Systems Transfer	8
2.3 Gaps and Omissions	9
2.4 Survey Team Observations	11
3.0 ANALYSIS OF SURVEY DATA	14
3.1 Number of Systems Reported	14
3.2 Percentage of Systems in Each System Category	15
3.3 Percentage of Systems Not Yet Operational	16
3.4 Percentage of Systems Planning Additions	16
3.5 Percentages of Systems Reporting LEAA Funding	17
4.0 RECOMMENDATIONS	18
4.1 Data Maintenance and Dissemination Recommendations	18
4.2 Recommendations Regarding other Criminal Justice Information Systems Work	20
APPENDIX I JURISDICTIONS SURVEYED BY FEDERAL REGION	23
DISTRIBUTION LIST	29

LIST OF TABLES

<u>Table Number</u>		<u>Page</u>
1	LIST OF DATA ELEMENTS	5

1.0 INTRODUCTION

As part of its continuing effort to reduce crime and delinquency, the Law Enforcement Assistance Administration (LEAA) has placed a high priority on aiding the development of automated criminal justice information systems. There are many of these systems already in use throughout the country and more in the development stages.

LEAA conducted an initial survey of criminal justice information systems during 1970. At that time, each state was visited and brief descriptions were prepared covering the significant state and local accomplishments. Emphasis was placed on the state level systems. The results of that survey indicated a wealth of ongoing developments in information systems and pointed up a need for a more comprehensive, nationwide directory of specific projects and contacts. Therefore, in March 1972, LEAA awarded a grant to the National Association for State Information Systems (NASIS) to conduct a more detailed survey, again covering all the states but increasing the coverage of local systems.

This survey was to include all of the criminal justice applications in each of the fifty states, the fifty-six largest cities (those with populations in excess of 250,000), and thirty-five other selected jurisdictions. The outcome of the survey was to be a directory of the automated systems in those jurisdictions.

1.1 The Survey Team

NASIS contracted with The MITRE Corporation to assist with the planning and preparations for the survey and to conduct the survey data collection operations. MITRE also analyzed the responses, transcribed the data and assisted with the preparation of the LEAA 1972 Directory of Automated Criminal Justice Information Systems. NASIS provided overall direction to the work performed under the grant and made arrangements with the State of Iowa, Division of Data Processing, to develop the programs required to process, store and print out

the data transcribed by MITRE. Iowa had previously developed programs to create and maintain the NASIS Information Systems Index. The programs required to maintain the criminal justice information systems data base were generally adaptations of these existing routines.

1.2 Performing the Survey

Survey planning began in April 1972. The survey questions were developed jointly by LEAA, NASIS and MITRE and approved by LEAA and the Office of Management and Budget (OMB). Initial contacts were identified in May with considerable assistance from the State Planning Agencies and from the LEAA Regional Systems Specialists. Questionnaires were mailed during the last two weeks in May. An intensive phone follow-up and personal visits to 40 jurisdictions were conducted during June and July to assist respondents in working out their responses. Most of the responses were received in July. Transcription work was performed in August and early September. The balance of September was devoted to editing and correcting the data, preparing the introductory sections for the LEAA directory, and performing a very limited set of analyses of the data gathered during the survey.

The response to the survey was extremely gratifying. Each of the original 141 jurisdictions completed the survey questionnaire. In addition, 12 jurisdictions not included in the original survey mailings voluntarily requested and completed survey forms.

The 100% response to the survey was the result of several factors. These included: (1) strong support from the LEAA Administrators' office; (2) substantial aid and assistance provided by the State Planning Agencies in identifying contacts and, in some cases, actually gathering the information; (3) assistance from the LEAA Regional Systems Specialists; (4) assistance from the NASIS members in each state; and (5) extensive personal contact and follow-up by the survey team.

Possibly the most effective aspect of the collection procedure itself appeared to be a quick follow up by phone, generally within a week after the questionnaires were mailed. Respondents frequently indicated that the calls came quickly enough to keep the questionnaires from being set aside with other business.

Before making any follow-up phone calls, the data collection team conducted a search of the current technical literature to find articles describing automated criminal justice information systems. Where appropriate, the survey team used these articles in preparing for phone conversations with the respondents. Information from the articles frequently refreshed respondents' memories of details which might otherwise have been lost. By themselves, the articles lacked the depth and uniformity required to permit preparation of any except the simplest kind of directory of systems. Nevertheless, they were valuable as a supplemental source of information and should not be overlooked in future surveys.

Most of the survey responses gave evidence of a lot of thought and care in their preparation. All of the responses contained at least the minimum required data and many were quite comprehensive. In almost every case at least one telephone call back was required, however, to clarify one or more points. Generally, the responses to these calls were cordially and quickly provided.

During the course of the data collection work, representatives of the survey team visited approximately one-fourth of the respondent jurisdictions. These visits were of two types. The first and most valuable type was visits whose purpose was to provide team members with a more thorough understanding of the operational environment in which criminal justice information system development takes place. This understanding contributed greatly to the team's ability to communicate effectively with contacts in other jurisdictions. The second type of visit was dedicated to the collection of data. These

visits were required in the few cases where a respondent required extensive assistance in translating the information about his system(s) into terms which were consistent with the intent of the questionnaire. Both types of visits greatly enhanced later verification, editing and analysis of the information presented in the directory.

1.3 The LEAA Directory

As published by the LEAA, the directory contains (a) a listing of the automated criminal justice information systems sequenced alphabetically by state and city or county within the state, (b) an index of the systems by system name, (c) an index of the systems by function, and (d) an index of the systems by the principal hardware element on which they operate. For each jurisdiction covered, the listing briefly describes criminal justice information systems which are operational or being developed, who is doing the work and the current status of the systems. Over 400 separately defined systems are represented in the 153 jurisdictions.

The directory is primarily intended to aid people working with criminal justice information systems to establish communications with each other. It is set up to identify and describe in general terms all of the specific criminal justice functions being served by the information systems in each jurisdiction. Hardware and software information, general financial data and other information about each system are included in the directory. (A list of the data elements is presented in TABLE I.) The names of contacts who can provide more information are listed for each system. Individuals interested in identifying other projects of a specific type can use the directory to perform a preliminary screening of possible systems and should then obtain detailed information from the contacts given.

TABLE I
LIST OF DATA ELEMENTS

1. File Number - A unique identification number assigned to the record for the system.
2. State Name - Name of the state in which the system is located.
3. Jurisdiction - Name of the city, county or state which operates the system.
4. System Name - The name of the system.
5. Code Name - The acronym or short name of the system.
6. Federal Region - The number of the LEAA Federal Region in which the system is located.
7. System Category - The type of system (police, courts, corrections or other).
8. Agency - The name of the agency which has fiscal responsibility for the system.
9. Population Area Served - The approximate number of people served by the system.
10. Present Status - The status of the system as of July 1972.
11. Operational Date - The date on which the system becomes or will become operational.
12. Percent Complete - The percent of completion of the planning, design and implementation work involved in building the system.
13. Contractors - The names of the currently active and previously active, but now inactive, contractors involved in the system development.
14. Total Projected Cost - The projected total cost of the system/function from its inception through initial implementation.
15. Total Costs Incurred - The total of all costs incurred between 1 January 1968 and 1 January 1972 in planning, designing and implementing the system/function.

TABLE I (con't)

16. Grant Costs Incurred - The total amount of costs incurred against LEAA grants as of 1 January 1972 to plan, design and implement the system/function.
17. Total Other Funds - The sum of funds. Reported under "Other Funds."
18. LEAA Grant Funds - The number and amount of any LEAA grants awarded in support of planning, design and implementation of the system/function.
19. Other Funds - The source and amount of any funds other than LEAA grants to be used in support of planning, designing and implementing the system/function.
20. Planned Additions - A statement regarding any system additions planned for the near future.
21. Software - The major software elements of the system.
22. Hardware - The major hardware elements of the system (includes a notation regarding whether the CPU and peripherals are leased or purchased).
23. Environment - A statement of whether the system is operated on a shared or dedicated environment.
24. Interface - A statement listing the major interfaces which the system has with other systems.
25. Documentation - A notation of the extent of documentation available regarding the system.
26. Narrative Description - A textual description of the system.
27. Responsible Agency Contact - The name, address and phone number of the individual to contact in the responsible agency for more information regarding the system.
28. Data Processing Contact - The name, address and phone number of an individual to contact regarding the data processing aspects of the system.
29. System Functions - The names of specific functions performed by the system. Where information for a function differs from that for the system as a whole it is so noted.

2.0 SUMMARY OF THE SURVEY RESULTS

2.1 General Summary Information

The survey covered all of the automated criminal justice information systems operated by police, courts, corrections and other agencies in a total of 153 jurisdictions. These included all of the 50 states plus American Samoa, the Canal Zone, the District of Columbia, Guam, Puerto Rico and the Virgin Islands, each of the 56 largest cities, and 41 other cities and counties. A complete list of the jurisdictions covered is presented in APPENDIX I.

Over 400 uniquely defined systems were identified in the survey. Of these about 41% were exclusively police, 17% served only courts functions and 6% were completely corrections oriented. A substantial portion, 36%, crossed boundaries and served more than just a single agency (police, courts, etc.). These statistics are of special interest in that they suggest two different approaches to criminal justice information system development. The first of these approaches is to develop a system which is restricted to a single agency while the second is to develop systems which cross agency boundaries to provide for more and easier use of the data collected by each agency. An example of the second type of system is the offender based subject-in-process system which tracks a defendant from his initial arrest through the various courts processes and into the correction environment. This type of system assures that the same information is available to each agency and also that duplication of data bases is minimized. These advantages are somewhat offset by the difficulty of establishing responsibility for the quality of the data, however.

The survey obtained complete nationwide coverage of the state level automated criminal justice information systems. Responses from cities and counties did not cover all of the jurisdictions of these types. Some occurrences of development of regional information systems

were noted. These were attributed to the cost advantages of common development and some degree of recognition of the mobility of the modern criminal.

A small number of the jurisdictions surveyed had no automated system to report. In these jurisdictions manual methods are still being used to process police, courts and corrections information.

Most of the automated systems reported were based on use of some type of general purpose digital computer. A few systems used special purpose hardware to perform their primary functions. Two examples of the latter group are the ORACLE system in Los Angeles County, California, which utilizes video tape and an internal indexing system connected to television terminals to provide access to a file of more than eighteen million sheriffs' department law enforcement documents and the MIRACODE system in Rochester, New York, which uses a microfilm retrieval system to facilitate fingerprint identification.

2.2 Systems Transfer

One of the secondary objectives of the survey was to provide a tool which could facilitate the transfer and adaptation of software from the jurisdiction initially responsible for its development to other jurisdictions. This approach to obtaining parts of or entire criminal justice information systems has the advantage of saving the receiving jurisdiction some portion of the system development cost. A number of examples of successful system transfer were encountered during the survey. Two of the more illustrative examples are the transfer of the Kansas City ALERT system to New Orleans and South Carolina and the transfer of the Cincinnati CLEAR system to San Francisco. The ALERT system was transferred to New Orleans in the form of a design concept, the programs were rewritten specially for the receiving city. South Carolina, on the other hand, is adapting some of the ALERT programs directly. The CLEAR system was moved to San Francisco by the contractor who had initially developed the system in Cincinnati.

These examples illustrate the two fundamental approaches to system transfer whose validity was noted by the survey team. The first approach involves utilizing analysts and programmers from the recipient jurisdiction to select salient portions of the subject system and adapt them either in concept or as program packages to their jurisdiction's needs. The second approach involves contracting with a firm which has previously developed a system to install their system in the new jurisdiction. The first approach appears to have greater potential for cost savings, but it also may involve a greater risk of error in operations and maintenance due to inexperience on the part of the receiving staff. Either way, the recipient should not expect the system to be fully satisfactory without some adaptation to his specific needs. The key to selecting the appropriate system to adapt is having a knowledge of a broad spectrum of potential systems. This should be easier to accomplish with the availability of the LEAA directory. Successful adaptation of an existing system appears to be dependent on good system documentation at both the design and programming levels and the willingness of the supplying jurisdiction to allow representatives of the recipient to observe operation and maintenance of the system for as long as three to six months prior to actual execution of the transfer.

2.3 Gaps and Omissions

Users of the survey data should observe a number of cautions regarding the information presented. The major point to remember is that the number of systems covered, while greater than the number covered in any previous survey, is still far from being a complete nationwide set. Many systems in smaller cities and counties are not covered in the directory. Also, in one case identified by the survey team, operational control of the courts operations lies outside of both the state and the city/county levels of government, thus the automated systems in use by those courts are not reflected in the data gathered during the survey.

Nor is the survey coverage necessarily complete in even the jurisdictions covered. On-site audits of a number of the survey returns indicated a few gaps in coverage, some of which may have occurred unnoticed elsewhere. Three types of omissions were identified. They are:

- a. stray or infrequent batch jobs;
- b. jobs not officially sanctioned;
- c. related jobs performed outside of criminal justice agency control.

Examples of the first type of possible omission are current, active applications which had been produced outside of the system development framework and functions being performed by infrequently used applications programs. In one city a Patrol Car Assignment model has been developed and is in use. The model is used only twice a year, however, to generate summer assignment patterns and winter assignment patterns. This model was overlooked by the respondent at first in the survey but was picked up in an on-site audit. Similarly, jobs that are only run once for a special study have probably been overlooked in many jurisdictions. Typical of these would be a model run to determine the best location for a new police station or a calculation to aid in analyzing a pattern of criminal activity. It is likely that many such jobs exist and have been inadvertently omitted from the directory.

Systems or functions not yet officially recognized by the agencies in which they are being performed have probably been omitted by many respondents. In one state, the Department of Justice response made no mention of two innovative and effective programs which were being used regularly for identifying major offenders and for recording juvenile activity. Even though the programs fulfilled vital Department level functions, they were still treated as Branch-level operations. Similar programs may have been omitted in other states.

The third type of possible omission is the job which fulfills a criminal justice function but which is performed by a non-criminal justice agency. Most typical of these are the motor vehicle and driver license operations. Records of stolen vehicles and stolen licenses are sometimes maintained by police agencies. Where this is so, the functions were always reported in the survey. In cases where a motor vehicle agency or a revenue authority maintained such records and allowed police use of the files, there was some variation in response. Some states reported the driver licensing/vehicle licensing functions as criminal justice functions; others omitted them. Records in the directory are therefore likely to be incomplete regarding systems of this type.

2.4 Survey Team Observations

The system descriptions provided by the respondents are generally informative and concise. In conducting the survey the survey team actively sought to identify flaws in the survey questionnaire and procedures. This was done both to insure that the results of the survey were properly understood and to preclude repetition of the same mistakes at some later time. A few problems were noted during the collection effort and those still unresolved are discussed in the following paragraphs.

The wide diversity of systems concepts in the many jurisdictions caused some difficulty in obtaining uniform responses as regards functions performed. Jobs such as the record keeping associated with courtroom assignments might, in one jurisdiction, be thought of as an "Assignment - Courtroom" function, while in another jurisdiction, it might be treated as part of a "Calendaring/Scheduling" or a "Docketing" function. In some instances respondents used function names which were unique to their own systems. Where possible, these have been changed with respondent approval to more standard function names. Where changes were considered inappropriate, the locally used function name was included.

System status information was accepted as reported by respondents. It was not possible to verify that all systems identified as operational were actually operating as described. Similarly, it was not possible to audit all of the statements regarding planned additions. Directory users should consider the present status entries only as general indications of progress. They should rely on direct contact for exact data on the current status of projects.

The contact names provided have been carefully checked for accuracy up to cut-off time for printing in mid-September. Normal turnover and organizational changes will alter the list with time.

Not all respondents included both a Responsible Agency Contact name and a Data Processing Contact name. Some responses indicated one individual as both the Responsible Agency Contact and the Data Processing Contact; in this case the contact information was only coded in the Responsible Agency Contact Field.

The nature of system interfaces with one another is sometimes difficult to describe. Some respondents minimize the number of interfaces by defining their systems very broadly. In these cases, what might have been shown as interfaces between more narrowly defined systems are considered internal system relationships.

Respondents offered various ways of reflecting one type of "terminal" interface. This is the type of interface which exists when a system in a local jurisdiction is queried and responds "no relevant data" and procedures then call for the operator to reformulate the query and enter it on a terminal connected to a State or Federal system. In these cases, some respondents felt strongly that no real interface existed. Others felt equally strongly that the existence of the manual procedure constituted a bona fide interface arrangement. The respondent's answer was accepted regardless of his interpretation of this interface.

Hardware entries are reported as Leased or Purchased. In some cases, items are on a Lease/Purchase plan. These items are shown as "Purchased" with an explanatory note in the narrative. Some jurisdictions obtain their computing capability from outside service bureaus. These situations are shown as "Leased," with special notes in the narrative where space permits.

For a number of systems, none of the desired financial information was available. For others, budgeting and accounting systems mix the development costs with operating costs in ways which preclude separation. Some figures reported were admittedly estimates. Such financial information as is provided for the various systems should therefore be used only as a rough gauge of the cost of the system described.

None of the information limitations described above should have any major effect on the usefulness of the survey data in the manner intended, namely, as input to a directory. It is recognized that the list of systems is far from a complete, nationwide listing. Nevertheless, it still brings together, for the first time, descriptions and location information on more than 400 automated criminal justice information system functions being performed in 153 jurisdictions.

Some patterns of activity are apparent from the data and some interesting sets of facts emerge. These are presented in the following section.

3.0 ANALYSIS OF SURVEY DATA

In order to formulate some initial impressions the survey questionnaires were scanned and a limited set of data was accumulated. This data was summarized by region and the results are presented below. The reader should note that the results given are approximations, and that the statistics presented are not considered to be an optimum summarization of the data in the survey. It is expected that a more extensive, automated analyses of the computerized data base will be possible as part of future activity. Any such future analysis must, of course, take into consideration the effects of the problems discussed in Section 2.3, Gaps and Omissions.

3.1 Number of Systems Reported

In order to place any regional summary of the number of systems in the proper perspective, it is necessary to first define how the term "system" is used. As used in this section a "system" is a uniquely named entity performing one or more functions. Under this definition, as an example, Portland, Oregon's CRISS system was counted only once despite the fact that the respondent detailed four distinct phases of system implementation, all of which are reflected in the LEAA directory. On the other hand, each of the approximately thirty responses from Washington, D. C. was counted separately because each was assigned a unique system name by the survey respondent. This approach was taken to avoid, where possible, counting the same software system more than once. Some of the statistics in this and subsequent sections will differ slightly from those in the LEAA directory due to the use of this definition.

Using the above definition, a total of 405 systems were counted. These varied from a low of 21 each in Regions VII and X to a high of 69 in Region III. It should be noted, however, that the Region III total may be somewhat inflated since it includes over thirty responses from Washington, D. C. The average number of system per region is 40 and the median is 45.

Examination of these and related statistics yield no immediate explanation for the differences found. Comparison with the crime rates, populations and the number of metropolitan areas in each region might indicate the underlying cause of the variation.

3.2 Percentage of Systems in Each System Category

The system category determination was based on the functions checked on the survey response. If the respondent checked functions listed as police functions or if he listed additional functions in the space provided under the list of police functions, the system was categorized as a police system. Similarly, if functions were checked from the courts or corrections lists, the system was called a courts or corrections system, respectively. Combinations were also considered.

Overall statistics were presented previously. The percentage of systems which included some police functions - in other words, systems which were both purely police and which were combinations of police with courts, corrections - or other functions ranged from 40% in Region VIII to 89% in Region IV. Similarly, systems which include courts and corrections functions range from 13% (Region I) and 6% (Region VIII) up to 49% (Region IV) and 39% (Region V), respectively. It can be seen from the statistics that the development of automated police functions has predominated in every federal region.

It was not possible to perform an analysis of the distribution of implementation dates by system category. It should be expected that such a distribution would indicate increasing emphasis on corrections and courts systems in successively later time periods. This is one type of analysis which should be pursued by LEAA in order to ascertain the potential benefits from increased emphasis on systems transfers in the courts or corrections areas.

3.3 Percentage of Systems Not Yet Operational

A significant percentage of the systems reported in the survey are not yet operational. Overall, approximately two-thirds of the systems are wholly or in part operational. The remaining third range from those in the initial planning stages to a few due to become operational within a month of the conclusion of the survey. By region the percentage of systems reported as operational ranges from Region IV's 49% to Region VII's 96%. The number of systems being implemented indicate a tremendous rate of development in criminal justice information systems.

No distinct general patterns as to the specific functions or categories of systems under development could be identified from the manual summaries of the survey data. More detailed analyses of a single region did, however, indicate that in that particular region the systems under development were evenly distributed among police, courts and corrections categories. This fact lends credence to the observation in Section 3.2 that the emphasis on development of courts and corrections systems must tend to increase as the need for police systems is satisfied.

3.4 Percentage of Systems Planning Additions

Respondents indicated plans to add more functions, change or add hardware, or improve the efficiency of existing programs for over 60% of the systems described. This can be attributed to such factors as the absence of comprehensive initial system planning, conformance to an incremental development plan or changing information systems requirements within the jurisdiction.

Two inferences of potential importance to LEAA should be noted here. The first of these is that this system development, as well as that discussed in Section 3.3 above, offers great opportunities for the LEAA to improve the effectiveness of law enforcement by

actively promoting measures (such as shared development or systems/functions transfers) to reduce the cost of information systems. The second is that the potential impact of the LEAA requirement that jurisdictions develop long-term plans for satisfying their information processing requirements is tremendous. Any measures which can be taken by the LEAA to insure that the required planning is of high quality will contribute significantly to the future efficiency of the criminal justice community.

3.5 Percentages of Systems Reporting LEAA Funding

Thirty-nine percent of the respondents' systems were developed with some assistance from the LEAA. It is clear, though the exact numbers have not been developed, that LEAA impact would be significantly higher if only those systems under development since the LEAA's inception were considered in computing this percentage. By region, the statistics range from the low of 28% in Region IX to a high of 67% in Region VII. Most jurisdictions had at least one system which had benefited from LEAA assistance.

4.0 RECOMMENDATIONS

The recommendations of the survey team in the area of maintenance and dissemination of the criminal justice information systems data base are presented in Section 4.1 below. In addition, other problem areas related to criminal justice information systems which became known to the survey team during the course of the survey are presented in Section 4.2. The supporting discussion is presented along with each recommendation.

4.1 Data Maintenance and Dissemination Recommendations

It is important to note that the field of automated criminal justice information systems is a vital, dynamic and rapidly developing area. Therefore, the data collected in the survey will, unless continually updated, become obsolete. A continuing effort will be required at a low level to maintain the file of data in a current status.

By monitoring the changes to the data over time, it will be possible to obtain some measure of the speed of growth and development in the field. Analysis of the changes as they are reported will yield early indications of development trends.

- LEAA should perform an annual update and republication of the LEAA directory. This recommendation is based on the survey team's evaluation of the reasonably low costs of updating the directory and the apparently high value of the information to the criminal justice community. By sending copies of each jurisdiction's data to the jurisdiction with a request that they enter the revised information and return the forms, the LEAA's and the respondent's efforts would be minimized. It is suggested that additional data such as the identification of major problems solved during system development or the annual operating costs might be requested in future surveys. This additional data would increase the utility of the directory.

- LEAA should undertake and should encourage others to conduct additional analysis of the survey data to the maximum feasible degree. This is the first survey of its type and scope. The data should be analyzed both with the idea of drawing any appropriate inferences about the field of criminal justice information systems and with the goal of identifying more effective questions and survey procedures for future use. Unless these analyses are performed, the full potential of an annual LEAA survey will not be realized. LEAA has a responsibility to the contacts who responded to this survey to obtain the maximum possible value from the data supplied.

- Both LEAA and NASIS should continue to encourage the transfer of systems, plans, designs or concepts among jurisdictions and should foster exchange through use of the LEAA directory. In addition to existing contractual requirements for developers of new systems, LEAA should consider other approaches to insuring that systems are used by more than one jurisdiction. Some possible approaches might be funding development of system documentation and disseminating this documentation through the LEAA National Criminal Justice reference service or funding local jurisdiction personnel in jurisdictions with highly transferable systems whose responsibilities would include training personnel from potential recipient jurisdictions.

- Both LEAA and NASIS should encourage the regular use of the survey data by officials in charge of reviewing proposals for new projects and by managers of existing projects of this type. The goal of such use must be the minimization of duplication of system development efforts. The possibility of establishing an incentive system such as general purpose discretionary grants for State Planning Agencies or regional administrators who are particularly effective in encouraging transfers should be considered.

- Both LEAA and NASIS should encourage the use of the survey data as a basis for developing seminars and workshops. Here again is a way of encouraging system transfer between jurisdictions. Lists of individuals with similar interests could be developed. Seminars could be held wherein these individuals would have the opportunity to exchange ideas on possible solutions to their problems. The possibility of holding specially tailored seminars in conjunction with annual or regional meetings of various groups such as NASIS, the International City Management Association or the International Association of Chiefs of Police should be explored.

4.2 Recommendations Regarding other Criminal Justice Information Systems Work

- LEAA should consider developing a comprehensive, well-defined set of criminal justice functions. As discussed in Section 2.0 of this report, the functions used in this survey were subject to a wide range of interpretations. By developing a set of functions and encouraging their use in the criminal justice community, LEAA could facilitate the exchange of information between jurisdictions at a far greater level than is possible with the great discrepancies in terminology which prevail at present.

- LEAA should perform an analysis of specific areas of state level information systems planning. The goal of this analysis should be to provide a structuring of the concepts around which a state information system plan is to be developed at a sufficient level of generality to allow its use by many or all state planning agencies. Some specific questions which should be addressed are: What is the full set of information system functions which might be covered in a state plan; what factors should be considered in selecting functions from this set for a specific state or locality; what are the arguments for and against distributed versus centralized control of specific functions; what functions should be considered for local, county, regional

and state control; and what are the legal implications of the various combinations of factors discussed above. In the course of the survey, two state planning agencies indicated that they were in the process of having this type of information developed for their own use. By preparing a generalized analysis of this sort LEAA, could minimize the cost of developing state plans by eliminating the duplications of effort involved and could insure that state planners have enough information to develop a good state plan.

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APPENDIX I

JURISDICTIONS SURVEYED BY FEDERAL REGION

REGION I

State of Connecticut
City of Bridgeport
City of New Haven
City of Hartford
State of Maine
Commonwealth of Massachusetts
City of Boston (including Suffolk City)
County of Middlesex
State of New Hampshire
State of Rhode Island
State of Vermont

REGION II

State of New Jersey
City of Camden
County of Camden
City of Jersey City
City of Newark
County of Hudson
County of Passaic
State of New York
City of Buffalo
City of New York (including New York County)
City of Rochester
County of Nassau
Commonwealth of Puerto Rico
Territory of the Virgin Islands

REGION III

State of Delaware
City of Washington
State of Maryland
City of Baltimore
Montgomery County
Commonwealth of Pennsylvania
City of Philadelphia (including Philadelphia County)
City of Pittsburgh
Commonwealth of Virginia
City of Alexandria

REGION III (con't)

City of Norfolk
County of Fairfax
State of West Virginia

REGION IV

State of Alabama
City of Birmingham
State of Florida
City of Jacksonville (including Duval County)
City of Miami
City of Tampa
County of Dade
County of Hillsborough
State of Georgia
City of Atlanta
Commonwealth of Kentucky
City of Louisville
State of Mississippi
State of North Carolina
City of Charlotte
State of South Carolina
State of Tennessee
City of Memphis
City of Nashville (including Davidson County)

REGION V

State of Illinois
City of Chicago
State of Indiana
City of Indianapolis (including Marion County)
State of Michigan
City of Detroit
State of Minnesota
City of Minneapolis
City of St. Paul
State of Ohio
City of Akron
City of Cincinnati
City of Cleveland
City of Columbus
City of Dayton
City of Toledo
County of Hamilton

REGION V (con't)

State of Wisconsin
Dane County
City of Milwaukee
County of Milwaukee
City of Madison

REGION VI

State of Arkansas
State of Louisiana
City of New Orleans (including New Orleans Parish)
State of New Mexico
City of Albuquerque
State of Oklahoma
City of Oklahoma City
City of Tulsa
State of Texas
City of Austin
City of Dallas
City of El Paso
City of Fort Worth
City of Houston
City of San Antonio
City of Wichita Falls
County of Dallas
County of El Paso

REGION VII

State of Iowa
State of Kansas
Polk County/Des Moines
City of Wichita
State of Missouri
City of Kansas City
City of St. Louis
County of Jackson
County of St. Louis
State of Nebraska
City of Omaha

REGION VIII

State of Colorado
City of Denver

REGION VIII (con't)

City of Colorado Springs
State of Montana
City of Billings
State of North Dakota
City of Fargo
State of South Dakota
State of Utah
City of Salt Lake City
County of Salt Lake
State of Wyoming

REGION IX

State of Arizona
City of Phoenix
City of Tucson
County of Pima
County of Maricopa
State of California
City of Long Beach
City of Los Angeles
City of Oakland
City of Sacramento
City of San Diego
City of San Francisco (including San Francisco County)
City of San Jose
City of San Mateo
County of Los Angeles
County of Orange
County of Santa Clara
State of Hawaii
City of Honolulu
State of Nevada
Territory of Guam
Territory of American Samoa
County of Alameda

REGION X

State of Alaska
State of Idaho
State of Oregon
City of Portland
County of Multnomah
County of Lane

REGION X (con't)

State of Washington
City of Seattle
City of Spokane
County of King

END