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MICHIGAN SUPREME COURT
SYSTEMS DEPARTMENT

LONG-RANGE PLAN

FOR

SYSTEM TECHNOLOGY IN THE MICHIGAN COURTS

March, 1974

This plan was made possible by a grant to The Michigan Supreme Court from the Law Enforcement Assistance Administration



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RE: Long-Range Plan for Systems Technology in the Michigan Court

The Michigan Supreme Court more than two years ago established the Systems Department within the Office of the Court Administrator. This gave birth to the Systems Technology Program to improve the operation of Michigan's One Court of Justice.

This Plan is the first attempt to project that Technology Program through the remainder of the seventies. The Systems Department engaged Ernst & Ernst to undertake this in-depth review of the Systems Technology Program and develop a comprehensive plan for its future.

When you read this Plan, bear in mind that the recommendations of Ernst & Ernst may not necessarily be adopted as final approaches to specific issues, but will be thoroughly considered along with other information by the Systems Department in the management of its Systems Technology Program.

Richard G. Wilhelm Director of Systems

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SECTION I

INTRODUCTION AND PLAN SUMMARY

A. Introduction

There has been a long standing concern about court records and information as evidenced by Edmund Plowden's observation in the sixteenth century that "the records of every court are the most effectual proofs of the law in relation to the things treated of in the same court." Systems technology and systems analysis are recent and modern approaches to this same basic concern.

The reasons that systems technology and systems analysis are relevant in today's Courts are:

- 1. The widespread and continued pressure to improve court efficiency and management; and,
- 2. The recognition that modern courts are complex organizations which store large numbers of detailed files which require elaborate procedures for processing.

It follows, therefore, that a modern court can be described as being both a judicial system and a data processing system that requires systems technology and systems analysis techniques for operational management and legal solutions. Because of this apparent need, the Michigan Supreme Court Systems Department was established to bring about optimum operation of Michigan's Courts through the application of a Systems Technology Program supported by systems analysis disciplines.

The following major events have highlighted the efforts of the Systems Department in the introduction of the Systems Technology Program:

- 1. The development of computer-based information systems that provide calendaring, indexing, and docketing; notice preparation; statistical report preparation; video entry and display for the Criminal and Traffic and Ordinance Divisions of Recorder's Court in Detroit.
- 2. The development of a computer-based court management information system that provides statewide statistical information on case work-loads and other case load measurements.
- 3. The development of a computer-based information system that provides limited automated service to all courts in the State.
- 4. The establishment and operation of the Judicial Data Center (JDC) to provide all computer-based support and services to all the Courts in the State.

B. Plan Summary

The purpose of the plan contained herein is to outline the succeeding steps, costs, and scheduling priorities necessary to continue both additional systems development efforts, and the important implementation effort necessary to achieve the objective of improving the efficiency of Michigan's Courts. Specifically, SECTION II - PLAN PURPOSE, details the fundamental purposes, uses, and constraints of this plan. SECTION III - BACKGROUND, furnishes a summary of Systems Department activities to date. SECTION IV - GOALS AND OBJECTIVES, provides for a statement of the Systems Department's purpose through a detailed articulation of its goals and objectives.

As outlined in SECTION V - SYSTEMS DEVELOPMENT AND IMPLEMENTATION PLANS, the development and implementation efforts required for the major systems in Recorder's Court (Basic Michigan Court System and Traffic & Ordinance System) will be completed during fiscal year 1974-5. Similarly, during this same period, the Case Information Control System (CICS) development efforts will be completed. The implementation of the CICS data collection procedures are planned for completion during this same period.

The interim Court Information System will continue development during the early part of calendar year 1974 with pilot demonstrations of its services expected by December, 1974. This system will be installed in those courts requesting computer-based services to assist in the relief of various administrative backlogs. It will provide a limited range of automated services on an interim basis as a prelude to the more comprehensive services envisioned by the development of an advanced Court Information System.

The advanced Court Information System will be a second generation development effort incorporating, where practicable, the previously developed features and modules of the aforementioned installed systems. Development of this new system will commence in calendar year 1974 and will be completed by late 1975. Implementation will commence in calendar year 1976.

SECTION VI - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT, outlines the personnel requirements necessary to complete the remaining systems development effort and to support the transition to systems implementation and production operations. Specifically, the following changes are planned to commence during 1974 and thereafter:

- 1. Addition of operating and maintenance personnel to the staff (within funding constraints), to replace services presently being provided under a Facilities Management contract.
- 2. Addition of systems development personnel to the staff (within funding constraints), to replace services presently being provided by consultants.
- 3. Addition of systems implementation personnel to the staff (within funding constraints), to carry out the extensive long-range implementation effort.

SECTION VII - <u>JUDICIAL DATA CENTER</u>, reviews the JDC equipment requirements and site considerations necessary to support the systems development and implementation efforts. These include the following plans:

- 1. Leasing of the Burroughs B4700 computer system presently being furnished for use at the JDC through an Industry Grant for fiscal year 1974-5.
- 2. Acquiring, through lease or purchase agreement, a permanent computer system for the JDC.
- 3. Acquiring, through lease or purchase agreement, the data communications equipment and terminals necessary for use by all the courts in the State concomitant with the aforementioned systems implementation effort.
- 4. Acquiring the additional computer data storage capacity required for systems implementation.

Cost estimates have been prepared to determine the budgetary requirements to support this long-range effort. These projections are found in SECTION VIII - FINANCIAL REQUIREMENTS and are summarized below:

FISCAL YEAR ENDING JUNE 30TH			AMOUNT
1974-75			\$2,229,000
1975-76	•	• ,	2,769,000
1976-77			3,940,000
1977-78			4,521,000
1978-79			5,009,000
1979-80			5,530,000

SECTION II

PLAN PURPOSE

A. General

Few would deny the importance of planning for any public or business enterprise. Every successful organization has a plan for its activities, whether it be a formal detailed plan with associated budgets and schedules, or an informal expression of goals, budgets and policies. The technical demands of data processing; combined with the increasing interaction of applications, require that a formal approach be undertaken for systems technology, expecially as its share of the total budget increases. In recognition of this requirement the Michigan Supreme Court, through its Systems Department, has developed the plan contained herein.

Long-range planning for systems technology, in the context of this document, is defined as concerning the period two to seven years ahead. Short-range planning, which will normally be synonymous with the budgeting and project control processes, will involve one to two years from the present time. This plan has been devised accordingly, to cover the seven year period commencing January 1, 1974 and concluding December 31, 1980 with considerable planning detail provided in the short range (one to two years) and more general planning information offered in the succeeding three years.

B. Purpose of the Plan

Although somewhat rhetorical, it is important in any planning effort to clearly establish the purposes and uses of any resultant plan. The following is a general listing of the purposes and expected uses of the plan contained herein:

- 1. To define the goals of systems technology, and to define goals and objectives for the Michigan Supreme Court Systems Department and its Judicial Data Center. The goals of systems technology which may be to assist in optimizing all of an organization's resources may be quite different than those of the Michigan Supreme Court Systems Department (and its Data Center), which may merely be to offer costeffective services to other users. A definition of the goals of systems technology will form a basis for planning future applications; a definition of the goals and objectives of the Systems Department (and its Data Center) will form a basis for the effective implementation of these applications.
- 2. To form a policy basis for the use of data processing. The chance of disagreement between the Systems Department and users will be minimized by a clear expression of policy and responsibilities.
- 3. To identify constraints on the use of data processing. A definition of statutory, fiscal, and practical constraints will help to obviate problems of developments conflicting with these restraints.

- 4. To provide a "look into the future" to assess and project the systems technology environment. Too many systems projects are designed taking into account only current needs and current technology. When needs or technology change these projects present the greatest problems of redevelopment. The plan should provide a forecast for the future in terms of: how the Systems Department may grow and change, potential hardware and software developments, and the way in which these may impact the use of data processing. For example, availability of inexpensive terminal devices could lead to demands for data communications services in situations impossible to justify on the basis of current costs.
- 5. To identify areas of major systems development. The plan should provide the preliminary definition of any major new systems, emphasizing the contribution each will make.
- 6. To facilitate interaction of systems as they are developed. Increasingly, new applications being developed must interact with existing systems either by sharing a common data base or passing data from one to another. The problems of systems design will be eased if the major future interrelationships of systems are at least documented within this concept, and a common dictionary of data elements is used.
- 7. To provide input to the budgeting process. The budget is in effect a short-range plan. The long-range plan for systems technology should be both compatible with the budget and should provide information about the overall personnel and equipment requirements.
- 8. To provide a control mechanism for measuring progress. Although budgets provide a means of measuring progress (actual versus budget), the long-range plan should, because of the longer period under review, provide a basis for measurement which is less liable to temporary fluctuations.
- 9. To form a basis for equipment and personnel development. Availability of a long-range plan for systems technology should facilitate considerably the determination of equipment requirements and needs for personnel hiring and education.
- 10. To encourage optimal expenditure methods by providing a forecast of future needs. There are typically (depending on the manufacturer) several alternative methods of acquiring data processing equipment: rental, lease, installment purchase, lease-purchase, or outright purchase. Availability of a more comprehensive plan for the future might simplify the selection of the most appropriate acquisition method and result in savings. For example, lease of peripheral equipment (disk and tape drives) from an independent peripheral vendor typically provides worthwhile savings, compared with rental of the equipment from the computer mainframe manufacturer. Another example involves the comparison of a manufacturer's rental and government unit installment-purchase agreements. For those governmental units which can plan ahead, the installment-purchase option generally offers considerable savings.

C. Limitations of the Plan

Policy makers, other planning agencies, and prospective trial court systems technology users throughout the State of Michigan are reminded, however, that the planning, scheduling, and fiscal determinations in this document are conditioned on a large number of variables not totally within the control of the Michigan Supreme Court or its Systems Department. These obviously include timely availability of funds, personnel, and equipment as a minimum, and also range across the uncertainties inherent in the development of complex data processing systems in the relatively new environment of the state court system. Hence, this plan should be utilized primarily as a general tool and not considered as an established statement of fact. Specific commitments and plans by other agencies and users should be made only after verification of the current status of this plan and the status of any specific element within it. Verification should be obtained from the Systems Department.

SECTION III

BACKGROUND

A. Industry Committee

In March, 1971 Supreme Court Justice G. Mennen . lliams was appointed Chairman of the Court Procedures and Technology Committee of the Michigan Supreme Court by Chief Justice Thomas M. Kavanagh. During June of that year, he initiated the steps that would lead to the modernization of the administrative procedures in the courts of Michigan. One of the first actions he took was to establish a Special Industry Advisory Group (comprised of systems and legal personnel from Chrysler Corporation, Ford Motor Company, and General Motors Corporation) to serve as a policy board in advising the Court on the "development and application of new systems and technologies throughout the Michigan Court System."

This Advisory Group then undertook a study of court operations in a number of states throughout the nation to ascertain what applications could be adopted to Michigan and to suggest ways in which the Michigan Courts could best undertake an improvement program.

Following an extensive survey, the Group presented its recommendations in September, 1971 in a report entitled, Systems Technology And The Michigan Courts (A Preliminary Survey By The Special Industry Advisory Group For The Michigan Supreme Court). The primary recommendations included in its report were as follows:

- 1. A necessary first step toward the development of a coordinated systems program would be the appointment of a "Director of Systems," who would report to the Supreme Court Administrator. He would be responsible for developing an improved system for the Supreme Court itself; for overseeing the development and installation of major systems projects within the Michigan courts and for fostering the common development of such systems, where desirable; for prescribing common coding practices; and for systematically reviewing the administrative practices used throughout the Michigan court system.
- 2. A desirable counterpart to the aforementioned position would be "Systems Manager" or a "Systems Coordinator" within each large-volume court that undertakes significant systems programs. Comparable functions could be exercised in other courts by the Court Clerk or by the Court Administrator, when one is employed.
- 3. Three computerization projects with concurrent priority were suggested:
 (1) a Case Information Control System to provide improved statewide information on case loads, case status, and other problem areas; (2) a system for the Traffic and Ordinance Division of the Recorder's Court, City of Detroit; and (3) a Basic Michigan Court System that could serve the criminal and civil functions of the larger circuit courts, Detroit Recorders Court and some of the civil functions of the Common Pleas Court of the City of Detroit. Similar projects for the District Courts and Probate Courts could be undertaken at a later date, after some experience has been gained on the initial projects.

- 4. For these projects, it was suggested that the development effort be undertaken by mixed teams of personnel, including representatives of the courts affected, the Supreme Court, and the outside analysts and programmers from consulting firms. It was also recommended that the Steering Committees of judges, court administrative personnel, senior officials from law enforcement and other affected agencies, and representatives of the Bar should supervise the development effort, since such participation is a vital ingredient of systems planning.
- 5. It was recommended that the development effort be undertaken on a modular basis, where possible, so that the affected courts can adjust to computerized procedure over an extended period, and so that the costs and high risks of unnecessary complexity can be avoided.
- 6. Finally, computerization should not be regarded as an end in itself, but rather as one of several possible solutions to specific problems. No problem should be undertaken without first identifying each type of solution and determining whether computerization or some other form of improvement (such as microfilming) affords the best solution.

B. Systems 'Department

In keeping with the recommendations of the Special Industry Advisory Group, the Supreme Court established a Systems Department in the Office of the Court Administrator and appointed a Director of Systems in November of 1971. Shortly thereafter, Lead Systems Analysts were appointed to manage the development of each of the three computerization projects recommended by the Special Industry Advisory Group; along with a support and clerical staff. This office was established in Detroit to provide close support to the three major projects; two of which were planned for implementation in the Criminal Division of Recorders Court and in the Traffic and Ordinance Division of the Recorders Court of the City of Detroit. These staffing arrangements were completed between January and June of 1972. During the latter part of 1972 staff personnel were added to investigate and develop projects for microfilming systems and for the Probate and District Courts. Recently, a similar staff addition was made to review advances in technology for court reporting and recording.

C. Systems Development

1. Systems Development Process

The systems development process was largely patterned on the recommendations of the Special Industry Advisory Group. Hence, Lead Systems Analysts on the Systems Department staff were appointed as project managers for the development of the following major systems: Traffic and Ordinance System (TOS), Basic Michigan Court System (BMCS), and The Case Information Control System (CICS).

The objective of the TOS project was to develop a system to process local parking, traffic and ordinance violations; high misdemeanors; traffic-related felonies; and State misdemeanors. This system was to

be installed initially in the Detroit Traffic Court. One of the salient features of the system was to be a direct interface with the Secretary of State's computer for access to defendant's history file of name and address information.

The objective of the BMCS project was to develop a system for use in Circuit Courts that would provide current and historic status in information on each criminal and civil case files. This system was to be installed initially in the Detroit Recorders Court. An important feature of this system was to be an interface (i.e., be compatible) with national, state, and local law enforcement computer systems for the exchange of criminal and criminal offense information.

Both the TOS and BMCS projects were established ultimately to develop systems that would:

- a. Provide the ability to make inquiry into the case record data files at court locations remote from the computer site through television-like (video) units with associated typewriter-like keyboards.
- b. Provide case indexing output which would cross-reference case identification information to litigants in a case.
- c. Provide case docketing output which would record the history of case proceedings in chronological order of occurrence.
- d. Provide, on a periodic basis, output which displays case scheduling information delineating judge calendars and courtday calendars.
- e. Provide, on demand, computer-printed notice to all litigants on each case scheduled for conference, hearing, or trial.
- f. Provide, on demand, the court schedules of attorneys and attorney firms.
- g. Produce statistical and exception reports from which caseload and court operational performance can be determined, and cases which have not proceeded in a timely manner can be identified.

The objective of the CICS project was to develop a system to provide the following improved statewide statistical information (similar to, but more extensive than that presently being provided by the Supreme Court Administrator's Annual Report) on a monthly basis:

- a. Case loads
- b. Case ages
- c. Case disposition
- d. Trial time
- e. Weighted case loads
- f. Case durability

- g. Time for each case step
- h. Workload forecasting, etc.

The system was to be designed to interface with BMCS and TOS to acquire statistical information developed by these systems.

In order to ensure a high degree of applicability and acceptance of systems and data processing technology in the court environment, the Special Industry Advisory Group recommended the heavy involvement of prospective users of systems at all levels. The Advisory Group also recommended that there should be an extensive utilization of "in-house personnel" in the systems development process, particularly in large volume courts. The former recommendation was accomplished by the establishment of Steering Committees for each of the aforementioned systems development projects that consisted or representatives from a broad spectrum of the justice community who give policy guidance. Task Forces composed of personnel from the affected courts were similarly established to provide specific development direction. Exhibit A graphically illustrates the relationship of the Steering Committees and Task Forces to the overall statewide direction from the Supreme Court and its Court Procedures and Technology Committee as well as its Advisory Groups, the Industry Team and the Umbrella Committee.

2. Development Constraints

At the outset, the Special Industry Advisory Group and the Systems Department recognized a number of serious constraints on the ability of the Supreme Court to introduce systems technology to Michigan courts. These included recognition of the following:

- a. That the trial courts in Michigan are primarily locally funded with little history of local control units expending funds for either system development or operation.
- b. That traditionally little or no funding is available from the State for systems technology improvements.
- c. That many of the trial courts have no local data processing support available.
- d. That in those instances where data processing support is available the courts are in a queue for service with no priority over executive branch departments.
- e. That some trial courts are operating various data processing systems and that several others are taking preliminary steps to do so.

EXHIBIT A

MICHIGAN SUPREME COURT SYSTEMS DEVELOPMENT PROJECT ORGANIZATION

MICHIGAN SUPREME COURT

INDUSTRY TEAM

COURT PROCEDURES AND TECHNOLOGY COMMITTEE

UMBRELLA COMMITTEE

- Representatives of the Michigan judiciary
- Law enforcement agencies
- Other criminal justice agencies, the Bar and others

For each project:

- BMCS
- CICS
- TOS
- District Cts.
- Probate Cts.
- Others

STEERING COMMITTEES

- Michigan Supreme Court Justice and Director of Systems
- · Representatives of the directly affected court
- Representatives of courts with benefits to gain from system
- Judges, administrators, city, county, or state officials
- Industry advisors

TASK FORCES

- Michigan Supreme Court Lead System Analyst
- Court Systems Manager
- Representatives of the directly affected court
- Outside consultants and technical personnel as needed
- Industry representative
- Technical and court personnel

AFFECTED COURT

- Supervisory committee
- All other court personnel

- f. That there are significant computer hardware disparities at the local level.
- g. That there was no readily identifiable or available computer to carry out the testing of systems under development.

In attempting to compensate for these constraints, the Systems Department structured its systems development effort as follows:

- a. The Systems Department actively sought systems development funds from the Law Enforcement Assistance Administration (LEAA) through the State of Michigan Office of Criminal Justice Programs. Initially, the Systems Department was made a party to grants already issued to the City of Detroit for systems developments in the Criminal Division of Recorders Court and the Traffic and Ordinance Division of Recorders Court. Subsequently, additional grant funds have been obtained by the Michigan Supreme Court to initiate the development of the Case Information control system (CICS) and the Comprehensive Lower Court Information System (COLOCIS).
- b. "Transferability" of like systems from court to court was established as a systems development objective. Steps taken to accomplish this objective included: multi-court Steering Committees and Task Forces, Supreme Court coordination work, consultant contractual requirements for transferability, development of state standards, and transfer qualities as goals in priority projects.
- c. Implement systems on a "modular" basis, so that affected courts might adjust over an extended period, and so that the costs and high risks of unnecessary complexity could be avoided.

3. Development Progress - 1972

During the Spring of 1972, the Lead Systems Analysts in charge of developing the Traffic and Ordinance System (TOS), Basic Michigan Court System (BMCS), and Case Information Control System (CICS) began laying the groundwork for design, development, and implementation of these systems. The following paragraphs outline development progress during calendar year 1972.

In the case of TOS, which was being prepared for the Detroit Traffic Court, a Systems Manager was hired for Detroit Traffic Court, a small systems staff assembled, and a Steering Committee and Task Force established. Subsequently, a preliminary survey of Detroit Traffic Court was carried out to determine user data needs, equipment requirements, and

interface requirements with other data processing systems and/or agencies. Based on this information, a Request For Proposal (RFP) was prepared to secure consultant assistance in the design, programming, and system test of the TOS system. (Law Enforcement Assistance Administration (LEAA) grant funds through the Office of Criminal Justice Programs (OCJP) had been previously furnished to the City of Detroit to underwrite the cost of involved court personnel, consulting assistance, and equipment rental and/or purchase.) A consultant (Ernst & Ernst) was selected in late August, 1972 and began the TOS development effort with a four (4) man team in September, 1972. By December of 1972, the general system design was commenced.

A similar pattern was followed for the BMCS project. As a result, Westinghouse Justice Institute and Systems Science Development Corporation were selected as coconsultants for the development of the BMCS Criminal and Civil system modules in July of 1972. They commenced work with a six (6) man team in August, and had completed the general and detailed BMCS system design by December, 1972. In addition, an interim criminal data processing system module, named the "Blind Draw" computer system, was designed during this period for use in Detroit Recorders Court. This system provides a weekly computer listing of the following information for each judge in Recorders Court: case number, case originating year, defendant's name, charge number (by M.C.L.A. code), charge identification, complainant data, examination status, bail/jail status, prosecutor's name, defendant attorney's name, next action (pretrial, trial date, sentencing, etc.), continuance/disposition, and Detroit Police Department number. The system was designed to provide a complete case inventory and a method for case status control and management. Furthermore, this interim criminal data processing system was designed to precede the complete Basic Michigan Court System (BMCS). The system was implemented on the Detroit Police Department computer and turned over to the Judicial Data Center in August, 1973.

During 1972, the Case Information Control System (CICS) development effort was initiated. This project effort was directed toward the development of a modest prototype system to be given preliminary testing in the Wayne County Circuit Court, utilizing the Friend of the Court computer. It was carried out primarily by the Lead Systems Analyst in charge, with assistance from Wayne Circuit and Friend of the Court personnel. In the fall of 1972 a grant request was prepared and submitted to the OCJP for LEAA funding to design, program, and implement CICS in all the courts.

A microfilming project and probate court project were established in late 1972 with project managers assigned from the Systems Department staff. A preapplication for a federal grant to develop court microfilming systems was submitted to OCJP. In addition, preliminary efforts were commenced to establish Task Forces and Steering Committees for these projects. Also, an analysis was begun of a computerized procedure for handling Probate Rule 5 (a) (now PCR 1973, 707.3) reporting requirements.

Many of the "development constraints" noted previously became increasingly evident in 1972, particularly after the inception of the major system development projects. Based on the experience of the Systems Department and the involved consultants it became singularly apparent that continuing systems development progress would be seriously jeopardized unless the Supreme Court was able to provide computer and related operating services for exclusive use on court system projects. Accordingly, upon the Systems Department recommendation, the Supreme Court approved the establishment of a Judicial Data Center, with the required computer hardware, and began seeking the necessary concurrence of the executive and legislative branches of State government. (This subject is treated in more detail in the Judicial Data Center section.)

4. Development Progress - 1973

The Traffic and Ordinance System (TOS) and the criminal subsystem of the BMCS project were designed and programmed during 1973. The civil subsystem of BMCS was designed but development was not completed. Originally both projects were scheduled for testing by June, 1973; however, numerous delays were encountered. The principal causes for these development delays were the delays in: obtaining the computer and related terminal hardware for the Judicial Data Center (JDC), establishing the JDC and training operating personnel, obtaining required court systems personnel and consultant personnel, and a variety of problems encountered in testing and debugging both the consultant developed programs and the computer system operating programs furnished by the computer vendor.

An LEAA grant was received by the Supreme Court in January, 1973 that provided funding for the establishment of the Judicial Data Center (JDC) and funding to complete the development of the Case Information Control System (CICS).

Following the systems development process used by the BMCS and TOS projects, a Steering Committee and Task Force were established to monitor these projects and a Request For Proposal was generated to secure consultant assistance. Public Management Systems Division of Planning Research Corporation was selected as the consultant and commenced work in March, 1973 with a three (3) man team. This consultant effort, directed by the Systems Department, culminated in the establishment of the Judicial Data Center in July, 1973. During 1973, the prototype CICS system was tested in Wayne Circuit Court and based on these test results, preparations were completed to implement CICS in the Circuit Courts in January, 1974. Initially the CICS system will utilize data collected from "source document" mailings by the Circuit Courts until computer generated data from the Civil, Criminal, Traffic, and Probate Modules are available.

The "Blind Draw" interim data processing system was improved and enhanced during 1973. Several new reports were prepared monthly. These included an "alias" listing using the Detroit Police Department I.D. number to list: all defendants in Recorders Court, cases by attorney, by defendant's name, and by Probation Officer.

In late 1972 an LEAA grant was awarded to the City of Grand Rapids for the development of a District Court Information System. This project was established under the joint project control of the Systems Department and the City of Grand Rapids. The objective of the project was to perform an in-depth survey of District Court user data needs, equipment requirements, and interface requirements with other data processing systems and/or agencies; and use the information acquired from the survey to develop a Comprehensive Lower Court Information System (COLOCIS). The previous systems design and programming work accomplished in the TOS, BMCS, and CICS projects were to be designed for operation on the computer at the Supreme Court's Judical Data Center.

As in the previous development projects, a Steering Committee and Task Force were established to monitor the COLOCIS project. A Request For Proposal was issued in January, 1973 to solicit consulting assistance. After many unanticipated contract negotiating delays, Touche Ross & Co. was selected as the consultant and work commenced with a five (5) man team in July, 1973. During 1973 the survey was completed and work begun on the conceptual design and general system requirements.

The federal grant requested to establish a microfilming project for the Michigan Court System was not approved by the Office of Criminal Justice Programs because of a lack of funds. Accordingly, this project effort was reduced and redirected toward the end of encouraging local government units to submit individual grant applications for funding to establish local court microfilming projects. In addition, a court rule on microfilming and record retention was proposed for review by the Supreme Court Administrator.

A data processing system developed in Genesee County and enhanced by the Systems Department during 1973 was implemented in several Probate Courts to replace certain manual procedures to monitor the requirements of Probate Court Rule 707.3 (PCR 1973, 707.3) and the forms required by the Supreme Court Administrator under old Rule 5 (a). This system (which was titled for brevity, the Probate 5 (a) System, and will be referred to as such throughout this plan) provides the following products weekly:

a. Master Case List - a listing of all open estates and guardianships in file number sequence that displays the name of the matter, date of bond, the date of the most recent fiduciary activity (account or inventory), and the date of the most recent court activity (notice, extension, or suspension). Matters are removed from the list after all fiduciaries are discharged.

- b. Case Review List a listing of all entries for which accounts or inventories will be required during the following month; sequenced according to the date when the account or inventory is required.
- c. Case Index a listing of alphameric cross-referenced cases.
- d. Audit List a listing of noted errors in submitted data.
- e. Court Room Scheduling (Judge and date cross-referencing).

The Probate 5 (a) System was implemented in seven (7) Probate Courts and is run as a "production" system on the computer at the JDC.

The Systems Department and the Department of Social Services jointly participated in a review of the practicality of providing data processing services from the JDC to operate the Michigan Department of Social Services Child Care and Placement Information System (CCPIS). The system is presently undergoing enhancements.

The Systems Department, in conjunction with other State agencies, is currently involved in a program to develop the Michigan Youth Services Information System (MYSIS), Computerized Criminal History (CCH) with the State Police, Corrections Management Information System (CMIS) with the State Department of Corrections, and improve the judicial process through the use of the State Police Law Enforcement Information Network (LEIN).

A Court Reporting/Recording Services program was established by the Systems Department in 1973. New ways of reporting and recording were investigated, including video tape, the Gimelli voice writer, and computer aided transcript, in an attempt to determine their feasibility for use in the Michigan Court System.

D. Judicial Data Center (JDC)

The development of the BMCS and TOS systems was commenced in the late summer of 1972 predicated on the premise that these systems would be operated on the computer provided by the local government unit supporting the courts in which they were to be implemented. These systems were to be programmed in a universal computer language (COBOL), and were to be designed with a high degree of transferability.

During the initial development stages it became increasingly apparent that these design and programming objectives were not realizable. This inability to provide a high degree of transferability further raised serious questions of the cost and time required to convert the completed BMCS and TOS programs to the computers provided by other local government units to support implementation of these systems in their local courts. Moreover, the extensive amount of computer testing time required for the development of such complex systems raised significant questions of computer test time availability, particularly in light of the existing production operations schedules of the City of Detroit's computer.

Consideration of these issues and their singular effect on system development and implementation in Michigan Courts led the Michigan Supreme Court in late 1972 to seek the cooperation of the Legislature and the Executive Branch in the establishment of a Judicial Data Center (JDC) dedicated initially to court system development and testing, and later to provide computer processing to all Michigan Courts. The principle reasons advanced for the establishment of the JDC included the following:

- 1. The JDC would realize economies in system development by avoiding the proliferation of separate hardware and software systems which do not interface with each other, would permit the establishment of "shared" files, and would also provide an effective way to implement cost-saving procedures.
- 2. The JDC would provide priority for court business and hence operate to reduce case backlogs.
- 3. The JDC would provide a high degree of security and privacy to sensitive court information.
- 4. The JDC would provide important administrative services to the Judiciary and operate as a tool to significantly improve judicial administration.
- 5. The JDC would provide the degree of uniformity in court administrative practices necessary to provide "one court of justice" throughout the State.

Approval was obtained from the Office of Criminal Justice Programs (OCJP) in early 1973 to use existing grant funds. A portion of the grant was used for the Case Information Control System (CICS) project to begin the detailed planning and site preparation for the JDC. The JDC site was established in the Lafayette Building, Detroit to initially guarantee proximity to the bulk of the volume of judicial business, to existing Systems Department locations, and the location of the first courts to implement current systems development projects. Site preparation was completed in May, 1973.

The Burroughs Corporation offered to provide the Supreme Court with the use of a B4700 computer system and related peripheral equipment for a period of one year, commencing in July, 1973, provided maintenance expense was assumed by the Court. Accordingly, in February, 1973 a no-cost lease contract for this equipment was negotiated with the Burroughs Corporation and installation was completed in July, 1973. In the interim period Burroughs provided computer test time for the BMCS and TOS projects at no charge to the Court.

The firm of Analysts International Corporation was selected to supervise the site preparation and procurement of supplies for the JDC during the period April to June, 1973. During this period it was concluded to secure a Facilities Management contract for the personnel to operate and manage the JDC rather than reassign existing

Systems Department staff involved in systems development projects. Accordingly, a Request For Proposal was prepared and the Public Management Systems Division of Planning Research Corporation was selected as the Facility Manager for the JDC for a one-year period, commencing July 1, 1973. The resultant Contract provides for approximately ten (10) full-time personnel to operate the JDC on a one shift basis (10-12 hours per day).

In June, 1973, the Systems Department received an LEAA grant from the Office of Criminal Justice Programs, along with a matching grant from the State to fund continued development of computer systems and the operation of the JDC.

From July, 1973 to December, 1973 the Judicial Data Center provided computer test time to the BMCS, TOS, and CICS systems development projects. In addition, production operation of the "Blind Draw" and Probate 5 (a) Systems has been run on the JDC computer. During this period initial problems with the computer hardware and the operating system software were also resolved. As the size of the files and the computer memory requirements of the developing BMCS and TOS systems increased, additional storage disk packs and computer core were added to the B4700 system, to accommodate these needs.

E. Interim System Development

During the summer of 1973, with the inception of the JDC, several reviews were held regarding its impact on systems development. The reviews included:

- a. A management review by the Special Industry Advisory Group.
- b. A technical review by the Burroughs Corporation.
- c. Internal concluding reviews with project consultants and staff.

These reviews highlighted numerous computer utilization problems such as data communications, data base management, duplicate files and programs, etc. As a result, planning efforts were undertaken to develop an interim court system. This interim court system was planned to provide information services to local courts as a prelude to the more advanced BMCS and TOS systems.

As a consequence of these efforts, a modified version of the Probate 5 (a) System was developed to extend services to the trial courts of both general and limited jurisdiction. Plans were also formulated in late 1973 to incorporate the report features of the "Blind Draw" System. By December, 1973 the interim court system was providing services to the Ingham County Circuit Court and the Grand Rapids 61st District Court, in addition to some seven (7) Probate Courts throughout the State. As this interim system is implemented in each court, the interim data collection procedures of the CICS System will be eliminated for that court.

SECTION IV

GOALS AND OBJECTIVES

A. Goals

Based on the experience of the past two years, the Systems Department has established goals to form a basis for planning future applications and for the effective implementation of these applications. The overall goal of the Michigan Supreme Court Systems Department is to develop in a timely fashion and improve on a continuing basis standardized manual and automated systems and procedures for use by all the Courts in the State of Michigan. This will permit the courts to achieve efficient and effective functioning at justifiable cost, within the constraints of the State Constitution and statutes and the policies of the Supreme Court.

The related subgoals that have been established are:

- 1. To standardize terminology, rules, and manual and automated systems and procedures in all Courts that will provide sufficient and effective administration and develop a uniform "one court of justice" for all Michigan citizens.
- 2. To develop or improve manual and automated systems for all the courts in a manner which will facilitate flexibility in the reporting and usage of data among the courts and the economical sharing of file data.
- 3. To develop or improve manual and automated systems for all the courts that will permit them to interface with other State and Federal agencies within the Judicial Community.
- 4. To develop or improve manual and automated systems for all the courts that will ensure the security and privacy of sensitive data regarding individual citizens.
- 5. To provide all the courts the services necessary for a systematic, organized, and smooth implementation of manual and automated systems they require.

B. Objectives

The Supreme Court Systems Department has established the following objectives as a realistic means of attaining its expressed goals:

- 1. Develop a Records Management program for all the courts in the State during the next five years.
- 2. Develop new, or improve the existing manual systems of each court in the State during the next five years.

- 3. Develop and implement an interim Court Information System, in all Circuit, Probate, and District Courts in the State, where practicable, during the next six years.
- 4. Complete integration of the Traffic, Probate, Criminal, and Civil Modules into an advanced Court Information System providing a full range of services and shared files.
- 5. Implement the advanced Court Information System in all courts in the State (where practicable) during the five-year period commencing in January, 1976.

- 3. Develop and implement an interim Court Information System, in all Circuit, Probate, and District Courts in the State, where practicable, during the next six years.
- 4. Complete integration of the Traffic, Probate, Criminal, and Civil Modules into an advanced Court Information System providing a full range of services and shared files.
- 5. Implement the advanced Court Information System in all courts in the State (where practicable) during the five-year period commencing in January, 1976.

SECTION V

SYSTEMS DEVELOPMENT AND IMPLEMENTATION PLANS

A. Introduction

The systems development and implementation schedules (outlined in this section and contained in the Appendix) are consistent with the overall goals and objectives detailed previously in Section IV. In every instance possible, the experience of the past several years of systems development has been relied upon to provide a high order of realism to these plans. Essentially, these plans are directed toward completing all major systems development during 1974 and systems implementation in all the Courts of the State by 1980.

1. The systems development effort will include:

- a. Completion and implementation of the TOS Module in the Detroit Traffic Court and the Criminal Module of BMCS in the Detroit Recorders Court.
- b. Completion of design and programming changes to the existing Probate 5 (a) System which will incorporate the report features of the "Blind Draw" System, the existing JDC data communications message control system, and a CICS interface that will result in an interim Court Information System available for implementation (where practicable) in all District, Probate, and Circuit Courts in the State.
- c. Completion of design and programming for the advanced Court Information System. This will include completion of the design and programming of the CICS interface, a Criminal Module, a Civil Module, and an advanced Probate Module. It will also include completion of the design and programming changes necessary to fully integrate the aforementioned interface and modules, the Traffic and Ordinance System, and the JDC data communication message control system into a comprehensive information service available for implementation (where practicable) in all the courts.
- d. Develop a Records Management program for all courts in the State. This will include the use of microfilming, record retention, standardization of forms, etc. This may require revision of court rules and administrative procedures.

2. The systems implementation effort will include:

- a. Implementation of the interim data collection procedures of CICS in all Courts in the State.
- b. Implementation of the interim Court Information System in all Circuit, Probate, and District Courts in the State (where practicable).
- c. Implementation of the advanced Court Information System in all Circuit, Probate, and District Courts in the State (where practicable).

B. Systems Development Plans

1. TOS and the Criminal Module of BMCS

During the second quarter of 1974, implementation preparation, system testing for user familiarization, and user training will be completed. Phased parallel operations in the Detroit Traffic Court will begin in May, 1974 and conclude by August. Monitored production operations will commence in May, 1974 and conclude by September, 1974. Beginning in October, with implementation of the TOS System completed, it will be available for integration into the advanced Court Information System. (See FIGURE 1 - SYSTEMS DEVELOPMENT SCHEDULE in the APPENDIX.)

The development cycle of the Criminal Module of BMCS will roughly-parallel that of the TOS Module with the following exception. The Criminal Module will be interfaced with the State Police computer to provide additions to the Computerized Criminal History (CCH) system. (See FIGURE 1 - SYSTEMS DEVELOPMENT SCHEDULE in the APPENDIX.)

2. Interim Court Information System

Design and programming changes will be made to the existing Probate 5 (a) System, incorporating the report features of the "Blind Draw" System, the existing JDC data communications message control system, and a CICS interface by July, 1974. Pilot development and implementation preparation will commence in the Macomb and Ingham Circuit Courts and a District Court to be selected later during January, 1974 and concluded by December, 1974. (See FIGURE 1 - SYSTEMS DEVELOPMENT SCHEDULE in the APPENDIX.)

3. Advanced Court Information System

This development effort will commence in 1974. The CICS interface will be tested by July, 1974. The Civil and Probate modules of the advanced Court Information System will be completed by December, 1974. The TOS module will be changed to provide a multi-court processing capability by June, 1974. Integration and testing of all these modules, with the Criminal module and with JDC data communication message control system will be completed by July, 1975. Pilot development and implementation preparation will commence in April, 1975 and conclude in December, 1975. (See FIGURE 1 - SYSTEMS DEVELOPMENT SCHEDULE in the APPENDIX.)

4. Records Management Program

A Records Management Program will be completed with a forms control system including recommended standardized forms for all courts by June, 1976.

5. Judicial Communications Network

A Judicial Communications Network study will be initiated in February, 1974 and completed by December, 1974. It is anticipated that the resultant plan with a detailed analysis of terminal requirements will be implemented by December, 1976. This plan will necessitate considering alternatives based on interagency planning.

6. Comprehensive Lower Court Information System (COLOCIS)

The COLOCIS project was established initially to develop a comprehensive lower court information system for use by District Courts in the State. To date, an in-depth survey of District Court user data needs, equipment requirements and interface requirements with other agencies and data processing systems has been completed. Based on the present and anticipated systems development efforts and the interim systems products presently available, there is no further requirement to develop an independent District Court data processing system module. Accordingly, this project will be restructured and completed by June, 1974.

7. Microfilming

The priority of other systems development efforts and continuing difficulty in the securing of funds for microfilm systems and equipment require postponing extensive effort on these systems until 1975. In early 1975 the Systems Department will review this subject to consider reestablishing a microfilm system development project including Computer Output Microfilming (COM).

8. Court Reporting/Recording

A Court Reporting/Recording Service was established in 1973 to handle all Reporter/Recorder related problems. Pending transcript, the Circuit Court is being surveyed to determine if the backlog in the court system can be attributed to Reporters, and if so, how to alleviate that backlog. Alternate methods of Court Reporting are being investigated to determine if there is, or can be devised, a quicker, easier method of producing the official court record. A manual on procedures and forms has been developed for the use of Reporters/Recorders, and instructional seminars for District Court Recorders have been planned. An attempt is being made to certify Reporters/Recorders. During 1974 there will be a continued investigation of court reporting and recording systems. A report outlining their feasibility, expected application, expected development cost, and equipment cost projections will be prepared by October, 1974.

9. New Systems and Applications

The priority of completing the existing systems development projects and their implementation preclude the initiation of any extensive efforts to develop new systems or applications during 1974. Accordingly, a "New Systems and Applications" project will be established in early 1975.

C. Systems Implementation Plans

1. Considerations and Constraints

Considerable systems development effort has taken place during the past two years. However, as noted previously in this plan, completion of the advance Court Information System is expected to require an additional two years of development effort. In light of this consideration, and with a number of interim systems services already or soon to be available, the Systems Department plans to commence full implementation of the interim Court Information System early in 1975. This policy conclusion is supported by the practical fact that implementation of the interim Court Information System will allow the affected courts to adjust to a systems and data processing environment over an extended period of time. Moreover, the "feedback" from the courts during and after implementation will be useful in the continuing advanced systems development effort as well as the entire court systems technology program.

In preparing the implementation schedules, a number of criteria were reviewed in order to determine the implementation priority among the courts. These included:

- a. Annual case volumes of each court by type of case (Civil, Criminal, Traffic, etc.). (Source: Supreme Court 1972 Annual Report Including Judicial Statistics)
- b. Total 1972 case volume of each court (Probate Court data not available). (Source: 1972 Judicial Statistics)
- c. Reported crime rates and volumes, and population densities by jurisdictional areas of the courts. (Source: Standard Police Automated Resource Management Information System (SPARMIS) project report)
- d. Geographic proximity of courts to each other and to those previously implemented.
- e. Anticipated degree of difficulty in implementing the systems in the larger courts.
- f. The degree of previous systems experience in the courts.

2. Interim Court Information System Implementation

a. General

The interim Court Information System consisting of the modified Probate 5 (a) System, the JDC data communications message control system and a CICS interface will be implemented in District, Probate and Circuit Courts.

C. Systems Implementation Plans

1. Considerations and Constraints

Considerable systems development effort has taken place during the past two years. However, as noted previously in this plan, completion of the advance Court Information System is expected to require an additional two years of development effort. In light of this consideration, and with a number of interim systems services already or soon to be available, the Systems Department plans to commence full implementation of the interim Court Information System early in 1975. This policy conclusion is supported by the practical fact that implementation of the interim Court Information System will allow the affected courts to adjust to a systems and data processing environment over an extended period of time. Moreover, the "feedback" from the courts during and after implementation will be useful in the continuing advanced systems development effort as well as the entire court systems technology program.

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- d. Geographic proximity of courts to each other and to those previously implemented.
- e. Anticipated degree of difficulty in implementing the systems in the larger courts.
- f. The degree of previous systems experience in the courts.

2. Interim Court Information System Implementation

a. General

The interim Court Information System consisting of the modified Probate 5 (a) System, the JDC data communications message control system and a CICS interface will be implemented in District, Probate and Circuit Courts.

b. Implementation Phase

FIGURE 2 - SYSTEM IMPLEMENTATION SCHEDULE - MAP and FIGURE 3 - SYSTEM IMPLEMENTATION SCHEDULE, outline the chronological order of planned implementation in the Courts of Michigan. The basic ordering is by Circuit Court which includes all Probate and District Courts within the Circuit Court jurisdictional boundaries. Municipal Courts have not been included on the schedules but will be after their District Court status is determined by pending legislation. It is expected that implementation of groups of courts in this fashion will facilitate the total effort required and reduce the costs as well.

FIGURE 3 also indicates the month in which the implementation effort is planned and the expected duration. The amount of time required to implement the interim Court Information. System has been estimated at four (4) man weeks of effort over a two-month period, or approximately two courts per two-month period per man.

Implementation will commence in March, 1975 with two implementation teams, each team consisting of a supervisor and a systems analyst. At this level, the duration of the implementation period is estimated to be slightly over four (4) years. By May, 1979 the interim Court Information System will be operational in all Circuit, Probate and District Courts (where practicable).

The duties of each team will be as follows. Each team will do a complete survey of court data requirements, present manual or automated systems and procedures, terminal and line requirements, facility and work flow layouts, as well as forms and forms controls.

Based on information obtained from this survey, forms standardization and controls will be implemented, data entry and retrieval requirements will be established, manual systems will be updated, and court personnel will be trained. Parallel operations will be established until an appropriate cutover to production operations is obtained.

c. CICS Implementation

The implementation schedule for the CICS system is as follows:

- 1) All Circuit Courts, commencing in January, 1974 and concluding in June, 1974.
- 2) All District Courts, commencing in July, 1974 and concluding in June, 1975.

3) All Probate Courts, commencing in July, 1975 and concluding in December, 1975.

The implementation effort will be accomplished by letter requests to all Circuit Courts in the State in January, 1974, soliciting a copy of the front sheet of all significant pleadings, motions, final orders, judgments, etc. whenever these documents are filed for a case. This letter will additionally request that these copies be made or secured on a daily basis and mailed to the Judicial Data Center (JDC) each week. These copies will then be coded and processed at the JDC by the CICS system, which will prepare monthly and quarterly case volume, case aging, and work load reports. Follow-up meetings for further orientation and training in this interim data collection, coding methods, and use of reports will be schedules throughout the State as discussed above, with appropriate personnel from all the affected Courts. Implementation in the District and Probate Courts will be accomplished in a similar fashion.

3. Advanced Court Information System Implementation

a. General

The advanced Court Information System is the planned second generation system for the Michigan Courts. It will include the following enhancements to the interim system:

- Civil Module
- Criminal Module
- Traffic Module
- Probate Module
- CICS Interface
- Data communication and message control system

b. Implementation Plans

The advanced Court Information System will be implemented in each court in the State in the same manner and priority as the interim system, commencing in January, 1976. Generally, this implementation will follow the interim system by about one year, with the last courts upgraded by December, 1980. (See FIGURE 3 - SYSTEM IMPLEMENTATION SCHEDULE.) This procedure will allow a smooth transition to the advanced system by virtue of the experience each court will have obtained through interim systems operations.

The amount of time required to implement the advanced Court Information System has been estimated at six (6) man weeks of effort over a three-month period, or approximately two courts per three-month period per man.

Implementation will commence in January, 1976 with two implementation teams, each team consisting of a supervisor and two systems analysts. At this staffing level, the duration of the implementation period for the advanced system will be five (5) years; at this time (December, 1980) all courts in the State will be operational on the advanced Court Information System. The functions of the implementation teams for the advanced system will roughly parallel those of the interim system teams.

SECTION VI

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT

A. Systems Development Cycle

The introduction of systems technology to the courts in Michigan has followed a traditional pattern. This pattern is, of course, the cycle of systems development followed by systems implementation, and finally by production operation and maintenance of the developed and implemented systems. During the first several years (1972-73), the Systems Department has been almost exclusively involved in systems development effort. Now that the first products of this development effort are becoming available and the Judicial Data Center has been established, the Systems Department will be increasingly required to focus on the task of systems implementation and production operations. This transition from the development mode must be reflected in the organization structure and personnel requirements.

B. Organization Structure and Personnel Requirements

1. Organization Structure

The previous organization structure of the Systems Department was oriented toward systems development and hence the structure focused on individual project managers for each of the major development efforts. The next several years of effort will be directed toward completion of the systems development projects and their ultimate implementation in the courts. Accordingly, commencing in 1974, the Systems Department shall be structured as shown in FIGURE 6 - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT - ORGANIZATION CHART.

Each of the functional areas represented on the organization chart will be established and manned, within funding and schedule constraints, to support the systems development and systems implementation effort outlined previously in Section V. In addition, the organization chart reflects the reporting relationships within the Supreme Court and the relationship of key advisory agencies and groups.

2. Systems Development and Implementation - Personnel Requirements

FIGURE 7 - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT PERSONNEL REQUIREMENTS, provides a realistic overview of the personnel manning level required to carry out the systems development and implementation plans outlined in Section V. The manning levels have been staged on an annual basis. They reflect the heavy systems development effort during 1974 and subsequent decline in this activity to allow for systems implementation. A continuing level of systems development effort is also reflected since it is anticipated that the implementation effort will generate "feedback" which will require further development work.

The implementation effort assumes a higher level during the latter years, consistent with the implementation plans in Section V. After this implementation effort is completed, these personnel will be required for new systems development and enhancement projects as well as for production operations. The technical support required for implementation is also reflected as a new support requirement of the Systems Department.

3. JDC Personnel Requirements

The JDC has been operated under a Facility Management (FM) contract since July, 1973. The Facility Management Contract provided the computer operators, keypunch machine operators, and supervision necessary to man the B4700 computer at the JDC and to provide assistance in the use of the Burroughs computer system operating software by the consultants and Systems Department staff.

The Facility Management arrangement will be phased out during 1975. JDC operations will thereafter be manned by Systems Department personnel. This new arrangement will be less expensive, provide more control over JDC operations during periods of critical systems development and implementation effort, and provide for a higher order of retention of operations expertise.

As indicated previously, the JDC has run primarily a one-shift operation of the B4700 computer to provide support for systems development testing. However, commencing in 1975, the JDC will be processing information from user courts that are scheduled for implementation during that period. Accordingly, the JDC will be required to establish an expanded three-shift computer operation.

It will be necessary to establish a systems and program maintenance section to maintain and change as required, the developed court data processing systems. All court system and program maintenance will be accomplished by JDC staff personnel only, and not court user staff, in order to maintain uniformity and standardization of these systems.

In order to accommodate the additional requirements posed by systems implementation throughout the courts of the State, the JDC will be reorganized and structured in 1974 as shown in FIGURE 6 - SYSTEMS DEPARTMENT ORGANIZATION CHART. Thus, the JDC will be managed by a competent data processing operations executive who will supervise an Operations Group and a Maintenance Group, each with appropriate staff to carry out those functions.

As the volume of data processing operations increases as a result of statewide systems implementation, the number of operations and maintenance personnel will increase. FIGURE 7 - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT PERSONNEL REQUIREMENTS, outlines the total personnel required by functional classification for the JDC during the period 1974 through 1980.

SECTION VII

JUDICIAL DATA CENTER

A. Introduction

Based on the experience gained from the operation of the JDC during 1973 by the Michigan Supreme Court Systems Department, it is almost rhetorical that the scope and operations of the JDC must be expanded. The JDC is inescapably the vital link to realization of the goals and objectives of the Systems Department. Continued systems development and ultimate systems implementation in all of Michigan's Courts requires the availability of this computer processing facility for both development testing and production operation. Accordingly, this section of the Long-Range Plan provides a review of the detailed plans necessary to expand the capability of the JDC to support the previously outlined systems development and implementation plans.

B. JDC Hardware Requirements

1. Computer Requirements

The computer system presently installed at the JDC is a Burroughs B4700 system with 500 KB of core. This system has been furnished by Burroughs Corporation at no cost (except for maintenance) to the Supreme Court until June 30, 1974. (See FIGURE 4 - JDC BASIC EQUIPMENT CONFIGURATION for details.) This system or an equivalent one will be adequate to handle systems development requirements during 1974, with no additional core required.

So that significant delays in the systems development effort scheduled for 1974 might be avoided, the Systems Department will lease the present B4700 system from the Burroughs Corporation for an additional twelve (12) month term, until July, 1975. A Request For Quotation (RFQ) will be issued by the Systems Department late in 1974 to secure permanent hardware. The RFQ will be written to solicit quotations of price and delivery for two (2) complete computer systems, each equivalent to the present B4700 configuration; one for delivery by July, 1975 and the other as soon as possible thereafter, but no later than December, 1975.

The second system will be required for backup of the JDC for a number of reasons:

a. Since on-line data entry is an integral part of the advanced Court Information System and also since there will be ultimately about 250 different court users throughout the State, it is imperative to have reliable computer processing backup in the event of equipment failure.

- b. There is very little prospect of securing reliable backup in the event of equipment failure from other adjacent noncourt computer facilities because of the unique characteristics of the communications network, number of users and terminals, terminal mix, and communications software required to service the State court system. (This qualification does not apply to the JDC's batch operations which can be run at an alternate noncourt facility with an equivalent computer.)
- c. The security and privacy problems incident to processing sensitive judicial information at alternate and equivalent noncourt computer facilities.

The plans outlined above will provide for relatively uninterrupted systems development and systems implementation effort during 1974 and early 1975, notwithstanding any change in computer vendor and hardware. This is because selection of a computer vendor other than Burroughs will still allow for continuation of the systems development and implementation effort with the B4700 system during the period July, 1974 to July, 1975 while allowing a six-month period for conversion of the existing court programs to the selected vendor's computers. In addition, the plans outlined above will provide sufficient computer processing hardware to meet all the systems implementation objectives for the courts from 1975 through 1980.

2. Terminal and Disk Drive Requirements

Disk pack storage will be required at the JDC for implementation of the interim Court Information System, commencing in January, 1975. In addition, data communications terminals will be required in each court throughout the State in order to establish the on-line data communications necessary for statewide implementation of the advanced Court Information System, commencing in January, 1976. Disk pack storage for the interim Court Information System will also be utilized by the advanced Court Information System. FIGURE 5 - TERMINAL AND DISK DRIVE REQUIREMENTS SCHEDULE, summarizes these requirements for the period 1975 through 1980.

Terminal requirements were estimated by analysis of the case volumes for each court listed in FIGURE 3, and by assuming one terminal for each 5,000 nontraffic cases (or fraction thereof) disposed per year, and/or one terminal for each 25,000 traffic cases (or fraction thereof) disposed per year.

These requirements are based upon presently available information and are useful for planning estimates. Actual terminal requirements will be determined by the Judicial Communications Network Study. Factors to be investigated in the aforementioned study will include network design, terminal specifications, use of more sophisticated terminal devices in large courts, etc. It should be noted that the case volumes in some very small courts may not warrant a data communications terminal.

Disk drive requirements were determined utilizing the following considerations. As the courts are automated, the total storage requirements are increased by the annual case volume, shown in FIGURE 3, multiplied by the average case record length, approximately 700 characters. Then, as the cumulative storage requirements reach increments of 100,000,000 characters, an additional dual-drive containing two disk packs is required. This is reflected in FIGURE 5. Because case volume statistics for Probate Courts were not available, their respective storage requirements were not defined at this time and therefore, are not included in the totals.

Terminal requirements for Detroit Recorders Court and Traffic Court were also not included in FIGURE 5, since these courts are already equipped with terminals and other data entry devices. Similarly, no disk drive requirements are shown in FIGURE 5 for these courts since the current configuration (and on order) will suffice.

C. JDC Site Considerations

The JDC will continue to be located in Detroit during 1974 and early 1975 for essentially the same reasons that this site selection was made initially i.c., proximity to the bulk of the volume of judicial business, the Systems Department location, and the location of the first courts to implement current systems development projects. This decision is also supported by considerations of the potential disruption to ongoing development projects, that would result from a relocation during that period. However, the specific site in the Lafayette Building will be reviewed during 1974 to determine space availability for the additional computer hardware and computer operating personnel required.

Upon completion of the major systems development projects in 1975 and completion of systems implementation in the Detroit metropolitan area courts in 1976, the Systems Department will review the question of moving the JDC to Lansing. The principal determinants of such a move would be:

- 1. Better coordination of Systems Department and Judicial Data Center activities with the Supreme Court Administrator's Office and other State agencies.
- 2. The feasibility of utilizing a statewide data communication system presently under discussion with the Executive Branch of State Government.
- 3. Potential line cost economies incident to a central location in the State.

SECTION VIII

FINANCIAL REQUIREMENTS

A. Estimated Personnel Costs

The personnel required to carry out the systems development, systems implementation, and production operations effort specified in the Systems Department's Long-Range Plan for Systems Technology are outlined in FIGURE 7 - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT PERSONNEL REQUIREMENTS. SCHEDULE - B - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT, LONG-RANGE PLAN - SYSTEMS TECHNOLOGY, ESTIMATED PERSONNEL COSTS following, is a summary of the estimated cost of these personnel for the fiscal years 1974-5 through 1979-80.

The personnel costs for 1974-5 were derived as follows:

- 1. Each position description on FIGURE 7 was equated with a correlative Michigan Civil Service position description and salary range.
- 2. The mid-point in each salary range was selected as an assumed base salary amount.
- 3. This assumed base salary amount was factored by 25% (an amount assumed adequate to estimate the costs of associated fringe benefits for each required employee).
- 4. The product from above was in turn factored by the number of personnel in that position description required during 1974.

The personnel costs for 1975-6 and each succeeding year were derived in an identical fashion. However, the sum of the assumed base salary and the assumed fringe benefit was in turn factored cumulatively by 10% for each year, through 1979-80, to provid for merit increase as well as the relatively unforeseeable contingencies of inflation.

B. Estimated Equipment Costs

1. Judicial Data Center

Item 1, Judicial Data Center on SCHEDULE C - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT, LONG-RANGE PLAN - SYSTEMS TECHNOLOGY, ESTIMATED EQUIPMENT COSTS, outlines the estimated rental cost of the computers, peripheral equipment, and Disk Pack Drives (for data storage) required at the JDC through 1979-80. The rental cost of the computers and peripheral equipment during this period is based on cost information available from vendor estimates for a configuration (or equivalent) substantially as shown in FIGURE 4 - JDC BASIC EQUIPMENT CONFIGURATION.

The estimated rental cost of the Disk Pack Drives, shown in the aforementioned item 1. is based on an assumed rental cost of \$3,000 per month for each set of two (2) Disk Packs and one (1) Dual Drive. This monthly rental cost was applied to the Disk Pack Drive requirements outlined in FIGURE 5 - TERMINAL AND DISK DRIVE REQUIREMENTS SCHEDULE in order to obtain the cost estimate shown in item 1. of SCHEDULE C.

2. Courts

Item 2, Courts, on SCHEDULE C outlines the estimated costs of the Data Communications Terminals, and associated lines that are required in the courts throughout the state for implementation of the advanced Court Information System. The monthly rental costs for these terminals and lines has been assumed as follows:

Data Communications Terminals Line Costs

\$350 per month 20 per month

The monthly rental costs for the Data Communications Terminals were applied to the requirements for equipment outlined in FIGURE 5 - TERMINAL AND DISK DRIVE REQUIREMENTS SCHEDULE. These rental costs were also applied for fiscal year 1974-75, to the Data Communications Terminals already installed or on order.

The Line Costs were derived from the installation requirements shown in FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE - as follows:

- a. It was assumed that each Circuit, Probate, and District Court would receive its full complement of terminals in the first month of scheduled implementation for the advanced Court Information System and they would be in use thereafter for the balance of the year. Each court would require one line, to which more than one terminal may be connected.
- b. Therefore, the number of courts scheduled for implementation during 1976 was multiplied by the number of months that the terminals were to be operated thereafter during the year and this product was in turn multiplied by \$20 per month.
- c. This process was repeated for each successive year and the resultant product, by year, was added to the cumulative total of the courts for which the advanced system had been implemented in accordance with FIGURE 3.

This assumption will be tested in succeeding years based on feed-back from continuing systems development and systems implementation efforts.

C. Summary of Estimated Funding Requirements

SCHEDULE A - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT LONG-RANGE PLAN - SYSTEMS TECHNOLOGY, SUMMARY OF ESTIMATED FUNDING REQUIREMENTS, aggregates the annual costs outlined in SCHEDULES B and C for personnel and equipment, respectively. In addition, SCHEDULE A provides an estimate of certain operating costs (i.e., maintenance, travel, and miscellaneous), and also provides an estimate of the costs of acquired contractual services for fiscal year 1974-75. The basis for these latter estimates is provided in the notes to SCHEDULE A.

D. Funding Sources

The cost estimates contained in this section have been prepared independent of any consideration of funding sources. The funds to carry out this entire LONG-RANGE PLAN FOR SYSTEMS TECHNOLOGY are expected to derive variously from Federal grants, State legislative appropriations, private grants, or a combination of such funding sources. It should be noted further that the personnel cost estimates contained herein are based on the assumption that all systems development and implementation tasks will be carried out by the staff of the Systems Department and the Judicial Data Center. Hence, any use of consultant personnel for completion of such tasks will require an appropriate increase in these estimates to account for this added expense.

SCHEDULE A

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT

LONG RANGE PLAN-SYSTEMS TECHNOLOGY SUMMARY OF ESTIMATED FUNDING REQUIREMENTS

	====	======================================	1974-75	1975-76	FISCAL YEAR I 1976-77	ENDING JUNE 30 1977-78	1978-79	1979-80	
	1.	Personnel Costs:	\$ 837,000	\$1,141,000	\$1,377,000	\$1,537,000	\$1,691,000	\$1,861,000	
*	2.	Equipment Costs: A. Judicial Data Center B. Courts	608,000 94,000	993,000 193,000	1,286,000 648,000	1,340,000 932,000	1,367,000 1,164,000	1,394,000 1,408,000	
•		SUBTOTAL	702,000	1,186,000	1,934,000	2,272,000	2,531,000	2,802,000	
VIII-4	3.	Operating Costs A. Maintenance-Note 1 B. Travel-Note 2 C. Miscellaneous-Note 3	70,000 10,000 210,000	119,000 38,000 285,000	193,000 92,000 344,000	227,000 101,000 384,000	253,000 111,000 423,000	280,000 122,000 465,000	
		SUBTOTAL	290,000	442,000	629,000	712,000	787,000	867,000	
	4.	Contractual Services-Note 4	400,000	-0-	-0-	-0-	-0-	-0-	
		TOTAL	\$2,229,000	\$2,769,000	\$3,940,000	\$4,521,000	\$5,009,000 ======	\$5,530,000 ======	

- Note 1 Maintenance costs estimated to be 10% of total equipment costs (Item 2) (Rounded)
- Note 2 Travel costs for 1974-5 are estimated to be \$10,000. Succeeding years are estimated to be 30% of implementation services personnel costs (Rounded) (See Schedule B, Item 3)
- Note 3 Miscellaneous costs (supplies, utilities, rent, etc.) estimated to be 25% of the total of total personnel costs (Item 1) (Rounded)
- Note 4 Estimated contractual service costs for 1974-5 only, i.e., JDC Security, Training, Research and Evaluation, etc.

SCHEDULE B

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT

LONG RANGE PLAN-SYSTEMS TECHNOLOGY ESTIMATED PERSONNEL COSTS

			1974-75	1975-76	FISCAL YEAR 1976-77	S ENDING JUNE 30 1977-78	1978 -7 9	1979-80
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	1.	Administration	\$109,000	\$ 120,000	\$ 132,000	\$ 145,000	\$ 160,000	\$ 176,000
	2.	Development Services	236,000	259,000	170,000	187,000	206,000	227,000
	3.	Implementation Services	-0-	127,000	305,000	336,000	369,000	406,000
1	4.	Technical Support	70,000	77,000	85,000	94,000	103,000	113,000
ì	5.	Court Services	44,000	48,000	53,000	58,000	64,000	71,000
į	6.	Administration - JDC	42,000	72,000	90,000	99,000	109,000	120,000
	7.	Operations Group - JDC	206,000	277,000	320,000	352,000	387,000	426,000
LIA.	8.	Maintenance Group - JDC	130,000	161,000	222,000	266,000	293,000	322,000
I-5	•	TOTAL	\$837 , 000	\$1,141,000	\$1,377,000	\$1,537,000 ========	\$1,691,000	\$1,861,000 =======

SCHEDULE C

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT

LONG RANGE PLAN-SYSTEMS TECHNOLOGY ESTIMATED EQUIPMENT COSTS

!				FISCAL YEAR	S ENDING JUNE	30	
		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
		188888888888		:-=		=======================================	
. 1.	Judicial Data Center:						
	A. B4700 Computer (or Equiv.) &						
	Peripherals) See Note	\$ 540,000	\$ 540,000	\$ 540,000	\$ 540,000	\$ 540,000	\$ 540,000
	B. Back-up Computer &						
1	Peripherals		167,000	334,000	334,000	334,000	334,000
1	C. Disk Pack Drives	54,000	270,000	396,000	450,000	477,000	504,000
•	D. Key-Disk Data Entry	14,000	16,000	16,000	16,000	16,000	16,000
T.					•		
9-TJ	SUBTOTAL	\$ 608,000	\$ 993,000	\$1,286,000	\$1,340,000	\$1,367,000	\$1,394,000
2,	Courts:				•		
.51 3	A. Data Communication Terminals	\$ 92,000	\$ 189,000	\$ 637,000	\$ 912,000	\$1,133,000	\$1,364,000
	B. Line Costs	2,000	4,000	11,000	20,000	31,000	44,000
1	SUBTOTAL	\$ 94,000	\$ 193,000	\$ 648,000	\$ 932,000	\$1,164,000	\$1,408,000
:	TOTAL	\$ 702,000	\$1,186,000	\$1,934,000	\$2,272,000	\$2,531,000	\$2,802,000
		=========					=========

Note - Equipment with an annual lease value of \$540,000 furnished for Fiscal 1973-74 to the JDC by Burroughs Corporation at no charge.

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT

APPENDIX

TO

LONG-RANGE PLAN

FOR

SYSTEMS TECHNOLOGY IN THE MICHIGAN COURTS

December, 1973

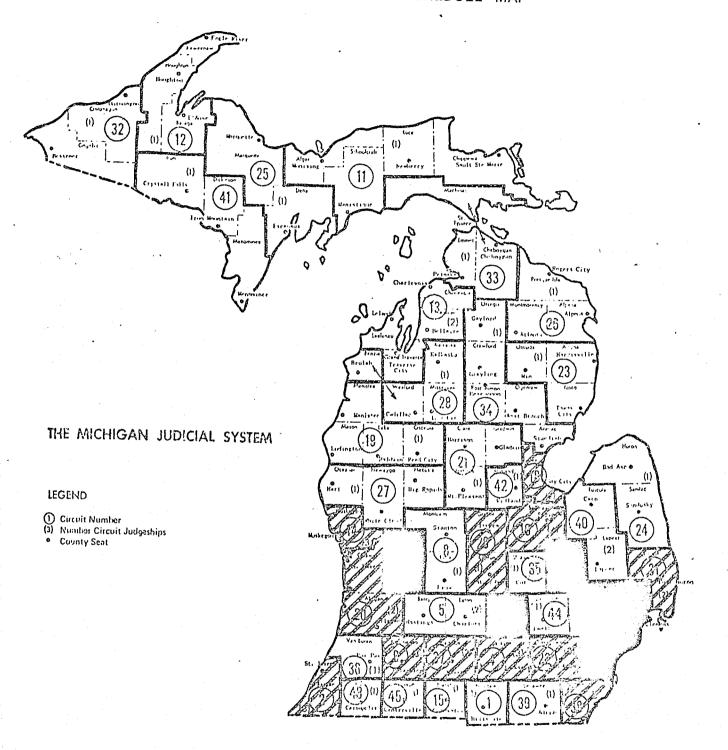
FIGURE 1 - SYSTEMS DEVELOPMENT SCHEDULE

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TOS MODULE - DETROIT TRAFFIC COURT																								
Implementation Preparation	×	x	x	×																				
Parallel Operations					×	x	x																	
Production Operations					x	×	X	х	Х															L
BMCS CRIMINAL MODULE – DETROIT RECORDERS COURT																								-
Implementation Preparation	×	×	×	×	+		-			-	-					-	\vdash		-				-	-
Parallel Operations	1		┼	x	-											-	-	\vdash		 			-	-
Production Operations .	-	_			╢	×	×		-								-	-	-	_				-
CCH Line to State Police	x	x	X	×	-	╁	\vdash	╁──																_
INTERIM COURT INFORMATION SYSTEM					-				_										-	-				_
Expansion of Probate 5(A)	×	×	×	×	 x	×	_	-								$\frac{1}{1}$	-	-	\perp	_	-			L
Blind Draw Report Features	+-	×	╁╴	├-	┢	-	╁		-							-	-	-		-	-			-
Data Communications	+	X	-	-	-	-	┼	-			_	'				-	+	\vdash	-	-	<u> </u>			-
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Pilot Development and Implementation Preparation	-	-	├		┼	 	 -	x	X	х	×	Х												-
ADVANCED COURT INFORMATION SYSTEM						_														-	_			
• CICS Interface	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					-	-	-	-	-						-	-	-	+	-				+
Program & Test Civil Module	†	X	<u> </u>	†-	╁	-	\vdash	1		_	_	-	-			-	+	╀	+	\vdash	-			-
Design, Program & Test Probate Module	1				1	 	1	×	Г		_					-	-		-	-	\vdash	-		$\frac{1}{1}$
Design and Program TOS Multi-Court Changes	X	X			Ι_	1	1	×	×	X	X	X				-	-	-	-	\vdash				-
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Data Communications	-		-	-	\vdash	-		Τ-	1							1	X	1	_	+-	-	-	-	+
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Pilot Development and Implementation Preparation	-	-	-	-		-	-	-				_				>	(×	X	× ×	×	×	X	×	-
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UDICIAL COMMUNICATIONS NETWORK STUDY	X	X	X	X	X	X	X	X	×	X	X	X				-	-	-	-	_	-		 	-
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FIGURE 2
SYSTEM IMPLEMENTATION SCHEDULE - MAP



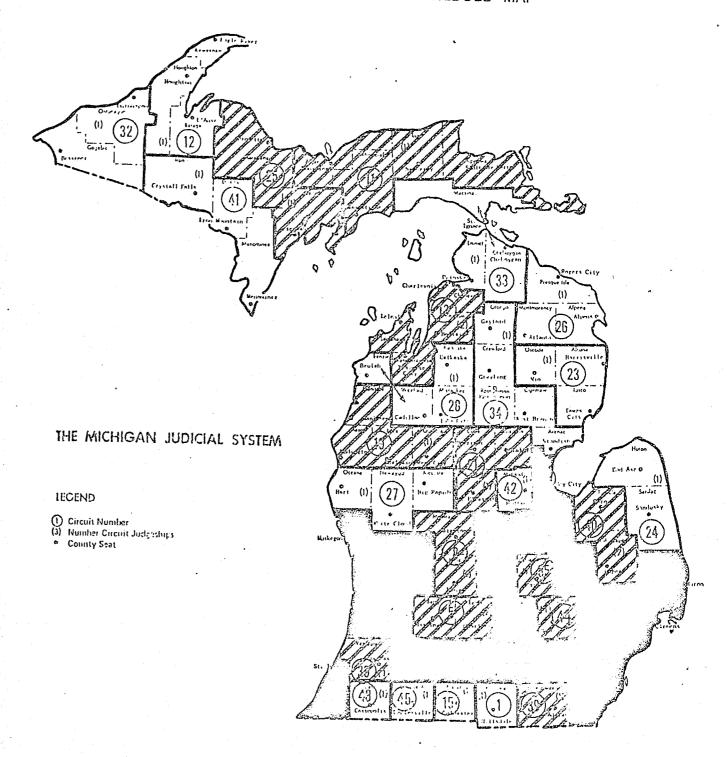
FIGURE 2
SYSTEM IMPLEMENTATION SCHEDULE - MAP





Previously Implemented

FIGURE 2
SYSTEM IMPLEMENTATION SCHEDULE - MAP







Previously Implemented

FIGURE 2

SYSTEM IMPLEMENTATION SCHEDULE - MAP





Previously Implemented

X = Interim System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE				19				_1				97					:			19	77							197	8_				_			979								198	_0د		
COURTS	VOLUME	JF	M	AF	4 3	JA	SC	H	D.	F	M F	M	j,	JA	S	ON	D	JF	M	AR	3 1	J	1 5	0 1	D	JF	M	AN	III.	A	SE	N	DI	F	MA	M]]	A	SO	H	DJ	F	MI	AM	1	JA	S	0
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17th Circuit	5,005	П														Т	П	\top	T	П	1	П	7	П	П	\top	\prod	\neg	П					\prod	T	П		П	\top	П		П	T	\top	П		П	Γ
61 District	65,478	П	\top												\sqcap	7	П	$\neg \Gamma$	1	IT	7				\top	\neg	\prod		\sqcap		\sqcap	\sqcap		\sqcap	T	\sqcap	1	П	T	\prod	T	П	T		\prod	\top	П	Γ
63 District, 1st. Division	9,267	TT	11	7	\top			\sqcap	\neg				\neg	7	\sqcap	7	\sqcap	T	T	П	1	П	1		\Box	\neg			\sqcap			TT	Т	П	7	П	7			П		Π	\top	T		T	П	Γ
63 District, 2nd Division	12,131	П	\sqcap	T			П	\prod		П	1		\neg		\sqcap				7	П	T	П	1	П		1	\prod		П						\top			П		П	T	IT	T	T	П	T	П	Γ
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OAKLAND COUNTY			×	x >	< x			T	-	00	0 0	00	0						\top		1	П				_	\sqcap		П	\Box		П	T	П	T	П	7	\sqcap	T	П	7	П	T	T	П			_
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Sth Circuit	15,320	T	\sqcap		77		П	\Box	\exists		1			\top		\top	\Box	T	T	П	1	П	T			7	П	T		T			T		T		T		T			\prod	T	T	\prod	T	\sqcap	٦
43 District	34,206	\prod	\sqcap	1	\sqcap		П	\top	7			\top		1	П			T	T			\sqcap	1						\prod												T			\prod		\prod		
44 District	21,566	11		丁	\sqcap		11	77	\neg		\neg	\top	1		П	7	П	T	1	П	7	П	T		\top	\neg		\top	П										T		T	IT	T	11		11		ı
46 District	28,848	T	\top	1			T		\neg		T			\top	\sqcap	\top	П			П	7	П	T		\sqcap	\top		7	П	П	T	П	T			П	\Box		T	П	T	П	T	\prod	T	\prod	\neg	
47 District	12,640	11	\top	\neg	77		\sqcap	\Box												П	T	П	\top		\Box	7	\sqcap		П			H	7	\neg						П	7	П		П	T	П	T	
48 District	23,682	11	11	\top			П	\top	_		T	T	\top		\sqcap		П		1	П			T		\prod			\top	П				T						T	П	T		T	П		П	T	
50 District	28,877	11	\top	\neg				11	7	\top				\top		1	П	T	T		T	П	T		П				П			П		\top	Т	\Box	П	\Box		\prod	Т		T	\prod	\prod	\prod	\perp	
51 District	16,129	T		1	11	7	\Box	\sqcap	1			\sqcap	7	1	\sqcap	\top	\sqcap	$\neg \vdash$			1	П			T			7					T						Γ	\prod		\coprod		П	\Box	\prod	I	
52 District, 1st Division	14,931	\sqcap	\top	_	\top	\top	\sqcap	17	\neg	П		\top	T	\top	\sqcap		П	Т	T	П	T	П			П			T	П	П													\perp			П	\perp	
52 District, 2nd Division	14,251	\sqcap	\sqcap	+	11	\top	11	\top	7	П		\top	\neg	T	П	T	П	\top		П	T	П		П	П	T	П	Τ	П	\prod	T															Ш	\perp	
52 District, 3rd Division	12,805	1	+1	1	11	\top	\top	11	1	\sqcap		\sqcap	\top	1	П		\sqcap	T	1	П	T	П		П	П		П	Τ	П				\mathbb{L}	\perp									\perp	Ш	\perp	Ц	\perp	1
Total	223,256	\sqcap	\top	\neg	\Box	1	\Box	\top	1	\top		1	\top		П	1	\sqcap	\neg		П	T	П			П	T	П		П								\perp			Ш	\perp	Ш		\coprod	\perp	Ш	\perp	
		11	\forall		\top	十	11	11	十	11		. 1	\top	\top	\Box	1	\sqcap	\top				П			П	\top	П	\top	П	П	T			\top	П		П	T	П	П	\Box		T		T	П		I
MACOMS COUNTY		+	+	7	+	x x	11	11	_	\top	-	0	0	1	\Box	十	\Box	1			1	\sqcap			\sqcap	\top	\sqcap	T	П	П		П		7			\prod		\prod	\sqcap	17	\mathbf{I}	\mathbb{T}		\perp	\prod	\perp	Ι
Probate Court		11	11	\top	11	_	\sqcap	11	_	\top	+	11	十	\top		1	\sqcap	1	\top	\sqcap	1	П				\top	\sqcap	T	1	\sqcap	\top	П					\prod	\top		\perp		\perp	\perp	П	\perp	\Box		
16th Circuit	7,904	tt	+	+	1	+	11	$\dagger \dagger$	十		十	\top	1	+	\Box	_	\sqcap	1	T	П	T	П			\sqcap	\top	\prod		П	\prod		П		\perp		$oldsymbol{\mathbb{I}}$		\Box		$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$		\perp		П		Ш	\perp	1
37 District	45,469	ff	11	+	++	1	11	\top	十	77	十	77	7	\top	\Box	\neg	\sqcap	1	T	\sqcap	1	\sqcap			77		П		П		T			$oxed{oxed}$		$oldsymbol{\mathbb{I}}$		\perp						Ш		Ц		1
39 District	26,340	11	++	+	11	+	11	$\dagger \dagger$	1	11	十	11	\neg			7	\sqcap				1				\sqcap		П	\top		\sqcap		П					П	T	\coprod	$oxed{oxed}$	\coprod		\prod_{i}			Ц	\perp	
41 District	79,334	$\dagger \dagger$	11	+	11	1	11	\forall	+	\top	1		\top	1	\sqcap	\top	\Box	1							11	T	П	T	П	П	\top		П		П		\prod						\perp '	Ц		Ц	\perp	1
42 District	20,761	+-	+	+	+	+	+	11	\dashv	1	7	11	+	+	11		\sqcap	+	\top						11	T	\sqcap	\top	П	77	\top	П											\prod			Ц	\perp	1
Total	179,808	+	++	+	+	_	++	+	+	+	+	\forall	+	十	17	\top	11	+	†			\sqcap	11		\sqcap	_	\sqcap	7	\sqcap	TT	\top	П	T		\sqcap	T	\prod						\prod	\prod		\perp	\perp	
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		\vdash	++		+	+	+	+		+	+	+		- -	\Box	1	1	1	1	1		十	+	+	11	十	\sqcap		\sqcap	\top	1		17	\neg	11	\top	\sqcap		П	\top	П		\prod	П			\perp	1
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X = InterIm System
O = Advanced System

FIGURE 3 — SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE				19								19									_1	97	7							1	97	8				Γ				197	9				T				1!	980	,				7
COURTS	VOLUME	JF	M	AR	3 3	j A	S	O N	D	J F	M	AR	ā j]	A.	SO	K	D	1	P.	A	H .	IJ	A	S	ON	D	1	FA	A A	M]	A	S	0	N D	1	F	A R	M	1.	JA	S	0	NE	0 1	F	M	A	HJ	1	A	SI	01	NI	0
WAYNE COUNTY		\coprod		$oxed{oxed}$		××	x	×					T	0	0 0	0 0	0	0		T			T	П	П						\sqcap	\top		П			П	T	T	П	1	T	T		\top		T	П		T	T	\sqcap	T	T	T	
Probate Court				\prod			\prod																					П		T	П			П			T	T			-		T		T	T	T		\Box	1	T	Γ	T	T	T	7
3rd Circuit	33,703															T	T		T		П		T	П		\top		П	1		П	1	T				П		T	П	T		Τ	П	T	T	T		1	T	T	一	T	\top	T	7
16 District	25,246	\prod			П						П	\top		П			T						T					П	T		П	1	Т	П		1	П	1		\sqcap		T	Т	П		T	Т	П			T	\sqcap	T	T	T	7
17 District	20,339		\prod	\perp	\prod	\prod_{i}	П						I				\Box						1	\prod			П			Т				П							\top			П		T		<u> </u>		\top		П	T	T	T].
18 District	22,997																							\square						$oxed{oxed}$							\prod		L		floor		I.			I	L			I	Γ	\prod	I	\perp	\perp]
19 District	8,206					\perp							L		\perp								L							L		\perp									\perp		L							I	\coprod	ıΤ	\perp	\perp	\perp	
20 District	13,879			\perp	Ш																		I							\perp	П	\perp				\perp				Ш		\perp	L									П	\perp	\perp	I]
21 District	10,127																																		\perp																\perp		1	\perp	L].
22 District	9,333	Ш	Ш				\coprod																L		\prod							\perp							L		\perp										\coprod	\int	\perp	\perp	\perp]
29 District	7,687	Ш.	\sqcup				Ш												_																	\perp					}									\perp				\perp		1
33 District	13,060			\perp																										\perp																						\perp	\perp	\perp	\perp	
34 District	15,008			\perp																																							Ш									\perp		\perp	Ι.	
35 District	12,054	LL		\perp											\perp	\perp	\sqcup		\perp			\perp		Ш		\perp	Ш	_				L	$\perp \downarrow$	4	\perp	L		\perp				L			\perp				1	\perp	Ш	\perp	\perp		L	
Common Pleas	120,830										Ш								\perp											Ш		\perp	Ш	_ .			Ц		\perp	Ц	\perp	L	Ш	\sqcup	_	L		\sqcup	_	1	Ц	\perp	\perp	1	\perp	1
* Recorders Court		Ш	Ш	\perp	П		Ш	L		\perp					\perp	L	Ш				Ш				\perp		П	\perp		\perp		1	Ш									_	Ц	\perp		Ц	Ц		\perp		Ц				L	1
* Traffic Court		Ш	\coprod				\prod								\perp		Ш										Ш	\perp	\perp	\perp		\perp	Ш		\perp				Ш		\perp	\perp		\perp		Ц	Ц	_		\perp	Ц	_		⊥′	\perp	
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Probate Court								\perp				\perp					Ш	_	_ _	Ļ	Ш	\perp	Ш	Ш	1	1	\sqcup	_	1	Ш	_		Ш	\perp	_	\perp	\perp	\perp	-	1	\perp	_	Н	\perp	\perp	\sqcup		\perp	_	$\perp \downarrow$	1	+		1-	+-	-
7th Circuit	8,806								Ш					Ш			Ш								\perp		Ц			Ш			П		1	\perp	1			4	4-		Ц	1	1	Н	Ц	_	. _	\sqcup	\vdash	+	1-	⊥'	 '	-
67 District, 1st Division																		_1		L							Ц		_	\sqcup			Ц		\perp	Ц	\perp		\perp	1	\perp	Ц	Ц	4	_	Ш	Ц	1,	\perp	Ш	4	4	⊥′	\perp	\perp	1
67 District, 2nd Division															\perp		Ш			L				Ш	\perp	\perp		\perp		\sqcup		\perp	Ц			Ц	Ц.	1	Ш			Н	Ц	\perp	_	Н	\sqcup	1	1	\sqcup	\perp	\perp	\bot	$oldsymbol{\perp}$	$\perp \prime$	1
67 District, 3rd Division	42,251														\perp	\perp	Ш		_	L	Ц			Ш	1	L			1	Ц		_	\sqcup	4	_	\sqcup		1	\sqcup	_	1	\sqcup	\sqcup	+	4_	\sqcup	4	+	+	\sqcup	\perp	-	┦	Щ	\vdash	1
67 District, 4th Division					П		Ш						Ш			\bot	Ш						Ш	Ш		\perp	Ц	_ _	_	Ш	_ _	_	Ш		4	Ш	1	4	11	_	_	\sqcup	Ц		_	Н	4		\perp	\sqcup			44	\sqcup	Н	
68 District	125,906				Π															1_			Ш			_	\sqcup			\sqcup	\perp	┸	П			\perp		1	\sqcup	4	1			4	\perp	Н	4		1	\sqcup	\perp	4	\sqcup	\sqcup	\vdash	ĺ
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INGHAM COUNTY			П	T	П			x	x								Ш		0 0	0					\perp			\perp	\perp	Li	\bot	┸	Ц	_ _		\sqcup				_ļ_	1	Ш	Ц	_	1	Н	4	\perp	\perp	\sqcup	+	+'	H	H	H	i.
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54 District, 1st Division	50,371		П	T		Т									L					L	Ц		Ш	Ц					\perp	Ш			Ц	_	\perp	\sqcup	_	- -	\sqcup	_	\bot	Н	4	- -	\perp	H	4	+	+	\vdash	+	+'	++	H	Н	i.
54 District, 2nd Division	11,126	\sqcap	П	\top	П	Τ	П													L		\perp		Ш			Ц	┸	\perp		_ _	\perp	1	\perp		\sqcup	_		\sqcup	_	\perp	\sqcup	\perp	+	\perp	Н	4	+	1	H	+	+'	H	H	\vdash	i.
55 District	19,444	\Box		T	П	\top	П					Τ	Ш										Ш			_	\sqcup	\perp	\perp	Ш	_ _	\perp	Ц	_		\sqcup	_	1	\Box	_	1	Н	4	-	1-1	\vdash	+		╀	╁	+	+-'	++	H	Н	Ė
Total	86,934	7			П		П	Т	П		П	1	\prod	T		T									1			\perp	\perp	Ш		┸	Ш	丄	L	Ш		_	Ц				┙		Ш	Ц		丄	_ـــــــــــــــــــــــــــــــــــــ	Ш		'ـــــــــــــــــــــــــــــــــــــ	Ш	لــا	ل	i .

* Implemented in 1974

X = Interim System
O = Advanced System

FIGURE 3 — SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE	-	72.1		19		1 - 7		,_				19	76				\perp				19	77				\perp				19	78								19	79								19	980	<u> </u>		
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22nd Circuit	3,893								П	T	П	T	T		Ţ	Τ.	\Box	Τ			T	\Box	7	1	П	1	1			1	11	\exists	\top	1		- -		\vdash	1	1		\top	1	+	+	1	\Box	7	+	H	7	+	٦
14 District	31,048						П		П				Т		\top	\Box		7	П	7		П	7	T		十	1			\top	\Box	\dashv	十			1			1	†	\Box	†	\vdash	+	1	+	\Box	\dashv	+	H	\pm	\dagger	٦
15 District	30,406	П		T			\Box			T		1	П		\top					1	1	\Box			\Box	7	1			1	11	1	1	11		1			1-	t	\Box	+	十		1	+	1-1	\perp	1	1-1	\dashv	\dashv	-
Total	65,347		П	Т		\neg	П		П	T	П	T	Т		\top			1	Ħ	\top	\top	\Box	1	1	\Box	十	\top			+	\Box		+	\Box		-†			\top	1		+	†-	-	+	1.4	H	+	- -	H	+	+	_
			П				\sqcap	<u> </u>	П	T		\top				\Box	7	1-	H	7	1	\Box	-†-	1	\Box	+	+	П	\dashv	\top		+	\vdash	\Box		- -	\Box		- -	+	\vdash	+	+	+	-	1-1	H	+	+	1-1	+	+	
KALAMAZOO COUNTY			П				\Box		П	хx	\sqcap	\top	\top		1	\sqcap	7	1	\vdash		0	0	+	+-	П	-	1	Н	十	+	11	-	- -	\Box	-	+	\Box	\vdash	+		\vdash	+	Н	十	+	++	H	+	+	+-	-+	+	-
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9th Circuit	3,207		П		\top	1	\Box	_		1	III	\top	\top	+		\Box	+	1	\top	-†-	1	\vdash	_	十	it	1	十	Н		+	Н	\dashv	+-	H	\dashv	+	Н	-	╁	\vdash	+	+	\vdash		十	+-1	\vdash	+	+	╂┤	+	+	_
8 District	13,801		\sqcap	-1-	17	\top	\Box	-	\Box	+	$\dagger \dagger$	\top	11		\top		\top	1	+	+	H	\vdash	+	+	\Box	+	╁	$ \cdot $	+	+	H	+	+-	H	\dashv	+	H	-	+	+ +	+	+	H		+	H	一十	+	+-	$\vdash \vdash$	+	- -	-
9 District, 1st Division	38,168		\sqcap	1	\top	\top	††	\dagger	$\vdash \vdash$	+	\Box		$\forall \exists$	\dashv	+	H	\dashv	+	\dashv	+	+	H	+	+	H	+	+	H	+	+	+	+	+	$\vdash \vdash$	+	╁	$\vdash \vdash$	-	╁	\vdash	\dashv	+	H		+	Н	\dashv	+	+	\vdash	+	+	-
9 District, 2nd Division	6,847		十	\top	11	┪	\Box	+-		+	\Box	+	\Box	\dashv	+	\vdash	+	+	十	- -	+	+	+	+-	\vdash	+	╁	H	+	+-	\vdash	+	+		+	1	\vdash	+	+	Н	+	+-	Н	- -	+	H		+	+-	H	+	+	-
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70 District, 1st Division	2.000			+-	++	+	${\dagger}{\dagger}$	+	\vdash	+	\vdash	+	Н	- -	+-	H	+	H		- -	\vdash	+	╁	\vdash	\vdash	+	╁	\dashv	\dashv	-	╁	+	Н	\vdash		H	\dashv	- -	+	\vdash	╅	+	\vdash	+	╁┤	一十	+	+	+	+	+	╁┈	+
70 District, 2nd Division	53,195	- -	-	+	+		++	+	\vdash	+		+	H	+	+	H	+	+	+	╁	Н	-		H	\vdash	╁	1	\vdash	+	-	\vdash	┽	+	\vdash	- -	H		+	+	\vdash	+	+	$\vdash \vdash$		+	$\vdash \vdash$	+	+	+-	\dashv	+	╁	+
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59 District	28,510	\dashv		- -	1-1	-	\vdash		1	\bot	\vdash		1-1	_	1]]	_	1-1		-}-	\sqcup	\dashv	\perp		1	-	\perp	4	-}-	Н	\sqcup	┵	\square	\perp	+	11	-	- -	-	4	4	\sqcup	4	-	\mathbb{H}	-	-	1	\vdash	4	4_	-	ļ
60 District	15,358	44	\sqcup	\bot	\sqcup	_ _	$\perp \downarrow$	4-1	1	\perp	Н	4	-	_	╀	Ш	4	\sqcup	4	4	Ц	_	╄	Ш	_	_	Ц	4	_	Ц	\sqcup	\perp	\sqcup	-	\bot	\sqcup	_	_ _	\sqcup	4	\perp	\sqcup	4	╀-	\sqcup	4	4	\perp	\sqcup	4	╆.	\sqcup	ļ
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2nd Circuit	2,929	$\perp \perp$	\perp		Ш	1		\perp	_1		Ш	\perp	Ш		\perp		┸	Ш	\perp		Ш		\perp	Ц		L	Ш	_	\downarrow				Ш	\perp	1	Ц	_ _	\perp	Ц	1	\perp	Ц	\perp	\perp	Ц	\perp	\perp	Ш	4	\perp	Ш	Ц	L
5 District	43,982		\perp										Ш	\perp	L			Ш							\perp	┸	Ш	_L		Ш			Ш	\perp	L	Ш		\perp	Ш			Ш			Ш		\perp	Ш	\perp	\perp	Ш	Ц	L
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C = Interim System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE					75							1:	976				1				19	11				1.]	97	8							1	97	9				上				18	986	9			
COURTS	VOLUME	JF	M	A	2 2	9	AS	0	N E]	F	A	M	J	A	SC	H	D	JF	M	AA	1 3	3	AS	0	NE	J	F	H A	M]]	A	S	0 1	i D	J	FM	A	H		IA	S	10	ID	1	F	H /	AA	A J	1	A	S	0	Ī
CALHOUN COUNTY				\int	$oxed{oxed}$		I			\prod	$oldsymbol{\mathbb{L}}$		х×				Ι		I			I	0	0 0		\top		П			T				$oxed{oxed}$		I	Γ		T	T	П	П	T	П	\sqcap	T	T	T	T	П		乛	ĺ
Probate Court -																	T		T			T	П	T	П	T	T	П				T		T		П			П		1	П		T	П	\sqcap	\top	1	7	T	П		П	1
37th Circuit	1,949						T			П				Τ	П	Т.	Τ	П	T.				П		П	7	Π	П		\Box	\top	П		T	Τ		Т	Γ	П	\top	T	П		T	П	П	\top	T	T		П		П	İ
10 District	23,170						T	T		\prod							Τ						П	1	П	1		П		П						П				T				T	П	\Box	T	T	T	Г	П	\sqcap		i
11 District	15,289							T			1			Т		7.			Т		П	Т	П		П		П	П	\top	П	Т	П	П	Т		П			1		T	П	7	T	П	\prod		-	T	Г	П			ĺ
Total	40,408		\prod			П				\prod		П										T	П			T			\top		\Box							Π			Γ				П		T	T	T	Γ	П			-
			П					T		TT				Τ		T			T		П	T		Т	П	\top	П	П	T		Т				T					T	Τ	П		T		T	T	1	T		П	T		Ī
ALLEGAN & OTTAWA COUN	NTIES		П	1		П		\sqcap	\top	П	T	П		×	x		Τ	П	Т			T	П	\top	0	00	,	П			T						T		П	T	T			T	Π	7	\top	T			$\lceil \rceil \rceil$	7		ĺ
Probate Court: (2)			Γ	_[Ι		T			\prod	\Box		floor	Ι					Ţ							T			T		T	\prod		I			$oxed{\Box}$	\prod	\Box	J	Ι	П		I	\prod	T	T	T	Τ	П	\prod	1		į
20th Circuit	1,895	П					T			П			\perp			T	Γ		T					I		Ι			floor		$oldsymbol{\mathbb{T}}$			Τ		\prod			J	T		П	T		П	T	T	T	T		П	1		Ī
57 District	14,630	\prod			\mathbb{T}^{-}												Γ							T		Ţ			J		J		T	I			1		T	J					\prod	\Box	T	T	T	П	П	T	\Box	,
58 District .	22,891	П			T			T			T.			T		T				П				T		T	\prod		Ι		T	\prod		Ι			T			Τ	E	П		T	П	T	T	T	T	П	\prod	\top	7	,
Total	39,416																Ι									J											I		\prod	T				Γ	\Box	floor	_	I	Γ		T		╛	ľ
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JACKSON COUNTY		П		1	\top	П	T	77	\top	\prod	T	П	1	×	x										0	0 0			I								\mathbf{I}									T		T	П	П	T	T	1	_
Probate Court		П	\prod		7	П	T	\prod		T	\top	П		Т		T		\Box	T	П	T	П		T		T			T					Ι			Τ			T			Т		\Box	T	T	T	П		T	1	7	_
4th Circuit	2,827	\prod		T	1	$\Gamma \uparrow$	T	\prod	1	\prod	T	П		T		T		П		П		\Box	\sqcap			T	П		T	\prod	T	П				T					Γ		bracket	\sqcap		T	T	Γ	П	П	T		7	_
12 District	13,907	\sqcap	П	T	\top	\Box	1	\top	7	1			\top								\exists								Ι		I	\prod	\prod	I		I			I	Ι			I		\Box	Ţ	I	\prod	\square		I	I		_
13 District	17,199		П	T		П	7	\sqcap	T	П	T	П	\Box	T	П	T			T		T			T		Τ					Ι					I				\prod					Ш				\Box		I			
Total	33,933	П	\sqcap	1		П	T	\top	\top	П	T		\top	T		T	П				\top			T		T									\Box	\prod			\prod			\prod			LΙ		\perp		\Box		\prod			
			\sqcap	1		П	1	T^{\dagger}			T	П		П	T	T								Ι		Ι			I		I		\perp			$oldsymbol{\mathbb{I}}$									П		L	L	\coprod					
MONROE COUNTY			П	1	1		1	11	\top	T		П	1		:	хx			T		T	П	T		П	T	0	0			m I		I	L		\perp						Ц.	\perp	ot				L		\sqcup		\perp		
Probate Court		\vdash	\sqcap		1		1	\sqcap	\top			П	\neg	П	T	T	П		\top	\prod		\Box		T		T	П		T	П	T					I			I	Ι			$oxed{\Box}$		\coprod	$oxed{\mathbb{I}}$	Ι	\prod	\prod		floor	\mathbf{I}	\int	
38th Circuit	1,351	\sqcap	H	1	\top		\top	11	1	\sqcap		П	\neg	\top	\top	7	П		1	\sqcap		П	1		П	T		\exists	T	П			T	Γ		\perp				Ι						\perp	\perp	E	\prod	\int	$oldsymbol{\mathbb{I}}$	I	\int	•
1 District	22,753		\sqcap	1		\sqcap	1	\top	7	T	1	П	7		T	\top	П	П	\top			П	\neg	T		T	П		Τ					Ι						Ι		\coprod		\Box	\Box	\perp			П			\int	I	•
Total	24,104	\vdash		+	1		7	11	7	TT	\top		\top	Π	\top	T	П		1			\prod		\top				T			Ι	П				Ι			\prod	L					\perp		L		Ц	\perp		1	1	_
				1			1	77	1	Π	\top	П	\top			T	П		T	П	\top		T	T	П	T		T	T	\prod	Ι			L	\Box	$oldsymbol{ol}}}}}}}}}}}}}}} $					Ш			\sqcup		L	\perp	\sqcup	Ш	\perp	\perp		1	
BAY COUNTY		\sqcap	\sqcap	\top			\top	$\uparrow \uparrow$	7	\prod		П	\top			x x	П		T	\prod		П	1			1	0	0	0				\int	$oxed{\Gamma}$		Ι							\perp		\perp	\perp	L		Ц	\perp	\perp	\perp	1	
Probate Court		\sqcap	\sqcap	+			1	П	1	11		П		П	\top	1	\prod		T	П		T	1	T		T		T	Ι	\prod	I			$oxed{\Box}$				\prod		L					\perp	\perp		\sqcup	Ц	\perp	1	1	1	
18th Circuit	1,372	$ \uparrow $	$ \cdot $	+		\Box	7	\sqcap	\top	11	\top	П				1	\sqcap		1	П	1			7		T		Ţ	Ι		Ι		floor	I						L			\perp	Ц	\perp	\perp	\perp	Ц	Ц	_	\perp	L	\perp	
74 District	22,253		1	1	1	\Box	1	11	\top	Π	1	П		П	T		П		1		\neg	\sqcap	T	T	1		П		T	\prod	T		$oldsymbol{\mathbb{I}}$	$oxed{oxed}$		floor		$oldsymbol{\mathbb{I}}$		L	Ц			Ц	\perp	1	\perp	Ш	Ц	1	\perp	1	1	
Total	23,625		\sqcap	\top		$ \uparrow $	\top	\sqcap	1	11		П	\neg		\top	\top			1	П	\neg	\prod	\top	1	T	T		T	Ι				\prod			$oxed{\Box}$				L	Ц			Ш	\perp	\perp	1	Ц	Ц	1	\downarrow	1	\downarrow	
× 2		\vdash	$ \uparrow $	\top	\top	\sqcap	\top	17	1	\sqcap			\neg	П	1	1	\sqcap	\top		\prod		\sqcap	1		\top	i	\prod	T	Τ			\prod	\int			I							\perp	Ш	\perp	\perp	'	Ц	Ц	\perp	\perp	1	1	
		-	\vdash	+	$\dagger \dagger$		+	11	1	11	\top	П	\top	\Box	1	1	\sqcap	-	T	\sqcap	\top	\sqcap	7		1	T	П		1	П	T	\prod	Ţ	Τ	П	I								Ш		\perp	\perp	Ц	Ц	\perp	\perp	\perp	1	
			\vdash	+			\top	11	+	11	11	$\mid \uparrow \mid$	_	\sqcap	7	1	11		+	\Box	┪	\sqcap	\top		1	1	1	1	T	П	T	\prod	T	T	П	Т			Ι	\prod		floor					\perp	Ц	Ц	\perp	\perp	L	1	
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X = Interim System
O = Advanced System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE	L-	111		197		T _ T :		_	-			76		1 . 1				; ;	197					, ,		1	978	-	T . T		ļ.,			1	979	<u> </u>	1 1		1			1	98	<u>U</u> .,		_
COURTS	VOLUME	JF	189	AR	1 1	I A	SC	H	DJ	F	MA	MJ]	AS	0	D M	JF	M	M	1 1	Ā	SO	H	DJ	F	M A	MJ]	AS	0	H D	3	F M	A	M		AS	0	N D		FR	A A	M	IJ	A	SI	0,
T. CLAIR COUNTY		Ш		L		L_		Ш	\bot			Ш			Ш	х×	L						Ш	0	0	0				Ш	L													_L	\perp	1	
Probate Court			1_1																				П														T			\sqcap		T	П		П	Т	_
31st Circuit	1,455												\Box				\top	П	\prod	$\neg \vdash$			П		TT	\top		\prod	\top	П	Т	П		П		П	\top	77		П			П	T	П	T	_
72 District	21,299												\prod								П			7	П		\top	TT	T	П		Π			T	П		П		П			П		П	T	_
Total -	22,754				\prod		П			\prod											П	T	П		П															\prod					П	T	_
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LINTON & GRATIOT COUNT	TIES														П	x x										0	0 0											\prod					\prod				_
Probate Courts (2)										П																		\prod			$\prod_{i=1}^{n}$															\perp	_
29th Circuit	818																																							\coprod			\Box	\mathbb{L}		\perp	_
65 District, 1st Division	11,460			$oldsymbol{\mathbb{I}}$	\prod	\mathbf{I}					I			$oxed{oxed}$									\prod	\prod		\prod			I			\coprod			\prod		\bot	\prod		\prod	\mathbb{I}		\coprod		\prod	$oldsymbol{\mathbb{I}}$	
65 District, 2nd Division	6,859			$oldsymbol{\mathbb{I}}$																													\coprod					\prod					\Box			\perp	_
Total	19,537	\prod		$oxed{oxed}$	\prod		\coprod	\prod		\coprod		LI		\bot							Ŀſ		Ш				\perp													П			Ш	$oldsymbol{\mathbb{L}}$	П	\perp	_
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DELTA & MARQUETTE COUN	NTIES		\prod					Ш		Ш		Ш	1	\perp		$\perp \mid$	x x			\perp	\coprod	丄			Ш	0	00					\perp	Ш	_ _	1	11	\perp	\coprod		Ш		Ш	\perp	Ш	\perp	\perp	
Probate Courts (2)					ot			Ш		\prod		Ш.		_ _	11	$\perp \perp$	1		11		$\perp \downarrow$			$\perp \perp$		$\perp \! \! \perp$		\sqcup		\sqcup	_		$\perp \downarrow$		1	$\sqcup \downarrow$	_ _	Щ	1	Ш		$\perp \perp$		Ш	\perp	\perp	_
25th Circuit	871		$\perp \downarrow$		$\perp \perp$		\sqcup	Ш	\perp	\coprod				\perp	$\perp \downarrow$	$\perp \downarrow$		$\sqcup \bot$	$\bot \bot$	\perp	\coprod			$\perp \downarrow$	\sqcup	11		11		$\perp \perp$	44	\perp	$\bot \bot$		_	$\bot \downarrow$	_ _	\coprod		Ц	\perp	\sqcup	\bot	$\bot \bot$	4	\perp	_
94 District	4,868	LL			\coprod	\perp		Ш	_ _	Ш		Ц.	\sqcup	\perp	\coprod	\perp l	1	Ц	$\perp \downarrow$			_		$\perp \downarrow \downarrow$		Ш	\perp	Ц	4	\sqcup	$\perp \perp$	\perp	11	_		\sqcup		 		\sqcup	\bot	11	\bot	$\perp \downarrow$	4	1	
96 District	13,981				Ш		Ш	$\perp \perp$	\perp	$\perp \downarrow$	<u> </u>	Ц.		_	\coprod	$\perp \downarrow$			11		\sqcup		Щ	\perp		11		11	\perp		4		11	4-		$\bot \downarrow$		Н	4-	Ц.		\sqcup	4	\bot	_	\bot	_
Total	19,740				Ш	\perp	Ш	Ш	\perp				Ц	_ _		$\perp \downarrow$	\perp	Ц.	11	\perp	Ц	_		Ш		44		\coprod	\perp	4	44	\bot	11	- -	\perp	\sqcup	\perp	Н	4	\sqcup		Н	+	44	+	4	1
							Ш	Ш			1		Ш		$\bot \bot$	$\perp \downarrow$		\perp	\perp	\perp	Ш		Щ	\perp		\bot	_	\Box	Ш	1	44	\perp	44	4	\perp	\sqcup	+	-		-		1-1	+	44	-	+	-
LENAWEE COUNTY		Ш	Ц	\perp	\coprod	丄	Ш	\coprod	\perp	П		Щ	Ш	_ _	\coprod	$\perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	x x		11	- -	\sqcup	1	-	\square	4	44	4	0 0	0	+	-	- -	- -	_ _	+	- -	+	\vdash	-	- -	+	╁┼	+	++	- -	+	-
Probate Court	·							$\perp \downarrow$	_						\coprod	Ш			11		-	1		11		44	\perp	\sqcup	- -	4	4-4	- -	11	- -	-	\vdash	+	- -	-	- -		${oldsymbol{arphi}}$	-	+	+	+	1
39th Circuit	917				Ш	\perp		Ц					Ш	\perp	$\bot \bot$	$\perp \downarrow$		\perp	44		Ц	4	\perp	$\perp \mid$		$\downarrow \downarrow$	4		\bot	_	\dashv	4	44	4	4	Н	- -	\vdash	-	-	-	\sqcup	+	\dashv	+	+	1
2 District, 1st Division	16,975	Ш	\coprod		11		Ш	$\bot \downarrow$		Ш		$\perp \downarrow$	Ш	_ _	$\bot \bot$	Ш		Щ	11		\sqcup	1	<u> </u>	\bot	_	\sqcup	4	\sqcup	\perp	4	44	+	+	- -	+	$\vdash \vdash$	- -	Н	+	⊢⊦	+	-	+	₩	+	+-	+
Total	17,892	Ш	11	\perp	\bot	\bot		\bot	_ _		_		\sqcup		\sqcup	$\perp \downarrow$	_		44		\sqcup	4	\bot	44	-	44	4	- -	-	-	╀┦	\bot	+	+	+	\vdash	-	- -	+	$\vdash\vdash$	+	H	+	H	+	╀┦	+
		11	$\perp \downarrow$		$\bot \bot$			Ш		Ш	╧	Ц.	\sqcup	_	↓ ↓	$\bot \bot$	_	1	44	4	\dashv	44	\perp	+	_	-	+	\vdash	+	- -	+	+	+	- -	+	╀	+	\vdash	-	╟┼	+	H	+	H	+	+-/	+
BARRY & EATON COUNTIES			\sqcup	\perp			Ш	$\perp \perp$			1		\sqcup	_		$\bot \!\!\! \bot$	\perp	××	1		-	\bot	 -	11		+	-	0 0	0	+	╁┤	- -	++	+	H	-	+-		+	\vdash	+	- -	+	++	+	┦	+
Probate Courts (2)		Ш	\coprod		\sqcup		Ш	\coprod	\bot	\sqcup	4	Щ	\sqcup		11	$\bot \!\!\! \bot$	1	\vdash	$\bot \downarrow$	1	\sqcup	4	- -	- -	_	+	-	-	+	+	+-1	-	++	+	+	\vdash	+	├┤╴	+-	-	+-	- -	+	╁	+	+	t
5th Circuit	1,219		\sqcup		11		Ш	$\bot \bot$	_ _	$\perp \downarrow$	\perp	$oxed{oxed}$	\sqcup		$\bot \downarrow$	\sqcup	_ _	\vdash	$\bot \downarrow$	_	$\downarrow \downarrow$	-	4	-	-	++	+	╌	-		+	+	-	+	+	- -	+	\vdash	+	\vdash	+	\vdash	+	${}$	+	+	1
56 District	16,129	Ш	Ш	\perp		\perp	Ш	\sqcup		11	_ _	\sqcup	Ш	4	11	\sqcup	_	$\sqcup \bot$	$\downarrow \downarrow$	_ _	$\sqcup \downarrow$	1	1	44	4	#	- -	 -	-	- -	4-1	\perp	-	+	+	\vdash	+	-	+	-	+-	H	+	H	+	+	+
Total	17,348							\sqcup	_ _	$oxed{oxed}$	1		Ц	\perp	$\bot \downarrow$	4	_	\sqcup	44	\bot	\sqcup	4		$\perp \mid$	1	++		- -	-		┦┦	+	+	+	+	\vdash	+	\vdash	+	+	+	\vdash	十	++	+	+	t
		Ш			$\bot \bot$	_ _	Ш	\sqcup	\perp	\coprod	- 	4	\sqcup	4	\sqcup	44	_	\sqcup	44	_	\sqcup	-	_	+	-	\coprod	╀.	H	+	+	╀┤	- -	╁┼	+	-	╂╌┼╌	+		┼╢	+	+	\vdash	+	H	十	++	t
		Ш	\sqcup	丄	\coprod		LL	\coprod	_		1_	Ц.	\sqcup		\sqcup	$\perp \downarrow \downarrow$	_	4	\sqcup	4	\sqcup	44	4	4	-	44	+	\vdash	+	+	\dashv	+	+	+	+	╀	+	├┼	╀┦	+	- -	$\vdash \vdash$	+	++	+	╁┤	t
				\perp		\perp		\sqcup	_ _	Ш			\sqcup	\perp	$\downarrow \downarrow$	$\perp \downarrow$			\coprod	- -	$\downarrow \downarrow$	\bot	-	44	_ _	44		┥.	, -	-	4-1		+	+	+	- -	+	\vdash	+-	+	+	\vdash	+	++	+	╁┤	t
		Ш					Ш			Ш	\perp		Ш	4	\coprod	$\perp \downarrow$	_		Ш	_ _	\sqcup	11	_ _	4-1	_ _	\sqcup	\perp	-	4-1		- -	4-		4	-	╁┼	+		╀┤	+	+	┼┼	+	+	+	+-	t
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X = Interim System
C = Advanced System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

	72 CASE				975]				97							1	97	7			\perp			15	978							_ 1	979	}							198	0		
COURTS V	OLUME	JF	MA	M j	j	AS	0 1	D	1 F	M	A M	3	A	SO	N	DI	k.	MA	147]]	A	8 0	N D)]	FR	A	LIM	j	AS	0	NE)]	F	A	M.]]	A :	0 8	NI	1	FR	A A	M]]	A	S	0
APEER & TUSCOLA COUNTIES								\Box		\coprod								x x	T		TT	T	П	\prod	\top			0	0 0										П		\top	T	П	\top	T	П	Ī
Probate Courts (2)					\prod			П	7	П		T	T		П				TT		П	T		П	\top	TT	\top	П	Т		T		T	T	П	T	П		T	П		T	П	T	1	П	
40th Circuit	1,106		\neg	Π	T	$\neg \vdash$	П	П		П	$\neg \neg$				TI	1	П	T	77		\prod	1	П	П	\neg	П	1	П	1	\top	\sqcap				П	7	П	\top		\top	T	7	П		1	П	_
71A District	9,348			11	Π	7				П		\neg	\top		П	7	П	7	TT	\top	11	\top			1	П	1		1					\top		1						1	П		1	П	
718 District	6,618			TT	TT	T		\prod	T	П		T	11		H	T		-	П	T	\sqcap			П		П										7					1		П		T	П	
Total	17,072			Π				\prod	\top	П		I	\prod			\Box		\Box	П					П		\Box							\perp							T	T		П				
				\prod	TT	T				П		$\neg \Gamma$	П		П				П																						\neg	T	\prod	7			_
LARE, GLADWIN & ISABELLA CO	UNTIES			11	11			\Box	7	П	\sqcap		\sqcap		П	T	П	T	X	×				П	\Box					0	0 0												ГТ				_
Probate Courts (3)	-		7	Π	T			\sqcap	T	\prod		\neg	П	T	TT	T		T		\top	IΠ			П	\Box				Τ.	П	T										7		П	_		T	
21st Circuit	862			TT		\top		\prod	-					T	\prod									\prod	T		T					\prod	\mathcal{I}						\int	\prod				T			
76 District	7,337		T	TT	\prod					\prod		T			П	T		1	П					П									\Box		T					T	T		\Box	T			_
80 District	6,497				\prod				I				\prod				J								$oldsymbol{ol}}}}}}}}}}}}}}}$				I		\perp		floor		I		\int										_
Total	14,696		\perp	\prod	\prod				\perp			\Box		\Box						\perp				П			Ι			П	I				\perp	\square	\perp		\perp	\prod	I		\Box			\Box	_
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LIVINGSTON COUNTY									I									T	×.	×									\perp	0	00				I						I	П	I				í
Probate Court									\cdot			floor			П		\rfloor		\Box	I		\Box			\perp	П			\perp		1	\prod			\perp	\prod		П		11		\prod	\perp	L		\perp	
44th Circuit	884									\prod			\prod		Ш									Ш				Ц	L		\perp	Ш		Ш		Ш				\sqcup		Ц	_		Ц		_
53 District	13,701									\prod			\prod		П		\bot				Ц			Ц			_	Ц	\perp	Ш		Ц		Ц		11		11	\bot	\sqcup	1	Ц	\perp			\perp	_
Total	14,585													\perp								\perp				Ш	1		1	11	_ _	11		\perp	1.	\sqcup	4	1-1		1-1-	\perp	Ц	\bot	1	_	1	_
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VAN SUREN COUNTY				LL	П					Ш		\perp		L		\perp	_	\bot	Ц	×	x	Ш	\perp	\coprod	\perp	\sqcup	\bot	\sqcup	1	0	<u> </u>	\sqcup	\bot	\sqcup	+	+	- -	\vdash	4	\vdash	4	Н	_	+	\sqcup	_	_
Probate Court									1		Ш		Ш		Ш		_		Ц		Ц	\perp		Ш	\perp	Ц	_	Ц	1	Ш		Н		\sqcup	\perp	11		\sqcup	ֈ_	\sqcup	4	Н	\perp	44		- -	4
36th Circuit	768		T													\perp				\perp		\perp		Ц			_	\sqcup		Ц	_	Ш		Ш	_	\sqcup	\perp			\sqcup	1	\sqcup	4	1-1	4	4	_
7 District	14,037															\perp	_	\perp	\sqcup	1	11	$\perp \downarrow$		\sqcup	\perp	\sqcup		Ц	_	\sqcup		11	4	\sqcup	\perp	11	1		4	\sqcup	-		+	+	4	+	_
Total	14,805		\perp												$\sqcup \sqcup$	\perp	_	\perp		1		\coprod		Ш		\sqcup	\bot		\perp	\sqcup	_	H	4	\sqcup	4	\sqcup	- -	-	4	H	4-	\sqcup	+	\sqcup	-	+	4
													$\perp \! \! \perp$	\perp	Ш	Ш		\perp		\perp		$\perp \mid$		\coprod		Ш	\bot		1	\sqcup	_	\sqcup	4-		4-	\vdash		$\vdash \vdash$	-	- -	4-	ert		+-	4	+	4
ANTRIM, CHARLEVOIX, GRAND TI	RAVERSE															Ш	_	┸		\perp		$\perp \perp$		Ш	4	11	1	\sqcup	\perp	\sqcup	_	\sqcup		\sqcup	-	\vdash	-1-	- -	-	- -	1-	\vdash	+		+	+	1
& LEELANAU COUNTIES			floor												\coprod		_[×	×	11		\sqcup		\sqcup	1	Ц	_	\sqcup	-	9	0 0	$\vdash \vdash$	\bot	$\vdash \vdash$	+	- -	1	-		4	+	+	4	+	4
Probate Courts (4)					\coprod											Ш	1			l	Ц	\sqcup		\sqcup	\bot	\sqcup	Ĺ	\sqcup	\perp	\sqcup	-	$\vdash \vdash$	-	H	+	 	+	- -	+	1	+	4	+	H	+	+	+
13th Circuit	1,148			\prod									$\perp \downarrow$				\perp	_ _	\sqcup	1	Ш	$\perp \mid$		\coprod		- -	_	\sqcup	_	Н	- -	- -		$\vdash \vdash$	4	- -	+	$\vdash \vdash$		4	+	-	+	H	+	+	+
86 District	8,680							\Box		\Box			Ш				_ _	1		1		$\perp \downarrow$	_	\coprod	\perp	- -	4	\sqcup	\perp	1	-	-	+	- -	+	\coprod	-		+	-	+	+	+	H	+	+	+
87 District	4,080		J										Ш	\perp		_ _		_	\sqcup	\perp	\sqcup	\sqcup		\coprod	_ _	Ц.	_	\sqcup	-	\sqcup	+	- -		$\vdash \vdash$	+	- -	-	$\vdash \vdash$	+		-	+	+	++	-	+	+
Total	13,908		\top						\perp				\coprod			$\perp \perp$	_			1	Ц	Ц	\perp	\coprod	_	$\sqcup \sqcup$		Ц	_	$\sqcup \downarrow$	4	Н	_	-	+	$\vdash \vdash$	+	- -	- -	+	+	-	+	H	+	+	+
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		-††	1	Π	\prod															\perp		$\perp \downarrow$		Ш	\bot		1	1	1	Ш	4	\sqcup		- -	1	\sqcup	4	-	4-1	4	1-1	-	+	₩	+	+	+
		-1-1	-	1	TT		1	\Box		П	1	Т	П	T	\Box			T	Γ	1					1	11	ĺ.	1 1	1							11					1_1	\perp L	_ _	Ll		ᆚ	1

X - Interim System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE	L			19	75				1			19	976	3							197	17			T			1	197	8							1	97	9			\neg				1	98	ō		_	
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ALGER, CHIPPEWA, LUCE &			\prod		T	П		TT	1.	77	T	\sqcap			\sqcap	7	1	П	1			1				\sqcap	\top		\top					\sqcap	1			17	+	1	H	-	H	+	†	++		+	+	+	۲	۲
SCHOOLCRAFT COUNTIES		\prod		T	Ţ	\prod		TT		П	7	\prod		T	Π	7	1		7			\sqcap		х×	;		1		\Box			1	-	1-1	1	00	,	1	+	\Box	\vdash	+	1	+	+	1-1	\vdash	+	+	+	+	+
Probate Courts (4)		П	П		T		7	TT	1	\top		1		1	11	_	1		1		1				\Box	1		+	\Box	-			1	\Box	-	-		1	+	1-1	\vdash	 	1	+	+	+-	1	+	+	+	<u> </u>	+
11th Circuit	435	П	TI		T	TT		77	7	11		\Box		1	\sqcap	1	1	1			1	1	1		11	1	+	1	77	1	1	1	1	1-1	7	1	\vdash	\vdash	-	11	\dashv	+	H	+	+	+	H	+	+	+	1	+
91 District	4,404	Π		1	T	17	1	TT	1	77	7	11		T		1	\top			-	\Box		1		11	1	1	-	††	1	11	1	_	\top	+		\vdash			1	H	+-	\vdash	+	1-	+	-	+	+	+	1	+
92 District	3,901	I		7	T	M	T	TT	1	\Box	\top	\sqcap		T	\sqcap	1	1	\Box					\top		11	-	11	1	11	+	11	-	\top	\Box	+	-	Н	1	+-	\vdash	+	+	H		+-	H	\dashv	+	+	-		H
93 District	4,473	П	П	T	T	П	1	Π	T	11	1	Π		1	П	1	1		\top		11		\forall		11		11	1	TT	1	\forall		1	††	1	1	1-1	1	1	\Box	+	1	H	+	+	1	+	+	+			1
Total	13,213		П		1	\sqcap	-	\sqcap		1	7	\sqcap		1	\Box	\top	1		\top	1	11	1	11		\top		11	+	\Box	+	77	_	+	11	+		H	-	+	\vdash	+	-	-	. +-	+-	H	-	+	+-	1-1	Н	1
		\sqcap	П	-1	7	\sqcap	7	11	+	11	\top	\sqcap	\top		11	7	1	1	\top	7	11	1	\top	+	11	-	11	1	11	_	H		1	\vdash	+	+	1-1	-	+	1	+	11	\dashv	+	+	H	+	+	+	Н	Н	-
LAKE, MANISTEE, MASON &			\sqcap		T		7	11	\top	11	7	11	\top		11	1	+		11	1	++	+	11	-	11	-	11	+	++	+	+1	+	+	1	+	\top	1-1	+	╁	\vdash	+	+-	1	+	H	H	+	+	+-	1-1	1	_
OSCEOLA COUNTIES		IT	\sqcap	7	7	\sqcap	1	11	1	71	7	\sqcap		1	\sqcap	1	1	1	\top	7	11	1	77	xx	: 1	十	77	+	T	+	17	+	1	\Box	+	1	10	0 0	5	\vdash	+	11	-	+	11	H	+	+	+	\vdash	-	-
Probete Courts (4)		П	П	1	T	П	1	11	1	11	1	11	+		\sqcap	1		7	11	7	77	+	11	+	11	\top	++	1	1-1	1	+	+	1	\vdash	+	\top	H	7	+	\forall	+	++	+	+	1-1	\vdash	+	+	1-1	H	+	-
19 Circuit	720	Π	\sqcap	1	T	11	7	11	+	11	1	1	1			+	T	1	11	†	+	\top	71	+	11	+	††	1	11	+	77	+	+-		+	11		+	+	+	+	++	+	+	H	一十	+	+	1-1	\vdash	+	
79 District	7,287	11	П	1	1	11	T	11	1	11	7	11	7		11	1	T	7	11	7	77	7	77	1	11	1	11	1	11	+	11	+	11	1	+	11	\vdash	十	$\dagger \dagger$	+	+	11	+	+	H	\dashv	+	+	H	1	7	
85 District	4,526			T	7		7	Π	7	11	1	11	1	\prod	\sqcap	1	11	+	11	1	11	+	11	7	\sqcap	1	11	_	11	+	77	1	77	-	+	11	\vdash	+	11	7	+	11	1	+	1	1	+	+	H	+	+	~
Total	12,533				1		T	\prod	1	T	1	M		\sqcap		T		1	\prod	7	77	\top	11		11	1	\sqcap	\top	11	-	77	7	11	1	1	11	7	+	\sqcap		1	H	+	1	H	+	+	1-1	H	7	+	_
			П		7		1	П	7	Π	7	П		T		7	Π	7	11	7	77	1	Π	1	Π	1	11	1	\sqcap	1	11	7	77	-1	1	\Box	\exists	1	11	7	1	Π	1	1	\Box	1	1	11	П	7	7	~
SHIAWASSEE COUNTY			\Box				7	\sqcap	7	П		\sqcap	1	\sqcap		\top	\sqcap	\top	\sqcap	T	11	\top	T	1	X:	x	11		\sqcap	1	11	1	\top	7	1	11	0	0 0	\Box	_	+	1-1	-1-	17	\sqcap	+	†	+	\sqcap	\forall	+	
Probate Court				7			1	IT	T	11		П	1	Π	T	7	11	1	\sqcap	T	17	7	17	1	Π	7	\sqcap	\top		T	\sqcap	1	\top	7	T	\sqcap	7	7	11	\neg	1	11	1	\mathbf{H}	\sqcap	1	T	11	\sqcap	\forall	7	7
35th Circuit	773		П	7			T	П	7	Π		П		Π	\neg	1	\Box	T	11		Π	1	Π	1		7	Π		П	T	Π	\top	\prod	7	T	П	7		\sqcap		1	11	\top	\prod	\sqcap	\top	1	Π	\sqcap	7	7	7
66 District	11,198		П	7	\sqcap	1	1	\sqcap	7	\sqcap	\top	П	7	\sqcap		7	\sqcap	1	\sqcap	T	11	\top	\sqcap		\sqcap	7	П	\top	П	\top	\sqcap	1	\sqcap	1	7	\sqcap	7	1	\sqcap	\top	7	\sqcap	7	\Box		1	7	\sqcap	T	7	7	7
Totel	11,971			1			1.	1		П	\top	\prod	1			7	17	T	Π	1	TT	\top	11	1	П	7	\prod		П	\top	П	T	П	1	1	П	1	1	\sqcap	7	T	П	1	П	\sqcap	\top	T	П	T	T	T	7
			\sqcap	1	\Box	1	1	\sqcap		\sqcap		\sqcap	1	\sqcap		1	11	1		1	11	7				1	\sqcap			T	\sqcap	1	11		T	\sqcap	1	7	Π	1	1	\sqcap	\top	П		1	1	П	7	1	T	7
ONIA & MONTCALM COUNTIES			\sqcap	1	77	1	7	Π	1	\sqcap	\top	\sqcap	7	\sqcap	7	7	\sqcap	7	\sqcap	7	T	7	11	7	x ;	×	\sqcap	77	\sqcap	7	Π	7	11	1	1	1	0 0	00	\sqcap		\top	\sqcap	7	П	7	1	Τ	П	T	7	7	7
Probate Courts (2)			П	1	1	7	\top	П	\top	\prod	\top	\sqcap	丁			1	\sqcap	T	\sqcap	\top	T	\top	17		П	7	\sqcap	$\forall \exists$	П	T	\sqcap	T	\sqcap	7			7	7	П	7	1	\sqcap	1	П	\top	7	T	П	7	7	7	7
8th Circuit	955	\sqcap	\sqcap	1	\sqcap	7	1	\prod	1	11		П		\prod		1	П	1	\Box	7	11	1	\prod	\top		T	\prod	T		1		T	\prod		Γ			T		T	T			П		T			T	J	T	Ī
64A District	7,120		П	1		\top	T	П	T	\prod	\sqcap				1	1	\sqcap	\top	П	1	77	1	\prod		\sqcap	T	П	\forall	П	1	П	T	П	1		П	T	T	П		Τ	П	7	П	\top	T		Γ	T	T	7	T
64B District	3,811			7	\sqcap	T	1	П	\top	Π	\sqcap	П	7	П	T	1	П	\top	П	\top	Π	7	\sqcap	7	IT	7	П	77				T		1		П	1	T			T	П	T		T	T			T	T	Ţ	Ţ
Total	11,885			1	\sqcap	1	1	П	T	\prod	1		1	1	1	T	П	1		1	11	1	\sqcap	\top		\top		11				T		T				T					T	\prod	T	T			I	I	I	ľ
				1	\sqcap	7	1	\sqcap	1	11	11	\Box	7	\sqcap	7	\top	Π	1	\sqcap	1	\prod	\top	Π	\top		1	П	\sqcap			IT	T	\prod	7		П	T				Γ		Γ	\prod	T				$oldsymbol{oldsymbol{oldsymbol{oldsymbol{\Box}}}$	I		I
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	:		7	1	11	1	1	П	1	TT	11	1	\top	\sqcap	1	\top	\prod	1	11	1	\prod	1	П	77		1		\top			IT	1	\prod				T	Γ		T					I	I		\int	I	I		I
		7	+	1	\Box	1	7	1	1	11	\sqcap		1	\sqcap	1	1	\sqcap	7	\sqcap	7	\prod	1	\sqcap	\top		7	\sqcap	77	1	7			П	T			T			T	\prod		П			\perp		\Box	\perp			J
		\top	1	+	11	7	T		1	11	\top		1	17	1	1	\sqcap	1	П	1	\sqcap	1	\sqcap	\sqcap		_		77	\top		\sqcap	1	П	7	\sqcap		T	T		T	П		П	\Box		I		\prod	$oldsymbol{\mathbb{I}}$	I		ľ
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X = Interim System
O = Advanced System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE				19	75							15	76						_			197	77				T				19	78				T				19	79		_		T			_	1	98)			
COURTS	VOLUME	JE	14	AR	A B	1 A	S	0 1	D	3 5	M	A	M B	j	A	S	0 1	D	1	F	n A	M	1	j f	S	0	NI	0 1	F	M	AN	1]	3	AS	0	22)]	F	H F	lia.	,	1	S	0	14	D.	F	M	A	M I	IJ	A	SI) H	D
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MACKINAC COUNTIES				1.													T				T	Γ	T	-		П		×	×		T	Т	\Box	T	1		T	Γ	T	T		0	0 0	,	\neg	1	T	Т	П	7	T	П	П	T	\Box
Probate Courts (3)		П	П	\top			П	T	П		T		7	П	П		T	T	П	T	T	П	T	1		П	7	T			7	T	П	1	1		T		1	T			1		1	1	\top		П	1	Ť		\sqcap	+	П
33rd Circult	507			\top		T	Π	7				П	1		П	1	T	T	П	7	7	\sqcap	7				\top	T		T	_	7	17	_	T		1			1	T1		1		1	+	T	1		1	1	П	\top	+	П
89 District	5,736		П		\sqcap		\sqcap	T				П	T		П	1	7	T	Ī	_	7	\sqcap	7	1			7	7-				T			1		1		7	1	П		1	17	7	1	1	1-		\top	T			T	П
90 Dinrict	5,533		Π	7	77	7	\sqcap	1	\sqcap			П	7			1	\top	T	П	7	7	\sqcap	\top	7	\Box		1	T	\top		7	1	\Box	1		T	1		1	\top	П	-	\top		十	7	T	1		+	T	П	\top	T	П
Total	11,776			\top	T		\sqcap	1					_		П	\neg	7			1	T	\Box	7	1			7	7			\top		П	1	T		T		1	1	П		T		1	1	T			\top	1	П	T	T	\neg
			\sqcap		\sqcap		\sqcap	1			1	П	1	\Box		7	7	T		7	1	11	7	1	\Box		1	1			\top	\top	\Box	_	\sqcap	1	1		1	T		-†-	-	\Box	7	7	\dagger		7	+	T	1-1	1	1	\neg
CASS COUNTY			\sqcap	1			\sqcap	1				П	\top	П		7	7	T	П	7	\top	\sqcap	7	\top			\top	×	×	7	1	\top		1	\Box	-†	1		7	1	П	0	0 0	1-1	7	1	1	17	7	-1-	T		1	1	
Probate Court			\sqcap	1	\Box	_	\sqcap	\top	\sqcap		\top	\Box	\top	П	П	7	\top	Τ	П		1	\sqcap	1	\top	\sqcap	1	1	T	\Box	7	1	\sqcap	一十	\top	П	7			7		П	1	1	\sqcap	\top	1	1	П	\exists	1	1		1	T	7
43rd Circuit	492		\sqcap	7	77	1	\sqcap	1	П		T	П	\top	\Box	H		7	1-		1	T	\sqcap	7	7		1	1	T	\sqcap	7	T	П		T	\prod	1	1		1	П			1	\sqcap	\top	1	1		+	1		7	1	\Box	7
4 District	9,911		\sqcap	1		1	\sqcap	1			1	\Box	1	П		7	1	1		7	T	\sqcap	7	_	П		1	T	П	7	T	\sqcap		1	\sqcap	1			1			7	T	П	+	1	T		+	+		寸	1	H	7
Total	10,403		\sqcap	\top	11	1	\sqcap	1				\Box	\top	\sqcap	П	1	\top	1		T	7	П	1	\top	\Box	7	1	1	\Box	7	1	\sqcap	\neg	1	\sqcap	十	T	7	1	П			1	\Box	T	1	1	П	\top	T		1	+	H	7
			\sqcap	\top	\sqcap		\sqcap	\top					7	П	П	1	T			1	T	Π	T	T	\sqcap		1	T	\sqcap	7	\top	\sqcap	\neg	1	\sqcap	1	П		\top	П	П	\top			\top	T	Г	П	1	1	П	7	1	\Box	7
MIDLAND COUNTY			11	\top	7-1	1		_	\vdash	1			7	\Box	\Box	1	T	1	\sqcap	1	1	П	1	1	\sqcap	1	1	1	\sqcap	x x	7	\sqcap	7	\top	\Box	1	П	_	1	П	7	00	0	1	7	1			7	T	П	7	\top	H	7
Probate Court			\sqcap	7		1	17	1	\sqcap		\top	П	\top	П	П	\top	T			1	T	П	1	T		\neg	7	T		7	T	П	T	1	П	7	П	\exists	1	П	\neg	7	T	T	T	1			1		П	7	1	17	7!
42nd Circuit	718	1	11	1	77	\top	\sqcap	1		1			7			1	7			1	T	\sqcap	1	\top	Π	\neg	T	T	П	7	T	П		7	П	T	П	\exists	T	П	\top	\top		\neg	-	T			T		П	T	T	П	7
42nd Circuit 75 District	8,717		11	十	11	1	11		\sqcap		\top		7			7	7	Г		1	T	\sqcap	1	7	\Box	1	1	1	\sqcap	\top	1	П	\neg	\top	П	7	П	T	1	П	1	1	П		1	1	П		7	\top	П	7	1	П	7
Total	9,435	1	1	7	11		\sqcap		\Box	+	\Box		\top			1	T			7	T	\sqcap		T	П		T	Т	П	1	1	П	T		П		П	7	1	П	7	7		7	7	T		1	1		П		T	П	7
		1	T	1	11		\sqcap			1	\sqcap		7	П		7	7			7	T	\sqcap	1	T	\Box	1	1	T	\Box		1	П	\top		П		П		7	П		\top	П		7	1			T	П		T		П]]
ST. JOSEPH COUNTY		1	11	十	11	+	\sqcap	1		\top		1	1		7	7	1	П	\Box	1	1	\Box	T	1	\sqcap		7			хx		П	T		П	\neg	П			П	\exists	1		00	0				\top			T		\Box]
Probate Court		+	廿	+	\forall	1			\Box	\top	\Box	\neg	1	\Box		\top	7		П	7	T		1	1	\sqcap	\neg	1		П	$\neg \vdash$		П			П		П	7	7		T	1	П	T	T	Τ	П	\neg	T	П	П	T	Γ	\Box	71
45th Circuit	622	_		+	11	+	\sqcap		\Box	\top	\sqcap	1	\top	П	1	\dagger	1			7	1		7	1	\sqcap	十	1	Τ		\top	1	П	T			\top	П	\top	T	П	T	7	П	\top	T	Τ		T	T	17	П	T	П	П	71
3 District, 2nd Division	8,703	十	\vdash	+	$\forall \exists$	_	$\vdash \vdash$	+	\Box	_	11	1	\top	П	7	\dagger	T		\sqcap	1	1		十	+	\Box	1	\top		\sqcap	7	1	П	7			_	\sqcap	\exists			7		П	T	T			7		П	1	7	П	П	71
Total	9,325	-	\vdash	+	\forall	+	1	1	1-1		\Box	7	1	H	1	+	7-			1	T	17	+	\top	\Box	_	\top	T	\Box	_	1	\sqcap				\top	П	\top			T	\top	\sqcap	\top	T	T		T	T	П	7	T	\prod	П	71
		+	\Box	十	+	1	H	1	\Box	1	H	\dashv	+	П	+	十	+	П	1	7	T	11	1	T	\sqcap	+	1	П	П	1		П	_	П		\top	П	7	T		\top	T		T	T				T		J	T		\Box] !
MECOSTA, NEWAYGO & O	CEANA COUNTIES	+	11	+	+ +		1.1		$ \cdot $	+	H	+	+	П	7	\dagger	\top		+	+	十		†	+	\sqcap	1	1	П	П	\top	x	x	1			1	П				\top	T	П	0 0	0	П		T	Ι	\prod	\prod	I	\prod	\int	
Probate Court (3)		+	1+	+	++	\top	+	+	$\vdash \vdash$	+	H	7	\top	17	\top	1	1	П	1	1	T		7	T	\sqcap	1	T	Π	П	\top	1	П	1	\sqcap	\sqcap	1	П	T	1		T	I		T	Γ				I		I	I	\Box	\int	
27th Circuit	816	+		+	++	十		+	\vdash	+		1	+	П	7	十	T	\sqcap	1	+	†	11	1	\top	П	1	1	T	П	\top		П		П		T	П	\top			T	Τ		T	I			I		\prod	$oldsymbol{\mathbb{I}}$		\Box	\perp	
77 District	7,163	-	11	十	++	+-		+	\sqcap	1		1	\top	П	\top	\top	\top	\sqcap	1	\top	T		1	1	\sqcap	\top	1	П	П	T	1	П				1	П	T		1				I			J					L			
78 District	1,147		11	+	++	-	1	\top	$\vdash \vdash$	-	$\dagger \dagger$	1	1	П	十	+	\top	П	+	+	T	\sqcap	1	1	П	+	1		П		T	П	1	П		1	П	T			T			T			$ \mathbb{J} $	\int	\perp	\coprod		\perp	Ш		
Total	9,126	+	-	+	++	+	+	+	\vdash	+	11	+	1	11	7	+	+	H	+	+	†	\sqcap	+	1	$ \cdot $	\top	1	\sqcap	\sqcap	\top		П	1			1	\sqcap	T	\top	7	7	T	П	T			J	I			\perp		\Box]
			1	+	1-1	+-	11	+	$\vdash \dagger$		$\vdash \vdash$	+	1-	H	十	+	十	П	+	+	+	$\vdash \vdash$	1	†	\sqcap	1	T	П	\sqcap	1		1	1	\Box	\sqcap	1	П			1	T	T	П	T		П	1				\prod		\coprod		
-		+	- -	+	+-}	- -		+	$\vdash \vdash$	+	+		+-	\vdash	+	十	+	H	\dagger	十	T	\vdash	+	\dagger	\vdash	+	+	H	\vdash	1		\sqcap	\top	\top	1	1	\sqcap		\sqcap	1	7	T	П	T	T	П		Ţ	1			Ι	П	\Box]
		+		+	+-	+-	-	+	\vdash	+	\vdash	+	+-	$\vdash \vdash$	-	+	+	\vdash	+	+	十	H	+	\dagger	H	+	+	H	\vdash	+	+	\forall	١,	.	\Box	十	\sqcap	1	11	\top	\top	T	П	\top		П	1	T	T			Γ		$oxed{T}$	
				+	+-			+	-		H	+	+	H	+	+	+	H	\dashv	+	十	十	+	+	H	+	+	H	H	十	\top	H	1	$\dagger \dagger$	1	\top	11	1	\Box	十	T	1	П	7	T	П	1	T	Τ	Π			\prod	T]
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X = Interim System

FIGURE 3 — SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE	[197	15			1			197	6						1	977	,			}			19	78							19	79				i i			1	198	.0			
COURTS	VOLUME	JFR	S A A	9 9	IA	SE	NE	1	5	AM	1	B	SE	H	ן פ	F	A A	M J	I	AS	0 1	D R]	H	AN	1	JA	IS	0 1	ום	1 F	M	A PM	1	3 6	IS	OH	D	3	FM	1 4	113]	IA	S	0	H
IURON & SANILAC COUNTIES			TT	TT		П	\prod	TT	77	7	\prod	T	П	TT		П	\top	П	\prod	7	M			\top	7	(X	T		T	T		П	T	\prod	П	Π	0 0	0	П	T	Ī	П	T	T	П	П	
Probate Courts (2)			\prod	TT			\prod	TT	11		П		П	T		TT	T	П	\prod			П				\prod					T	П	Τ	П	П	\prod			П	7	T	П		T	П	П	_
24th Circuit	394		П		7		$\Gamma\Gamma$	TT	Π	$\neg \vdash$	П			T1		П	\top	П	\sqcap		П		П	\Box		П	\top	\top	T	17	7	П	7	\sqcap		\prod	T	\Box	\Box	7	T	\prod		T	\prod	\sqcap	_
73 District, 1st Division	4,468			\prod	T			\prod	77	7	П	\top		\prod		11		\prod	77	1		\Box				Π	7			\sqcap	7	П	T	77		\prod	\top	\Box	П	T	1	П	\top	\top	Π	\sqcap	_
73 District, 2nd Division	3,947							TT	\sqcap	7				1		П	_	П	77			\sqcap	П			\prod	7		T		1	П	T	\prod	\top	\prod	7	T	IΤ	7-		П		T	Π	\sqcap	_
Total	8,809			TT			П	Π	\sqcap	\neg			П	77			7		77	7		\top		\sqcap						П		П	T	П		П			П	T	T	П	T	T	П	\sqcap	_
		$\Gamma \Gamma \Gamma$	Π	11		1	П	TT	Π					\sqcap	\top	П	1	П	77					\Box		\prod			7	\sqcap	7	П	T		7	TT	T	\prod	i	T	1	П	7	1	П	T	_
ALCONA, IOSCO & OSCODA CO	JNTIES			TT			Π	Π	\sqcap	\top	\sqcap		П	\sqcap	7	\sqcap		П		1		\top	П	77	7	\prod	хx		T		T	П	T	\Box	7	\prod	1		00	0 0	,	11	7	1-	11		_
Probate Courts (3)								TT	\top	Î	Π		\sqcap	\Box	7	Π		П	17	1		\sqcap		\Box		\sqcap	1	T		T	7	П	1		\top	T	T	\sqcap		\top	1		1	1	\Box		_
23rd Circuit	395		\prod	\prod			\prod	TT	\sqcap	\top	\prod	7	\prod	\top	_ _	\prod	\top		\sqcap	\top	T	\sqcap		\prod		П	T	\Box			7	П	7	\prod	7	\prod	1	\sqcap	\top	T	1	П	1		口	十	-
81 District	6,422		\prod	77			П	11	77	$\neg \vdash$	\prod			77	1	\sqcap	1	П	11	\top		71		\sqcap		\prod		\sqcap		\top	\top	П	T	\sqcap	1	11	\top	П	1	T	77	П	T	1	H	1	_
82 District	1,047	ΠT	77	11			\sqcap	11	\top	$\neg \vdash$	\sqcap			\Box		\sqcap			Π	_		\top		77		\sqcap	\top	\Box		\sqcap	1	\prod	\top	\Box	1	11	T	\sqcap		1	1	\Box	\top		Γİ	+	_
Total	7,854		11	11			\sqcap	\prod	11	\top	\Box				1	\sqcap	1		11		\top	\top			\top	\sqcap		\sqcap	1		┪		1	\sqcap	7	Π	\top	П		1	11	口	+	11	一	1	-
			11	17	1			\sqcap	77	1	11		1			\sqcap			17	1		\top	1	\top			\top	П	\top	\sqcap	7		1	\sqcap	1	11	\top	П		1	11	П	1	\dagger	П	7	_
ABENAC, CRAWFORD, OGEMA	W, OTSEGO		11	\Box	1			11	77	7	17	\top		11	\top	\Box			\sqcap	1	+	\top	1	17	7	\Box	7	\Box	1	11	7	\sqcap	7-	\Box	1	11	+	\sqcap		+	1-1	\sqcap	+	1-1	\sqcap	+	_
& ROSCOMMON COUNTIES			11	11			\sqcap	11	\top	1	11			\sqcap	7	\sqcap	7		\sqcap			11		11	\top	\sqcap	хx		7	11	1		1	П	7	H	1	\sqcap	0 0	10	,††	П	\top	\Box	广	7	_
Probate Courts (5)			11		7		\sqcap	\sqcap	77		11			Π	1	11			17	7	\top	\top		11		T	1		+	11	1		1	\sqcap	1	\sqcap	\top	\sqcap		+	11	\sqcap	十	11	亣	+	-
34th Circuit	672		11	11				11	11	1	\Box			$\top \top$	+	\Box			11		\top	11	1	11	7.	\sqcap	十	\Box	1	11	\top	\vdash	1	H	_	11	\top	H	1	+	11	ΓŤ	\top	\Box	一十	+	_
B3 District	7,048		11	11	7			\sqcap	77	$\neg \vdash$	\sqcap	11	1	\sqcap	1	Π			11			\top	\sqcap	\top	1	Π	1	\sqcap	7	\sqcap	1		1	\sqcap	1	\prod	T	П		T	Π	丌	T	\Box	\sqcap	1	_
Total	7,720			11	\top			$\dagger \uparrow$	11	7		\top		\Box	\top	\sqcap			11			77	7	\top		\prod	7	11	1		_		1	П	1	11	1		T		\prod	П	1	\Box	丌	丁	_
			1.1	17		\top		11	11	1	11	\top		Π	\top	\sqcap			\top			\Box	1	\sqcap	\top	T	1	\Box	\top	\sqcap	\top	\sqcap	T	П	1	Π	T	17	T	T	\prod	П	T	\sqcap	\sqcap	7	_
BARAGA, HOUGHTON &			11	\top		\top	\sqcap	11	T		\sqcap	\top	1	\sqcap	7	\Box	\top	\Box	\sqcap	\top	\top	\Box		17	\top	1-1	1	\prod		\prod	T	П	T	П	1	П	T	П	T			П	T	П	П	T	
KEWEENAW COUNTIES			11	11		1	11	1	77	\top	\sqcap	11	1	11	1	11	1		11	\top	\top	11	1	11	1	H	1	1 _x	x	Π	\top		1	\Box	1	\prod	1	П			0	0	0	H	\sqcap	7	7
Probate Courts (3)			11	11		十	\Box	11	11	\top	\Box		1	11	+	\Box	+		11	\top	\top	\Box	1	11	_	11	+	$\dagger \dagger$	+	\sqcap	\top		1	\sqcap	1	H	\top	口	\top		H	at the second	\top	\Box	\top	1	7
12th Circuit	310		++	11	1	\top		11	11	十	TT	11		\top	十		\top	\vdash	††		\top	$\top 1$	+	11	十	\sqcap	+	\Box	+	\Box	1				十	11	1	\sqcap	+		H	一	+	\Box	\top	+	7
97 District	2,652		11	11	+			11	11	+	\Box	\top	+	\sqcap	+	$\dagger \dagger$		1	H	+	1	11	1	11	7	H	1	17	\top	\sqcap	1	1	1	\sqcap	\top	H	1	口	T		H	\top	1	H	7	+	7
93 District	3,804		11	++		\top	\vdash	11	\top	1		\top		11	1	\sqcap		1	11	\top	+	11	\top	11	\top	$\dagger \dagger$	1	\Box	+	11		_		\Box	+-	1	T	口	+		\Box	十	\top	\Box	1	T	
Total	6,766		11	$\dagger \dagger$	1		\vdash	11	11	\top	\vdash	11	+	11	+	\Box	11		11	+	\top	11	+	11	十	H	+	$\dagger \dagger$	+	\sqcap	\top		\top	1	1	11	+	\sqcap	+		H	\vdash	+	\Box	_	+	7
			什	+	1	\top		11	11	\top	H	11	+	11	+	11	\top	-	11	\top	1	11	+	11	1	11	十	11	+	11		1		11	1	\sqcap	11	П	+	П	П	7	\top	\sqcap	十	1	٦
RANCH COUNTY			++	++	1	+	\vdash	11	11	\dashv	\vdash	11	+	11	1	11	+1	_	計	11	+	+	+	††	- -	11	1	x	\	$\dagger \dagger$	1	\Box	\dagger	\Box	\top	\sqcap		口	1	H	6	0 0	5	\Box	\top	1	-
Probate Court			11	++	+	+	H	11	++	\top	11	11	+	$\dagger \dagger$	_		11	\top	††	+	-	††	+	††	+	H	+	17	4	††	+	1	\dagger	H	+	H	+	广十	+	H	H	1	+	\sqcap	十	+	~
15th Circuit	311	1	++	++	+	+	\vdash	††	++	十	\vdash	††	+	++	+	$\vdash \vdash$	11	+	++	+1	1	++	+	1-1	+	11	十	H	+	-	1	+	$\dagger \dagger$	\vdash	+	H	+1	\sqcap	+	H	H	十	T	H	1	+	-
3 District, 1st Division	5,686	++	++	++	$\dashv \dashv$	+	-	++	++	+	1	++	+	++	1	1	++	+	++	\dashv	十	+1	+	†+†	+	††	+	+	+	11		+	$\dagger \dagger$		+	1	17	一十	+	1	H	1	\top	\sqcap	十	+	1
Total	5,997	1	++	++	+1	\dashv	11	++	++	+	\vdash	++	+	H	+	$\vdash \vdash$	- -	+	++	+	+	++	+	11	+	11	-	11	4	11	1	+	11	-	+	1	+1	\sqcap	十	H	H	+	+	H	+	+	-
		++	++	†:†	$\dashv \dashv$	+	\vdash	+	++	+	-	+-}	+	++	- -	\vdash	+	+	++	+	+	+	十	$\dagger \dagger$	+	$\vdash \vdash$	+-	$\vdash \vdash$		-	+	+	+	$\vdash \uparrow$	+	H	+	\vdash	+	H	H	+	+	\vdash	+	+	1
		++	+	++	+	+	\vdash	++	+	+	+	+	- -	╂┪	- -	++	-{-	+-	++	\dashv	+-	+-1	+	+-	+	╁	+-	\vdash	+	-	+	+	+1	1	+	+	+-1	\vdash	+	H	\vdash	+	+	H	+	+	1

X = Interim System
O = Advanced System

FIGURE 3 - SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE				19		 _		,		····	1	97	6			,_				197	7						1	197	78			_1				19	79							_1	198	0		_	_
COURTS		JF	R	A	4 1	1 4	IS	ON	D	JF	M	1 [19]	3 3	IA	S	H O	D	1 F	189	AM	1	A	SC	N	DI	F	M A	l Ki	1	1 A	S	N O	D] F	M	AM	13	3 A	S	0 N	D	1	M	A	M	1]	A	S	0	ľ
DICKINSON, IRON & MENOMIN	EE COUNTIES	Ш		Ш				\perp					_L					\perp					$_{\perp}$									x	$ \mathbf{x} $	1	Ш					\coprod		Ц.		0	0	0	L		_	L
Probate Courts (3)		Ш	Ш				\perp	\perp		1	Ш	11				L								1												_1_								\coprod	Ш	1	1_	Ш		L
41st Circuit	452	Ш			\perp		Ц	\perp			Ш			L																						_L							\perp							Ĺ
95 District, 1st Division	2,687	11_	Ш	Ц	\perp			1		1		\coprod											$\perp \Gamma$															\perp					I_{-}							I
95 District, 2nd Division	2,734						\perp		Ш		Ц												\perp															.]					Ĺ.				L			1
Total	5,873			Ц.	$\perp \! \! \perp$		11			1	Ц	11			Ц						Ц	Ш	\perp	\sqcup		Ш	1	\coprod					1_1								Ш		1		11		1_			l
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HILLSDALE COUNTY																																х	×									I				0	0	0	\Box	Ĺ
Probate Court		Ш											1																	\perp								\perp				I	L							L
1st Circuit	413		\sqcup	Ш			\perp							\perp			\prod		П																		\Box				\perp				\Box					
2 District, 2nd Division	5,074	Ш			Ш		\prod				П								\Box										\perp														$oldsymbol{\perp}$	П	\Box	\int			\int	į
Total	5,487												Γ										\perp						I									I			\Box	\int	\prod		\prod			\Box	I	
			Ш					L															\perp		\perp		I		I												\prod	\perp		П			\Box			
ALPENA, MONTMORENCY &			Ш					L																\prod		\coprod			$oldsymbol{\perp}$						\perp				П		\prod	\perp				\perp		\mathcal{I}		
PRESOUE ISLE COUNTIES																						\coprod						П	\perp				×	X	\perp	Γ					\prod	\perp	\Box	П	\perp	0	0	0	I	
Probate Courts (3)			Ш																					П																\perp	\prod	\perp						\perp	\rfloor	
26th Circult	506							L																																									\exists	
83 District	5,038												\perp			\mathbb{L}		I				\prod	I	\prod			\mathbb{L}	\prod	\perp		\perp	\prod						I			\prod	I	\Box	\Box	\perp	I			I	
Total	5,544		1					1				$ \cdot $																																	\perp					
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BENZIE, KALKASKA, MISSAU	CEE &											\prod	I	\prod						П		П	T	П			I	\Box	\Box			\coprod	×	×				T.			\Box	L			1				0	
WEXFORD COUNTIES		$\prod_{i=1}^{n}$				T	TT		\Box			П		Π	$\cdot T$					\prod	T	П	T	П	Т			П	{											1.1						1		1	1	
Probate Courts (4)		П	П		П	\top	\prod	1	П		П	Π	T	\prod		\sqcap			П	П		П	T	П		П	\top	П	T	\sqcap	\top	\prod	\neg	\prod	T	\sqcap	T	Т	П	\top	П		\prod		1			1	T	
28th Circuit	508	Π	П		П	T	\prod		П			П	T	\prod	T	T		\top	П	\sqcap	7	Π	\top	П	7	П	T	П	7	\sqcap	1	77	T	Π	\top	\prod				TT	П	T	\Box	T	T	T	П	T	T	
84 District	4,252		П		\prod		П		П		П	П	\top	П					П	П		П	1	П	T	П	T	П	\top	\Box	T	\prod	\top		\top	П					\prod	T	П	\Box	T	Γ		T	Ι	
Total	4,760						\prod						T	T									1				7									\prod	$oxed{\int}$					Γ	\prod	T	floor	\Box		I	I	
						T				\prod		П	T	11	T	T					7	TT	T	TT	T		T	\Box	1	11	7	T	T			\prod			LT	\prod	\Box	Γ	LT	_[\Box		I	\int	
GOGEBIC & ONTONAGON COU	NTIES		П		11	1	TT		П		\Box	77	T	\sqcap	7			77		11	T	11		\prod	T	\sqcap			T	11	T	T	T	T	×х	\Box	7			\Box	\supset	T		\prod	T	\Box		o	Ī	
Probate Courts (2)			П	1	\prod	1	\prod	\top	П			Π	1	Π		\Box		\top		11	\top	77	\top	П		\Box		П	7	\sqcap	7	TT	1	\prod	T	TI	T			T	\Box	T	\prod	T	I	\prod		I	I	
32nd Circuit	196		П		\sqcap	1	11	\sqcap		\top		\prod	\top	Π	\top	77	\neg				1	H	T	\sqcap		\sqcap		П	7	\sqcap	T	\prod	\exists	\sqcap	7	\prod				\prod	T	T	\prod	T	T			T	T	
98 District	2,940		П		11	1	77	\sqcap	П	\forall	T	\prod	7	77	7	77	1	77	1	77	\top	11	1	П	1			\sqcap	1	T	1	\sqcap	1	\prod	\top	\prod	7	\sqcap		Π		T		T	T	П		T	I	
Total	3,136		П	7	11	1	\sqcap	77		17	1	11	1	11	+	11	1	\sqcap		11		11	1	\sqcap	\top	\sqcap	\top	\sqcap	7	11	1	17	1	17	T	11	1	7		\Box	1	T	\Box	1	T	П		T	Τ	
			H	1	11	1	11	\sqcap	1	77	7	77	1	11	-	77	\neg	71	1	77	7	\sqcap		\sqcap	\top	1	\Box	\sqcap	1	\sqcap	7	17	1	11	\top	77	T	1 1	T	TT	T	T	П	1	T	\prod		T	T	
· · · · · · · · · · · · · · · · · · ·			\sqcap	1	$\dagger \dagger$	+	11	\top	\vdash	++	+	$\dagger \dagger$	1	11	+	††	1	$\dagger \dagger$	1	$\dagger \dagger$	7	11		\vdash	1	\top	\forall	\vdash	+	13	1	11	\top	11	\top	77	1	П	\top	77		7	\sqcap	7	T	\prod		T	T	•
				1	11	+	11	11		11	\top	11	1	11	1	11	1	11	1	11	1	11				1	\top	\Box	1	\sqcap	1.	11	1	11	\top	11	1	T	1	77		T	\sqcap	T	T	П	\sqcap	7	T	
			1	-	11	-	1		1	++		+	1-	+	-	++		1-1	-	++		1-1-	+	-			1	1	-	11	-+-	11	-1-	1-1	\top	17	-	\top	-	11		7	\sqcap	1	1			T	T	٠

X = Interim System
O = Advanced System

FIGURE 3 — SYSTEMS IMPLEMENTATION SCHEDULE

COUNTY	1972 CASE		· 		19								197	6				L.			19	377							. 1	97	8							19					1				198				_
COURTS	VOLUME	JF	M	AR	1 1	3 6	S	0 14	B	J F	MA	i in	3	A	S	0 1	i I	I	FA	9 A	M I	11	AS	0	ND	1	F	A A	M]]	A	S	ON	D	J F	M	A M	j	3 A	S	ON	D	1	FR	a A	M	1	IA	S	0	N
ickinson, iron & menomin			П		T	T	T	T	\sqcap		T	\top		\top	\sqcap		7		7			\sqcap	\top	TT	1	\Box	7	\top	\Box	1	П			x	T	П	1		1	\prod	T		П	T	0	0	0	T	П	П	Γ
Probate Courts (3)			П	T		1	\sqcap	7		7		77		7	\Box		7	77	1			\Box		\sqcap		\top	1	1		1			1		T	17	7		-	Π	1		П	7	T		T	T	П	П	Γ
41st Circuit	452			1	11	7	11	\top	\sqcap		\top	77		T	\sqcap	7	1		7			\Box	+	\sqcap	\top	T	7	\top	\sqcap	7	11		1	\Box	_	T	\top	\Box	\top	Π	\top		口	T	1	11	\Box	1	\prod	П	Γ
95 District, 1st Division	2,687		17	7	77	\neg	T	7	П		7	\forall	1	1		7	7	11	7			11	1	11	1	Π	1	1	П	1			\top			\sqcap	7	77		17	7		IT	T	T	\sqcap	\top	T	M	П	Γ
95 District, 2nd Division	2,734			\top	\sqcap		11	T	\sqcap		1	\sqcap	_	7	\sqcap		T	\Box	\top			11	\top			\sqcap	\top		П	7			1		1	11	1	\sqcap	7	Π		1		1-	\top			T	Π	П	Γ
Total	5,873		П	7	\Box	7	\prod		\prod		7		T	7			1	П	1			\sqcap	7	\sqcap		\prod	7		П		71		7	\Box	1	\prod	7	П	7	T		1		T	T	\Box	\Box		П	П	ſ
			П	Т	\prod	7	T	1			\top	\prod	T	7	\sqcap	1	7	П	7			11	\top	П	_	\prod	1	1	П	7	71		7		1			П	7	TT	T			T	1			1	17	П	Γ
HILLSDALE COUNTY			П	\top	\top	\top	11	T				\sqcap		\top	П		7	\sqcap	7			\sqcap	7		\top	\Box		T	П	7	\sqcap		×	×	1	\prod	_		1	17		7-1	IT	1	7	7-1	C	0 0	0	П	٢
Probate Court			П	7	11		П	\top			\top	\sqcap	7	7		7	1	T	1			\sqcap	\top	П	\top		7	1	П	7	\Box		\top		7	П		П	\top	Π	1	17	17	7	\top		T	T	П	П	Γ
1st Circuit	413						T^{\dagger}	T				\Box	T	Τ	\Box		1	T	T	T			\top	M	7	T	1	\top	П		\top		\top	\prod	T	T	\top	П	\top	T	7	TI	IT	T	T	П	T	T	П	П	ſ
2 District, 2nd Division	5,074		\prod	1			\prod	7	П	77	7	T	7	T	\sqcap	1	7	1	1		7	\sqcap	7	\Box	1	\Box	7	7	П	1			T	Γt	T	11	T	П	1	T	7	T	П	7	T	\prod	T	T	П	П	Г
Total	5,487	I	П	7	77		77	\top	\sqcap	\top		\prod	7	1	\Box	1	T	11	1			77	\top	П	\neg	11	7	T	\sqcap	1	\sqcap	\sqcap	T	\sqcap		11	1	\prod	1	T	1		17	T	1	\prod		T	П	\sqcap	ſ
			\prod	7	11		77	7	1	\top	7	71	7	T		7	T	77	7	\top	1	\sqcap	1	\sqcap	十		7	1	П	1	\sqcap	1	1	11	1	11	1	11	1	77	T	11	$\Gamma \uparrow$	7	1	\sqcap	+	T	H	\sqcap	ſ
LPENA, MONTMORENCY &			П	\top			\top	\top			1	\sqcap	7	7	\sqcap	\top	1	\sqcap	7	\sqcap	\top	77	\top	\sqcap	1	\sqcap	1	1	П	\top	\top		T	П	1	11	\top	\sqcap	\top	\prod	7	\sqcap	\sqcap	T	1	П	1	T	口	\sqcap	ſ
PRESQUE ISLE COUNTIES			\sqcap	1	11	1	71	\top	\sqcap	77	7	77	1	1	\Box	7	T	11	1	77		11	1	\sqcap	1	11	1	+	П	1	77		\top	\Box	хx	11	1	\sqcap	1	11	+	\sqcap	M	7	+	11	lo	0 0	101	\sqcap	Γ
Probate Courts (3)			П	1	\top		11	7		$\neg \neg$	7	\prod	7	T	11	1	T	T	1	\sqcap		11	1	\sqcap	7	\sqcap	1	T	П	7	77	\top	T	\sqcap	1	TT		П	\top	T	7	П	丌	T	T	П	T	T	M	\Box	ĺ
26th Circult	506		17	7		T	Π	T			1	Π	7	1	\Box	7	\top	\Box	7	\Box	\top	\sqcap		\sqcap	7	\sqcap	7	7	П	7	\sqcap		1		1	\sqcap	1	\sqcap	\top	П	T	П	\sqcap	T	\top	\prod	7	1	П	7	ī
83 District	5,038		П	\neg	77	7	\sqcap	1	\sqcap		7	\sqcap	7	1		\neg	T		1		7	\sqcap	1	\sqcap	1	11	7	\top	П	1	11	7	7		7		1	П	1	M	T	\sqcap	\sqcap	1	\top	\sqcap	7	1	П	7	<u> </u>
Total	5,544		П	T	T		\prod		П		7	1.		T		7	T	\prod	7		T	\prod	1	П	\top	\sqcap	7	T	П	7	\sqcap		7		T	П		П		П	T	П	П	T	T	П	\top	T	П	T	Ī
			П	\top	T		\prod	T			\top	\sqcap	7			7	T	Π		\sqcap		\sqcap		П		П	7	7	П	\top	\sqcap	7	T	П	T	П	\top	П	\top	П	\top	П	П	T	T	П		T	П	Т	_
ENZIE, KALKASKA, MISSAUK	EE &		П				17	1		77	7	\sqcap	T			\top	T	\prod	1	\Box	1	\sqcap	\top	\sqcap	\top	\prod	\top	1	П	\top		$\neg \uparrow$	7		хx	П	1	П	\top	П	\top	П	П	1	T		1		П	0	(
WEXFORD COUNTIES		1	П	\top		7	\prod			\top	7	M	7	7	1.1	1		П	7	\sqcap	\top	\sqcap	7	П		П	7	7	П	7	П	7	T	П	\top	П		П	T	П	\top	П	П	T	T	П	T	T	П	П	
Probate Courts (4)		1	П	Т	П	\top	T		П		T	П				T	T	\prod	1	\top	1	\sqcap	T	\sqcap		Π	\top	1	П	7	\sqcap	1		П	T	M		П	T	П	\top	П	П	T	T	П	\top	T	П	П	_
28th Circuit	508	7	П	\top	11	\top	\sqcap		П	77	7	\sqcap	\top			\top	Τ	\sqcap	1	\Box	1	\sqcap	1	\sqcap	1	\sqcap	7	\top	П	7	17	7	\top	П		11		П	\top	П	1	П	T	1	T	П	\top		П	T	_
84 District	4,252	T	П	T	\prod	1	П	T	П	\top	7	\sqcap	\top		\sqcap		T	\sqcap	\top	\sqcap	\top	\sqcap	1			П	7	1		T	\top	\neg	\top	\sqcap	1			П	1	П	T	П	T	T	T	П	\top		П	T	
Total	4,760	\top	П	1	11		M	7		77	7	\sqcap	\top	T	П	7	1	Π	7	T	1	\sqcap	7	П	7	\prod	1	7	П	7	T^{\dagger}	7	T	П	T	П	\top	П	T	П	T		T	T	T		T	Γ	\Box	J	_
			П	T	M		TT		П	\Box	1	\prod	T	7	П	T	T	\prod	T	\prod	7	\prod	$\neg \vdash$	\sqcap		\prod	\top	T		7	\sqcap	T	T	\sqcap	T	П		П	T	П	7	П	T	T	T	П	T		ΙŢ	T	_
OGEBIC & ONTONAGON COU	ITIES		1	T	11	1	TT		\Box	77	7	77	7			1	T	\prod	7	\sqcap	\top	Π	7	П	1	Π	T	1	\sqcap	7	11	\top	1	\Box	7	x >	7	\sqcap	\top	П	T	П	T	T	T		T	\Box	10	0 0	o
Probate Courts (2)			П		TT	T	TT		П	\top	T	TT	T	\sqcap	П	7	7	\prod	\top	\top	7	\sqcap	1		\top	\sqcap	7	1	7	7	\sqcap	7		\sqcap	T	\sqcap	\sqcap	\sqcap	T	П	1	П	T	7	T	П	T	П	T	T	_
32nd Circuit	196		П		TT	\top	77		\sqcap	\top	T	M	\top	\top		1	1	\prod	T	\sqcap	\top	\sqcap	\top	\sqcap	\top	17	1			7	77	1		\sqcap	7	IT	77	\sqcap	1	П	T	П	T	1	T	П	7	П	T	T	_
98 District	2,940		П	1	\prod	1	\prod		\sqcap	\top	1	11	\top	\top	\Box	1	T	\sqcap	7	\sqcap	\top	TT		\sqcap	1	Π	7	1	1	1	11	1		\sqcap	\top	\sqcap	77		T	П	T	\sqcap	7	T	\Box	П	T	\prod	T	T	_
Total	3,136		П	1	77	7	11			77	1	11	7	П	П	7	1	17	1	\sqcap	7	\sqcap	1		1	11	7	1		7	11	7	T		\top	П	11	\sqcap	T	口	T	П	T	T	1	\sqcap	T	\prod	T	T	_
	[_		1	71	7	11	\top	\sqcap	77	\top	11	1	\prod		1	T	11	1	\sqcap	\top	\sqcap			1	11	1		1	1	11	7			T	\sqcap	77			IT	7	П	T	T	17		T	П	T	\top	
		$\neg \neg \neg$		1	11	1	T		\sqcap	77		11	1	\sqcap	\sqcap	1	\top	\sqcap	十	\top	\top	11	1		1	11	+			+	††	1	1	广十	1	11	+1	\sqcap		口	7	口	T	+	7		T	\prod	\top	T	
				T	77	1	11		\sqcap	11	\top	11	1	\sqcap	1	1	T	11	1	11	1	\sqcap			+	11	+	11	1	1	11	1	1		1	11	\top	\sqcap	1	一十		\sqcap	1	1	71		T	\prod	\neg	T	
				\top		-	11	1	1	71		11	7	11	1	+	1	1	+	11	-	\vdash	1	\vdash	+	11	-1-	1-	+	 	11	-	1	-	1-	\vdash	11	1	1	1	7-1	1	1	1	1	\sqcap	1	\sqcap	7	1	_

FIGURE 4 - JDC BASIC EQUIPMENT CONFIGURATION

ITEM				
NO.	QUANTITY	MODEL		DESCRIPTION
	_			to the control of the
1	1	B4704-1		Central Processor
		*		8 I/O Channels
2	4			150 KB Core
2	10	B4050-1		Additional 350 KB Core
3	1 3 1	B4302		Type B I/O Channel
-4 E	4	B4099		Floating Point Arithmetic
4 5 6		B4098		Aux. Power Cabinet
7	1 1	B4342		Console, Standing
8	1	B4340		Console Printer Control
Q	.	B9340		Console Printer & Keyboard
9	1	B4110		Card Reader Control .
10	1	B9111		Card Reader, 800' CPM
11	1	B4242		Line Printer Control
12	1	B9243-1		Line Printer, 1100 LPM
13	1	B9941		Additional 12 Print Positions
	en en en en en en en en en en en en en e			
14	1	B4393-2		M.T. Control
15	1	B4493-1		1 x 8 M.T. Exchange
16	4	B9393-1		M.T. 144 KB,9-Channel, 1600 BPI
17	2	B9393-1	•	144 KB, 9 ch 1600 BPI Mag Tapes
18	2	B4375		D.F. Comb. Control
19	1	B9379-3		H.P.T. Disk, 20 MB, 23 MS
		_,0,,,		Inc. Electronics Unit
20	1	B9374-3		H.P.T. Disk, 20 MB, 23 MS
21	1	B9375-4		H.P.T. Disk, 100 MB, 40 MS
22	2	B4471-5		Control Adapters
23	2	B4471-6		E.U. Adapters
24	1	B4471		D.F. Exchange
25	1	B9484-3		Dual Drive Disk, 121 MB
26	1	B4380-2		Disk Control
27	3	B9486-3		Dual Drive Disk, 121 MB
28		B4353		Multi Line Control
29	<u></u>	B4354		8 Channel Ext. for B4353
30	$\frac{-}{2}$	B4665-1		Dir. Connect Std Adapter
31	5	B4665-5		Data Set Std Adapter
32	2	B4665-10		Burroughs Syncronous Adapter
33	$ar{f 1}$	B4665-15		Automatic Dial Out
	그는 그 그 그 그 사람들은 것이 되는 것이 없었다.			

FIGURE 5 - TERMINAL AND DISK DRIVE REQUIREMENTS SCHEDULE

				197						3	976	i					1	977			T			19	78			T			-	197	9			\top			1	980	,		
	JF	M F	A A7	3	JA	SO	N	1 1	114	A M]]]	AS	0	D	J F	M I	M	3 3	AS	0 1	D	J F	M A	MJ	JA	SI	N	DJ	F	Pal A	ME]]	A	SO	N	נוס	F	H A	M		A	S . 0	οĪ
ATA COMMUNICATIONS TERMINALS			\perp									П		1							\sqcap		$\neg \neg$	1	\Box			\top		\sqcap			\sqcap	\top		+				1		1	+
Scheduled Need	-	T-	-	П	-		\sqcap	30		2	31		31		20	1	4	19	\vdash	13	11,	2	10	_	14	1	4	1	5	1	5	1	1	14		13	!-+	15	-	8	+	10	
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FIGURE 6 - MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT - ORGANIZATION CHART MICHIGAN SUPREME COURT COURT PROCEDURES AND TECHNOLOGY COMMITTEE COURT ADMINISTRATOR MANAGER
ADMINISTRATIVE SERVICES
(Budgets, Grants, Standards, etc.) DEPUTY COURT ADMINISTRATOR ADVISORY GROUPS DIRECTOR OF SYSTEMS SPECIAL INDUSTRY ADVISORY GROUP MANAGEMENT SCIENCE GROUP EXECUTIVE BRANCH DEPUTY DIRECTOR OF SYSTEMS STEERING COMMITTEES MANAGER MANAGER JUDICIAL DATA CENTER MANAGER MANAGER IMPLEMENTATION SERVICES COURT SERVICES TECHNICAL SUPPORT MANAGER DEVELOPMENT SERVICES (Computer Facility Operations) (Implementation/Field Lisison) Court Reporting
 Court Recording
 Microfilming Data Base Administrator
 Data Communications Coordinate (Systams Development) Fleid Supervisors
 System Analysts Senior Systems Analyst Systems Analysts Programmer/Analysts Programmers SUPERVISOR SUPERVISOR MAINTENANCE GROUP OPERATIONS GROUP Computer Operators
Data Entry Operators
Production Control Clark
Librarian Systems Analysts Programmer/Analysts Maintenance Programmers

MICHIGAN SUPREME-COURT SYSTEMS DEPARTMENT PERSONNEL REQUIREMENTS

			. FISC	AL YEAR E	NDING JUN	JE 30	
	POSITION DESCRIPTION	1974-5	1975-6	1976-7	1977-8	1978-9	1979-80
A. M	ANAGEMENT - SYSTEMS DEPARTMENT						
	1. DIRECTOR OF SYSTEMS	1	1	1	1	1	1
	2. DEPUTY DIRECTOR	1	1	1	1	1	1
	3. OFFICE MANAGER	1	1	1	1	1	1
3	4. SECRETARY	1	1	1	1	1	1
	5. STENOGRAPHER CLERK	1	1	1	1	1	1
	6. TYPIST CLERK	1	1	1	1	1	1
	SUBTOTAL	6	6	6	6.	.6	6
. D	EVELOPMENT SERVICES						
	1. MANAGER	1	1	1	1	1	1
	2. SENIOR SYSTEMS ANALYSTS	3	3	2	2	2	2
	3. SYSTEMS ANALYSTS .	2	2	1	1	1	1
	4. PROGRAMMER/ANALYSTS	5	3	1	1	1	1
	5. PROGRAMMERS	3	3	2	2	2	2
	SUBTOTAL	12	12	7	7	7	7
). IN	MPLEMENTATION SERVICES						
	1. MANAGER	. 0	· 1	1	1	1	1
	2. FIELD SUPERVISORS	0	2	4	4	4	4
	3. SYSTEMS ANALYSTS	0	2	6 .	6	6	6
	SUBTOTAL	0	5	11	11	11	11
). T	ECHNICAL SUPPORT						
	1, MANAGER	1	1	1	1	1	1
	2. DATA BASE ADMINISTRATOR	1	1	1	1	1	1
	3. DATA COMMUNICATIONS COORDINATOR	1	1	1	1	1	1
	SUBTOTAL	3	3	3	3	3	3
. C	OURT SERVICES						
	1. MANAGER	1	1	1	1	1	1
	2. SYSTEMS ANALYSTS	1	1	1	1	1	1
	SUBTOTAL	2	2	2	2	2	2

FIGURE 7 (continued)

MICHIGAN SUPREME COURT SYSTEMS DEPARTMENT PERSONNEL REQUIREMENTS

•		POSITION DESCRIPTION		• FISCA	L YEAR E	NDING JUN	E 30	
		POSITION DESCRIPTION	1974-5	1975-6	1976-7	1977-8	1978-9	1979-80
F.	ADMIN	NISTRATION - JDC						
	1.	MANAGER, JUDICIAL DATA CENTER	1	1	1	1	1	1
	2.	DEPUTY MANAGER	0	1	1	1	1	1
	3.	SECRETARY	1	1	1	1	1	1
	4.	STENOGRAPHER CLERK	0	0	1	1	1	1
		SUBTOTAL	2	3	4	4	4	4
G.	OPER/	ATIONS GROUP – JDC		1	<u> </u>		<u> </u>	
	1.	SUPERVISOR	1	1 1	1	1	1 1	1
	2.	COMPUTER OPERATORS	4	5	6	6	6	6
	3.	PRODUCTION CONTROL SUPERVISOR	1	1	1	1	1	1
·	4.	PRODUCTION CONTROL CLERK	4	1 7	7	7	7	7
	5.	LIBRARIAN	1	1	1	1	1	1
	6.	DATA ENTRY SUPERVISOR	1	1	1	1	1	1
	7.	DATA ENTRY OPERATORS	5	5	5	5	5	5
	·····	SUBTOTAL	17	21	22	22	22	22
					1			
Н.	MAIN	TENANCE GROUP - JDC						
	1.	SUPERVISOR	1	1	1	1	1	1
	2.	SYSTEMS ANALYSTS	2	2	3	3	3	3
	3.	PROGRAMMER/ANALYSTS	1	1	1	1	1	1
	4.	MAINTENANCE PROGRAMMERS	3	4	5	6	6	6
		SUBTOTAL	7	8	10	11	11	11
		TOTAL	49	60	65	66	66	66
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END