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SYSTEM SURVEY REPORT
MUNICIPAL COURT
OF
MARION COUNTY, INDIANA
LEAA REGION V
TECHNOLOGY TRANSFER PROJECT

JUNE 1976

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Section I
INTRODUCTION

PURPOSE

The purpose of this report is to sufficiently describe the efforts and occurrences of a technology transfer project so that other interested agencies can understand its problems and successes. This report will describe the project as it occurred at the Marion County Municipal Court from grant application until the project was nominally concluded, on 31 December 1975. Included in the report are discussions of the efforts involved in planning, design, donor selection and implementation.

PROJECT DEFINITION

Because of the interest in information systems technology transfer, and because of the lack of information on the practical aspects of transfer, LEAA's Region V office undertook to design a project which would explore the feasibility of transfer, in a developmental setting, and to glean from this effort the kind of information which would be helpful to agencies considering the possibility of technology transfer.

Specifically, the project had two primary objectives:

- To transfer one or more criminal justice information system applications to each of the participating recipient agencies.
- To provide thorough documentation of the problems encountered, solutions to those problems and recommendations that may benefit other agencies involved in the transfer process.

The six agencies selected as recipient sites were:

- Lake County Department of Management Services, Waukegan, Illinois
- Municipal Court of Marion County Indianapolis, Indiana
- Michigan Department of Corrections Lansing, Michigan
- Minneapolis Police Department Minneapolis, Minnesota
- Northwest Ohio Regional Information System (NORIS), Toledo, Ohio
- Wisconsin Division of Corrections Madison, Wisconsin

The project was designed to consist of four phases:

- A system requirements analysis, where agency needs were assessed.
- A donor site selection phase, where alternative systems for transfer were selected.
- A technology transfer phase, during which the actual transfer of software took place.
- A documentation phase which lasted for the duration of the project and collected all available information on the process of technology transfer.

Two sites terminated their participation prior to completion of the project. The State of Wisconsin, for reasons not directly associated with the project, was unable to continue its participation. The Michigan Department of Corrections chose to terminate its involvement at the conclusion of the second phase.

The conditions under which the project would occur were minimal. As with any LEAA funded project, certain time

constraints were involved. The project funding was not to include budgeting for any additional hardware requirements. The transfer was to consist of operational applications software written in COBOL.

While preliminary objectives of the site were stated in the Request For Proposal, the intent of the initial project phase was specifically to develop the information processing requirements of the site.

The report is presented in eight sections as shown below. It covers the site environment and experiences from the start of the project through to December 31, 1975, when for the most part the "lessons learned" were complete and documentable.

- I. Introduction
- II. Management Summary
- III. Definition of Technology Transfer Project
- IV. Survey of System Requirements
- V. Donor Site Selection
- VI. Implementation Schedule and Process
- VII. Modification Analysis
- VIII. Summary of Transfer Effectiveness

Section II

MANAGEMENT SUMMARY

ORIGINAL PROJECT GOALS

The Technology Transfer Project began at Marion County Municipal Court with a statement of goals in a RFP issued by the Law Enforcement Assistance Administration (LEAA). The goal of the Marion County Municipal Court was to increase its operating efficiency to handle increasing caseloads.

While the objectives of LEAA's Region V office dealt with the question of feasibility of technology transfer, the site objectives were much more directly related to needs of their agencies. The desires of the Marion County Municipal Court were related to immediate needs to support judicial processing in the courts and, by so doing, ease the pressures of an increasingly heavy caseload. These needs were translated into a description of application areas in the Request for Proposal as follows:

Transfer of a modular, operational automated Judicial Information System. Types of modules to be transferred: Calendaring and Scheduling; Bail Bonds and OR Releases; Attorney Inventory (Prosecution and Defense); Automated Indexes; Management Information; Adult Probation; Docket Information; Cash Receipts Funds and Accounts; Jury System.

Although a comprehensive subject-in-process system was identified, the time frame under which the project was initially planned was very limited. While the concept of a subject-in-process system servicing law enforcement, prosecution, courts and corrections would certainly meet

many informational needs of the agencies, many planning and preparatory steps had not been taken prior to issuing the RFP. Subsequently, there was a dual effort of performing the planning activities as well as a functional analysis and conceptual design simultaneously.

IMPLEMENTATION PROCESS

The Technology Transfer Project was conducted in three phases as follows:

- Phase I - Requirements Analysis
- Phase II - Donor Selection
- Phase III - Implementation

In addition, Phase IV - Documentation was a concurrent task designed to capture the experiences and lessons of the project. It was the LEAA Region V office's desire to provide such information with recommendations to others to assist and enlighten during other technology transfer projects.

As later determined, the statement of needs expressed in the RFP remained generally appropriate. Some small part of the needs were being addressed by an existing system called CAUSE, which provided court slates and schedules for all traffic violations and recorded dispositions. Indexing by name and Uniform Traffic Ticket number was available. The CAUSE system was being redesigned to provide additional services including all court required lists, courtesy letters to citizens who failed to appear, payment instructions to non-moving violation recipients, requests for driving records from the State Bureau of Motor Vehicles, cases scheduled and not disposed of (for judicial action) and letters of continuance on not guilty

pleas. The technology transfer project was to address and define the information requirements separately and to coordinate donor selection with the emerging CAUSE system.

Phase I - Requirements Analysis

It was the task of this phase to ascertain exactly what kind of information system was required at the Marion County Municipal Court. This task could be broken down into two kinds of knowledge: (1) What functions does the Court perform and (2) what information is used and by whom?

Since the site agency intended to develop a system not necessarily limited to its own agency, the requirements analysis was to be extended to include the other participating agencies. However, difficulties arose in so doing which altered considerably the original objectives of the project. Because in some cases agencies desired an autonomous, highly independent system, and in others the concept and benefits of a subject-in-process system were apparently not clearly understood, there was confusion and resistance from some agencies. Since it was felt that training and familiarization were critical to resolving the lack of commitment, a master planning effort was proposed and conducted. However, because of the scheduling, the planning effort did little to assist in the development of coordinated system objectives.

The development of the requirements analysis including a conceptual design was further involved with the concurrent redesign of the CAUSE system in the municipal court. Its redevelopment would duplicate to some extent modules and programs which conceivably would be acquired through a transfer. The determination of whether CAUSE should be

redesigned or not and if so, whether it would interface, merge or be replaced during the transfer project was a problem which was often addressed during this phase. Eventually, it was decided that the question would be resolved during evaluation of possible donors.

The proposed information requirements to be met through donor transfer were summarized in the Information Requirements Report as a subject-in-process system serving both traffic and criminal needs of the Municipal Court. The major modules to be included, listed in order of decreasing priority, were:

- Case Management System
- Calendar Management
- Notification System
- Court Management Information
- Probation Tracking

Other modules seen as beneficial were:

- Jury Selection System
- Computerized Criminal History Information
- Criminal and Civil Case Processing
- Master Name Address File

Phase I resulted in development of a document, "System Specification Requirements", which ostensibly contained the consultant's understanding of the project criminal justice functions and information needs. It described possible output reports and data requirements, file structures and possible costs. The document was not clear, however, in the scope of the system to be transferred. While the consultant and site project director

still held the objective of a comprehensive subject-in-process system as viable, the System Specification Requirements report did not extend to an understanding of law enforcement, prosecutor and corrections functions, nor had the Phase I activities clearly defined the project or elicited commitment from these agencies.

Phase II - Donor Selection

The donor selection phase of the project was begun on schedule and included the study and evaluation of a number of court subject-in-process and management systems. For all serious donor considerations, a site visit was made by Marion County and consultant staff. These teams consisted of the Marion County Court Administrator who functioned as the Project Director, personnel from the CAUSE redesign staff, Central Data Processing and a manual records analyst. Consultant personnel also attended the site visits.

Documentation was collected before, during and, in some cases, after the visits, in order to assist in the evaluation of the donors. Evaluations of the donors were written up and discussions were held among the team to ascertain feasibility of transfer.

Seven systems were considered in the report describing the selection decision. They were:

- Court System, Philadelphia (Pennsylvania)
- MCAPS, Orange County (California)
- CORPUS, Alameda County (California)
- CABLE, San Francisco County (California)
- CJIC, Santa Clara County (California)
- CJIS, Dade County (Florida)
- VFRMS, Jacksonville (Florida)

The criteria by which the systems were evaluated were not specified but included the following elements:

- LEAA requirements for an operational COBOL system
- Marion County Central Data Processing (CDP) Hardware and Software compatibility
- CAUSE system compatibility

The Santa Clara County CJIC system was recommended by the consultant in the Phase II report, *System Transfer Recommendations*. It was mistakenly felt by the consultant that the system file structure and program construction would be beneficial for transfer into an environment which might require that certain segments or modules be abandoned if the user chose not to participate in the system.

The report further defined the file requirements, programs which might be transferred and the modifications to them which would be required to operate in the Marion County environment. It was recommended that the system operate in parallel with the CAUSE system when redesigned.

The project director was to determine which elements of the system would be selected for transfer and the costs of the project. An implementation schedule would then be prepared and initiated.

Phase III - Implementation

With the process of final selection of modules to be implemented, a number of decisions and events occurred which

had drastic effects on the nature of the system implemented. These major influencing occurrences were:

- The Police Department and Prosecutor's Office elected to continue development and refinement of their own systems in preference to reliance upon the subject-in-process system as an information source or potential.
- The Central Data Processing elected to utilize CICS as the only teleprocessing monitor on the County systems.
- In the process of final design of the system to be transferred, there was a significant definition of the scope of the project, particularly concentrating on internal needs of the Municipal Court itself.

As a result of these decisions, the selection of modules from the CJIC donor was severely impacted. The elimination of the law enforcement and prosecutorial modules also eliminated inputs which were critical to the subject-in-process concept. As a result, the redefining of the system to be transferred was limited largely to court requirements.

The effort to select and implement the prescribed designed modules became a three-month effort to determine what modules or elements could be salvaged and to redesign the system around them. In the process the CAUSE system, renamed Transmission and Retrieval of Automated Court Information (TRAC), became the nucleus of the system design, with subsequent programs supporting and interfaced to it.

Once a redesign plan was established and a schedule developed, the transfer project proceeded immediately thereafter.

The elements selected for implementation were:

- Daily Batch Disposition Listings
- On-line Slates
- On-line Case Notices
- Daily Probationer Arrested/slatted
- Probation Bench Warrant List
- Adult Probation Referral List
- Public Defender Referral List
- Batch Edit/Maintenance Modules
- On-line Edit/Maintenance Modules

Because of the extensiveness of the change resulting from separating the modules in the CJIC program, the change in teleprocessing monitors and file access methods, the transfer could not be made at the code level as originally anticipated. Instead, the transfer occurred largely at a conceptual and, in some instances, a design level, utilizing ideas from particular programs, general screen concepts, some file identification and data element definitions.

The overall project included a number of beneficial results, such as:

- Redesign of data files from ISAM to VSAM resulting in less overhead processing.
- A more efficient, supported teleprocessing monitor package.
- Development of a file management interface with a considerable degree of program independence.

As the project progressed, it was found that the booking information required to support the public defender

referral list would not be available and a statistical management report was substituted for that module.

Generally, the schedule developed at the start of implementation was met. Toward the end of the implementation phase, the schedule was impacted by coordination problems with other agencies in developing a universal control number for case processing.

CONCLUSIONS

The Marion County Municipal Court Technology Transfer Project yielded considerable benefits both to LEAA and to the site.

In LEAA's terms, the project was a success. A conceptual transfer was successful and, more importantly, the transfer experience and process was captured and documented as a training and planning instrument for others to use. The lessons of Marion County and the other five sites were reported in a document titled *Information Systems Technology Transfer Summary Report*.

For Marion County Municipal Court, the project resulted in a more complete understanding of planning and coordination requirements, a court information system which provides the essential components of the court requirements and an understanding of directions to be pursued. While it did not result in the comprehensive subject-in-process system originally intended, it did point out the preparatory conditions to be met for such a system. Without the commitment of the total criminal justice community, the Municipal Court has defined its own needs and relationships for development.

While technical problems may exist in a project such as this and should be considered ahead of time whenever possible, people problems can be just as important to the success of a system. Acceptance of the system concept, understanding of the system benefits and potential and commitment to providing persons for the input of data, etc., cannot be sought during or after implementation but must be considered criteria for the project itself.

Section III

DEFINITION OF TECHNOLOGY TRANSFER PROJECT

The Region V Technology Transfer Project was initiated early in 1974 by the Regional Office Systems Specialist. Program #6 of the Region V Discretionary Fund Handbook dealt with Computer Technology Transfer and \$1,200,000 had been budgeted for the program. The principal objective of Program #6 was the successful transfer of a criminal justice application program to a recipient site in each of the six Region V states. Based on their needs, recipient sites would receive operational programs and the technical assistance required to install and make them operational.

The six states of Region V were asked to participate in the project by selecting a recipient site with the prescribed criteria. The site selected for the State of Indiana was the Marion County Municipal Court.

Following site selections, the six recipients, SPA system specialists and LEAA personnel met, developed a tentative (but detailed) work plan and schedule and generated on May 24, 1974; a Request for Proposal for Technical Assistance for a Computer Technology Transfer Program.

Although the RFP was generated by the LEAA Region V office under the direction of Mr. Frank N. Sass, Systems Specialist, the project management at that time had been placed under the control of the Advisory Committee of the Computer Technology Transfer Program. The Advisory Committee was composed of representatives of the

six states' SPA offices, the six Project Directors and Frank Sass.

Proposals were received and reviewed by the Committee and a contractor selected. A master contract was negotiated on July 9, 1974, with Public Systems incorporated to provide the technical support to the six sites as outlined in their proposal work plan and subsequently by contractual agreement with the agencies themselves.

The project was funded by an LEAA Part C Discretionary Grant, requiring ten percent (10%) matching funds from the participating states. The grant was approved by LEAA Region V in June. However, funding was no longer available through the Region V LEAA office and was then being granted directly from Washington, D. C. Approval for these funds by LEAA, Washington, D. C., was not given until late October, 1974. This placed a considerable strain on both Marion County, which had been receiving services for some time, as well as the Contractor, PSi, and Subcontractor, CSC.

As indicated previously, two basic goals had been generated: (1) to effectively transfer application modules to the site and (2) to document the experiences as an aid to others. Beyond these general goals, the specific objectives were left to the sites themselves to develop in Phase I, information requirements study.

WORK PLAN

A work plan had been developed in the contractor's proposal. The proposed plan was to conduct Phases I and II concurrently at all sites so that the sites could benefit

from the donor analysis conducted by others. However, because of considerable differences in the time frame under which final site contracts were negotiated, this concept became impossible, and each site eventually renegotiated and proceeded with its own work plan. The Marion County work plan is presented as Appendix A and discussed in Section IV.

Section IV
SURVEY OF SYSTEM REQUIREMENTS

BACKGROUND

At the writing of the Request for Proposal (RFP) for the Technology Transfer Project, specific application modules were identified by Marion County and included in the RFP for an operational automated Judicial Information System. These modules were as follows:

- Calendaring and Scheduling
- Bail Bonds and/or Releases
- Attorney Releases (Prosecution and Defense)
- Automated Indexes
- Management Information
- Adult Probation
- Docket Information
- Cash Receipts Funds and Accounts
- Jury System

The actual requirement for Marion County was a subject-in-process (SIP) system to provide an efficient, predictable method of processing much of the court's workload. In addition, the system was to provide needed liaison with other agencies for up-to-date information as well as a data base for courts' management statistics.

A specific requirement of the system was to interface with an on-line traffic records system which was being developed during the Technology Transfer Project. If possible, an interface with a developing jail booking system was desired.

The system components required of Marion County were oriented toward meeting the heavy demands of a combined traffic/misdemeanor court system. Of these, the heavy load was upon the traffic side in sheer numbers, whereas the criminal processing segment was generally smaller but more time-consuming per case. There was a large amount of paper processing of notices to appear, continuances, referrals, process letters, etc., which could be adapted to data processing, given the development of a data base and identification of conditions for generation. It was likely that in this area, and in the resulting ease of manual system paper movement (e.g., warrants, affidavits, etc.), the greatest gains could be achieved for the court administrator and court system in general.

No documentation or preplanning reports were available describing the nature of the required system or its objectives. The court had very recently begun an analysis of its instruments (documents) as well as those of the other criminal justice agencies in an effort to define the information being exchanged and procedures involved. It was initially anticipated that this report would be available to the Contractor in the first month.

The CAUSE System, which was essentially a municipal court information system for citations, had been documented but was in a major rewrite status, and no program documentation was available. Documentation was not available for systems prepared by the Indianapolis Police Department which would optimally be interfaced with the subjects-in-process system.

WORK PLAN

A work plan was developed by the Contractor to gather information and develop tasks for the project. As it was initially conceived that the sites would progress in a related fashion, the work plan developed was to be followed by all sites, with some having different start dates. As the project progressed, each site made modifications to the work plan, reflecting individual site needs or scheduling impacts. The initial work plan developed is shown as Appendix A.

Subsequently, the work plan was amended with specific inputs from the Marion County project team. This was done to reflect the requirements of the site which were progressing at a different rate from other sites. The major change to the work plan was to move the completion dates for Phase I and II forward to 18 October 1974 and 29 November 1974 instead of 25 October and 20 December. The revised work plan is presented as Appendix B.

LEVEL OF READINESS

The Technology Transfer Project was conducted within the Municipal Court Administrator's Office with liaison support provided by the Court Administrator and others by his staff. There was a staff provided to the Transfer Project on a part-time basis which was prepared to begin Technology Transfer at the start of the project. It was anticipated that this staff, along with support from the Contractor, would complete Phases I and II. This staff included the following:

- Project Director
- Project Coordinator
- Two (2) Systems Analysts
- Courts Records Specialist

The Project Coordinator was specifically assigned as liaison for this effort. The Systems Analyst personnel were also assigned to a task of redesigning and implementing a traffic records information system for the court and were available to support the Technology Transfer Project. The Court Records Specialist was committed full-time to an analysis of all municipal court documents used within the court as well as those interfacing with other criminal justice agencies.

The Project Coordinator assigned at the site terminated shortly after initiation of the project and an interim Coordinator was appointed until a replacement was assigned shortly prior to the end of Phase II.

While Marion County has a Criminal Justice Coordinating Council which could serve as a planning group for a project such as this, it was not utilized for that purpose: minimal preplanning had been conducted, no master planning effort had been undertaken and communications with the Council did not convey needs or problems being experienced by the Contractor.

Definition of Goals and Objectives

Goals and objectives of the site were not clearly defined at project initiation. The general goal of this agency was to increase the efficiency of the court processing through the utilization of an on-line information processing system. Implied in this goal was an objective to resolve the computer system dedication problem within Marion County Criminal Justice Agencies. The general objectives were understood by court management as those stated in the actual requirements revised from the RFP.

Marion County operated two computer systems for the various functions under the operational responsibility of the Central Data Processing Department. The first computer primarily served the Indianapolis Police Department, the Sheriff's Office and the Weir-Cook Police Department. The second computer served all other government agencies.

By City/County ordinance, two positions of Deputy or Assistant Directors were established as direct subordinates to the Directors of Data Processing. One of these positions was to be filled by the "ranking police officer assigned to agency operations". Only one Assistant Director (police) position had been filled.

While the ordinance and associated job descriptions did not specify the relationship of the Assistant Directors to the hardware systems themselves, the "police system" processed only police programs. (The CAUSE System was processed on the administrative system and the planning for the SIP system also related only to the administrative system.)

The Contractor recommended that an effort be made from within the criminal justice community to explicitly define the function of the Assistant Director as it related to the hardware, design of police and non-police systems, etc. It was felt the relationship of the Criminal Justice Coordinating Council should also be explicitly defined in these terms so that coordinated systems could be developed by all agencies on an acceptable, prioritized manner.

It was further recommended that the planning and decision-making for all criminal justice systems be conducted by a

body representing the total criminal justice community. An important benefit could be gained by the criminal justice community as a whole if all criminal justice applications were processed in a more integrated manner. While a centralized system was seen as a goal which would enhance communications and transfer of information between police and court system modules, the data processing management environment precluded operation on a consolidated court/police computer.

The omission of clear objectives and support for the Technology Transfer Project by the total criminal justice community at the project start impaired the ability to define the site requirements. While an attempt was made to correct this deficiency through the development of a master plan, this planning venture was also conducted as a function of the Municipal Court Administrator's Office, which seems to be a primary mover in Marion County. Also, the master planning effort was initiated late in Phase I, and its effects were not felt in any increased liaison efforts at the site prior to termination of Phases I and II.

Technical Problem Areas

The technical problems that were evident to the Contractor during the initial start of the project were as follows:

- There was a need for documentation concerning court processing in Marion County.
- There was a need for documentation concerning both hardware and software configuration and requirements.

- Rapidly expanding workloads in both manual and automated systems processing impacted the availability of personnel and resulted in procedural inefficiencies in the court system.
- The information and data flow between agencies was not adequately specified or understood.

Administrative Problem Areas

Administrative problem areas evident at the project start were perceived as follows:

- Interagency coordination of information processing system development was very limited.
- A resolution and definition of management control functions of the data processing center was required.
- There had been coordination of the project's intent with a user committee. In spite of that fact, there was some reluctance to have the project team interface with other agencies.
- Absence of a signed contract at the project start created working pressures on both the site and contractor.

Resource Requirements

- Hardware Requirements - Two IBM 370-145 computer systems were in operation. Both were housed at the same physical location under the operational responsibility of the Central Data Processing Department. The first computer primarily served the Indianapolis Police Department, the Sheriff's Office and the Weir-Cook Police Department. The second computer served all other government agencies. All peripheral hardware components are IBM equipment, unless otherwise noted.

Although it was anticipated that the Technology Transfer would effect changes in the communications equipment requirements, no major impact was anticipated for mainframe core, channel availability or peripheral support equipment. However, a

major issue in the configuration of the two systems was the determination of whether the court system would share the same system as the police system.

--Processing Units. Each computer was equipped with three selector channels and had a 768K storage capacity. The police computer had an IBM System 7 attached. The System 7 was used to monitor water levels for flood control within Marion County. The Sheriff's Office had remote job entry capability using a Data 100 which was connected to the police computer. The police computer had communication linkage with NCIC through the Indiana Data Communications System (IDACS).

--Tape Units. There were nine 3420 tape drives, two of which were dual density. These units were switchable between processing units. Normally, four units were assigned to the police computer and five to the administrative computer.

--Direct Access Storage. Both computer systems utilized 3330 dual density disk drives. The police computer had 12 disk drives and the administrative computer 14. Both processing units could access disks for either system. Each disk had a maximum storage capability of 100 million bytes. It was anticipated that additional on-line disk storage would be made available by Central Data Processing when required.

--Teleprocessing Communications. Both processing units used 3704 control units with 3270 video display terminals and 3284 printer communication terminals. Each computer would support a maximum of 32 terminals under the existing hardware configuration. The police computer had twenty 3270's and five 3284's attached. The administrative computer had nine 3270's and eight 3284's attached. These terminals were located in the municipal court rooms primarily, with one each in the computer center and the Court Administrator's office. Plans were in progress for additional terminals to be placed in outlying municipal court rooms.

It was anticipated that the Technology Transfer would impact data storage capacities and terminal hardware requirements. Additional terminals

would be required at all of the interfacing agencies, including Court Clerk's Office, Prosecuting Attorney's Office and law enforcement agencies.

--Printers. The police computer had one 1403 printer and the administrative computer two 1403 printers. All printers were equipped with the standard UCS printer trains.

--Security. The Central Data Processing Department was located on the ninth floor of a high-rise building which eliminates any possible forced entry to the operations area from outside the building. The public had access to the ninth floor by elevator or stairs. The computer room and tape library were locked at all times. A limited number of keys had been issued to a select group of employees. Teleprocessing security was accomplished by sign-on passwords and key locks on each terminal. All keys for terminals were in the possession of the Court Administrator.

--Availability. The police computer was available on a 24-hour-a-day basis. The administrative computer was available from 8:00 a.m. to midnight, Monday through Friday.

At the end of Phase I contractor personnel felt that the existing hardware capability would not hinder the transfer of any of the suggested systems. Systems selected as candidates for transfer were to be examined individually and totally so as not to exceed or tax the hardware capability of the existing computer systems. The existing administrative computer would handle an additional 15 teleprocessing terminals without additional control units. Installation of a terminal was planned in each of the four outlying court rooms; the maximum number of terminals that would be added for the transferable system's use would be limited to 11.

• Software Requirements - Both computer systems utilized the IBM OS-VSI operating systems. Each system had five available partitions with 4 million bytes of virtual storage available.

--Police Computer. The police computer system used CICS as a data base/data communications management system for teleprocessing. COBOL, Fortran, PL-1 compilers and assemblers were supported.

--Administrative Computer. The administrative computer system utilized FASTER MT. CICS was available and plans were being made to convert to CICS. Programming languages were restricted to ANSI COBOL or Assembler. The COBOL report writer features and internal sort verb were non-desirable in any transferred system. This restriction was a preference and was not mandatory. Any transferred system was to have password entry for teleprocessing, with logging and audit trails for on-line processing.

● Existing Applications Programs

There were two application systems which were running or being implemented that were to be taken into consideration when examining candidate systems for transfer. The jail inventory system to be implemented by the Police Department would provide the initial data elements for a SIP system. Ideally, the information available at the time of booking an offender, offense information and offender characteristics would create the initial data base record that would describe the individual and his progress through the system. It is essential to capture this initial data as soon as possible so that further activity will have a data base record to update with minimal input. Since the entire SIP system was dependent on an adequate data base and the skeletal data record would be created at the time of booking, the jail inventory system should be designed in such a way as to provide all necessary data, quickly and correctly, with adequate provision for correction of errors. It was also essential to provide the means of identifying and segregating aliases and fictitious names from legitimate data as quickly as possible. The ability positively to identify offenders initially would limit unnecessary corrective actions and file maintenance.

The court system in operation during Phase I and II was basically a traffic system with provisions

to record and maintain continued misdemeanor-felony municipal court cases. This system was being redesigned to upgrade the performance in maintaining and reporting the court's traffic cases. Emphasis was being placed upon the issuance, recording and recall of re-arrest warrants. The system design would also provide provisions for maintaining additional information on misdemeanor, felony and civil actions.

The existing system and the redesign would maintain all information by cause (specific illegal act). In the event of multiple causes, all such causes may be linked via a name-index file for either on-line or batch reporting.

The impact of the development of the CAUSE Information System and the proposed transfer of a Subject-in-Process system was to be studied carefully during the selection of candidate software. Redundancy of data base management, collection of input, on-line access and reporting must be avoided for efficient operation. It was imperative that the two systems interface with a common data base. Any SIP system would optimally have a data base design that related judicial information, status information and offenses to the subject, thus increasing its applicability to the total criminal justice community by providing a continuing basis for relating the various independent, but interrelated systems.

The relationship of the Jail Inventory System, the CAUSE Information System and the proposed transfer of a SIP system was recommended by the Contractor as follows:

--The Jail Inventory System should provide the initial data base for the CAUSE Information System and SIP system. It would perform as the initial data collection module for a SIP System.

--The CAUSE Information System would perform as the traffic module for a SIP system. In this concept, the system would serve as a collection point for traffic offenses and associated data.

--The proposed SIP system would consist of multiple modules which would use the data base established by the Jail/Booking and CAUSE

Information System. All modules transferred would be modified to conform to the standards and specifications defined in the CAUSE Information System.

--The transferred SIP system and the CAUSE Information System would be modified to create a common data base. The merger of these two systems would create the final operational system for Marion County.

PHASE I REQUIREMENT ANALYSIS

This subsection addresses the environment after project start and will discuss activity investigated by the Technology Transfer Project through Phase I.

Site Survey Documentation

During the process of the Phase I requirements analysis, site personnel undertook two major documentation tasks of their own. These were supported to a minor extent by the Contractor.

- A report titled "Document Collection and System Study of the Marion County Municipal Court", dated September 16, 1974, was prepared by the Court System Analyst. This report provided a written description of documents utilized and the methods by which they are processed throughout the criminal justice agencies in Marion County.
- A report titled "A Master Plan for Criminal Justice Information Systems for Marion County", dated October 9, 1974, was prepared for the Marion County Criminal Justice Information Steering Committee.

This report was prepared by two senior systems analysts after recommendations by the Contractor. Following completion of the report, it was coordinated through the Steering Committee with all other local criminal justice agencies.

Interagency Liaison Activity

As indicated above, the Technology Transfer Project indirectly led to the production of a master plan document for the criminal justice community. During the actual on-site analysis by the Contractor team, a very limited amount of interagency interfacing was directly provided, however. Inter-agency interfacing by the Contractor was generally restricted to the Court Administrator's office, the Data Processing Department and technical personnel in the Court Clerk's Office, Marion County Sheriff's Department and the data processing personnel of the Indianapolis Police Department. Concern was expressed at the time by the Contractor, since the operation of a subject-in-process system requires efforts of many agencies including law enforcement, probation and the District Attorney.

No planning of any account had previously been undertaken by the collective criminal justice agencies. Therefore, initial requirements specification analysis was conducted at a low profile level and coordinated by the Court Administrator's Office. The Phase I effort did not produce an adequate Requirements Analysis document.

Inventory Process

The Contractor interviewed and discussed the requirements analysis information with the following agencies or departments:

- Central Data Processing
- Marion County Sheriff's Department Data Processing
- Indianapolis Police Department Data Processing
- County Clerk Municipal Court Division
- Marion County Municipal Court Administrator's Office

These meetings were held for the purpose of acquiring information regarding processing of information as it related to the Municipal Court functions. Instruments (forms) utilized, scheduling of events, problems, timeliness and availability and additional needs for information or support were discussed at these meetings.

In addition, the "Document Collection and System Study" was utilized as a source of information regarding court processes. This document was finalized in October and, while it did not appear in final form prior to the development of the Phase I System Specification Document, sections had been made available in draft versions at different times. The document study mirrored a requirements analysis and functional description effort from a records analyst viewpoint.

The result of Phase I was a System Specification document which described a system composed of both traffic and misdemeanor court processing. Files, data elements and report outputs were summarized in the report in general terms. The intent of the document itself was two-fold: 1) to serve as a descriptive list of the system components that would be sought in donor selection and 2) to limit the functions to those areas which could be considered most realistic for the Marion County user environment at the time.

A point of the system specification which still remained unclarified was whether the donor system components would be merged with the CAUSE system. It was generally felt that an integrated system was more advantageous, at least from a design standpoint. The concept of a second system with some interfacing with CAUSE files was also

considered as a feasible alternative. It was anticipated that the decision to integrate the technology transfer or transfer a "stand-alone" system would be made concurrent with the donor selection. This seemed advisable since the determination posed many technical questions which involved the donor system design.

RECOMMENDATIONS FOR FUTURE TECHNOLOGY TRANSFER

At the end of Phase I differences in the effectiveness of the project's achievements were discussed by the Contractor and site personnel. Basically, these differences of opinion centered on a single issue, namely, the depth of understanding the Contractor had achieved regarding the manual and automated systems existing in Marion County.

The considerations which follow are formulated to provide a corrective measure of control for the circumstances which led to the problem stated above.

The following recommendations emerge:

- Where a project requires interagency coordination, such as a Subject-In-Process system, the goals and objectives of the project should be developed by all agencies involved prior to the state of the project.

The commitment to develop a system interfacing multiple agencies such as Sheriff, Police Department(s), Prosecutor, Data Processing, Court Clerk and Administration obviously should be made by all agencies. Interfaces to other systems, or coordination in the planning of a Subject-In-Process and a Prosecutor's Information System, should be defined and agreed upon at an agency management level as a preliminary task.

Prior to the Technology Transfer Project, interagency communications had not effectively

defined coordinated goals and objectives. The need for a master planning endeavor was recognized by many of the agencies, and a master planning effort was generated from the initial work and with the urging of the Contractor. The effect of the planning effort provided little, if any, support for the Technology Transfer requirements analysis due to its time frame.

- An active, decision-based committee representing management personnel from all criminal justice agencies should be involved throughout the project.

This committee should be apprised of the progress of the tasks and informed of all problems and difficulties encountered. Objectives which involve many agencies should be designed and implemented only with the full cognizance of the agencies.

Although some presentations had apparently been made to a steering committee which included the various users of the projected system, this committee was not used as a vehicle for resolving problems such as an inability to acquire documentation on existing police automated systems.

- An effective liaison should be established between the site personnel and the Contractor.

A real disadvantage at the start of the Marion County project was the inability quickly to communicate needs, especially those involving interfacing agencies, into corrective action. The Project Coordinator assigned as liaison was generally unfamiliar with the interfacing agency personnel, being recently hired, and was reluctant to take action without his management's approval. Systems Analysts also providing coordination were in an equally unfamiliar position.

Section V
DONOR SITE SELECTION

METHODOLOGY

At the time that donor site reviews were made, the project team had developed the information requirements document and reviewed the documentation supporting the CAUSE system re-design effort. In addition, the court administration staff had completed some research and had documented the use of information reports, forms and notices throughout the judicial process of the municipal court (titled: *Marion County Municipal Court Document Collection and System Study*). In general, however, the amount of information and understanding of existing functions available at the time was limited. No clear statement of scope or objectives of the donor search had been prepared.

A limited number of court systems had been isolated for review by the Contractors. The specific agencies selected were those known to have operational systems, to be committed to a Subject-In-Process concept and involved in development of versatile automated court systems. Some telephone conversations had been conducted by the Contractor team to determine the nature of the systems, particularly the existence of certain modules (e.g., jury selection, notices, warrants). A telephone survey as such was not conducted.

Documentation of the donor system design and functional use was gathered before, during and after site visits to assist in the selection process.

Specified criteria of selection were not enumerated. This was largely due to the flexibility available to the Project Director, who felt that in the user environment he was representing, great benefits would accrue from any of a number of SIP-related modules. Since the CAUSE system was seen as a major basic module in the system, the primary criteria were construed as:

- Existing IBM system compatibility, both hardware and software
- Compatibility with the CAUSE system
- Versatility of the SIP system modules

In order to insure that these major criteria were assessed, the site trips were attended by the Contractors, the Project Director, at least one of the programmers involved in the CAUSE system, a representative of CDP and the records analyst who had performed the "Document Collection and System Study".

Following site visits, brief trip reports were written describing the system and its feasibility as a transfer donor. After all site visits were concluded, and discussions were held between the Contractor analysts and CAUSE systems analysts, a Phase II report was prepared recommending donor selection, describing potential modules and the proposed system's functioning and estimating the costs.

SELECTION CRITERIA

As described above, the criteria for donor selection were not enumerated. It was clear that the specific modules discussed in the Information Requirements document (e.g., case management, calendar management, notices,

fine/bail control, probation tracking, etc.) were modules which would be sought. A versatile, complete Subject-In-Process System was the overall objective. Areas of impact which defined more precisely the acceptability of possible donors were:

- Hardware: An IBM S370 with random access disk files and on-line video terminals (preferably the 3270 model).
- Software: OS, VSAM and FASTER were sought with varying degrees of impact. During the selection phase the teleprocessing monitor, FASTER, was seen as an important criterion, due to apparent confusion between the Municipal Court and Central Data Processing personnel.
- Functional Similarity: The required system would provide the basis for the Municipal Court functions, including traffic, misdemeanor and criminal preliminary processing. It would provide interfacing functions for receiving and providing information to the police, sheriff, district attorney, probation and parole officials.
- CAUSE System: The functional relationship with the CAUSE system considered an important, though largely undefined, issue. Since the specifications of design were not completed, the impact of any particular transfer was to be assessed and commented on by the CAUSE systems analysts themselves. It was still unclear during the donor selection phase what eventual relationship was desired. It was understood that the CAUSE redesign effort would continue until implementation in January, 1975. The Contractor felt that this effort should be disbanded; however, the recommendation was rejected because of a need to provide immediate relief to court processing. The eventual Transfer Technology Project might absorb the CAUSE system, or operate in parallel with it as a criminal-oriented system, or provide modules augmenting the system with CAUSE as a foundation.
- Documentation: To a considerable extent, the understanding of all the criteria given above was dependent upon the documentation provided by the donor. Beyond that, however, it was felt

that any system which did not provide a sufficient level of documentation would not be considered a selectable donor. The documentation sought was to be complete, addressing both functional and program detail of all modules, and accurate in its maintenance.

The salient intent of the Project Director was to provide as complete a Subject-In-Process System as possible. While implementation of some elements conceivably might require postponing until training and other preparation could be effected, a versatile system was to be pursued. The time frame required for complete implementation of the system was not considered as critical as the completeness of the package or its ability to service informational needs and processes of all the criminal justice community.

This emphasis was dominant during the selection phase. Given that a suitable system could be found, many other problems or difficulties could be worked out in order to reach the desired goal.

SELECTION

The final selection of a donor was made following site trips to all systems under consideration. As indicated above, the site visits were conducted by teams composed of Marion County and Contractor personnel. The purpose of the site visit was to (1) evaluate the sites' functions and capabilities to determine the extent to which they could provide meaningful, automated information in the Marion County environment and (2) assess the impact that transfer of each specific system would have in terms of hardware, software and reprogramming efforts.

During the selection phase, heavy reliance was placed on the descriptive documentation received from the prospective donor. While it was felt important that various levels of documentation were available, the analysis at this time was aided by functional descriptions of the system. Explanations of what and how the system performed were more relevant than details of programming for the selection process.

Seven systems were considered in the report describing the selection decision. They were:

- Philadelphia, Pa. Court System
- Orange County, Ca., MCAPS
- Alameda County, Ca., CORPUS
- San Francisco County, Ca., CABLE
- Santa Clara County, Ca., CJIC
- Dade County, Fla., CJIS
- Jacksonville, Fla, IFRMS

Philadelphia Court System

The initial survey of the Philadelphia system provided considerable information to the Marion County staff on the capabilities of a court information and tracking system. Although somewhat unsuitable as a donor candidate because of the lack of documentation and assembler language programming, it was helpful as an operational, conceptual design of what an extensively developed system could provide. Marion County court personnel could picture from the Philadelphia system the types of information and reports that could be produced and some of the concomitant impact on their own environment.

Orange County MCAPS

In a similar manner, the Orange County, California, Municipal Courts Automated Procedures System (MCAPS) provided several insights into different procedures and design techniques. Several of the functions being performed by the system were considered desirable and enlightening, and close attention was paid to the system in order to incorporate elements into the CAUSE system redesign. There were several basic differences between the MCAPS system and the Marion County Municipal Court objectives which made transfer of any elements of the system inadvisable:

- MCAPS was largely designed and operating as a traffic violation system. Orange County was in the process of designing a Subject-In-Process System (MCAPS-II) to include criminal processing requirements.
- MCAPS was oriented around a case concept as opposed to the cause or charge philosophy held by Marion County. The integration of the file management system utilized by CAUSE and MCAPS would require considerable data base modification.
- Procedures for bail setting and bail forfeiture which were utilized extensively in Orange County were not used in Marion County.
- The MCAPS system did not tie into a jail/booking system, nor did it provide scheduling/calendar capabilities already provided by the CAUSE system.

Alameda County CORPUS

The Alameda County CORPUS system was transferred from Santa Clara County with some modifications to increase system throughput. Basically, the modifications to CJIC were to the file and teleprocessing access methods. Training support documentation from CORPUS later proved useful

to Marion County; however, the general lack of system documentation was considered critical, and it was felt that a more costly transfer would result than if the Santa Clara CJIC system were transferred and the desirable modifications of CORPUS redone from the CJIC base.

San Francisco County CABLE

The CABLE system was visited briefly by the donor selection team while it was in the area. It was understood at the time of the visit that CABLE modules relating to Subject-In-Process were in a design stage and that little documentation supporting the eventual system would be available. The meeting which occurred discussed the basic design problems and overall planning process of CABLE. Since CABLE itself was essentially a conceptual design transfer of the Cincinnati CLEAR system, this first-hand experience of transfer in a court environment was of considerable interest.

Santa Clara County CJIC

Considerable interest was given to the Santa Clara CJIC system from the start by the consultant staff. CJIC was seen as a rather comprehensive system, providing nearly all of the modules required by Marion County. It had developed an extensive documentation package in support of the initial system and had undergone the experience of supporting a transfer of the system to Alameda County.

Because of some reluctance on the part of CJIC management to deal with a subcontractor on the project, some early difficulty was experienced in gaining access to CJIC personnel support system documentation and listings. The analysis of CJIC BY THE visit team was that the

system was of high technical quality, was modular in construction and would be easily modified to meet local requirements.

Dade County CJIS

Analysis of the Dade County CJIS indicated a number of automated functions which could meet Marion County requirements. The system provided Subject-In-Process information for law enforcement (warrants, booking, jail inventory), state's attorney and courts (calendar-ing, disposition). Management and statistical information modules were also operational. Primarily, the system operated in batch mode, with some on-line update and retrieval functions.

Complete documentation was available supporting the system design, functions and operation. The system itself was developed around a rather comprehensive, highly indexed data base, consisting of 14 major data sets and several secondary and temporary data sets. This complexity, especially in the interaction of the data sets with a specific program, was seen as a decided disadvantage to the transferability. The difficulty of the complexity and resultant costs of any reprogramming were primary concerns.

An additional disadvantage was that collection of data for the various data sets was accomplished through numerous program modules. The functions of the Marion County environment did not match those of Dade County and it was felt that many time-consuming changes would be required in this area.

Jacksonville, Florida IFRMS

The Integrated File Record Management System developed in Jacksonville, Florida, was composed of five major subsystems:

- Police Operations System
- Command and Control System
- Judicial Operations System
- Courts Management System
- Management Information System

The system itself was developed to operate in a Burroughs environment, utilizing Burroughs' Data Base Management System. As such, it presented a significant transfer problem to the Marion County Municipal Court. The Court system would utilize the Marion County Central Data Processing Center, which had no immediate plans to install a comparable IBM data base system.

It was felt that the complexity of such a transfer, with the limited amount of documentation available, presented significant disadvantages in comparison to other donor possibilities.

In summary, the Santa Clara County CJIC system was recommended for transfer. It was selected primarily because of its comprehensiveness in meeting the stated information needs of Marion County and the expected ease of modification to fit the local unique environment. Functionally, CJIC appeared to operate in a similar environment. Technically, the hardware and software of the CJIC system were largely compatible with the Marion County environment existing in January, 1975. The CJIC video terminals in use were antiquated, and the update from a 2260 to a

3270 terminal environment would require time-consuming program changes. They were not considered technically prohibitive to transfer, however.

LEVEL OF TRANSFER PLANNED

At the time of donor selection, the contractor staff recommended that the transferred system operate in parallel with CAUSE. As such, it was conceived that CJIC would be transferred and implemented as a stand-alone system with some communication with CAUSE to consolidate calendar management and other mutually impacting functions. Each system would maintain its own data base, with appropriate accessing by either system as required.

It was anticipated at the time that this transfer would be conducted with a small degree of rewrite. Thus, code would be transferred with minimal rewrite, and such rewrite would be dictated by two events:

- Differences in functions between Marion County and Santa Clara County
- Differences related to the hardware or software of the system.

The transferred system would provide the following functions:

- Arrest/booking
- Jail inventory
- Court calendars
- Probation accounting
- Disposition notices
- Court appearance of prisoners
- Release lists for custody
- Public defender referrals

- Bench warrants
- Prosecutor case control

The data base design of the CJIC system including all file formats would be transferred intact and operate under the same access method.

Only minimal data redesign was considered necessary. These changes would consist of field length changes and the addition of any essential data elements missing from the transferred system.

Other programming impact anticipated was as follows:

- A conversion program would be required to convert CAUSE master records for persons charged with misdemeanors, felonies and drunk driving. The resulting files would be used for the initial data base and for testing purposes.
- An Alpha Name Search module would be required to search the alpha.index file and display related CAUSE and Person file records.
- A Report Monitor program was recommended to interface on-line report selection parameters to batch programs for subsequent printed outputs.
- Backups, dumps, restores, sorts, merges and libraries must be written or established from utilities to augment the system.
- The following modifications would be necessary for transferred modules where applicable to the function of the module:
 - Modifications to constant values and table entry values to reflect the conditions of Marion County.
 - Modifications to data base descriptions and work areas to reflect any change to data base element definition.

--Modifications to edit criteria to reflect the conditions of Marion County.

--Modifications to the T/P monitor linkage descriptions, entry and return points to comply with the requirements of the existing T/P monitor.

--Modifications to constant display messages to comply with symbolic and abbreviation standards in use at Marion County.

--Modifications to comments, notes and remarks to reflect changes made in all programs.

DOCUMENTATION OF DONOR SYSTEM

CJIC documentation was extensive in that it included in its discussion all operating files, inputs, outputs and reports. It described in detail the file structure and programs, including interfacing with other programs and files.

In addition, the documentation was packaged as a computer-generated and maintainable product which made it seem more easily maintained, leading to the conclusion that it would be more current.

Although the donor made it clear that the documentation had not been updated for some time, the exact extent of its departure from an up-to-date status was not realized until much later.

CJIC documentation was not complete. It provided some useful functional description but mainly concentrated on the data base detail and program/file interactions. The absence of a training package was fortunately filled by the CORPUS training manual.

The areas of incompleteness most critical later in the project were in functional descriptions of the environment (e.g., how do programs reflect what people are doing in the court or attorney procedures?) and the inadequacy of description of program interaction.

Section VI

IMPLEMENTATION SCHEDULE AND PROCESS

PRELIMINARY PLANNING

Phase II of the project was concluded with the submission of the System Transfer Recommendations Report on January 20, 1975. At that time the Marion Court staff was in a rather difficult position, being somewhat dissatisfied with the costliness of the progress and concerned about the level of effort required to effect a desirable transfer. Negotiations ensued which resulted in a decision for the site personnel to continue with the implementation using their own staff. This decision was reached following a meeting with the Contractor in mid-February.

At the same time, the Marion County staff was actively engaged in completing required steps preliminary to beginning actual implementation. These steps were briefly summarized in Section 7 of the System Transfer Recommendations Report and are included here as Appendix C. The purpose of the eight steps was to clearly establish what would be transferred (and how it would be interfaced with the CAUSE redesign), who would perform the tasks and under what schedule. Preliminary estimates of person days and costs for various transfer options had been generated by the Contractor.

Unfortunately, the development of a detailed implementation plan was affected by several other unanticipated events in the first four months of the year.

- The user atmosphere at Marion County differed from that found in Santa Clara. After considerable time and effort was expended in

discussion of the most effective mutually beneficial system relationship between the municipal court and Police Department was determined that the CJIC system modules were unacceptable to the law enforcement community. The efforts and design-related tasks associated with the transfer project, including donor selection, were severely impacted by this decision. A re-examination and design of the level of transfer and implementation effort was an immediate result.

- Upon discussion of the final transfer design with the Prosecutor's Office, the Prosecutor elected to transfer PROMIS, an alternative system, instead of using CJIC's capabilities. The comprehensive design of CJIC including misdemeanors and felony processing through municipal and criminal courts was seriously affected by this decision.
- At approximately the same time, the Central Data Processing Department determined that FASTER would no longer be utilized as a tele-processing monitor and notified users that the IBM/CICS package would be substituted. While the CAUSE system redesign was written to use CICS, it had been thought that the transfer of CJIC using FASTER would be permitted.
- Unfortunately, these crises coincided with another series of events somewhat more serious in nature. The redesigned CAUSE system, now referred to as Transmission and Retrieval of Automated Court Information (TRAC), was in the throes of implementation. Several serious malfunctions and oversights of the redesigned system created operating emergencies and repair efforts which affected the performance of the Technology Transfer Project as well. In addition, it raised serious concern in the users regarding the reliability and feasibility of automated systems.

One result of these difficulties was a delayed design and implementation planning effort. A more serious result was that the combination of events raised serious questions about the initial transfer concept. The Contractor's

recommendation that CJIC be transferred largely intact to operate in parallel with TRAC was hardly viable at this point. Major portions of CJIC's code would not be used, and the data base concept was inappropriate without support by the law enforcement and prosecutor.

The implementation planning effort became an effort to determine: (1) what elements of CJIC could be utilized with the remaining support, (2) if those elements could be isolated from the CJIC system in an operable fashion, (3) how they might interface with TRAC and (4) what amount of recoding would be involved. This redesign effort was culminated in a revised software work plan which described the modules to be implemented at Marion County and the project schedule.

PROJECT WORK PLAN

A Phase III work plan was generated as early as February 24, 1975, showing a milestone chart for major tasks (Figure 6-1). This effort presented the major elements of the implementation and the work effort to complete them. The project was still undergoing changes in the areas described above. As a result, the work efforts were altered considerably. The general tasks, however, did not change.

The major effort involved the detailed development of the scope of the transfer project and the design which resulted. During the period of May to June, 1975, the site project personnel completely defined exactly what would be the goal of the transfer and what information system modules would be implemented. The impact of this effort was considerable since the concept of a Subject-In-Process System was recognized as unfeasible and the project was defined as a municipal-court-oriented project with appropriately specified modules.

Figure 6-1

TECHNOLOGY TRANSFER - PHASE III WORKPLAN CHART

DESCRIPTION	TASK	MAN/DAYS PER TASK	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC				
ESTABLISH DOCUMENTATION STANDARDS AND PROCEDURES	1	10	10													
REVIEW AND FINALIZE DATA AND PROGRAM REQUIREMENTS	2	100	60	40												
DETERMINE AND DOCUMENT RELATIONSHIP BETWEEN THE INDIANAPOLIS P.D. BOOKING SYSTEM AND THE COURT INFORMATION SYSTEM	3	80		30	50											
SELECT AND SLATE ON A PROGRAM-BY-PROGRAM BASIS APPLICATION MODULES TO BE CONVERTED AND IMPLEMENTED	4	70		20	50											
PLAN PROCEDURAL CHANGES IN THE MANUAL SYSTEM	5	120			20	20	20	20	20							
PROGRAM-BY-PROGRAM CONVERSION	6	472			45	47	50	50	50	45	50	50	35			
DEVELOP TEST DATA FILE	7	8			5	3										
CONVERT MANUAL AND MACHINE READABLE DATA FILES INTO NEW FORMAT	8	26						5	2	2	2	5	10			
SYSTEMS TESTING	9	120							5	5	10	40	40	20		
PACKAGING OF PROJECT PRODUCTS	10	110							5	5	10	10	10	20	20	30
USER TRAINING	11	104						15	23	8	8	10	10	10	20	
SYSTEM IMPLEMENTATION	12	110											10	10	50	40
TOTAL MAN/DAYS (7 people)		1,330	70	70	70	70	70	70	70	70	70	70	70	70	70	70

● = Milestones

6-4

Because the effort involved in Task 2, Review and Finalize Data and Program Requirements, continued for some time, the schedule was slipped somewhat. By June 17, 1975, Tasks 1 through 4 had been completed and a detailed software work plan was generated. Included in the revised work plan were the following:

- An explanation of the approach to the project including a definition of scope, intended level of transfer and a review of determining influences.
- A list of staff assigned to the project.
- A detailed description of the tasks to be formed.
- A module by module work plan with accompanying narrative which revealed in detail the completion of Tasks 2 and 4, and the methodology proposed for fulfillment of Tasks 6, 9 and 12.
- Assembled abstracts from the CJIC system's documentation illustrating modules to be transferred on a design level and CJIC master file formats to be used as auxiliary files. These abstracts directly correspond to the module implementation transfer work plan.

DESCRIPTION OF PROPOSED TRANSFER

As discussed above, the original objective of a multi-agency tracking system was dropped. It was decided that the Technology Transfer Project would largely remain within the confines of the Municipal Court System. The stated reasons for this, presented in the June 20, 1975, work plan documentation, were as follows:

- Many of the activities and procedures within and between the various Criminal Justice agencies remained undefined.
- Given this lack of definition, information systems' requirements were difficult to establish.

- Other Criminal Justice agencies (i.e., Indianapolis Police Department) had already made a great deal of progress in their own behalf, causing a certain amount of rigidity in assuming a larger perspective. And, at the same time, other agencies either desired automated information service immediately and, therefore, did not wish to wait for comprehensive development or they were unable, due to fiscal and organizational constraints, to participate, no matter what the time frame.

The elements of CJIC that would continue to be relevant to Marion County needs were those modules monitoring misdemeanor and felony processing in the municipal court. They would be recoded to operate in the Marion County CDP hardware and software environment and interfaced with the developing TRAC system which had primarily been developed for the traffic caseload.

Nine modules were scheduled for implementation initially. Each of the nine modules met an established information requirement of the municipal court environment and a specific module or parts thereof from the CJIC system was utilized in the design. In addition to the module functional descriptions provided below, the site identified the CJIC programs and descriptions to be utilized in the new design. Thus, a fairly well-planned approach to the transfer had been developed at this point despite the several setbacks.

The modules to be affected in the Technology Transfer were as follows:

Batch Edit/Maintenance Modifications

Purpose: *Modify the municipal court's current data base and batch/edit maintenance programs to include additional data*

elements necessary to support program modules in the transfer period.

Required: Establish input procedures for new data elements including input and data flow processes utilizing CJIC input coding forms as initial design structure.

Specify edits of and relationships between data elements.

Modify existing TRAC edit/maintenance programs to include the additional data requirements, edits and relationships.

On-line Edit/Maintenance Modifications

Purpose: *Utilize the data base modifications and edit relationships established in batch edit/maintenance, modify and include these in on-line applications.*

Required: Modify, establish and utilize on-line CJIC input procedures.

Modify and add CJIC input screens for new data elements.

Modify and add on-line program segments for edits and relationships between additional data elements.

Due to the specialized needs of the Municipal Court of Marion County, certain report products were necessary that were not directly available to CJIC per se. However, due to the additional data elements made available by the enhancement of TRAC with the transfer project, these reports were made possible.

Daily Batch List of Dispositions

Purpose: *Notify all disposing agencies of dispositions made each Court day.*

Required: Modify, establish and utilize on-line CJIC input procedures.

Modify and add CJIC input screens for new data elements.

Modify and add on-line program segments for edits and relationships between additional data elements.

Due to the specialized needs of the Municipal Court of Marion County, certain report products were necessary that were not directly available to CJIC per se. However, due to the additional data elements made available by the enhancement of TRAC with the transfer project, these reports were made possible.

Daily Batch List of Dispositions

Purpose: *Notify all disposing agencies of dispositions made each Court day.*

Required: Determine selection criteria based upon needs of various agencies and related CJIC criteria.

Select disposition records and sort by Court date and name.

On-line Slating

Purpose: *Enable Court personnel to display the Court's slate for any future day, as an aid in rescheduling entire sessions if necessary.*

Required: Generate a daily on-line reporting file maintained by date, Court session and defendant.

Generate the CICS display mask.

Allow for CICS terminal printing of the display.

On-line Case Notices

- Purpose: *Insure timely production of subpoena and other notice-type printed material for mailing or service to individuals connected with a particular case.*
- Required: Allow adding names on-line, one at a time.
Write on-line CICS notice printing program.
Determine batch generation criteria.
Write batch program for use daily.

Probationers Arrested/Slated

- Purpose: *Notify Probation and community agencies daily of the incidence of their respective clients re-entering the Criminal Justice System.*
- Required: Add known agencies, both active and inactive, with indicators to TRAC master.

Enter known agencies' information (indicators and ID numbers) into TRAC master.

Select daily arrestees and slated persons who are known to any of the participating agencies, sort them into required order and list them.

Probation/Bench Warrant List

- Purpose: *Notify Courts and agencies of all Court dispositions daily and periodically (people placed on probation, stay-fines, probations revoked etc.)*
- Required: Determine detailed program specifications, department by department.

Select required disposition records from the file daily and monthly.

List all disposition records in order.

Adult Probation Referral List

Purpose: *Prepare a concise, appropriate, collated list of new probationers referred to the Municipal Probation Department by the Courts on a daily basis.*

Public Defender Referral List

Purpose: *Produce a list of all persons referred to a public defender by a particular Court over a period of time.*

TRANSFER SCHEDULE

The Marion County staff developed a detailed work plan schedule of the module development through implementation. This schedule, Figure 6-2, described each of the nine modules in terms of the programs to be developed and provided estimated time spans for programming, testing and implementation.

IMPLEMENTATION PROCESS

As indicated, technology transfer implementation in Marion County suffered setbacks from the start so that the development and finalization of the work plan was accomplished in a rather difficult atmosphere. The work plan described in the June 20, 1975, letter was at that point already behind schedule for some tasks. The major reasons for the delay were stated briefly as follows:

- The intended scope of the Transfer Project remained unresolved until that time (end of May, 1975) due to delay in receiving refined commitments from various agencies in the Criminal Justice Community here in Marion County.
- Review and approval by the various Criminal Justice agencies of possible CJIC modules for transfer.

Figure 6-2

CRIMINAL JUSTICE INFORMATION SYSTEM
 WORK PLAN - May 1975-December 1975

Module	Description	Week Starting																																			
		05/19	05/26	06/02	06/09	06/15	06/23	06/30	07/07	07/14	07/21	07/28	08/04	08/11	08/18	08/25	09/01	09/08	09/15	09/22	09/29	10/06	10/13	10/20	10/27	11/03	11/10	11/17	11/24	12/01	12/08	12/15					
1	BATCH EDIT/MAINTENANCE MODULES																																				
	--Modify Current File Structure																																				
	--Update New File Structure																																				
2	ON-LINE EDIT/MAINTENANCE MODULES																																				
3	DAILY BATCH LIST OF DISPOSITION																																				
	--Select Disposition Records																																				
	--Sort Utility																																				
4	ON-LINE SLATING																																				
	--Generate On-Line Reporting File																																				
	--CICS Display Mask																																				
5	ON-LINE CASE NOTICES																																				
	ATTORNEY/DEFENDANT																																				
6	LIST PROBATIONERS ARRESTED/SLATED																																				
	--Select Daily Arrestees from Police																																				
	--Sort Utility																																				
7	PROBATION/BENCH WARRANT LIST																																				
	--Select Disposition Records																																				
	--Sort Utility																																				
8	ADULT PROBATION REFERRAL LIST																																				
	--Select Probation Referrals																																				
	--Sort Utility																																				
9	PUBLIC DEFENDER REFERRAL LIST																																				
	--Select Public Defender Referrals																																				
	--Sort Utility																																				

Note: For each category below there are 3 lines. The top line signifies programming effort, the middle line testing, and the bottom line implementation.

- The approval of Central Data Processing to operate CJIC teleprocessing programs with minimal modification was undetermined due to their being coded in a FASTER TP monitor environment.

Because the work plan and final selection of modules was delayed, actual program-by-program conversion (Task 6) was also delayed briefly. It was anticipated that the two-week delay at the start of program conversion would be made up later, and this was the case.

Further, it was decided that the development of a test data file would purposely be rescheduled to August and September. During July, 1975, it became quite apparent to Central Data Processing that three separate systems were being developed largely without communication regarding designs. They were the Court system described herein, the Police Department system which at that time was implementing a booking system and the Prosecutor's PROMIS system which was also being implemented at that time. Since the separate developments promised considerable impact to CDP's resources, it was apparent that some guidance and control should be affected, especially in areas relating to file design and teleprocessing systems.

During the months of program development, assistance was provided by CDP to the Technology Transfer Project. One effect of the assistance was to broaden considerably the versatility of the design and its responsiveness or throughput capabilities. Specifically, this support culminated in the development of a versatile file design.

The TRAC system functions with many of the advantages of a data base system, including alternate indexing, record compression and facility in adding elements or redefining records.

In October, it was discovered that the public defender referral program planned for transfer was not feasible. Information required to indicate public defender participation would not be available from the arrest-booking process of the Indianapolis Police Department System. A case load management statistical report was substituted for implementation instead. Problems associated with the resolution of the most effective identifier or computerized control number delayed the scheduled completion for the batch and on-line edit programs.

In October, a revised schedule (Figure 6-3) was generated to accommodate changes in scheduling associated with the computer control number. This schedule also reflected difficulties associated with the general design transfer of CJIC modules. This difficulty was summarized in a September status report, as follows:

Since CJIC is a county-wide Criminal Justice System with a labyrinth of interdependent subsystems or modules, it is difficult to abstract one subsystem on a stand-alone basis for serving needs of just the Municipal Court System here in Marion County.

The effect of this circumstance was to seriously limit the "transfer" function and increase the originality of design. This being the case, the implementation proceeded with few technical problems, but at a slower pace than originally estimated.

DOCUMENTATION

As the CJIC system programming and design proved to be difficult to dissect into the distinct modules required in Marion County, the documentation also proved to be largely unsuitable. Although generally developed to a

very detailed and understandable level, modification of CJIC's documentation to meet Marion County's design generally proved unwieldy. However, the documentation package provided by CJIC, named Machine Assisted Documentation (MAD) was utilized by Marion County as the means for documenting the transfer system.

Section VII
MODIFICATION ANALYSIS

This section of the report was included in order to describe the actual changes or modifications involved in a transfer project. Originally, it was felt that changes would be necessitated by three basic areas, functional or organizational differences, hardware differences and software differences. At another level, it was felt that change might be necessitated as well by other considerations which were concurrent but not directly associated with the transfer. In this area, a decision to utilize structured programming techniques or data base management system technology might require modification of the donor system.

In the Marion County project, extensive modification of the donor system was the case. The actual amount of modification incurred elicits a critical question regarding the economics of extensive modification: When has the amount of modification become so great that the "transfer" of a system is uneconomical? Another philosophical question would be: When does a project cease being a "transfer"?

ORGANIZATIONAL/FUNCTIONAL IMPACT

Of particular importance in the Marion County experience were the changes necessitated by functional and organizational differences with the donor. The CJIC system presupposes a merging of functions as opposed to a separation of police, prosecutor, court, probation and other agency data processing. Where Marion County had already developed

systems as in the case of the Police Department or where a design concept had been developed as with the prosecutor, there was a reluctance to abandon them for the promise of an integrated system serving all. As a result, the CJIC system concept had to be modified to supplant the data collection process, abandoning many outputs and internal linkages as well. The inability to modify and utilize the booking process resulted in the specific rejection of the public defender referral programs as a transferable subsystem.

In part, these were as much coordination problems as they were concrete functional differences. Nevertheless, their effect on an operational transfer donor system remained the same and could be anticipated in many cases.

HARDWARE IMPACT

Major modification to terminal input/output programs would have been required to accommodate the terminal hardware change. Where CJIC utilized an IBM 2260 device, Marion County utilized a much newer and more versatile IBM 3270 compatible unit. The additional screen size and other features of the terminal become advantageous only through program changes.

Since a decision was made to rewrite the code for design and software related reasons, this modification requirement was incorporated. Consequently, little mention was made of the specific impact. However, this difference alone would have required rewrite of all portions of input/output programs associated with data management functions.

SOFTWARE IMPACT

Two major software differences were influential in the question of CJIC modification: file access method and teleprocessor monitor. Their cumulative effect was critical and could have required considerable modification to programs had the decision to redesign not been made.

CJIC utilized a variable record length ISAM file. This file structure was not unknown to Marion County as TRAC had at one time been designed in the same fashion. However, the planned transfer system operating under VS-1 supervisor and CICS with any substantial amount of add-on records would have resulted in extensive overhead using variable length ISAM files. For this reason, the file access method utilized was changed to VSAM during the redesign effort. The actual impact of a change from ISAM to VSAM is slight and presented no technical difficulty. However, the requirement to increase efficiency and throughput by dropping the variable length file design required some programming changes.

The change from the FASTER teleprocessing environment to the IBM CICS package is a dramatic change and is complicated by any modification or non-standardization of FASTER. The CICS package will emulate FASTER-MT and provide device independence with newer IBM terminals. However, FASTER-MT is no longer supported by IBM and its use forebodes increasing difficulty to any dynamic data processing environment. With the multiplicity of differences already requiring degrees of recode, the decision was made to rewrite the programs to CICS requirements. While this alone would not have required complete rewrite of programs, its actual impact was unknown since it was inseparable from the others.

Section VIII

SUMMARY OF TRANSFER EFFECTIVENESS

The system emerging at the Marion County Municipal Court promises to meet a large proportion of the immediate operating needs. The major direction of the system development to date has been in the area of public informational needs and automation of some clerical document-producing functions. The system there has provided support to time-consuming and tedious labor tasks.

The system has not met all requirements stated at the onset and, in fact, the operation of the primary judicial functions dealing with case processing has not been effectively updated by the transfer. The need for coordination and comprehensive planning with other agencies has been discovered as a result of this and other agencies' concurrent projects, setting the stage for an effective treatment of operational system needs as a near next step.

Appendix D contains the current TRAC system description which incorporates both CAUSE redesign and transfer project results.

CRITIQUE OF PROJECT

In reviewing the Marion County Project successes and failures, it is important to do so in terms of the original project objectives. Those objectives as stated in the Information System Technology Transfer Summary Report were:

- To transfer one or more criminal justice information system application programs to each of six participating recipient agencies, and

- To provide thorough documentation of the problems encountered, solutions to those problems and recommendations that may benefit other agencies involved in the transfer process.

Addressing the objectives separately then, we consider the success of Marion County in transferring one or more criminal justice application programs. Although "transfer" as originally conceived by the Marion County staff implied use of actual computer program coding, the definition was expanded to three levels as reported in the Summary Report:

- Concept--the concept level of technology transfer involves using ideas from particular application programs, the identification of files required to support these applications, the general contents of output reports.
- Design--transfer at the design level refers to the adoption of another agency's programming specifications, procedures for collecting data, data element definitions, etc.
- Operational--transfer at the operational, or "code", level implies use in the recipient agency of actual computer programs, forms, output report formats, access instructions etc.

Using these three levels as different classes of transfer with associated, varying levels of effort-saving in the process, Marion County generally transferred at a concept level with some instances of design level. That is, the actual results of using CJIC documentation and code listings are somewhat revealed in general file structure, output screens and reports, and form and context of documentation. The level of detail in some specific program cases was more involved, adopting some

data element definition, file contents and other design specification considerations.

As indicated in the implementation process, actual code transfer was precluded by the impact of several donor-recipient differences.

The second objective deals with providing beneficial experiences to other agencies through documentation of problems. This has effectively been done in the Summary Report, where implementation problems have been described and recommendations made for their avoidance or control. The Marion County site provided excellent material for that report through documentation of their unique experiences in this project.

CONCLUSIONS

The major conclusions which emerge from the Marion County project deal with the need for careful, methodological planning and preparatory procedures.

The development of a comprehensive system designed to embrace multiple agencies requires their early commitment and planning.

The decisiveness and clarity of such commitment, expressed early in the development of explicit goals and objectives, is a direct indicator of the complexity of problems ahead.

Marion County has experienced the development of separate systems for law enforcement, prosecution and Municipal Court judicial processing. To varying extents, these systems meet the specific needs of those individual agencies. The need for more depth and detail exists in each of the systems and can be provided for by that agency. However,

the need for more coordinated and comprehensive information system development efforts also exists and will require an impact upon the resources and cooperation of many agencies.

At the start, the Marion County project was somewhat premature in its attempt to develop a comprehensive, multi-agency Subject-In-Process System. Certainly, the planning and project description failed to explain the task and elicit the required extensive support of all the agencies involved. The experiences of the agencies in their separate developments has neither diminished the need nor the capabilities of effecting such an eventual system development.

Information needs analysis and functional analysis cannot be bypassed in the consideration of a transfer project.

It is easily concluded that major changes to the transfer concept resulted in the Marion County project because of ineffective functional description, needs analysis and conceptual design. That the objectives of the project were fulfilled despite these maladies is a slight comfort. The expenditure of energy and cost which resulted was severely felt.

The ability to analyze donor site systems was limited considerably by the inability to compare functional systems. In court processing especially, differences in jurisdiction and organizational matters may have a severe impact on the applicability of a transferred module.

The analysis of donor software was further impaired by the inability to compare explicitly stated detailed information requirements with donor system provisions. Technical

considerations such as terminal differences impacted transfer much less than changes necessitated by differences in information needs and uses.

A technology transfer project faces the same kinds of people and organization problems as any other project.

Technical problems cannot be overlooked. However, the real problems faced in many projects of the type described here will be related to people, organization, functions and responsibilities.

The transference of an automated court system requires a heavy emphasis on study and comparison of functions.

Because court jurisdictions and procedures vary greatly, considerable attention must be paid to the methods and sequencing of information collection and dissemination. Failure to do so may result in the transfer of a system which duplicates all the data elements and outputs desired, yet may not function because the processes of data movement are completely different in the donor and recipient environments.

A detailed functional analysis should be performed by the recipient prior to evaluating possible donor sites. The donor evaluation itself must rely heavily on the functional comparison of the two environments.

Donor selection should be carefully planned and executed as a controlled research project.

Specific criteria should be enumerated prior to any site visits or study. Site team members should be carefully selected to provide all needed expertise in system needs,

and their tasks on the site visits should be assigned and reviewed before the trips. Following each trip, a structured discussion on the advantages, disadvantages and impacts should be pursued among the entire interdisciplinary group.

APPENDIX A

ORIGINAL WORK PLAN

APPENDIX A

ORIGINAL WORK PLAN

Region V

Computer Technology Transfer Program

NOTE: The dates below apply to MINNEAPOLIS, MICHIGAN, and LAKE COUNTY. Change Phase I Start Date to 26 August 1974 and Duration to 9 weeks, also Activity I.1 Start Date to 26 August 1974 and Duration to 5 weeks, for WISCONSIN, NORIS, and MARION COUNTY.

PROJECT SCHEDULE

PROJECT PREPARATION

PSi has begun the process of preparing the basic material required for the Region V Computer Technology Transfer Program. This effort includes the refinement of the project work plan/schedule for your agency, the associated budget data, and the preparation of forms required for collecting data from the agencies/units involved in your system and the forms required for the collection of data from potential donor agencies. The refined work plan/schedule is reflected herein.

Start Date: 15 July 1974
Completion Date: 19 August 1974
Duration: 5 weeks, 1 day

PHASE I: SYSTEM REQUIREMENTS ANALYSIS

Upon completion of the project work plan refinement process, the PSi/CSC project team will work with the selected agency personnel to determine system requirements and develop system specifications.

Start Date: 19 August 1974
Completion Date: 25 October 1974
Duration: 10 weeks

Activity I.1: System Requirements Study

The emphasis of this activity will be to determine the actual system or application module needs of the various recipient sites.

Start Date: 19 August 1974
Completion Date: 27 September 1974
Duration: 6 weeks

Associated Tasks:

- Task I.1-1: Project Team Orientation
- Task I.1-2: Review Present Systems or Applications
- Task I.1-3: Review of Present Hardware Configuration
- Task I.1-4: Analysis of Informational needs

Activity I.2: System Specification

During Activity I.2 the foundation for Phase II, System Survey and Selection, will be completed. This activity provides for

the identification of the requirements that must be satisfied by the system or module to be transferred:

Start Date: 23 September 1974
Completion Date: 25 October 1974
Duration: 5 weeks

Associated Tasks:

- Task I.2-1: Document Applications Required
- Task I.2-2: Site Agency Specification Review

PHASE II: EXISTING SYSTEM SURVEY AND SELECTION

Upon completion of Phase I and its associated activities and tasks, the P*Si*/C*SC* project team will initiate the existing system or application review and selection phase of the project.

The P*Si*/C*SC* project team personnel will visit three to four potential donor sites. The visits will be made by two project team members comprised of the P*Si* criminal justice system specialist and the C*SC* technical systems analyst. The project director and site supervisor will visit potential donor sites as deemed necessary to support the project team.

Start Date: 28 October 1974
Completion Date: 20 December 1974
Duration: 8 weeks

Activity II.1: Review Existing System Documentation

The P*Si*/C*SC* project team will review existing LEAA and P*Si*/C*SC* documentation on criminal justice agency information systems to ascertain possible donor candidates.

Start Date: 28 October 1974
Completion Date: 8 November 1974
Duration: 2 weeks

Activity II.2: System Survey and Selection

This activity calls for visits to selected possible donor sites. (The six P*Si*/C*SC* project teams in Region V will have developed knowledge on all six sites and therefore will be able to interchange both information and ideas in periodic meetings during this activity.) The following tasks have been identified.

Start Date: 11 November 1974
Completion Date: 6 December 1974
Duration: 4 weeks

Associated Tasks:

- Task II.2-1: Select and Schedule Donor Site Visits
- Task II.2-2: Review Donor System and Documentation
- Task II.2-3: Document the Surveys & Provide Recommendations

Activity II.3: System or Module Selection

Upon completion of the first two activities, it is anticipated that the recipient site personnel will visit one or two of the prospective donor sites to review the system and discuss its capabilities with the present users. Following the site visits, alternative methods of the transfer process will be presented.

Start Date: 2 December 1974
Completion Date: 20 December 1974
Duration: 3 weeks

Associated Tasks:

Task II.3-1: Review of sites and survey documentation
Task II.3-2: Prepare system or module alternatives

PHASE III: CRIMINAL JUSTICE TECHNOLOGY TRANSFER

The transfer of existing applications software from operation on donor agency hardware system to operation on the recipient agency hardware system will be accomplished by establishing a transfer team to translate the existing programs and data files.

Start Date: 23 December 1974
Completion Date: 25 July 1975
Duration: 31 weeks

Activity III.1: Implementation Management Organization

The project director will be responsible for all work done. The director will be fully responsible for:

- acquiring and allocating the required resources
- distributing the work
- monitoring performance
- reporting status.

The schedule for the transfer program will be designed to promote cost effectiveness. Other factors that will be used to determine a schedule are:

- the transfer constraints listed in the RFP
- the number of programs to be translated
- the minimum linear time required for the transfer
- the manpower loading for each of the translation paths

Start Date: 23 December 1974
Completion Date: 25 July 1975
Duration: 31 weeks

Activity III.2: Review Standards and Procedures

Standards will be developed for both the transfer process and for ongoing operations. The standards will consist of minimum

requirements for computer software, for software operational procedures, and for supporting documentation.

First will be standards for the translation activities. These will include standards for the submission of programs and test data, and standards for transfer software including listings, tapes, and supporting documentation. Second will be standards for ongoing operations. These will include standards for administrative purposes, including the issuing and controlling of identifiers for files, tapes and reports. The standards will provide a systematic and uniform basis for issuing, locating, and controlling each element within the system.

Once the standards have been defined and agreed upon, they will be used as guidelines for the transfer activities and to facilitate smooth operations.

Start Date: 6 January 1975
Completion Date: 25 July 1975
Duration: 29 weeks

Activity III.3: Input Collection and Distribution

The project team will receive and review the necessary material for each program slated for transfer. This material represents the Input Package. It consists of:

- machine readable tape of program
- program listing
- system description documentation
- program flow chart
- test data description
- test data file
- test and validation procedures
- user results
- JCL for program and data base

Start Date: 16 December 1974
Completion Date: 3 January 1975
Duration: 3 weeks

Activity III.4: Production Control during Translation

Production control entails complete surveillance and information feedback for each input package throughout the cycle. Audit and control will uniquely identify each element, whether it be a program, test data file, tape, or document.

Audit and control will use these identifiers to schedule and track each conversion as it proceeds. The team will be responsible for revising the schedule based on its analysis of the problem, and will report its revision to audit and control. Additionally, the receipt of an input will trigger a status report to audit and control. Schedule revisions and status reports will provide information for ongoing reallocations of resources and work redistribution.

The work flow must proceed in a single direction if it is to handle the projected volume within established time limits. The primary objective of production control is to maintain effectiveness and efficiency.

Start Date: 30 December 1974
Completion Date: 18 July 1975
Duration: 29 weeks

Activity III.5: Program Conversion

Upon selection of the appropriate packages or modules to be transferred and collection of all pertinent data, the PSi/CSC project team will begin program conversion activity. Where possible, the recipient site personnel who will have system maintenance responsibility will be encouraged to work with the PSi/CSC implementation team to increase the recipient site personnel's understanding and awareness of the system.

Start Date: 13 January 1975
Completion Date: 6 June 1975
Duration: 21 weeks

Associated Tasks:

- Task III.5-1: Preparation
- Task III.5-2: Execution
- Task III.5-3: Review Converter Output
- Task III.5-4: Compile New Version of Program
- Task III.5-5: Review Compiler Output
- Task III.5-6: Trouble Shooting Team
- Task III.5-7: JCL Conversion

Activity III.6: Test Data File Conversion

The data file conversion process will be accomplished in two stages. Initially, the team will evaluate the baseline documentation to determine a detailed conversion, determine and perform any required file redesign, and determine and develop additional file conversion aids. Then, conversion of the test data files will be performed. In addition to providing the data required for the unit and functional unit test activity, test data file conversion will serve to verify the conversion procedures to be used in the operational data file conversion.

Start Date: 13 January 1975
Completion Date: 11 July 1975
Duration: 26 weeks

Associated Tasks:

- Task III.6-1: Define Inputs
- Task III.6-2: Define Outputs
- Task III.6-3: Test Preparation and Run
- Task III.6-4: Test Run Evaluation
- Task III.6-5: Test Run Problem

Activity III.7: System Testing

The following items will be required as inputs to the overall testing function:

- converted source program file
- source program listing
- program description
- test and validation notes
- test data description
- user results
- test data file
- JCL for the program(s) and test data

Start Date: 30 December 1974
Completion Date: 11 July 1975
Duration: 28 weeks

Associated Tasks:

- Task III.7-1: Logging and Control
- Task III.7-2: Review Test Package
- Task III.7-3: Monitor and Revise Schedule
- Task III.7-4: Route All Work Packages

Activity III.8: Product Packaging

The packaging function is the last operation in the conversion. The packaging team will update program documents and flow charts to reflect converted programs. The entire package will be reviewed for completeness and accuracy and then turned over to audit and control for submission for parallel testing. Inputs consist of:

- program descriptions
- source program listing
- machine readable tape
- test and validation notes
- test data description
- test data file
- JCL file program(s) and data
- operational procedures
- test results
- user results

All program documentation (e.g., program descriptions, test and validation procedures, test data descriptions, etc.) that is to be generated will be updated to reflect changes resulting from translation and testing.

Parallel testing will allow the user of the program to evaluate the translated program in the new environment. When the program has successfully undergone parallel testing, the testing will be terminated and the program will be considered formally accepted by the recipient site.

Start Date: 12 May 1975
Completion Date: 11 July 1975
Duration: 9 weeks

Associated Tasks:

- Task III.8-1: Logging and Control
- Task III.8-2: Update of Program Documentation
- Task III.8-3: Update of Test Documentation
- Task III.8-4: Manual Flow Chart Generation
- Task III.8-5: Product Package Review
- Task III.8-6: Training Manuals

PHASE IV: TECHNOLOGY TRANSFER DOCUMENTATION

Phase IV is the culmination of the proposed PSi/CSC project activity; the documentation related to the entire transfer process for each site, and a final report of the analysis of the transfer process as a technological project.

Start Date: 23 June 1975
Completion Date: 22 August 1975
Duration: 9 weeks

Activity IV.1: Individual Site Transfer Documentation

This activity is initiated at the start of the project. The PSi/CSC team will maintain a transaction record to monitor and record all activities directly related to the technology transfer process. This approach will facilitate the documentation process and assure both the accuracy and completeness of the information.

The final reports on the recipient site transfer will describe in detail the process by which the transfer was accomplished. Problems encountered will be discussed and solutions described including those which were unsuccessful. The discussion will not be limited to problems related solely to the computer facility or the technical aspects of the transfer. Organizational differences in the criminal justice environment between donor and recipient site may affect the success of the transfer effort. The final report will also address the roles and attitudes of recipient site technical personnel and the personnel of the user criminal justice agencies as they affect the transfer process.

A significant feature of this report will be an analysis of the individual site performance in relation to the initial plan in terms of time and resource requirements.

Start Date: 23 June 1975
Completion Date: 1 August 1975
Duration: 9 weeks

Activity IV.2: Technology Transfer Report

The previous activity provided for the development of a document that describes the transfer process at each site. This activity

will summarize the process, problems, constraints, benefits and other considerations into a single report for use by LEAA and other criminal justice agencies. The purpose of this document is to report the analysis of the six recipient site transfer experiences and present recommendations to facilitate the transfer process. The report will examine the relative success of each transfer in terms of results achieved versus resources expended. It will compare and evaluate alternative solutions to similar problems where site-teams have selected different techniques to achieve their goals.

Start Date: 4 August 1975
Completion Date: 22 August 1975
Duration: 3 weeks

APPENDIX. B

REVISED PROJECT SCHEDULE

APPENDIX B
REVISED PROJECT SCHEDULE

PROJECT PREPARATION

Start Date: 15 July 1974
Completion Date: 19 August 1974
Duration: 5 weeks, 1 day

PHASE I: SYSTEM REQUIREMENTS ANALYSIS

Start Date: 26 August 1974
Completion Date: 18 October 1974
Duration: 8 weeks

Activity I.1: System Requirements Study

Start Date: 19 August 1974
Completion Date: 27 September 1974
Duration: 6 weeks

Activity I.2: System Specification

Start Date: 23 September 1974
Completion Date: 18 October 1974
Duration: 4 weeks

PHASE II: EXISTING SYSTEM SURVEY AND SELECTION

Start Date: 21 October 1974
Completion Date: 29 November 1974
Duration: 6 weeks

Activity II.1.: Review Existing System Documentation

Start Date: 21 October 1974
Completion Date: 8 November 1974
Duration: 3 weeks

Activity II.2: System Survey and Selection

Start Date: 21 October 1974
Completion Date: 29 November 1974
Duration: 6 weeks

Activity II.3: System or Module Selection

Start Date: 21 October 1974
Completion Date: 8 November 1974
Duration: 3 weeks

PHASE III: CRIMINAL JUSTICE TECHNOLOGY TRANSFER

Start Date: 2 December 1974
Completion Date: 25 July 1975
Duration: 34 weeks

Activity III.1: Implementation Management Organization

Start Date: 2 December 1974
Completion Date: 25 July 1975
Duration: 34 weeks

Activity III.2: Review Standards and Procedures

Start Date: 6 January 1975
Completion Date: 25 July 1975
Duration: 29 weeks

Activity III.3: Input Collection and Distribution

Start Date: 2 December 1974
Completion Date: 20 December 1974
Duration: 3 weeks

Activity III.4: Production Control during Translation

Start Date: 9 December 1974
Completion Date: 18 July 1975
Duration: 32 weeks

Activity III.5: Program Conversion

Start Date: 30 December 1974
Completion Date: 6 June 1975
Duration: 23 weeks

Activity III.6: Test Data File Conversion

Start Date: 30 December 1974
Completion Date: 11 July 1975
Duration: 28 weeks

Activity III.7: System Testing

Start Date: 30 December 1974
Completion Date: 11 July 1975
Duration: 28 weeks

Activity III.8: Product Packaging

Start Date: 12 May 1975
Completion Date: 11 July 1975
Duration: 9 weeks

PHASE IV: TECHNOLOGY TRANSFER DOCUMENTATION

Start Date: 23 June 1975
Completion Date: 22 August 1975
Duration: 9 weeks

Activity IV.1: Individual Site Transfer Documentation

Start Date: 23 June 1975
Completion Date: 1 August 1975
Duration: 9 weeks

Activity IV.2: Technology Transfer Report

Start Date: 4 August 1975
Completion Date: 22 August 1975
Duration: 3 weeks

APPENDIX C

RECOMMENDED IMPLEMENTATION PLAN

APPENDIX C

RECOMMENDED IMPLEMENTATION PLAN

In order to implement the system transfer and to integrate the system with the CAUSE or TRAC system currently under development in the Marion County Municipal Court, the following eight-step implementation plan is recommended for consideration and resolution.

Step 1: SELECTION OF SYSTEM AND/OR MODULES BY MARION COUNTY

The Marion County Municipal Court must determine the segments of the CJIC system required for transfer.

Step 2: ESTABLISHMENT OF IMPLEMENTATION TEAM ORGANIZATION

The project team (PSi/CSC and Marion County) must be established as soon as feasible in order to facilitate both staff commitment and requirements, and if necessary, the relocation of CSC programming/analyst personnel to Indianapolis.

Step 3: DEFINITION OF ROLES AND RESPONSIBILITY

The roles of team personnel must be established (i.e., project leaders, analysts and programmers) and a definition of which segments of the transfer each functional group will have the responsibility for implementing. This includes establishment of system acceptance criteria.

Step 4: DEVELOPMENT OF REALISTIC COST ESTIMATES

Based upon completion of Steps 1 through 3, a realistic cost schedule and plan can be developed. Once PSi/CSC manpower requirements are determined, manpower and travel and per diem expenses can readily be established.

Step 5: DEVELOPMENT OF IMPLEMENTATION MANAGEMENT AND PROJECT REVIEW PROCEDURES

The PSi/CSC team has previously defined the implementation management control and procedures in the project proposal. These require review by the project team and restructuring to fit the particular needs of Marion County. Project coordination should be formalized.

Step 6: DEVELOPMENT OF PROJECT SCHEDULE (PHASE III)

Once the preceding steps are completed, a comprehensive implementation schedule can and should be developed including milestones, critical path analysis, and project review dates.

Step 7: FULL-TIME COMMITMENT OF PROJECT TEAM PERSONNEL

Full-time project team personnel (analysts and programmers) should be committed to the project. This would prevent any problems during implementation which could arise due to personnel re-assignments.

Step 8: REVIEW AND APPROVAL BY PSi/CSC AND MARION COUNTY

The preceding seven steps should be reviewed and approved by both PSi/CSC and Marion County project management personnel. This final step should provide a firm understanding by all management personnel of what is to be accomplished.

The above plan is presented at this time for review by Marion County and is, of course, subject to change or modification. It is anticipated that these steps will provide a basis for discussion later this month. Further, these guidelines should be formalized within the first three weeks of the Phase III effort.

APPENDIX D

THE TRAC SYSTEM

Appendix D
THE TRAC SYSTEM

The Transmission and Retrieval of Automated Court Information (TRAC) System is a computerized caseload management system for the Criminal Division of the Municipal Court of Marion County. TRAC's prime purpose is to provide the Municipal Court with the necessary tools it needs to manage and coordinate the large and varied caseload flowing through the ten Criminal Division courtrooms from over nine law enforcement agencies operating in Marion County. In that, the mission of the Municipal Court includes the adjudication of traffic, misdemeanor, and preliminary hearings in felony cases; the responsibility of total case-load management becomes great and difficult.

One of the primary tools for managing the caseload is the slate. Slates are lists of cases scheduled for adjudication on a certain day at a given session of a particular courtroom of the Municipal Court. In short, they serve as a control list of cases to be heard in a given session of the Court. The TRAC System produces the slates on a daily basis. They serve the dual purpose of providing updated schedules for the Municipal Court sessions and providing a conduit for conveying the various rendered dispositions of the court in a given session back to the TRAC System. Simply, case dispositions are recorded on the slate for updating on the computer.

The TRAC System produces the slates by drawing upon three basic sources of information. Those are: Uniform Traffic Tickets and Ordinance Summonses filed with the Court well in advance of the first scheduled appearance of the

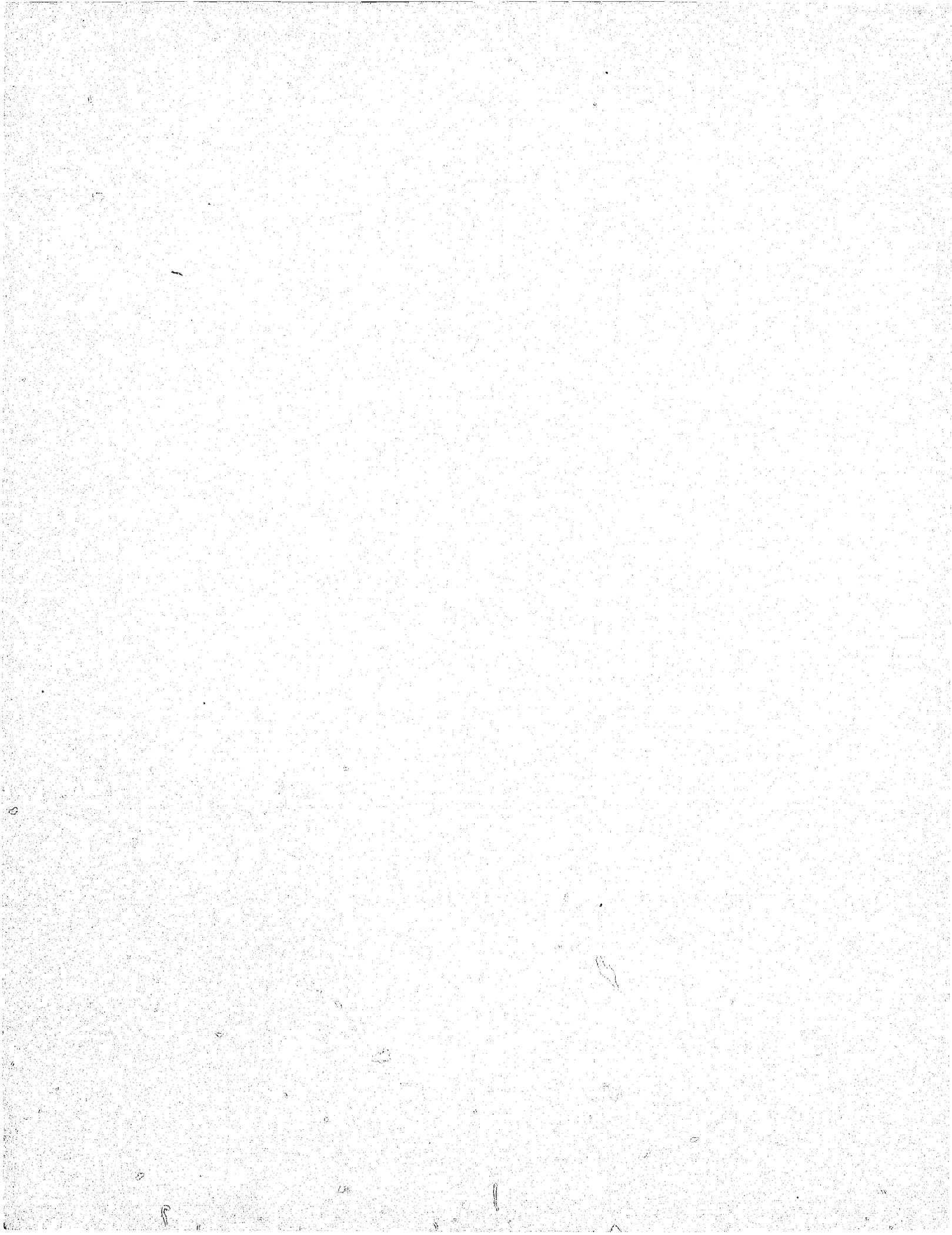
defendant, new arrest information passed to the TRAC System from the Indianapolis Police Department (IPD) computer no more than twenty four hours before the first scheduled appearance, and disposition information coming back to the computer on the slates from the courtroom sessions of the Municipal Court. In effect, the first two sources of information provide for the introduction of a new cause or case into the Municipal Court and TRAC System. The recorded disposition information found on the Court session slates (the third source of information) provides new cause status information for updating against the newly introduced or filed causes.

Utilizing the above-described sources of information the TRAC System is able to build and maintain computerized files that retain complete updated information on every non-civil cause being processed by the Court. This captured computer readable information provides the basis for a number of very valuable products that can now be produced for the Court by the TRAC System. The most obvious products are the slates themselves which serve as a primary reference in coordinating the movement of paper and people throughout the Municipal Court System.

Other notable products of the TRAC System are:

- OFFENDER PAYMENT LETTER (OPL), otherwise known as Mailers. This pre-printed letter is produced by the TRAC System and sent to traffic case defendants who meet certain qualifications. Adhering to a strict fine and cost schedule set by the Judges of the Municipal Court, the TRAC System notifies the defendant via the U. S. mail on the amount of fine and cost he will be obligated to pay if he chooses to plead guilty and waive his right to a court appearance and trial. Part of the mailer includes a return envelope and waiver form in order that the defendant may handle the entire matter by mail without ever needing to make an appearance in court.

- CLERK/COURT ADMINISTRATION WORK LIST. Various lists are produced by the TRAC System on a regular basis which are designed to assist in various clerical functions relating to various manual processing procedures of the Municipal Court.
- DRIVER SUMMARIES. The TRAC System produces a magnetic tape which is sent to the Indiana Bureau of Motor Vehicles for running on their computer system which causes the printing of driver summaries for use in adjudicating traffic cases being heard in the Court. These driver summaries are printed only on individuals scheduled to appear in a given session of the court and they are printed in the order that they will be heard.
- REARREST WARRANTS AND RELATED PRODUCTS. When a court orders a particular cause to go on rearrest status because of the defendant having failed to appear as promised, the TRAC System automatically prints the actual rearrest warrant. These printed warrants are then routed through the Clerk's Office for eventual review and validation by the courtroom ordering the warrant. Once the rearrest warrant is activated in this fashion, the TRAC System produces a special index card for use by the Indianapolis Police Department. These index cards hold the same information that is printed on the warrant itself. Once a warrant has been either served or otherwise satisfied, a recall report is produced by the TRAC System which serves as a notification to all concerned parties that a given rearrest warrant has been recalled. In summary, the TRAC System provides helpful assistance in the production and control of rearrest warrants.
- STATISTICS REPORT. Since the TRAC System holds computer readable information on all traffic misdemeanor and felony causes, a statistics report can be easily and inexpensively produced which reveals the experienced court case load from the past and the projected case load in the future. This report can serve as a prime management tool in enabling the court to effectively evaluate and plan for its operations.
- PROBATION REPORTS. Various reports can be produced by the TRAC System which will assist the Municipal Court Probation Department in managing its probation case load. One notable report is the



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list of Municipal Court probationers arrested and slated into the Municipal Court on new charges. This report will provide the probation office with immediate notification when one of its clients has been arrested.

- ON-LINE CAUSE RECORD ACCESS. One of the major advantages of the TRAC System is the universal and conversational availability of cause records via the various computer terminals arranged throughout the Marion County Criminal Justice System.

In effect, court scheduling information is available through on-line access via the IPD computer and the County administrative computer. This feature enables law enforcement officers in the county to quickly inquire on the status of cases being adjudicated in the Municipal Court and also determine the current extent of their appearance obligations. This feature has also been extremely helpful to law enforcement in the arrest/booking process by providing information relating to other cases being heard by the court on the new arrestees currently in process. This availability has been helpful in assisting the Marion County Jail in seeing that their inmates meet all their Municipal Court obligations.

- ON-LINE SLATES. Slates are now available via the computer terminals through the remote terminal printers. This on-line slate capability will be of advantage to the outlying Municipal Court rooms in providing the most currently scheduled causes.

Now that we have succeeded in the development of a complete and flexible computerized file or data base within the TRAC System it is possible to devise and implement additional product enhancements to the System at relative inexpense. In short, now that we have built the core system or foundation, we are in a position to develop enhancements with a high pay-off/cost ratio. Some near future enhancements being considered at this time are:

- AUTOMATED MUNICIPAL COURT CLERK ACCOUNTING SYSTEM. At present the Municipal Court Clerk's Office handles approximately \$3,500,000.00 in fines and costs annually. Enhanced upon the present information system this module will provide a new level of efficiency, accuracy, and security in the handling of assessed and collected fines and costs.
- AUTOMATED CLERK DOCKET SHEET GENERATION. The Municipal Court Clerk's Office is responsible, by law, for the maintenance of the Court Docket Books. This task is presently performed manually (hand written); accounting for at least 30% of expended personnel time in that office. We intend to develop software which will enable the computer to produce, on a per cause basis, printed Docket Sheets for binding into books at a tremendous savings of time and money.
- ON-LINE CAUSE CONTINUANCE DATA ASSIGNMENT. To supplant the present open number assignment procedures. This module will assist in the avoidance of multiple cause number assignment against the same case.
- AUTOMATED CASE NOTICE GENERATION. This module will serve to automatically notify parties to a given cause of pertinent dates, times, and places.
- PRE-TRIAL SERVICES SUPPORT. This module will assist our Bail Commissioners in supervising defendants awaiting a court appearance who have been released on their own recognizance or have otherwise been given a conditional release.
- ADDITIONAL PROBATION AND DRUG COUNSELING PROGRAM SUPPORT. Software enhancements will be developed which will assist in the monitoring of individuals placed on probation or placed under the supervision of a specialized program.
- MODELING, FORECASTING, AND COST ACCOUNTING STATISTICAL ENHANCEMENTS. Various management statistics reports will be developed.
- DELINQUENT CASE REPORTS. Reports will be produced which will alert the court on causes that have experienced delays in adjudication. The criteria used in the production of this report will be pursuant to the speedy trial rules of

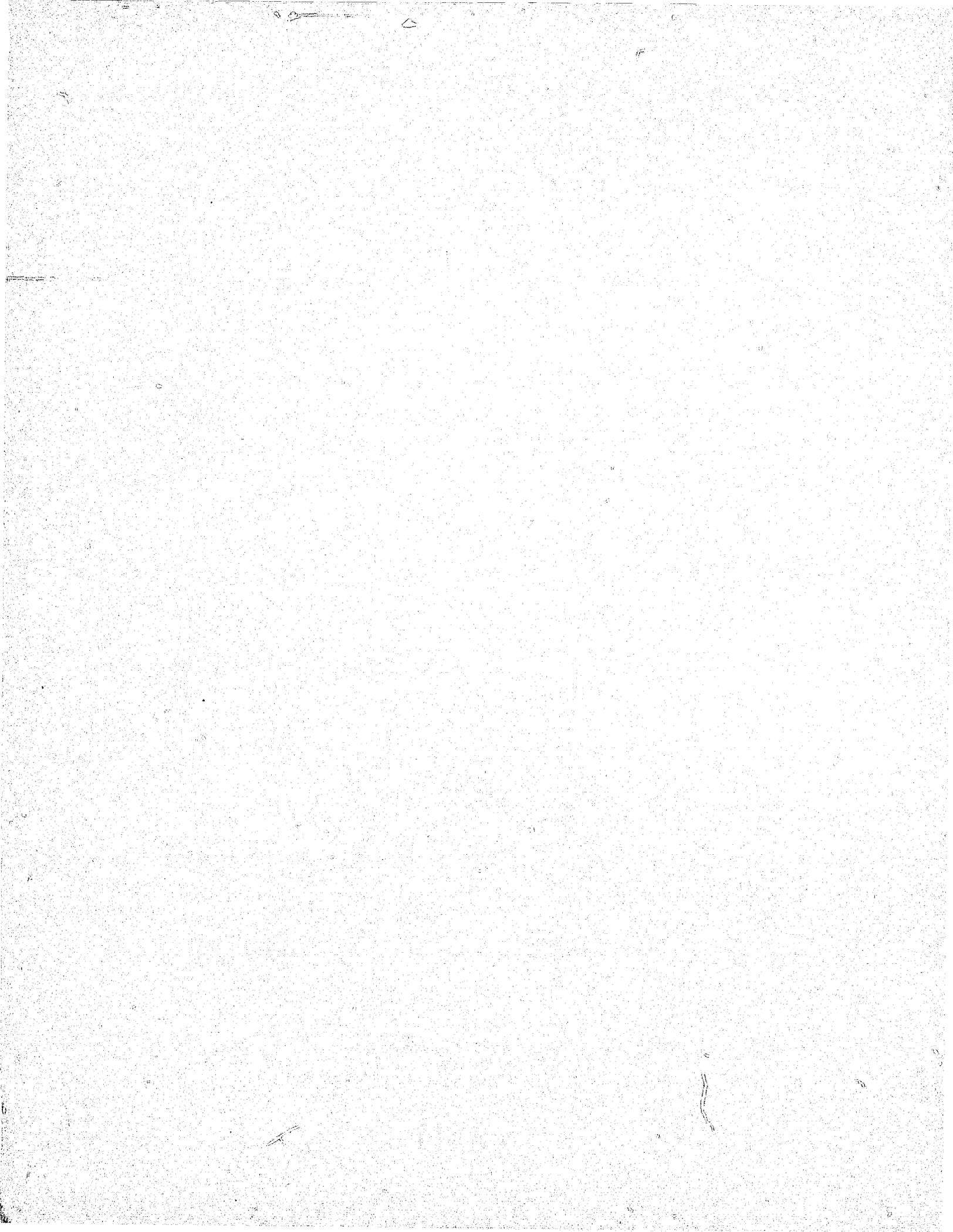
the U. S. Supreme Court and the prescribed policy of the Municipal Court bench.

- BMV TRAFFIC CONVICTIONS REPORTING. At present the Clerk's Office is required to manually prepare abstracts of traffic convictions rendered in the Municipal Court for submission to the Bureau of Motor Vehicles for updating against a given driver's record. Since all of this information is now retained by the TRAC System, we will produce a magnetic tape for submission to BMV saving a great deal of clerical time both here at the Municipal Court and at BMV.

Another primary systems development effort we will be working on in 1976 and 1977 is in the area of systems interface with the various police oriented information systems and the PROMIS system. So as to avoid unnecessary overlap we have already established technical and managerial liaison with the people working in the above-mentioned areas. The main thrust of this liaison will be in the sharing of captured machine readable information. Some notable modules to be developed which require interface are:

- PRISONER CALL-UP LIST FOR MUNICIPAL COURT APPEARANCE.
- BENCH/REARREST WARRANT CONTROL.
- CAUSE DISPOSITION SHARING. This module will assist the Indianapolis Police Department in meeting the new United States Justice Department regulations which require that all criminal history records be maintained with current court and correctional dispositions.
- MUNICIPAL COURT WITNESS AND JUROR ACCOUNTING. This module should prove to be of particular assistance to the County Prosecutor's Office.

The above delineations are but a brief sampling of the systems development activities planned for 1976 and 1977. The ultimate objective of the work now being done is to, with the cooperation of the various agencies of the Marion County Criminal Justice Community, evolve towards a total criminal justice information system for Marion County. This accomplishment should enable us to make great strides towards the well-coordinated movement of people, paper, and information throughout the Marion County Criminal Justice System. The attainment of this goal should greatly enhance the ability of the prime functionaries of the Criminal Justice Community, Judges, Prosecutors, attorneys and law enforcement officials to do what they do best--administer justice.



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