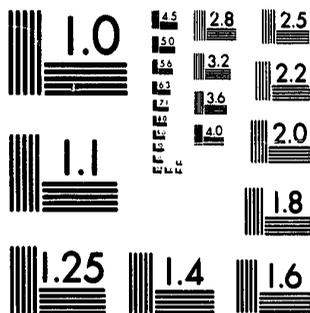


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**National Institute of Law Enforcement and Criminal Justice
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PROMIS

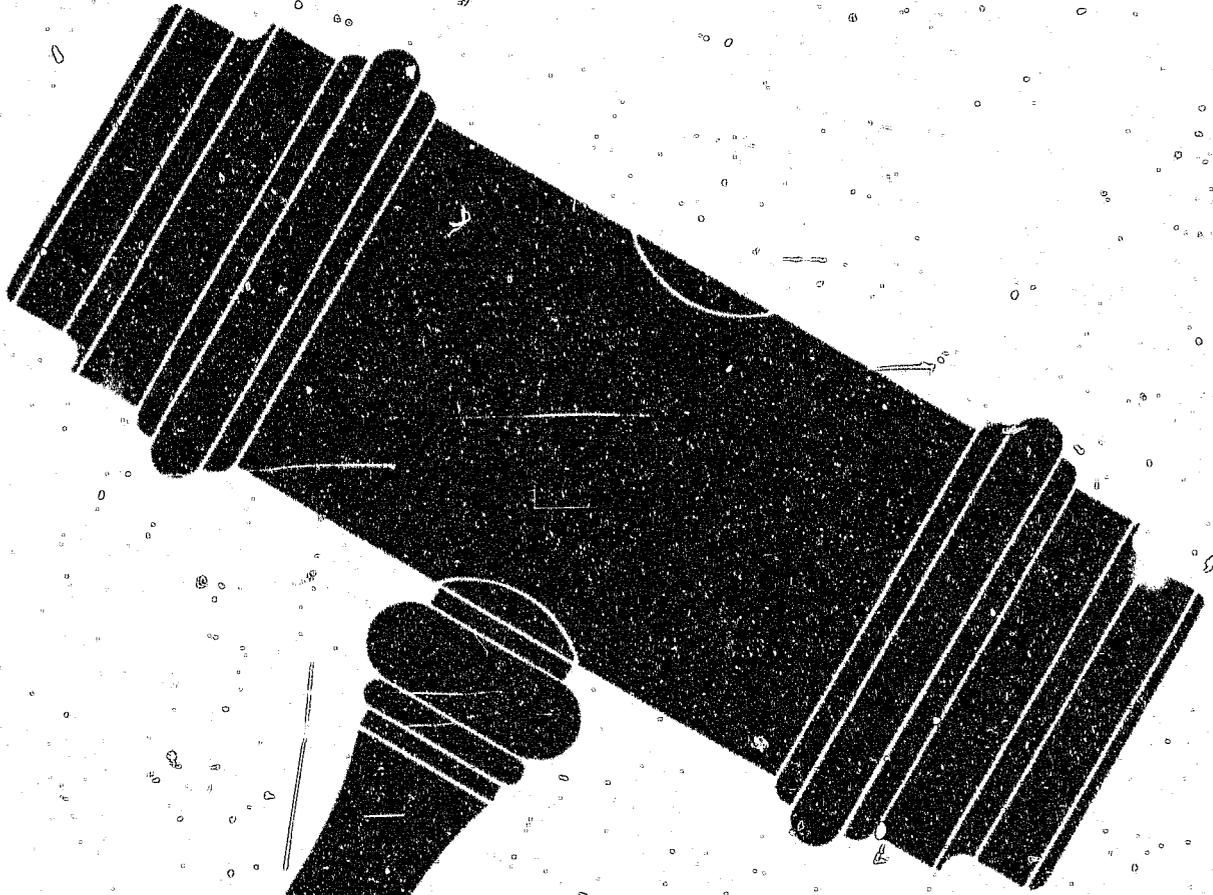
PROMIS for the Courts

**A New Computerized Information System
for Management of the Court**



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Law Enforcement
Assistance Administration
U.S. Department of Justice



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NCJRS

MAR 27 1980

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HIGHLIGHTS

Court Records, Information Systems, and Statistics: General Principle. A court system should have a modern system of court records, efficient procedures for storing, indexing, and retrieving information from its records, and statistical systems for measuring and monitoring the flow of its work. The systems and procedures should assure that information entries and withdrawals are prompt, economical, and accurate; that necessary judicial and administrative decisions can be made with sufficient and readily available facts; and that periodic inquiries and analyses of the court system's operations can be made readily, accurately, and continuously.¹

This publication presents an overview of a new computerized system for court management: PROMIS.² Addressed primarily to those responsible for the overall management and administration of their respective courts—chief or presiding judges and their colleagues, as well as court administrators and clerks of court—this publication focuses on three principal questions:

- What kinds of courts can use PROMIS?
- What are the capabilities of PROMIS?
- What implementation assistance is available?

Highlights of the answers to these questions are presented below so that readers can make a quick initial assessment of PROMIS's relevancy to their respective court operations. More detailed answers are provided in the chapters that follow.

IS PROMIS ADAPTABLE TO YOUR COURT?

A common pitfall of computerized court management systems is that such systems are often intolerant of the unique requirements of a given court. Rather than being able to adapt a management information system to its specific needs, a court must often adapt itself excessively to the demands of the automated system.

In contrast, PROMIS contains a built-in feature that permits it to be tailored to accommodate the many ways one court may differ from another. PROMIS can be tailored to civil, criminal, or juvenile case loads, or any combination of them. It is applicable to a variety of court types, such as limited and general jurisdiction, appellate, criminal and civil, and local, state, and federal. PROMIS is also adaptable to differing case assignment systems,

case-processing steps and procedures, terminology, and report contents and formats.

Designed to run on the equipment of a number of manufacturers, PROMIS is compatible with both minicomputers and large mainframes.

WHAT ARE THE CAPABILITIES OF PROMIS?

PROMIS can store hundreds of items of information on each pending or closed case. This information supports not only daily operations but also long-range management decisions and policies. PROMIS permits the capture of information pertaining to causes of action, the offense, scheduling, docket entries, case participants (including witnesses and attorneys), dispositions, sentences, appeals, and the like. This information may be retrieved as printed reports or as displays on the video screens of computer terminals. The informational items to be stored in the system may be increased, decreased, or modified through PROMIS's tailoring capability. Similarly, the types and formats of system-generated reports, forms, and displays may be adjusted during tailoring, as appropriate.

Displays on the video screens of the terminals can, at the discretion of the user, present all available information on a given case, or focus on only a segment of case information, such as data on scheduled court events, completed events and the related minutes, parties and party contacts, or dispositions. Information can also be retrieved on all cases sharing a specified characteristic or attribute—for example, all pending cases having the same assigned judge, calendar date, or defense attorney.

¹From *Standard 1.60*, American Bar Association Commission on Standards of Judicial Administration, *Standards Relating to Court Organization* (Chicago: American Bar Association, 1973): 92-93.

²PROMIS has been serving prosecutors' offices since 1973. Recently, the information system has been successfully tailored to a wide range of court applications.

Displays or printed reports also provide scheduling and calendaring information (including identification of potential conflicts in the schedules of case participants), docketing and minute entries, case aging and status statistics, witness management information, disposition analyses, case-flow management data (including case-tracking statistics), and descriptive case data.

PROMIS's capabilities can also be described in terms of five major areas of benefit.

1. **Clerical benefits.** The data storage and instant retrieval capabilities of PROMIS reduce to a minimum manual filing procedures and the related space and equipment. Similarly, the automated docket entry and retrieval features of PROMIS streamline the traditional clerical procedures in this area. The automatic generation of forms and notices on demand or at specified intervals is another major clerical benefit. This feature alone will save one court more than 3,500 clerical hours annually.
2. **Scheduling assistance.** In addition to providing court managers with the data on which to base the overall objectives and policies that supply direction to scheduling operations, PROMIS can produce numerous reports that promote effective calendaring. For example, the system can be used to maintain current information on the status of the calendar, the pending work load, and the scheduled commitment of resources as cases move through the various stages of the judicial process. Moreover, PROMIS helps schedulers to control conflicts in participants' schedules, to minimize court appearances of law enforcement personnel, to notify case participants regarding the time and place of scheduled (or rescheduled) court events, and to adjust to last-minute changes in the calendar. Finally, PROMIS facilitates evaluation of scheduling operations in terms of how well they meet the overall objectives of the court.
3. **Improved service to the public.** Because PROMIS constitutes a central source of information and can help minimize conflicts in case participants' schedules, public inconvenience and frustration occasioned by court appearances that result only in continuances are minimized. Moreover, questions by witnesses, who may have lost their summonses, for example, can be quickly answered using PROMIS's capability to link witnesses' names to the related cases and display on a video screen the information pertaining to those cases. Informative annual reports based on statistics generated by PROMIS's case-flow management reports can also be produced. Another set of reports permits courts to

respond to the largely unanticipated, often highly specific questions asked by the media, civic organizations, legislative committees, and the like.

4. **Case-flow management.** In conformance with standards developed by the American Bar Association (ABA) and others, PROMIS can provide significant help to those responsible for moving cases efficiently from the point of filing to the point of hearing, trial, or other disposition. For instance, the automated system can aggregate data on what is happening in the judicial process—continuances, dismissals, backlogs, findings, elapsed time between events, and the like. Additionally, PROMIS facilitates case flow by providing a weekly snapshot of the calendar (by case category) in terms of cases set, the capacity of the calendar to absorb more cases, judges available, and so forth. Because of the array of statistical data generated by PROMIS, local courts can routinely supply state agencies with the data they may require to monitor case flows in the various jurisdictions. PROMIS data elements can be tailored to conform to State Judicial Information System specifications (civil and criminal), as well as to Computerized Criminal History and Offender-Based Transaction Statistics systems.
5. **Aiding judicial decision making.** PROMIS collects data that can be used to develop and update guidelines that help promote evenhanded and effective judicial decisions in such areas as pretrial release, speedy trial, continuances, and sentencing.

WHAT IMPLEMENTATION ASSISTANCE IS AVAILABLE?

To encourage the adoption of PROMIS by public law agencies, the Law Enforcement Assistance Administration has contracted with the Institute for Law and Social Research (INSLAW) for the provision of PROMIS software, documentation, and technical assistance, at no cost to PROMIS users. In this capacity, INSLAW strives to bridge the communications-expertise gap that often exists between the developers of technology and the potential users.

This is not to say that INSLAW takes charge and implements PROMIS. That is achieved by local resources, under the control of the court. Rather, INSLAW provides assistance in such areas as cost-benefit analysis, obtaining funding, planning, requirements analysis, system design, human engineering, employing new categories of personnel, and obtaining contractors and consultants. INSLAW also provides extensive documentation, including a step-by-step explanation of the implementation process, user manuals, and technical system descriptions.

PROMIS IS ADAPTABLE TO YOUR SPECIFIC REQUIREMENTS

More projects and programs have sought to improve the nation's court system in the past decade or so than perhaps during all the preceding years of United States history.¹ Numerous court-improvement efforts have included within their scope consideration of the pivotal role played by timely, valid, and sufficient information. The American Bar Association Commission on Standards of Judicial Administration, for example, advised in Standard 1.60 that judicial and administrative decision making (such as assigning cases for trial), information-handling activities (such as making entries in records and sending out notices), and monitoring and planning (such as analyzing the flow of cases) "require that the persons charged with doing so have readily at hand all necessary relevant information in a form that they can use."² The Commission recommended that courts should have "a modern system of court records, efficient procedures for storing, indexing, and retrieving information from its records, and statistical systems for measuring and monitoring the flow of its work."³

This emphasis on the acquisition of adequate information recognizes that, without it, priorities are almost impossible to determine, feedback on operations is sketchy at best, policies are determined more by intuition than by substantive analysis, and the overall direction of the organization is influenced more by the accumulation of ad hoc decisions by subordinates than by the careful deliberations of key personnel. In words attributed to the noted British physicist Lord Kelvin, "When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in

numbers, your knowledge is of a meager, unsatisfactory kind."

The ABA Commission observed that, under modern conditions, a court information system must "provide large amounts of information to many users, economically and with a high degree of accuracy, and often upon rapid or even instantaneous response to request."⁴ When appropriate, the court information should be computerized, according to the ABA Commission. Others concur. Earlier, in 1967, a task force report of the President's Commission on Law Enforcement and Administration of Justice noted the promise of computers for courts in such areas as maintaining case histories, reporting statistics, monitoring and scheduling cases, preparing documents, and case indexing.⁵ Six years later, another national commission advised that the courts "must employ every technological assistance that is available if they are to survive. At present, computers appear to hold great potential for helping the courts perform adequately their role"⁶

PROBLEMS LEADING TO COMPUTERIZATION—AND OCCASIONAL DISAPPOINTMENT

A number of symptoms indicative of problems in the courts have been cited⁷ as spurring the trend toward computerization, such as:

- Frequent last-minute conflicts in the schedules of case participants, with resulting continuances.

¹National Advisory Commission on Criminal Justice Standards and Goals, *Courts* (Washington, D.C.: Government Printing Office, 1973): 2.

²American Bar Association Commission on Standards of Judicial Administration, *Standards Relating to Court Organization* (Chicago: American Bar Association, 1973), Standard 1.60 (with commentary): 93.

³*Ibid.*: 92.

⁴*Ibid.*: 93.

⁵President's Commission on Law Enforcement and Administration of Justice, *Task Force Report: The Courts* (Washington, D.C.: Government Printing Office, 1967): 162.

⁶National Advisory Commission, *Courts*: 216.

⁷For example, see Larry P. Polansky, *Computer Use in the Courts. Planning, Procurement, and Implementation Considerations* (Washington, D.C.: The American University, 1978): 3.

- Missed speedy trial or filing deadlines often undetected.
- Heavy volume of repetitive and relatively simple clerical tasks.
- Case inventories inexplicably growing.
- Case-processing delays becoming longer, with cause or causes unknown.
- Significant difficulty in answering inquiries from participants about the status or scheduling of cases.
- Inability to supply disposition or other statistical data to local or state agencies.
- Much of the available information characterized as too little, too late, or too unreliable to aid policy making or to assist in monitoring operations.
- General inability to identify problems or adverse trends until they are full blown.

Identified in 1978 by a national manpower survey of the criminal justice system, certain long-range developments in state and local courts also tend to indicate the need to explore the feasibility of computerized court information systems. First, although the trend toward court unification and consolidation promises to reduce further the number of state and local courts, employment in those courts is projected to increase by 54 percent between 1974 and 1985.⁸ This trend seems to suggest that, on average, courts are becoming increasingly complex administratively. The manpower survey, for example, cites a cause of the projected growth in court employment:

These trends result, in part, from increasing pressures upon the court to cope more speedily, and effectively, with their large backlogs of both criminal and civil cases, and—in part—from the increasing demands being placed upon the courts as the arbiter of the nation's laws and conscience.⁹

Such pressures strongly suggest that court information systems must shoulder an even weightier burden than in the past. This conclusion is supported by the response of court administrators when asked by the manpower survey to identify their most urgent operational responsibilities:

These include such tasks as the development of improved methods of identifying backlog or delayed cases, improvements in court statistics and records, and improved methods of calendaring—all of which were cited by 40 percent or more of court administrators as in need of change in their courts, or court systems.¹⁰

Motivated by the recommendations of various commissions and spurred by the appearance of one or more of the symptoms or pressures indicative of present or potential information deficiencies, many courts have explored the advisability of implementing computerized information systems. Appropriately enough, courts often attempted to identify and adapt existing or "packaged" computerized systems, in contrast to starting from scratch and spending the enormous amount of time and money this would require.

Not infrequently, however, courts have been disappointed with the computerized systems they have transferred to their respective jurisdictions. One reason, discussed in more detail later, has been the occasional tendency to engraft the computer on a previously inadequate information system. As one authority observes, "Often the result is either the maintenance of the *status quo* at a higher cost or a regression in the effectiveness of management with an attendant increase in cost, case inventory, and backlog."¹¹ In effect, the inadequacies of the prior information system become technologically locked into court operations. Beyond that, however, courts too often have found that they had to change procedures, terminology, forms, and other areas of court management and operations just to accommodate the computer.

Indeed, most criticism directed at the transfer of computerized information systems from one environment to another stems from the system's lack of responsiveness to the needs of the new users—that is, the systems are too inflexible. Instead of adapting the computerized system to its needs, the court must excessively adapt itself to the requirements of the automated system. In a sense, the computer becomes the master, and the court, the servant. This tail-wags-dog syndrome need not occur with PROMIS.

⁸National Institute of Law Enforcement and Criminal Justice, *The National Manpower Survey of the Criminal Justice System: Volume 4—Courts* (Washington, D.C.: Government Printing Office, 1978): 9, 29-30.

⁹*Ibid.*: 39.

¹⁰*Ibid.*: 78.

¹¹Polansky, *Computer Use in the Courts*: iv.

HOW FLEXIBLE IS PROMIS?

Released in 1979, court-oriented PROMIS is an extremely flexible package. Described as the most successful transfer package developed for court-related agencies thus far,¹² PROMIS possesses the built-in capability to accommodate itself to the many ways one court may differ from another. Among the various inter-jurisdictional differences to which PROMIS can be tailored are the following:

1. Case load, both volume and whether civil, criminal, juvenile, or some combination of these.
2. Court type, whether one of limited or general jurisdiction or appellate, and whether at the local, state, or federal level.
3. Case assignment system, whether master or individual calendar, or hybrid.
4. Number of agencies using the system, whether the court alone or in combination with one or more of the following: prosecutor, police, public defender, bail agency, corrections.
5. Uses to which the system is put. One jurisdiction may utilize the witness management feature; another, the docketing capability; yet another, both.
6. Case-processing steps and procedures.
7. Scheduling practices.
8. Court terminology.

9. Number, content, and format of reports and screens for input data.
10. Method of accessing the data base, whether by litigant's name, case number, certain case characteristics, judge, or all of these plus others.
11. Characteristics of key data elements. For example, in one jurisdiction the case number may be eight digits; in another, a combination of ten alphabetic and numeric characters.
12. Privacy and security requirements for access to the data base.
13. Document or forms generation.

PROMIS is also highly flexible in terms of its compatibility with a variety of computer hardware. Designed to work on the equipment of a large number of manufacturers, PROMIS will run both on minicomputers and large mainframes. This means that the court has the option of purchasing or leasing a minicomputer, or sharing a large computer operated by the city, county, or law enforcement data processing department. Additionally, a variety of manufacturers' terminals may be used for data entry and retrieval in any given PROMIS court.

PROMIS can be easily altered to reflect local court needs, either as now perceived or as they might change in the future. Such flexibility in an automated information system can spell the difference between making a major step forward in court management or merely projecting the appearance of doing so.

3

THE CAPABILITIES OF PROMIS

This chapter provides a nontechnical, operations-oriented discussion of the system's capabilities. It begins with a broad-brush description of PROMIS and continues with a guide to PROMIS-generated video displays, reports, and forms. Then, the capabilities of the system are viewed from five principal perspectives: clerical benefits, improved service to the public, scheduling assistance, case-flow management, and judicial decision making.

BIRD'S-EYE VIEW OF PROMIS

Essentially, PROMIS for the courts is a trial and appellate court information system capable of performing scheduling functions and of tracking cases, litigants, other parties, causes of action, and charges from filing to disposition (arrest through sentencing when used as a criminal justice information system).

PROMIS permits instantaneous data entry, updating, and retrieval through the use of video terminals connected directly to the computer. This on-line, terminal-triggered access to data within the computer's memory permits immediate retrieval and a video display of a wide range of information and reports pertaining to either pending or closed cases. In addition, the system can provide the reports in printed form—case-aging reports, disposition reports, work-load reports, case status lists, witness lists, and calendars, among others. PROMIS is also designed to complete numerous forms either on demand or on a periodic basis—subpoenas, notifications, case jacket labels, and other frequently used forms.

Through the collection of hundreds of items of information on every case, PROMIS supplies not only day-to-day operational support but also significant data for management and policy-making purposes. The data base for a court of general jurisdiction (such as the data base diagrammed in Exhibit 1) could include the following items, among others.

1. **Case information:** case number and type, court branch, assigned judge, attorney names, case title, date initiated, next scheduled event, date and type of final disposition, appeal notices, and findings.

2. **At issue *praecipe*-offense information:** incident or *praecipe* number, date, time, and place of action involved in a given case.
3. **Witness information:** name, address, home and work telephone numbers, and type (e.g., expert witness).
4. **Litigant-criminal defendant information:** name, ID number, litigant type, address, telephone number, date of birth.
5. **Attorney information:** name, firm, address, bar number, attorney type (e.g., retained or appointed).
6. **Cause of action-charge information:** litigant number, charge-cause type (e.g., information or counter claim), count, charge or cause, section or title, initiator.
7. **Disposition information:** disposition of the charge or cause, date, point at which the disposition occurs, reason for the disposition, judge and attorneys present.
8. **Litigant-defendant status information:** litigant number, date, status (e.g., incompetent or incarcerated).
9. **Scheduling information:** time, date, location, and type of proceeding for which the case is scheduled.
10. **Event-docket entry information:** date, proceeding, judge and attorneys present, outcome of proceeding, reason for outcome, event duration.
11. **Minute information:** date, proceeding, minute entries (free form or coded), which are recorded for each event and constitute an automated docket.
12. **Case notes:** free-form notes (e.g., "Notify Judge Davis if a continuance is requested").

Recall that the above items of information can be increased, decreased, or modified through PROMIS's built-in tailoring capability. For example, the orientation of the foregoing data could be changed to reflect the needs, procedures, and terminology of appellate or juvenile

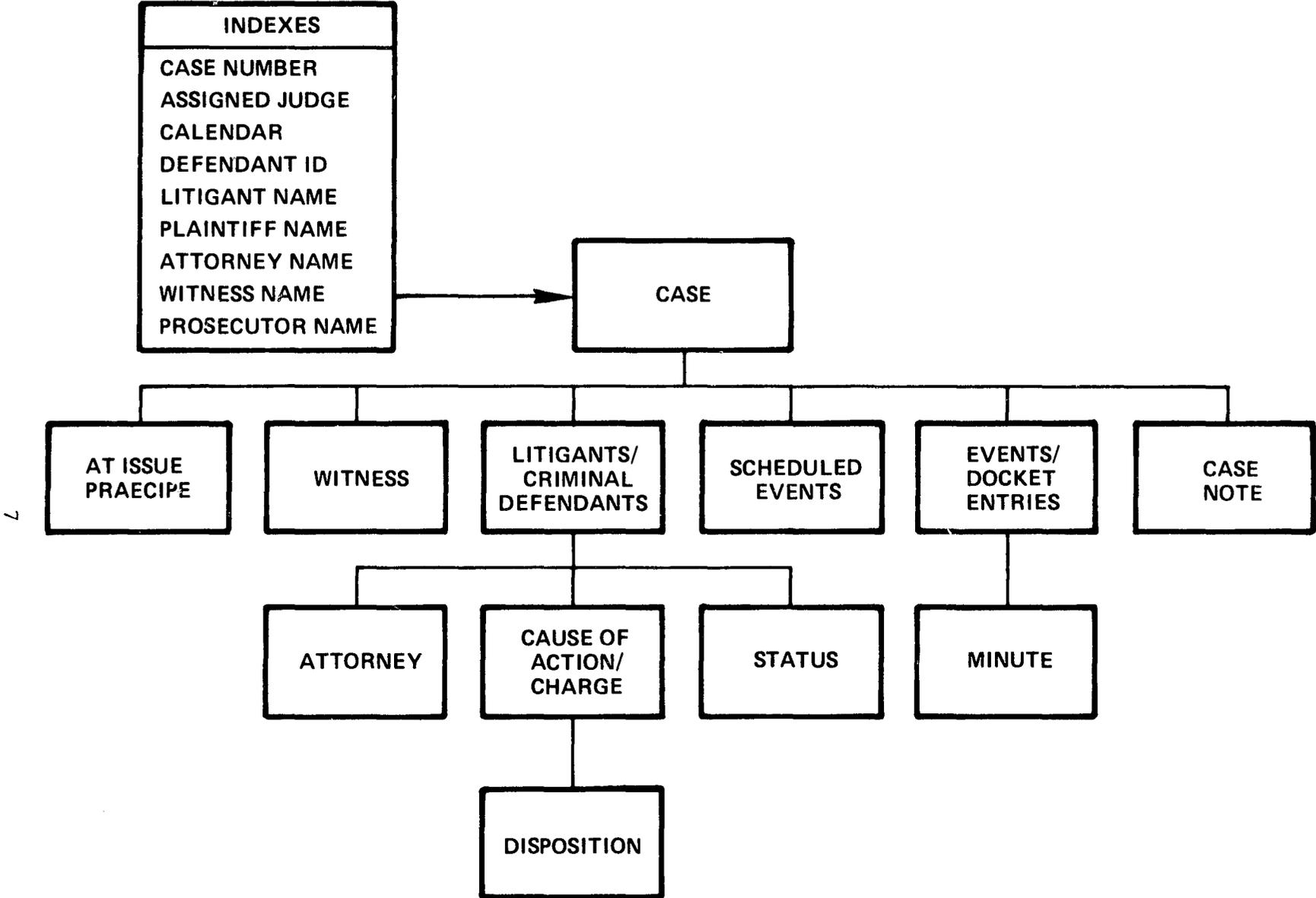


Exhibit 1. DATA BASE FOR A COURT OF GENERAL JURISDICTION

courts. Note also that data stored in PROMIS permit users to determine not only what has occurred in the court but also *why* (through the reason data, such as reasons for continuances, dispositions, and other court actions).

PROMIS automatically provides access to data either by case number, litigant identification, or by case triable unit (CTU). Information may be easily retrieved in other ways also, as discussed in the next section.

Several other features of PROMIS warrant emphasis at this point:

- **Joinder.** Information regarding any two cases can be combined to form one case. This would occur when defendants are initially processed separately but later joined to form one triable unit.
- **Privacy and security.** To limit access to the system to those persons qualified to make inquiries or to enter data, security passwords may be defined. A password determines the level of access to the data base, from no access to any combination of inquiry, add, modify, or delete actions. Data retrieval can also be restricted to open cases only. If different agencies are using the same system, passwords can be used to protect one agency's data from the scrutiny of another agency. Within a single agency, passwords can be used to restrict data access according to the responsibility of each operator.
- **Completeness and accuracy.** Several features of the system help to assure that the data entered are complete and accurate. For example, PROMIS can produce reports that indicate errors of omission, such as cases without scheduled events or cases with past due scheduled events.
- **Phonetic search.** All names sounding like the one for which a search is being conducted can be listed. This is especially useful for witnesses' names.
- **Appeals.** The system can keep track of two "final" dispositions: the original and post-appeal dispositions on the trial court case.
- **Current and historical case files.** Based on specifications established by the PROMIS user, closed cases can be retired from on-line status (direct access through terminals) to a historical file. Additionally, the user can specify that a skeleton record of each closed case remain in the on-line file for

criminal history or case history purposes. In one operation PROMIS can produce statistics—generally on an overnight basis—from both the historical files of retired cases and the on-line files.

- **Compliance with external reporting requirements.** Because PROMIS provides the capability to add to or modify data elements and to tailor reports to a variety of formats, compliance with the statistical reporting requirements of state, regional, or county agencies is facilitated.

Finally, PROMIS is consistent with, and supportive of, the management and administrative standards prescribed for courts by various commissions. These include, for example, standards relating to case-flow management found in the ABA's *Standards Relating to Trial Courts* and *Caseflow Management in the Trial Court*, as well as the standards relating to court records, information systems, and statistics contained in *Court Organization*.¹ The same is true with regard to the ABA's standards relating to scheduling contained in *Speedy Trial*² and to the National Advisory Commission's *Courts and Criminal Justice System*,³ which specify standards in such areas as recordkeeping, subject-in-process statistics, monitoring case flow, calendar management, and data for court management, research, and evaluation.

VIDEO DISPLAYS, REPORTS, FORMS

As noted above, PROMIS permits access to a wide array of information on each case. Sheer quantity of information, however, is not useful unless it is timely and in a form that aids decision making. Timeliness is assured by the system's capability to accept and display data instantaneously on terminal screens or, if such speed is not required for some purposes, to generate printed reports at specified intervals. The tailoring feature of PROMIS enables users to assemble individual informational items into a variety of reports helpful to managerial, administrative, and operational decision making. Exhibit 2 illustrates the general flow of data from source documents to entry into PROMIS, and from PROMIS into various printed or video-displayed reports and forms.

Through on-line inquiries, everything entered into the PROMIS system may be displayed, each display having been user-tailored in terms of informational content and format. A printed copy of any video display can also be system generated.

¹American Bar Association Commission on Standards of Judicial Administration, *Trial Courts* (Chicago: American Bar Association, 1975); Maureen Solomon, *Caseflow Management in the Trial Court* (Chicago: American Bar Association, 1973), rather than containing administrative standards, *per se*, this publication constitutes a supporting study; American Bar Association Commission on Standards of Judicial Administration, *Court Organization* (Chicago: American Bar Association, 1973).

²Standing Committee on Association Standards for Criminal Justice, *Speedy Trial* (Washington, D.C.: American Bar Association, 1978).

³National Advisory Commission on Criminal Justice Standards and Goals, *Courts and Criminal Justice System* (Washington, D.C.: Government Printing Office, 1973).

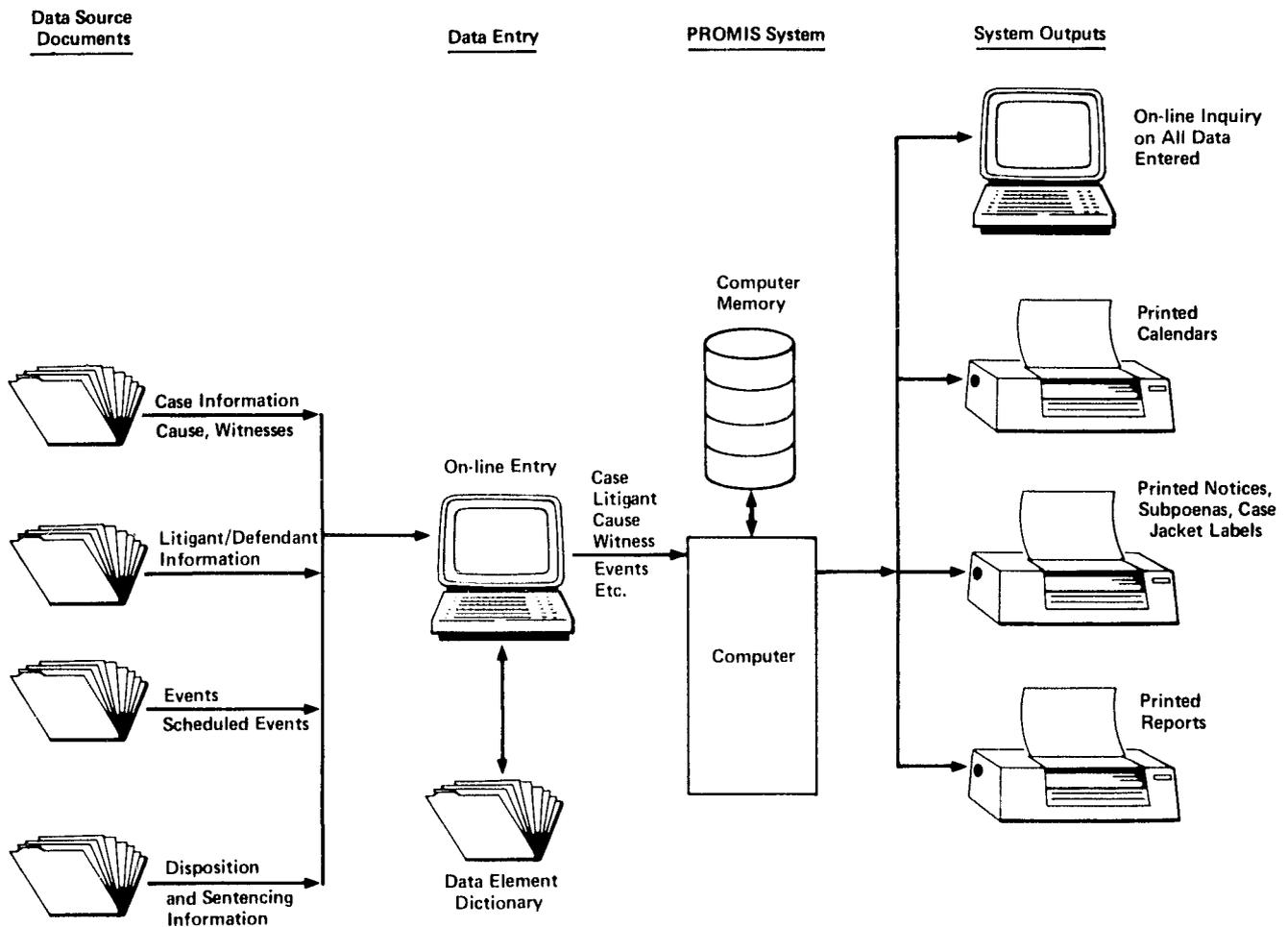


Exhibit 2. TRANSFORMING CASE INFORMATION INTO PRINTED REPORTS AND DISPLAYS USING PROMIS

On-line inquiries are of two principal types: case-related inquiries and index inquiries. The PROMIS system includes a video-displayed "menu" that lists the inquiries that are available and allows the user to specify the inquiry to be displayed. Users making case-related inquiries may request either all or a specified portion of information on any given case. Whether all or just some of the information about a case is requested, the resulting display begins with a summary of the case as a kind of preface to the data specifically requested. Exhibit 3 illustrates the information displayed in response to a request for all the information on a case.

Through an index inquiry, information pertaining to all cases sharing a specific characteristic or attribute may be displayed on a terminal screen. For instance, information may be requested on all cases having the same assigned judge, litigant, or defendant (identified by name or number), calendar date, attorney, witness, police officer, or activity (such as defendant on mental observation).

Users may create additional indexes, tailored to the specific inquiry needs and other requirements of the court. (Exhibits 8, 9, and 10, which are discussed below, illustrate several of the available index inquiries.)

Within a given index, such as calendar date, users are often able to further refine or limit the information sought. For example, an index inquiry based on calendar date would provide a list of all cases scheduled for any proceeding for any court branch on a given date. The inquiry could be limited by requesting a list of cases scheduled for only a certain kind of proceeding in all branches on the given date, or cases scheduled for a specific proceeding in just one branch on the given date.

Name indexes, such as witness or litigant name, can be phonetically based. For instance, a court staff member could enter the name of a particular criminal defendant and receive a video display of the identification numbers and physical descriptions of defendants with names

sounding like the one triggering the inquiry. To determine the cases pending for a certain defendant, an index inquiry based on the obtained defendant identification number could then be made. The resulting display of cases contains, among other data, case numbers, which may then be used to initiate a case-related inquiry to obtain additional details on each pending (or closed) case of the defendant.

In addition to the printed copies of video-displayed information that can be obtained, users have access to a wide range of printed reports through the Management Report and Generalized Inquiry Packages that are part of the PROMIS software.

The Management Report Package provides information, in aggregate numbers, on what is happening (or has happened) and why at each stage in the judicial process. Reports can be produced showing time-delay figures for cases (case-aging reports), number of and reasons for postponements and dismissals, number of special cases (fugitive defendants), bail statistics, disposition statistics, status of appeals, cases pending for any given proceeding, and other counts by case type, defendant, or case. Both work-load statistics (what was processed during a past period) and tracking statistics (the current status of cases that entered the court during a past period) are available.

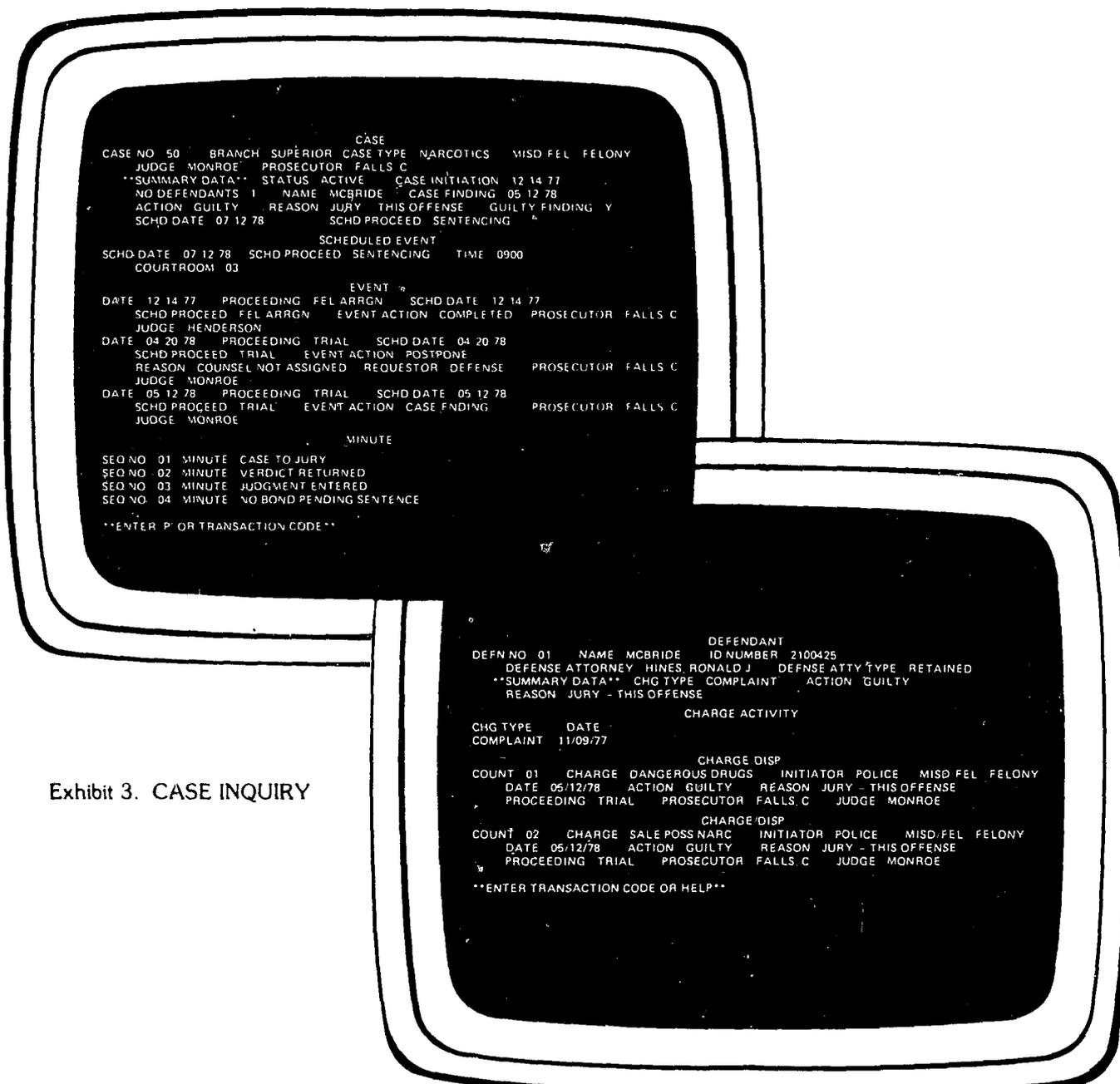


Exhibit 3. CASE INQUIRY

With the system's Generalized Inquiry Package, users can select a group of cases sharing one or several attributes and request descriptive data (e.g., name of plaintiff, cause of action)—in contrast to the aggregate numbers of the Management Report Package—on each case. A summary report presents one line of descriptive data per case; a detailed report, a full page on each case. The Generalized Inquiry Package could be used, for example, to generate lists of final case dispositions for the prosecutor and police. The dispositions could be linked to criminal incident number, defendant identification number, or docket number. Other types of disposition reports, such as to the division of motor vehicles, could also be produced.

Another feature of the PROMIS software, the Forms Management Package, enables users to produce subpoenas, notices, file labels, form letters, and other documents on demand or at specified intervals (such as—for notices—20 days before trial).

Appendix A and the section that follows provide additional examples of the uses of on-line inquiries and PROMIS-generated reports and forms.

FIVE MAJOR PROMIS BENEFITS

The scores of informational items recorded in PROMIS and the dozens of reports and video displays the system generates are designed to provide five principal benefits to the courts. These benefits pertain to clerical activity, service to the public, scheduling, case-flow management, and judicial decision making.

Clerical Benefits

The system's "instant recall" capability, which results in a video display or a printout of a wide variety of information, means that the repetitive and time-consuming clerical chore of locating a specific folder stored in a bank of file cabinets, fingering through its contents, manually copying the desired data, and refiling the folder is substantially reduced. Not only is the need for manually prepared files—folders, cards, and the like—minimized but also related needs for space and hardware are reduced.

For example, case-related inquiries eliminate the need for progress cards. PROMIS users can also forgo numerous index files of 3" x 5" cards by taking advantage of the various on-line index inquiries, described earlier. As a respected authority on court automation notes: "The first fruit of an automated system is the virtually limitless indexing capabilities. The first step in most

systems has been the creation of defendant (criminal cases) and litigant (civil cases) indices, which are effortlessly prepared on demand."⁴

Similarly, PROMIS can streamline the clerical process of making and referring to docket entries. Under manual procedures, posting each substantive action affecting a case to a log book results in entries that are often neither timely nor readable. The collection, storage, and retrieval of such information under PROMIS's automated docketing avoids such problems and results in computer-generated docket sheets (Exhibit 4) as video displays or as printouts.

Special features of PROMIS increase both the speed and accuracy of data entry by clerical personnel. The tailoring capability, for example, allows each court to design data entry formats to correspond to their own procedures. Thus, if the next event for a case is normally scheduled immediately following entry of information about the last event, the data entry format can be designed to permit the operator to enter both transactions on the same screen. In addition, the user can specify that certain data elements are to be transferred from one update transaction to the next. So, for example, if event information is entered from a calendar, the operator can enter the date and courtroom for the first case and have that information automatically repeated in the event record entered for each of the other cases.

The system can also save time for the data entry operator by permitting him, as appropriate, to type a brief code that instructs PROMIS to apply a specified disposition—such as a dismissal—to all open charges for a defendant in a given case, instead of having to identify the open charges and update them individually. Or, for purposes of updating charges with sentences, an operator can instruct PROMIS to retrieve guilty unsentenced charges only—in contrast to having to pick and choose among all charges. Accuracy is promoted through missing-data reports, as well as by such built-in checks as the one that prevents any case event (other than the first one or notice of appeal) from being entered unless it had been previously scheduled. Also, when adding to or modifying the data displayed on the terminal screen, operators can easily distinguish what they have just entered from the other data shown because the former appears on the screen with, for example, greater intensity or brightness—that is, the information just entered is highlighted on the screen, thereby facilitating doublechecking those entries for accuracy.

Another major clerical benefit of PROMIS is its capability to generate user-tailored calendars, reports,

⁴Larry P. Polansky, *Computer Use in the Courts: Planning, Procurement, and Implementation Considerations* (Washington, D.C.: American University, 1978): 52.

and notices (forms) either on demand or at specified intervals. Consider, for instance, the following array of notices and forms:

- Notices to witnesses to appear (summons/subpoena).
- Notices to counsel of upcoming events.
- Notices of bench warrant issuance.
- Notices to agencies informing them of court actions.
- Notices to detention facilities to present defendants in court.
- Notices to probation officers.

The list could be expanded considerably. Moreover, the notices, reports, calendars, and the like can be displayed or generated in formats closely approximating those used by the court prior to computerization.

Cost-benefit analyses of the PROMIS system—conducted by INSLAW as part of its LEAA-funded technical assistance (Chapter 4)—frequently document substantial clerical savings. As a specific illustration of a cost-effective application of PROMIS in the clerical area, refer to Exhibit 5 (Notice to Appear for Court Action). This PROMIS-generated form, which can be printed in a self-mailer, is used to subpoena witnesses and to notify

Exhibit 4. PROMIS-GENERATED DOCKET SHEET

```

--APPELLATE CASE--
CASE NO: 790004 SUFFIX: DOCKET TITLE: PARKER VS: UNITED STATES
CATEGORY: FELONY CASE TYPE: BURGLARY 1 DEC TYPE BELOW: JUD
DEC DATE ELOW: 08/24/78
***SUMMARY DATA*** STATUS: COMPLETED NO OF ATTORNEYS: 2
ATTORNEY: JOHN A TERRY DECISION DATE: 03/06/79 DISP METHOD: OPINION

--DOCKET ENTRIES--
DATE: 08/30/78 ACTION: NOTICE OF APPEAL
DATE: 09/08/78 ACTION: DESIGNATION OF REC SCHD DATE: 09/08/78
SCHD ACTION: DESIGNATION REC
DATE: 10/25/78 ACTION: RECORD ON APPEAL SCHD DATE: 10/29/78
SCHD ACTION: RECORD ON APPEAL NOTE: RT
DATE: 11/01/78 ACTION: TRANSCRIPT OF RECORD NOTE: N
DATE: 12/18/78 ACTION: ORDER TO SHOW CAUSE
NOTE: WHY APPELLANT BRIEF NOT FILED
DATE: 12/27/78 ACTION: MOTION TO EXT TIME NOTE: TO FILE APPELLANT'S BRIEF
RESULT: CLERK GRNT DATE: 12/22/78
DATE: 12/27/78 ACTION: APPELLANT BRIEF SCHD DATE: 12/27/78
SCHD ACTION: APPELLANT BRIEF
DATE: 01/26/79 ACTION: APPELLEE BRIEF SCHD DATE: 01/26/79
SCHD ACTION: APPELLEE BRIEF
DATE: 02/20/79 ACTION: ARGUED SCHD DATE: 02/20/79
SCHD ACTION: REGULAR CALENDAR
DATE: 03/06/79 ACTION: AFFIRM/RE/ND IN PART
DATE: 03/14/79 ACTION: PETITION FOR REHEAR RESULT: DENIED
DATE: 04/03/79
DATE: 04/04/79 ACTION: MANDATE ISSUED

--ATTORNEY--
ATTY SEQ ATTORNEY PARTY TYPE ATTY TYPE NOTICE
01 JOHN A. TERRY APPELLEE USAO N
02 RONALD J. HINES APPELLANT RETAINED Y

--COURT REPORTER--
REPORTER: QUICKPEN SEQ NO: 01 SC CASE NO: 2222-78 EST DATE: 10/25/79
EST PAGES: 75 DATE FILED: 11/01/78 PAGES FILED: 72

--SUPERIOR COURT--
SC CASE NO: 2222-78 DIVISION: CRIMINAL DECISION DATE: 08/24/78
JURY/NONJURY: JURY TRIAL SC JUDGE: MURPHY JUDGE TYPE: TRIAL

--FILING FEE--
SEQ NO WAIVER DATE PAID FEE PAID BY DATE DISBURSED
01 10/25/78 0025 CHECK 10/30/78

--DISPOSITION--
DISPOSITION AFFIRM/RE/ND IN PART DATE: 03/06/79 DISP METHOD: OPINION
JUDGE: CATHERINE B. KELLY DATE CLOSED: 04/04/79

```

CASE TITLE: PARKER V. PARKER
STATE OF MICHIGAN
CIRCUIT COURT FOR THE COUNTY OF WAYNE
NOTICE TO APPEAR FOR COURT ACTION

The attorney of record for the PLAINTIFF in the above captioned case, you are hereby notified that this case has been scheduled for the following court proceedings on the dates, times, and at the locations indicated:

EVENT: TRIAL DATE: 05/12/79 LOCATION: COURTROOM 12

JOHN E. COLEMAN, ESQ.
COLEMAN AND COLEMAN
28 HARPER STREET
DETROIT, MICHIGAN

Please notify the Assignment Office at 231-0521 if:
1. You are unable to appear for any of these dates
2. There has been a substitution of attorneys
3. The case has been settled (civil cases)

This notice supercedes all previous notices that pertain to this case.

REFER TO IMPORTANT INFORMATION ON REVERSE SIDE

Exhibit 5. NOTICE TO APPEAR FOR COURT ACTION

litigants and attorneys in civil or criminal cases of all appearance dates that have been set for each stage of the proceedings. In the event scheduling changes are necessary, PROMIS automatically generates a supplemental notice, which indicates the new hearing dates and instructs the recipients to ignore previous notices. This notice can replace up to eight different notice forms.

Annual savings resulting from the use of this form notice in one court are estimated at over 3,500 clerical hours. In the same court, an additional 3,400 clerical hours may be saved annually by using PROMIS to compile and type daily calendars (Exhibits 6 and 7) and to answer case-status inquiries using an on-line terminal (Exhibit 8).⁵

⁵INSLAW, *Decision-related Research on Technology Utilized by Local Government: Court Scheduling*, Phase II Final Report, Volume II: *Research Papers*, mimeographed (Washington, D.C., 1978): 5-38, F-16.

DATE 09/20/78 SETTLEMENT CONFERENCE CALENDAR FOR 9/20/78 PAGE 01

REPORT LIMITED TO: BRANCH - SC
CASE TYPE - C
TIME VALUE - 09/20/78
PROCEEDING - SETTLEMENT CONFERENCE

CASE NO	BRANCH	CASE TYPE	STATUS	CASE INITIATION	NAME	SCHED DATE
78-0103	SUPERIOR	CIVIL	ACTIVE	08/12/78	PARKER V JESSE	09/20/78
78-0107	SUPERIOR	CIVIL	ACTIVE	07/28/78	LEVINSKY V BARRY	09/20/78
78-0115	SUPERIOR	CIVIL	ACTIVE	08/24/78	MURPHY V CAROL	09/20/78
78-0126	SUPERIOR	CIVIL	ACTIVE	07/25/78	MORRIS V HENRY	09/20/78
78-0114	SUPERIOR	CIVIL	ACTIVE	08/15/78	LANNON V HOWARD	09/20/78

Exhibit 6.
SAMPLE DAILY
CALENDAR OF CIVIL
CASES SET FOR
SETTLEMENT
CONFERENCE

Exhibit 7.
SAMPLE CALENDAR
IN TURNAROUND
FORMAT

DATE 09/20/78 SETTLEMENT CONFERENCE CALENDAR FOR 9/20/78 PAGE 01

REPORT LIMITED TO: BRANCH - SC
CASE TYPE - C
TIME VALUE - 09/20/78
PROCEEDING - SETTLEMENT CONFERENCE

CASE NO	BRANCH	CASE TYPE	STATUS	CASE INITIATION	NAME	SCHED DATE	PROCEEDING	DEFENSE ATTORNEY	DEFENSE ATTY TYPE	CHG TYPE INFORMATION
78-0103	SUPERIOR	CIVIL	ACTIVE	08/12/78	PARKER V JESSE	09/20/78	SETTLEMENT CONFERENCE	HOWERS, FRANK	PLANT APT	
78-0107	SUPERIOR	CIVIL	ACTIVE	07/28/78	LEVINSKY V BARRY	09/20/78	SETTLEMENT CONFERENCE	HOWERS, FRANK	PLANT APT	
78-0115	SUPERIOR	CIVIL	ACTIVE	08/24/78	MURPHY V CAROL	09/20/78	SETTLEMENT CONFERENCE	HOWERS, FRANK	PLANT APT	
78-0126	SUPERIOR	CIVIL	ACTIVE	07/25/78	MORRIS V HENRY	09/20/78	SETTLEMENT CONFERENCE	HOWERS, FRANK	PLANT APT	
78-0114	SUPERIOR	CIVIL	ACTIVE	08/15/78	LANNON V HOWARD	09/20/78	SETTLEMENT CONFERENCE	HOWERS, FRANK	PLANT APT	

Note: This is a turnaround document providing the court with information on a case calendared for pretrial conference. Space is also provided (broken lines) for noting the outcome of the pretrial conference and for scheduling the next event. This information is then entered into the computer by a data entry clerk and is available for on-line inquiries and printed calendars and reports.

CALENDAR				
SCHED DATE		12 11 77		
SCHED PROCEEDING		TRIAL		
CASE NO	SCHED PROCEEDING	TIME	COURTROOM	TITLE
760003	TRIAL	0900	12	LEWIS V MALLIN
760008	TRIAL	1300	12	BOY V BOY
760073	TRIAL	0900	11	WIRT V MICHAELS
760028	TRIAL	0900	11	PAHNE V GINSBERG
760042	TRIAL	1100	11	COLLENS V JAMES
760044	TRIAL	1300	11	MURTON V GILBERT
760053	TRIAL	0900	14	WILLIAMS V CHARLES
760063	TRIAL	1100	14	THACK V THACK
760077	TRIAL	0900	15	WASHINGTON V WILTON
770066	TRIAL	0900	10	OLIVER V TYRONE
770098	TRIAL	1430	10	MILL V STEPHENS
770104	TRIAL	0900	09	STRICK V PAULEN
770108	TRIAL	0900	08	PHIL V CHARLSON
770119	TRIAL	0900	07	FERDINAND V JANSEN

ENTER TRANSACTION CODE OR HELP

Exhibit 8. ON-LINE
CALENDAR
DISPLAY

Improved Service To The Public

"Citizens—as victims, witnesses, defendants, or jurors—experience delay, inconvenience, and confusion. These personal experiences contribute to an undercurrent of popular dissatisfaction that is undermining the public's respect for the American court system," states the report of a national advisory commission. For this and other reasons, the commission recommended that courts maintain a "central source of information concerning all participants in each case" in order to identify "as early as possible conflicts in the schedules of the participants. . . ."⁶

PROMIS constitutes a central source of information that can help officials of the court and court-related agencies better serve affected members of the public by assuring that when they appear at judicial proceedings something happens other than a continuance. As described in the previous section, PROMIS can produce timely notices informing case participants of scheduled events and subsequent changes in appearance dates. And special reports can help officials avoid setting court

events for times that conflict with participants' schedules or for times when the court is not likely to reach the case.

Questions by witnesses, who may have lost their subpoenas and forgotten details about the case (such as the time, date, case number, or courtroom number), may be answered over the telephone by taking advantage of PROMIS's capability to link witnesses' names to the related cases (Exhibit 9). Similarly, queries by attorneys and litigants concerning their cases may be answered through appropriate on-line inquiries (Exhibit 10).

A measure of goodwill may be promoted among the public both through PROMIS-generated letters thanking witnesses for their participation and informing them of the ultimate disposition of the case and through informative annual reports based on the statistics in the various case-flow management reports.

Finally, the reports of PROMIS's Generalized Inquiry Package (Exhibit 11) permit the court to provide descriptive case data in response to the largely unanticipated questions asked from time to time by the media, local or state legislative committees, civic organizations, research groups, and government agencies.

⁶National Advisory Commission, *Courts*: 1-2 and 187.

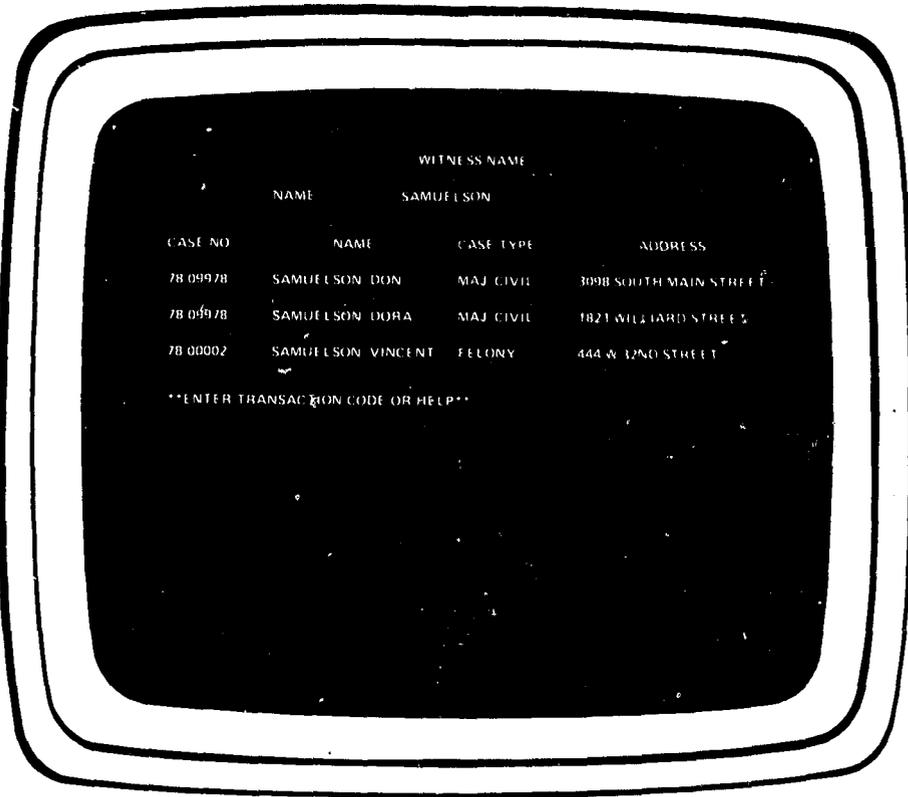


Exhibit 9. WITNESS INDEXED INQUIRY

Note: Phonetic name-search capability retrieves the name entered and other names that sound like the name entered.

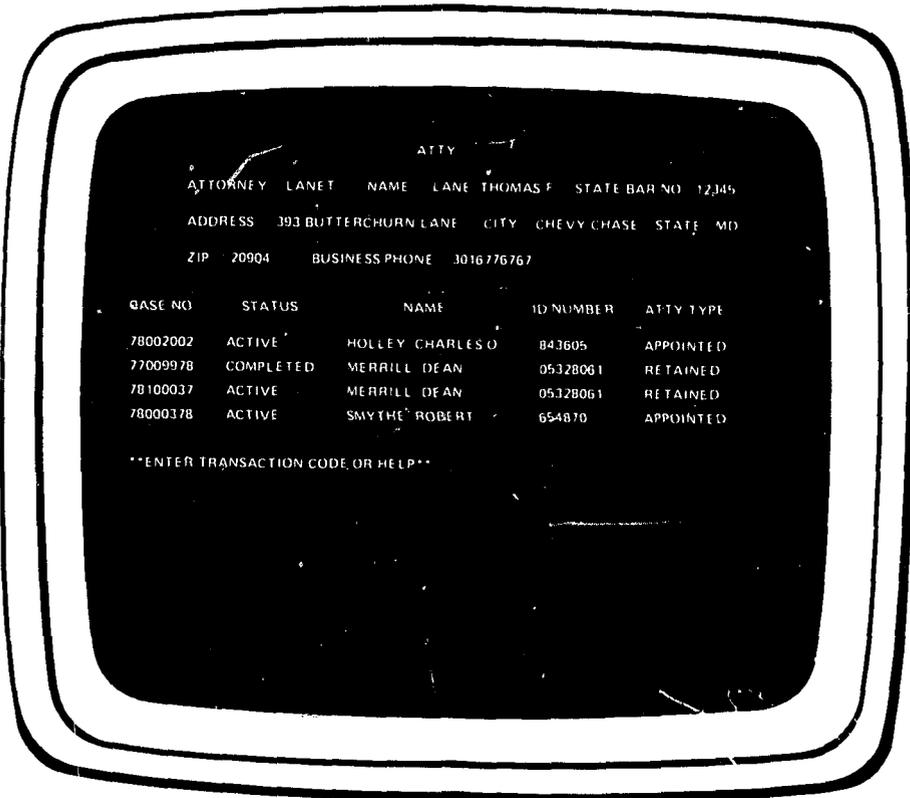


Exhibit 10. ATTORNEY INDEXED INQUIRY

DATE 08/10/79		PROMIS GENERALIZED INQUIRY				PAGE 01	
TRIAL CONTINUANCES							
CASE NO	TITLE	CASE TYPE	INIT DATE	REQ BY	FIRM OF REQUESTING ATTY	DATE OF REQ	REASON
CV-780315	BARTON V MCMAULEY	MAJ CIVIL	02/15/78	DEF	EVERLY, DOUL & ZACHERY	07/05/79	ATTY ENGAGED IN OTHER CASE
CV-780314	BARTON V MCMAULEY	MAJ CIVIL	02/15/78	DEF	EVERLY, DOUL & ZACHERY	07/12/79	ATTY ENGAGED IN OTHER CASE
CV-782631	SHAPIRO V MAYFIELD INC	MAJ CIVIL	10/04/78	PLAINT	GEORHAM & JOHNSON	07/09/79	WITNESS UNAVAILABLE
CV-790097	ASTON V BELOSI, ET AL	MAJ CIVIL	01/12/79	DEF	HAROLDSON & JACOBS	07/18/79	OTHER ATTY UNAVAILABLE
		CASE TYPE	MAJ CIVIL	TALLY	15	4	
CV-786213	LANGLEY V AMARO	GEN CIVIL	11/04/78	PLAINT	HAROLDSON & JACOBS	07/13/79	ATTY ENGAGED IN OTHER CASE
CV-770066	HEHRMAY V LATTERMAN	GEN CIVIL	01/19/77	DEF	MORTIN, JOYCE, THOMPSON	07/16/79	DEFENDANT ILL
CV-770056	HEHRMAY V LATTERMAN	GEN CIVIL	01/19/77	DEF	MORTIN, JOYCE, THOMPSON	07/20/79	DEFENDANT ILL
CV-770184	SMITH'S DINER V MILLER	GEN CIVIL	07/27/77	DEF	LARK, A DAMP	07/05/79	WITNESS UNAVAILABLE
CV-780243	SOKOEN V ALLISON	GEN CIVIL	01/21/78	PLAINT	HAROLDSON & JACOBS	07/10/79	ATTY ENGAGED IN OTHER CASE
CV-780244	SOKOEN V ALLISON	GEN CIVIL	01/21/78	PLAINT	HAROLDSON & JACOBS	07/13/79	ATTY ENGAGED IN OTHER CASE
CV-780245	SOKOEN V ALLISON	GEN CIVIL	01/21/78	PLAINT	HAROLDSON & JACOBS	07/13/79	WITNESS UNAVAILABLE
CV-781957	ALEXANDER V CLARK REAL EST	GEN CIVIL	08/15/78	DEF	DAWLEY, TOWSON & SMITH	07/20/79	ATTY UNAVAILABLE
CV-781957	ALEXANDER V CLARK REAL EST	GEN CIVIL	08/15/78	DEF	DAWLEY, TOWSON & SMITH	07/20/79	ATTY UNAVAILABLE
		CASE TYPE	GEN CIVIL	TALLY	15	8	
CR-780675	VICKERS, HENRY R	CRIMINAL	09/17/78	DEF	SCHMIDT & LARSON	07/18/79	ATTY ENGAGED IN OTHER CASE
CR-780937	FRASO, CLAYBORNE J	CRIMINAL	01/11/79	PROS	COUNTY ATTY'S OFFICE	07/11/79	POLICE OFFICER UNAVAILABLE
CR-780214	OGDEN, NATHAN B	CRIMINAL	02/08/79	DEF	WAGLE, T HURSON	07/28/79	ATTY ENGAGED IN OTHER CASE
CR-780215	OGDEN, NATHAN B	CRIMINAL	02/08/79	DEF	WAGLE, T HURSON	07/20/79	ATTY ENGAGED IN OTHER CASE
CR-780216	OGDEN, NATHAN B	CRIMINAL	02/08/79	PROS	COUNTY ATTY'S OFFICE	07/25/79	OTHER ATTY UNAVAILABLE
CR-780246	SAMUELSON, MARY A	CRIMINAL	02/21/79	DEF	LUTGATE, CLAY & KREWER	07/13/79	DEFENDANT ILL
CR-780313	FRISVOLD, JUAN J	CRIMINAL	06/10/79	PROS	COUNTY ATTY'S OFFICE	07/23/79	POLICE OFFICER UNAVAILABLE
CR-780352	WILLIAMS, RACHEL	CRIMINAL	04/15/79	DEF	SCHMIDT & LARSON	07/02/79	OTHER ATTY UNAVAILABLE
		CASE TYPE	CRIMINAL	TALLY	15	8	

**Exhibit 11.
PROMIS
GENERALIZED
INQUIRY REPORT**

Note:
This is an example of how the Generalized Inquiry Package can be used to answer media allegations that jurors are not being used when called. The report in this illustration shows trial continuances, reasons, and the moving party.

Scheduling Assistance

Court scheduling is important if for no other reason than it costs money, and inefficient scheduling costs more money, not to mention the social costs inflicted upon litigants and witnesses in the form of unwarranted delays and other frustrations that serve to lower the quality of justice.

The scheduling process involves planning and taking necessary steps so that the assembly of all participants in cases to be heard will occur at the proper times and places, given the resources and objectives of the court, the availability of the participants, and the requirements of due process.

The utilization pattern of all the court's resources—personnel, equipment, space—is determined by the scheduling system. If a resource is underutilized or is used for an inappropriate purpose (such as when judges sit idle or must perform the work of clerks and schedulers), the court's costs rise while effectiveness may decline.

As described in more detail in another publication,⁷ INSLAW views the scheduling process as comprising a management component, calendaring component, and a data component (PROMIS) in support of the first two (see Exhibit 12).

As case loads grow and resources remain limited, the task of court scheduling has become increasingly complex. However, the added complexity is not attributable to growing case loads alone. For example, court objectives may not be clear. Exactly what is the court trying to accomplish through its scheduling process? Certain standard goals, such as speedy and fair trials, will always be listed as objectives toward which a court system should strive. However, others may be selectively emphasized according to the situation and the particular needs of a given court. One court may have a shortage of space, a second a shortage of judges, and a third an overworked trial bar. Thus, each court should direct its scheduling efforts toward a set of objectives tailored to its unique circumstances.

Court scheduling, therefore, is not merely calendaring, *per se*, but calendaring in a manner consistent with the court's overall goals and policies, which should be set by a managerial-level group of judges and the court administrator or his equivalent. Thus, the calendaring component of court scheduling should operate in the context of what can be called the management component, which is defined as the process of establishing objectives and policies and planning and evaluating scheduling procedures accordingly. Should scheduling procedures seek

⁷INSLAW, *Guide to Court Scheduling* (Washington, D.C., 1976).

to maximize judge utilization or citizen and attorney convenience? To what extent should criminal cases receive priority over civil actions? If those at the managerial level do not supply answers to such questions, decisions at the calendaring level will constitute *de facto* policy, which may be highly inconsistent or otherwise unsatisfactory in the absence of management direction.

Guided by the objectives and policies of the management component, the calendaring component involves the scheduling system's day-to-day operations, which lead to the assignment of dates, times, and places to specific court events. Six principal functions comprise calendaring. **Calendar monitoring** maintains current information on the status of the calendar, the pending work load, and the scheduled commitment of resources as cases move through various stages of the judicial process. **Setting events and dates** involves matching court hearings with dates and times or vice versa. **Controlling conflicts in attorney schedules** is performed during the pro-

cess of setting events and dates. **Controlling police officer appearances** helps to minimize court time and conflicts in the schedules of law enforcement personnel. **Making last-minute adjustments** in the calendar is a necessary function because the tendency for cases to be settled, dismissed, or continued on the day of a hearing or trial often leaves potentially costly gaps in the schedule. Finally, **notifying participants** regarding the time and place of scheduled (or rescheduled) court events is an obvious calendaring essential.

As the data-support component, PROMIS provides the information required for both the management and calendaring facets of the scheduling system. Regarding the six elements constituting the calendaring component, PROMIS functions as follows.

First, the Case Participants' Schedule (Exhibit 13) helps PROMIS users **control attorney conflicts**. This video display indicates the schedules for two attorneys

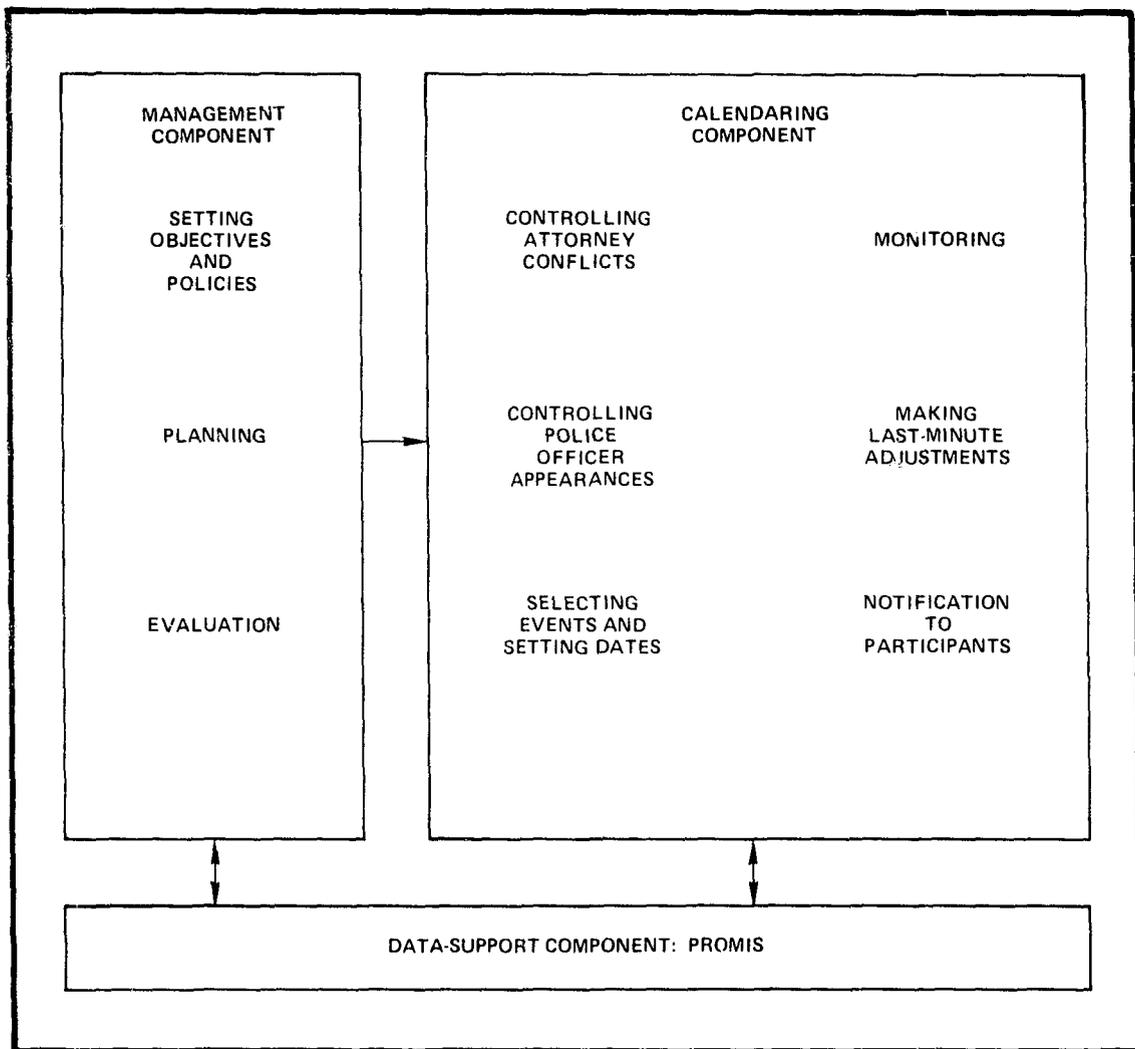


Exhibit 12. MODEL OF SCHEDULING COMPONENTS

CASE PARTICIPANTS SCHEDULE				
PARTICIPANTS IN CRIM CASE 76 0234 STATE VS WHITE				
1	(JD) JUDGE	TOM JONES	COURTRM 12	
2	(AP) PROSEC ATTY	FRANK HOGAN	(6724) PHONE 894 7626	
3	(AD) DEFENSE ATTY	EB WILLIAMS	(4976) PHONE 664 5140	
4	(WP) POLICE OFCR	SM NETCHEM	(MPD 4231) SHIFT 3RD 5 15 2ND 5 30	
5	(WC) CHEMIST	JJ BEANER	PHONE 961 1324	
SCHEDULE FOR PARTICIPANTS IN CR 76 0234 STARTING 10 02 78				
2	3	4	5	6
AP M CR 76 0234	AP M CR 76 0234	AP M CR 76 0234	AP	AP
AP D CV 75 1886	AD	AD	ADD CV 76 1123	AP
WP	WP	WP	WP	WP DO
WC VAC	WC VAC	WC VAC	WC VAC	WC VAC
9	10	11	12	13
AP (2)	AP	AP M CR 77 0013	AP	AP VAC
AD	AD	AD	AD	AD
WP DO	WP	WP	WP	WP
WC	WC	WC	WC	WC

Exhibit 13. ON-LINE DISPLAY SHOWING SCHEDULE FOR CASE PARTICIPANTS OVER ANY TWO-WEEK PERIOD

(one on each side). All events scheduled for them are displayed as case numbers and court-branch indicators. When multiple events are scheduled for an individual for a given day, only the total number of events will be displayed. The top of the Case Participants' Schedule lists the participants, their roles, and other scheduling information, such as bar number and telephone number. Vacation days are also noted. Attorneys will probably volunteer vacation information if the court honors it in scheduling and makes continuances for noncontributing attorneys awkward.

Second, **control of police officer appearances** involves setting conflict-free dates for lengthy hearings, such as felony trials, as well as consolidating the appearances of officers in order to maximize use of their "court days" and minimize travel and waiting time with regard to court events of short duration, such as traffic hearings. Officers' shifts, days off, and vacation time must be accommodated. The Case Participants' Schedule is also used to support the information requirements of this function, in much the same way the attorney-conflicts function is supported. When appearances are consolidated for an officer, the total number of events is given for a day whenever more than a single event has been scheduled. Only one officer is displayed along with his shift and other information, although the "witness," line 5 of Exhibit 13, could be a police officer.

Third, PROMIS helps schedulers **select events and set dates**. Whether a scheduler begins with events and looks for agreeable dates, or begins with a date and seeks to fill it with events, certain information about the pending case load is required. For example, the more urgent matters, as defined by court policy, must be identified for scheduling. The Case Load Status report (Exhibit 14) provides a statistical snapshot of the pending case load according to various processing stages. For each stage, the number of cases, their average wait in that stage, their expected disposition age (based on past disposition rates), and their backlog condition (now and expected) are given. Backlog for each stage is defined as those cases in a given stage that cannot be disposed of in accordance with a court-set time standard. The indication of backlog is a form of exception reporting on cases exceeding an allowable time limit or processing capacity.

The companion to the Case Load Status report is the Case Load by Stage report (Exhibit 15), which lists the cases, oldest first, in a given stage. Additional information, such as expected hearing duration and an estimate of the probability that the event will occur, may also be provided.

In choosing events either to select a date for or to fill a date with, displays such as Exhibits 14 and 15 will assist the scheduler in identifying cases according to court-set policy as expressed by stage-related time standards.

CASE LOAD STATUS					
WEEK ENDING-05/08/78			PAGE 1		
JUDGE WALTER MURPHEY			PREPARED ON: 05/08/78		
STAGE	# CASES	AVG. TIME IN STAGE	EXPECTED DISP. AGE	EXCEEDS STAND. NOW EXPECTED	
1. ARREST TO INDICT./INFORMATION	110	40 DAYS	169 DAYS	5	21
TIME STANDARD: 60 DAYS					
CAPACITY: 120					
2. INDICTMENT TO ARRAIGNMENT	8	4 DAYS	145 DAYS	0	0
TIME STANDARD: 5 DAYS					
CAPACITY: 10					
3. ARRAIGNMENT TO PRELIM. HEAR.	68	32 DAYS	153 DAYS	5	8
TIME STANDARD: 30 DAYS					
CAPACITY: 60					
4. PRELIM. HEAR. TO TRIAL	85	37 DAYS	160 DAYS	3	5
TIME STANDARD: 40 DAYS					
CAPACITY: 80					
5. PLEA/CONVICT. TO SENTENCING	62				
TIME STANDARD: 30 DAYS					
CAPACITY: 60					
TOTAL ALL CASES:	333				

Exhibit 14.
A STATISTICAL REPORT OF PENDING CASES BASED ON COURT-DEFINED PROCESSING STAGES AND STANDARDS (time and capacity)

Exhibit 15. A DETAILED STATUS REPORT OF CASES IN EACH STAGE (companion to report shown in Exhibit 14)

CASE LOAD BY STAGE						
JUDGE ALAN MC BRIDE			CIRCUIT COURT		MARCH 30, 1979	
CASES IN STAGE 7, AWAITING TRIAL						
CASE	DEFENDANT/ ENTITLEMENT	OFFENSE/CAUSE OF ACTION	EST HRS	PROB	STAGE & DAYS IN	CASE AGE
001 F7405527	STANDVICH	INJURY CHILD	6	4	7.85	340
002 F7508558	PRITCHETT	FORG	60	1	7.12	175
003 F7512157	ALLEN	THEFT	12	1	7.2	168
004 F7512158	ALLEN	THEFT	12	4	7.2	168
005 F7512237	WILLIS	AT/MUR	60	4	7.12	155
006 F7512238	WILLIS	MUR	60	1	7.12	155
007 F7601166	ALLEN	THEFT	6	3	7.40	148
008 F7608402	SANCHEZ	BURG/BLDG	9	4	7.27	142
009 F7609036	GERMAINE	UNAUTH USE VEH	2	4	7.37	110
010 F7609678	JASON	FORG	4	3	7.5	102
011 F7609716	JIMINES	THEFT	12	4	7.33	81
012 F7610392	BATES	CC/ABUSE	6	4	7.41	89
013 F7700329	ADAMS	BURG/VEH	6	2	7.51	89
014 F7700581	JACKSON	POSS/MJ	6	4	7.44	84
015 F7700638	FISCHER	THEFT REIN	6	8	7.40	82
TOTAL 15 CASES			AVERAGE TIME IN STAGE: 30 DAYS			
			AVERAGE CASE AGE: 140 DAYS			

Fourth, **calendar monitoring** is the process of maintaining current information on resources available and resources already committed to handling events. An important factor in monitoring the calendar is the capability to identify peaks and valleys in the work load in order to attempt to distribute the case load more evenly through reassignment and continuances. Blindly continuing a case to another date leaves too much to chance.

The video display called Calendar Capacity Monitor (Exhibit 16) provides information for comparing resources available with resources committed. Resources available are expressed as the number of cases to set, reflecting some prior judicial allocation decision. The number of judges assigned to that calendar for a given day is also indicated. Resources committed are displayed as number of cases set, total estimated duration of those

cases, and the average of the probabilities that hearings will be required. Probability may be expressed simply as a range from 1 to 9, or in whatever other terms the court and scheduler find convenient.

The Calendar Capacity Monitor maintains information for a one-week (five-workday) period. Each day, the display is automatically advanced so that an inquiry on a Tuesday, for example, would return a display of Tuesday through the next Monday.

Monitoring the calendar is a scheduling function whose information requirements parallel those for setting events and dates. Although these functions have been separately described, in practice they may be intertwined, with schedulers selecting events, checking resource availability, and then setting dates.

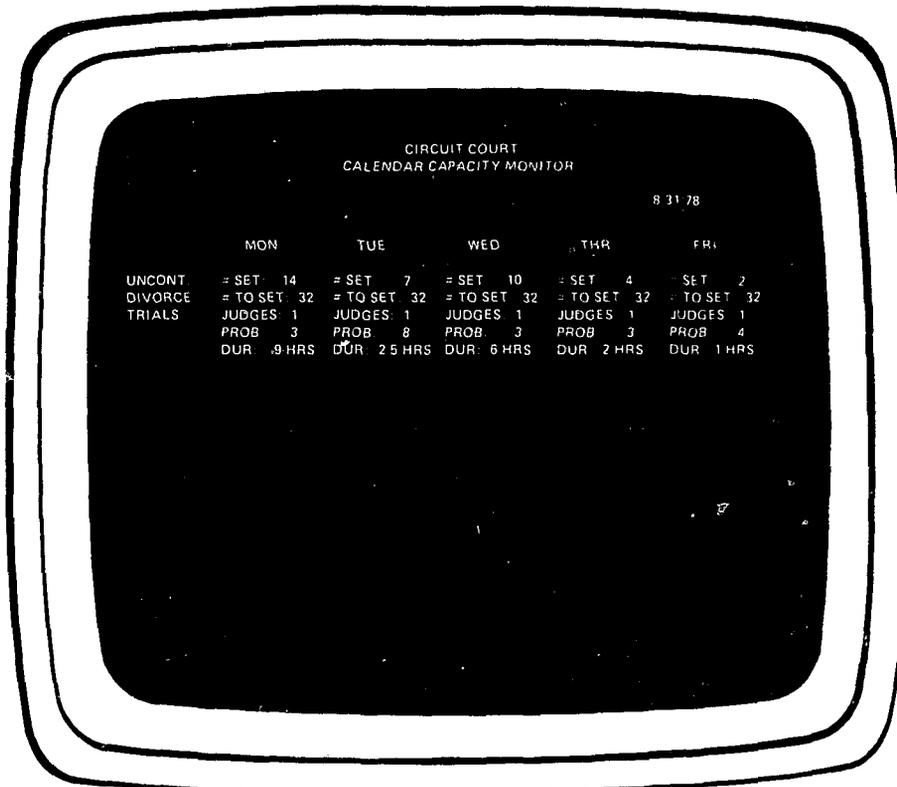


Exhibit 16. CALENDAR CAPACITY MONITOR COMPARES RESOURCES AVAILABLE WITH RESOURCES COMMITTED FOR CURRENT FIVE-DAY PERIOD

Fifth, the task of **making last-minute adjustments** in the calendar requires that schedulers possess flexibility to cope with the inevitable differences between what was planned and what actually occurred. Flexibility, in turn, requires information on individual scheduled events and on available resources. Much of this information is available through the Calendar Capacity Monitor, described above.

Another approach, that of reducing calendar variability and uncertainty, depends on information about case event duration and frequency (probability) of occurrence. This information may be entered for each event scheduled and form the basis for reassigning cases from over-committed to undercommitted judges. These data are also available, in the aggregate, on the Calendar Capacity Monitor for reassigning cases from heavier to lighter work-load days or for transferring judges from one calendar to another.

Additional calendar variation and uncertainty can be reduced through the Case Participants' Schedule display, which may be used to avoid scheduling conflicts and resulting continuances (Exhibit 13).

Finally, as discussed earlier, PROMIS automatically assures **notification** of case participants regarding

scheduled events and schedule changes (Exhibit 5). Listings of scheduled events can also be provided to sheriffs, jailors, courts sharing the trial bar, and other affected agencies. Disposition information can be provided to participants and agencies, as well.

As for the three elements comprising the management component of the court scheduling system depicted by Exhibit 12, **evaluation** of scheduling performance should be conducted in terms of previously set objectives of the court. PROMIS permits the evaluation through its Scheduling Performance Report (Exhibit 17, available in printed form only), which indicates resources available, resource commitments, and the results thereof. Also, the report compares estimated time with actual hours required for hearings, provides data on the results (calendar or event dispositions) of allocations of judge time to various calendars, and supplies information on continuances (and whether caused by attorney or court) so that the court can determine the effectiveness of its policy in that area.

Additional data for evaluation of scheduling performance are available through the case-tracking and statistical reporting capabilities of PROMIS. Moreover, these capabilities—which supply information pertaining

Case-flow Management

Of all the perspectives from which PROMIS's capabilities may be viewed, case-flow management is the widest. Standards of both the ABA and the National Advisory Commission on Criminal Justice Standards and Goals place ultimate responsibility on the courts for case-flow management, defined in an ABA publication as follows:

We consider "caseflow" to be the continuum of activities through which cases move within a court. By our definition, caseflow management encompasses all the functions directly associated with moving cases from the point of filing to the point of hearing, trial, or other disposition. . . . [C]aseflow management is not directly involved with the adjudicative process itself.

Caseflow management is *strictly* a management process, encompassing all the functions that affect movement of the case toward disposition, regardless of the type of disposition.⁹

The ABA and National Advisory Commission have listed various elements of case-flow management.¹⁰ A composite list of several of these elements follows, along with a brief indication of the related PROMIS capabilities.

The flow and status of cases should be under continuous observation by the court staff and monitored by the presiding judge at regular intervals.

PROMIS can generate aggregate data on what is happening at each point in the judicial process—continuances, dismissals, delay, backlog, findings, and the like. This information is provided primarily by the system's series of case-flow Management Reports (Exhibit 18) and also by such reports as the Case Load Status (Exhibit 14).

Subject-in-process statistics should be developed to provide information concerning elapsed time between events in the flow of cases, and defendants released at various stages of the court process.

Again, this information is available from PROMIS's case-flow Management Reports, which can supply either work-load or case-tracking data, as noted in Appendix A.

The status of the calendar should be reported to the presiding judge at least once each month.

The PROMIS-generated Calendar Capacity Monitor (Exhibit 16) provides a weekly snap-

shot of the calendar (by case category) in terms of cases set, cases that can yet be set for a given calendar slot, judges available, and the like. The Management Report Package also produces a statistical picture of all pending cases, by status and age intervals.

A central source of information concerning all participants in each case should be maintained. This should be used to identify, as early as possible, conflicts in the schedules of the participants to minimize the need for later continuances.

The Case Participants' Schedule (Exhibit 13) addresses this element of case-flow management. Moreover, continuances and the reasons for them can be monitored through the Scheduling Performance Report (Exhibit 17) and Reasons for Postponements and Discretionary Actions, produced by the Management Report Package.

The foregoing list of some of the elements of case-flow management is applicable to both civil and criminal case loads. Ideally, PROMIS's capability to provide information for case-flow management should be applied to both categories of cases if so handled by the court, because of the frequent interaction of parties and resources across case types.

Essentially, PROMIS enhances the court's ability to manage case flow by supplying a statistical profile of what is occurring at key points in the adjudicative process, thanks in large part to the Management Report Package. When appropriate, the Generalized Inquiry Package can supply the descriptive data (e.g., case characteristics and participants) underlying the statistics. (See Appendix A for details.)

Thus, court management has access to operations-generated data on which to base case-flow objectives and policies and by which to monitor, evaluate, and if necessary, change them.

In addition to being viewed in the specific context of a given court, case-flow management may be regarded as the broader, more encompassing task of enhancing effective, systemwide management by assuring that the court's information on cases and their parties can be linked to—or is compatible with—the data files or needs of agencies with which the court interacts. For example, PROMIS enables local courts to supply state agencies with data they may require to conform to the State Judicial Information System specifications, as well as to the information needs of the Computerized Criminal

⁹Solomon, *Caseflow Management in the Trial Court*: 4.

¹⁰See, *ibid.*: 30-47; American Bar Association Commission, *Trial Courts*: 81-87; National Advisory Commission, *Courts*: 187-88.

TRIAL PROMIS MANAGEMENT REPORT ACTIVITY BY PROCEEDING:					
TYPE :	WORKLOAD.....COUNTED BY: CASE				
BRANCH :	SUPERIOR COURT				
PERIOD :	07/01/79-07/31/79				
CASE TYPE :	ALL				
DATA FILE :	CURRENT MASTER				
	MAJ CIVIL	GEN CIVIL	CRIMINAL	COMES REL	TOTAL
PENDING BEGINNING OF PERIOD	32	132	66	291	521
PENDING ENDING OF PERIOD	30	133	68	296	527
FUGITIVES END OF PERIOD	0 0.0%	0 0.0%	4 5.9%	0 0.0%	4 1.6%
DAYS SINCE INITIATION ¹¹					
0-30	0 0.0%	0 0.0%	3 4.7%	0 0.0%	3 0.6%
31-60	0 0.0%	5 7.8%	7 10.9%	0 0.0%	12 2.3%
61-90	0 0.0%	8 6.0%	16 25.0%	22 24.3%	96 18.4%
91-120	5 16.7%	22 16.5%	21 32.8%	105 35.5%	153 29.3%
OVER 120	25 83.3%	98 73.7%	17 26.6%	119 42.2%	259 49.5%
AVERAGE	127	240	108	208	199
INITIATIONS	6	52	31	74	163
POSTPONEMENTS	11	21	25	42	99
WITNESS	1 9.1%	2 9.5%	5 20.0%	3 7.1%	11 11.1%
MOTION CONTINUANCE	4 36.4%	8 38.1%	8 32.0%	18 42.9%	38 38.4%
COURT UNABLE TO REACH	5 45.4%	10 47.6%	10 40.0%	21 50.0%	46 46.5%
OTHER	1 9.1%	1 4.8%	2 8.0%	0 0.0%	4 4.0%
COMPLETIONS	8	51	29	70	158
TRIAL	3 37.5%	8 15.7%	9 31.0%	19 27.1%	39 24.7%
PLEA	0 0.0%	0 0.0%	13 44.8%	0 0.0%	13 8.2%
SETTLED	4 50.0%	35 68.6%	0 0.0%	43 61.4%	82 51.9%
DISMISSED	1 12.5%	6 11.8%	6 20.7%	5 7.1%	18 11.4%
OTHER	0 0.0%	2 3.9%	1 3.4%	3 4.3%	6 3.8%
TIME DELAY FOR COMPLETIONS (DAYS SINCE CASE INITIATION)					
0-30	0 0.0%	0	7 24.1%	0 0.0%	7 4.4%
31-60	1 12.5%	1 2.0%	9 31.0%	0 0.0%	11 7.0%
61-90	1 0.0%	2 3.9%	6 20.7%	18 25.7%	26 16.5%
91-120	1 12.5%	8 15.7%	3 10.3%	22 31.4%	34 21.5%
OVER 120	6 75.0%	40 78.4%	4 13.8%	30 42.9%	80 50.6%
DAYS SINCE PREVIOUS PROCEEDING					
0-30	13 34.2%	27 14.7%	33 34.0%	101 27.7%	174 25.4%
31-60	16 42.1%	94 51.1%	40 41.2%	129 35.3%	279 40.8%
61-90	7 18.4%	41 22.3%	20 20.6%	84 23.0%	152 22.2%
91-120	2 5.3%	17 9.2%	2 2.1%	35 9.6%	56 8.2%
OVER 120	0 0.0%	5 2.7%	2 2.1%	16 4.4%	23 3.4%

¹¹NON-FUGITIVE CASES ONLY USED IN THESE CALCULATIONS.
ALSO, FIGURES ACCUMULATED UP TO END OF STUDY ONLY.

Exhibit 18. SAMPLE CASE-FLOW MANAGEMENT REPORT (court defines criteria for report)

History and Offender-Based Transaction Statistics systems.¹¹

Moreover—insofar as the criminal side of the court is concerned—realizing that judicial independence is not necessarily synonymous with total isolation, more and more courts are considering sharing data processing systems with law enforcement, prosecution, and correctional agencies, whose informational needs closely parallel those of the courts. PROMIS can provide such linkages.

PROMIS can also facilitate smooth case-flow management between police and court by permitting data file compatibility. As a result, PROMIS is able to report final dispositions for automated or manual posting to rap sheets, help upgrade police performance by providing data on case dismissals caused by inadequate police procedures (such as with the failure to recover physical evidence or a sufficient number of witnesses, or violations of a citizen's Fourth Amendment rights), and generate fugitive listings that help police identify and apprehend defendants for whom bench warrants have been issued.

At the other end of the criminal justice pipeline, PROMIS can supply correctional agencies with defendant data and case information for jail management. This facilitates the establishment of computer-based files on new inmates by correctional institutions. Moreover, PROMIS can help round out the total correctional picture with performance data on diversion programs, such as first-offender efforts, narcotics and alcoholic treatment centers, and other court- and prosecution-sponsored programs.

Returning from this generalized view of case-flow management and focusing on its applicability to the court alone, one might initially consider aggressive judicial management that affects the stream of cases through the court to be at odds with adjudication performed by impartial judges who do not interject themselves into the substance of litigation but instead leave the burden of "going forward" to the adversaries. Nonetheless, responsibility for efficient administration of the court lies with its judges, who must provide direction. If judges do not articulate case-flow objectives and do not establish policies

¹¹PROMIS also can meet the data requirements of GAVEL, an information system model designed to satisfy the operational and administrative needs of trial courts and to produce SJIS, CCH, and OBTS data as a byproduct.

to implement objectives, the policies implicit in court procedures may not be those of the court. Instead, such "policies" will be those of a scheduler, a clerk, or the trial bar, and may be inappropriate for the court as a whole. To take the policy-formulation initiative, however, the judiciary—acting as the "corporate board of directors" for the court—requires aggregate data such as those provided by PROMIS's case-flow management reports. Otherwise top management may not see the forest for the trees, the outline of court operations for the cases.

Aiding Judicial Decision Making

PROMIS may be used to develop and periodically update guidelines that help promote evenhanded and effective judicial decisions in such areas as pretrial release, speedy trial, continuances, and sentencing.

Regarding pretrial release decisions, recent PROMIS research¹² on 4,631 felony pretrial releasees found that 17 percent had at least one other case pending at the time of the bail hearing. Of the 3,825 defendants granted pretrial release, 13 percent were rearrested for an unrelated offense before disposition of their original case. About 11 percent failed to appear for at least one hearing, although only 4 percent were judged to have done so willfully.

A principal point made by this research is that the factors associated with crime on release or with failure to appear did not seem to influence the bail decision of judges. This resulted in the pretrial detention of many defendants who posed little threat of pretrial misconduct, whereas some of those released posed a significant threat. For example, if the bail decision had been guided by the factors identified by the research as predictors of pretrial rearrests, the frequency of crime on bail could have been reduced by about one-third without increasing the number detained as the result of being unable to make bond.

Among the factors that systematically predicted pretrial crime were arrests for burglary, robbery, larceny, arson, property destruction, or robbery. Also, an extensive and recent criminal history—indicated by arrests during the preceding year, cases pending when arrested, prior arrests for crimes against persons, or a history of drug

use—was a systematic positive predictor of pretrial rearrest. However, employed defendants and older defendants seemed less likely to be rearrested while on pretrial release.

Such predictors—as determined by similar PROMIS research in any given jurisdiction—could serve as bail-setting guidelines, with provisions for individualized deviations for cause. As a result, the bail policy of the court becomes visible and explicit, instead of implicit; is grounded on empirical findings, in contrast to intuition or conventional wisdom; is capable of being administered on an evenhanded basis; and can be monitored and evaluated periodically through subsequent research. This need for a reformed and more rational bail process has been a subject of congressional interest.¹³

PROMIS may also assist the court in the areas of speedy trial policy and continuance decisions. A U.S. Supreme Court interpretation of the Constitution's speedy trial provision notes that one of the factors to be weighed by a judge when determining whether a speedy trial has been denied is the length of the delay in relation to the characteristics of the individual case.¹⁴ As we have seen, PROMIS can generate statistical reports indicating the extent of case delay, in the aggregate, at various points in the judicial process. Specific identification of cases exceeding court-established time standards can be easily achieved through PROMIS, as well. For example, the Generalized Inquiry Package could be used to obtain a list of all cases that have been in the system for more than a specified period and, therefore, may require judicial action to speed disposition.

The Supreme Court indicated that the reasons for delay must also be carefully weighed during a determination of whether speedy trial has been denied.¹⁵ For example, absence of a key witness is cited as a valid reason for delay. PROMIS can generate reports noting the reasons for delay-causing actions, not only for the case load as a whole but also for a specific case.

PROMIS research in one jurisdiction found that judges appeared to differ in their willingness to grant continuances and that granting continuances was the most important factor explaining delay in the courts, more important than the number of cases in the queue, the number

¹²Jeffrey A. Roth and Paul B. Wice, *Pretrial Release and Misconduct in the District of Columbia* (INSLAW, 1979)

¹³In mid-1979, for example, Senators Edward M. Kennedy and Birch Bayh delivered speeches focusing on bail reform. Addressing the National Governors Conference, Senator Kennedy stated that the goal of bail reform must be "to develop a more rational policy for distinguishing who should be released and on what conditions. . . . The challenge is to develop a bail policy that takes into account the legitimate concern of the public about community safety."

¹⁴*Barker v. Wingo*, 407 U.S. 514, 521 (1972)

¹⁵*Ibid.*

of judges available, and the complexity of the case.¹⁶ Both the ABA and the National Advisory Commission have cited continuances as a major source of delay and urge granting them only for good cause shown.¹⁷ PROMIS reports can identify the reasons for continuances and who requests and grants them. Examination of this information can help pinpoint areas of excessive leniency and lead to the development of a definitive policy specifying acceptable reasons for continuances. Subsequent monitoring of PROMIS data will help determine how well such a policy has been followed and how it has affected case-processing time.

Yet another area of judicial decision making in which PROMIS can be of assistance is the development of sentencing guidelines. The latitude characteristically afforded judges when determining sentences has provoked widespread comment and concern, such as that expressed by Chief Justice Warren E. Burger, who observed that sentencing discretion "sometimes results in the defendants who ought to be similarly treated receiving substantially disparate sentences."¹⁸ A PROMIS study reinforces the validity of such an observation: after taking into account more than 200 factors relating to the prior record, current conviction, and socioeconomic characteristics of each of 1,665 sentenced felons, the analysis demonstrates that considerable sentencing variation existed among judges, a good deal of which could not be at-

tributed to differences in the type of case or the type of defendant handled by the judges.¹⁹

The study suggests that one way by which unwarranted sentencing variation might be reduced is to specify a set of guidelines or norms based on the prior sentencing practices of the court. In a sense, previous decisions represent the collective judgment of the court's judiciary, but the guidelines approach brings it to light. For instance, if it were possible to identify for a judge in a sentencing situation the nature of past sentences given by other judges in the same court to offenders whose offenses and criminal histories were similar to that of the current defendant, the judge would be in a position to make a decision consistent with those past sentences or be alerted to the advisability of documenting the reasons for his or her decision if the sentence imposed falls outside the guidelines. As the study notes, PROMIS can store and generate the type of information needed for such a guidelines approach.

Perhaps the most appropriate way to summarize the capabilities of PROMIS is to say that they help to meet what the President's Commission described as the greatest need of law enforcement and administration of justice: the need to know.²⁰

¹⁶Jack Hausner and Michael Seidel, *An Analysis of Case-processing Time in the District of Columbia Superior Court* (INSLAW, 1979).

¹⁷See, American Bar Association Commission, *Trial Courts*: 95; National Advisory Commission, *Courts*: 97.

¹⁸Quoted in Lesley Oelsner, "Burger Asks Review of U.S. Sentencing," *New York Times*, January 2, 1977: 1.

¹⁹Terence Dungworth, *An Empirical Assessment of Sentencing Practices in the Superior Court of the District of Columbia* (INSLAW, 1979). The description of the guidelines approach that follows is excerpted from this study. At least one prior study has also recommended the guidelines approach to sentencing: Leslie T. Wilkins, et al., *Sentencing Guidelines: Structuring Judicial Discretion* (Washington, D.C.: Law Enforcement Assistance Administration, 1976).

²⁰President's Commission on Law Enforcement and Administration of Justice, *The Challenge of Crime in a Free Society* (Washington, D.C.: Government Printing Office, 1967): 273.

TRANSFER AND IMPLEMENTATION OF PROMIS

Since 1973, INSLAW has been involved in the transfer of PROMIS to more than 150 jurisdictions, including courts, prosecutors' offices, and law enforcement agencies. Jurisdictions considering the adoption of PROMIS can benefit from the experiences of other PROMIS users and capitalize on much of the time, labor, and money already expended on the system elsewhere. In short, PROMIS users can avoid the duplicative and costly process of reinventing the wheel.

To encourage the further adoption of PROMIS, the Law Enforcement Assistance Administration (LEAA) provides funding so that public law agencies can receive PROMIS software, documentation, and technical assistance at no cost through INSLAW.

INSLAW'S ROLE

PROMIS was not always available as a transferable technology. It was originally developed for operation in the Washington, D.C., prosecutor's office and contained certain features that restricted its applicability elsewhere. With LEAA funding, however, INSLAW eliminated those restrictive features. PROMIS now has the flexibility to fulfill the management information needs of a wide variety of public law agencies in diverse jurisdictions.

The role of INSLAW in advancing the transfer of court-oriented PROMIS is to perform what a National Academy of Engineering report describes as "a complex brokerage process" that serves as "the catalyst to help match the needs to the technologies."¹

The PROMIS transfer plan executed by INSLAW embodies substantial assistance at no cost to implementing jurisdictions and conforms to a major recommendation of the National Academy of Engineering report, which calls for "shifting the focus of Federal concern from *simply telling* commercial users and local governments about promising technologies to actually *transforming technical information into ultimate uses*"²

In its role as middleman-broker, INSLAW strives to bridge the communications and expertise gap that often exists between the technology and the potential users: the courts and related agencies. This is not to say that INSLAW takes charge and implements PROMIS. Implementation is accomplished with local resources under the control of the local jurisdiction.

What INSLAW does provide is assistance to courts in overcoming such potential roadblocks as the following:

- Obtaining funds to support the transfer effort.
- Planning an unfamiliar, technical project involving strict time schedules and procurement of services and hardware.
- Employing new categories of personnel, such as system analysts, to implement and monitor PROMIS.
- Obtaining and using contractors and consultants for the first time.
- Justifying costs and benefits of PROMIS to local legislatures.

As specific examples of the foregoing types of assistance, INSLAW has helped jurisdictions obtain needed funds by identifying potential funding sources and by providing grant-preparation guidelines.

Planning for PROMIS is aided by INSLAW's on-site visits and feasibility studies, its Users Group conferences, and its publications, such as *Technical System Description* (informs computer systems analysts and programmers of the design philosophy of PROMIS and the technical aspects of how the system functions) and *System Transfer and Operation* (a guide for technical personnel on how to install and operate the system, including data entry and retrieval information, model source documents, error correction procedures, and program execution procedures). A major hurdle, software planning and development, is avoided since the basic

¹*Technology Transfer and Utilization* (Washington, D.C.: National Science Foundation, 1974): 9.

²*Ibid.*; emphasis added.

PROMIS software is already available and easily tailored to local needs.

Regarding the employment of new categories of personnel, INSLAW can assist jurisdictions in specifying and locating the type of staff required for PROMIS operations. For example, guidance in the preparation of job descriptions can be supplied. INSLAW also stands ready to assist with a number of contractor-related tasks, such as:

- Preparing requests for proposals to attract bids from private industry to install PROMIS.
- Creating the ground rules and procedures for the conduct of bidders' conferences.
- Establishing the criteria by which proposals submitted by contractors will be evaluated and assisting the jurisdictions in applying the criteria to the bids submitted.
- Answering technical questions of contractors (through on-site visits or telephone conferences) on software modification, human engineering (forms design, paper-flow simplification, training), and the like.
- Reviewing contractor's progress.

Cost-benefit analysis is also part of INSLAW's free technical assistance package. With today's tight fiscal conditions, responsible public officials must ponder carefully the decision to install a computerized information system, even with the help of federal funds. Among the questions to be considered are these:

- What are the one-time development and implementation costs of PROMIS?
- How large will the annual operating costs be and how can they be justified?
- Will PROMIS have a financial impact on the law enforcement, prosecution, and other criminal justice agencies in the jurisdiction?
- Assuming a decision is made to go ahead with PROMIS, how large a grant will be required and for how long? What local funding will be available when the grant expires?
- A number of system options are available for PROMIS users. Which of these options will be most cost-effective for a given court?
- PROMIS development and operation may require the services of a systems contractor, a computer manufacturer or a terminal vendor, and a data processing/telecommunications service bureau. What are reasonable charges for their services?
- Once PROMIS is operational, is there a benchmark for evaluating its success and efficiency?

In providing technical assistance in the transfer of PROMIS, INSLAW has been asked these questions many times. The tool for dealing with them is a cost-benefit analysis or cost-effectiveness analysis. Such analyses can be conducted in-house without great expense. However, unless the court employs a person experienced in using the technique, the results may be incomplete or misleading; funding agencies may also doubt a favorable result from an in-house study. An independent contractor would lend rigor and credibility to a cost-benefit analysis, but usually at a substantial price.

INSLAW has developed a PROMIS cost-benefit model that has many of the advantages of a contractor's study, but costs the user only a few hours of time to gather the necessary raw data. Once collected, the data are coded at INSLAW and entered into the automated cost-benefit model. The results are then analyzed and presented to the prospective user in a report that explains each cost and benefit projected.

The cost-benefit analysis can help a jurisdiction weigh the economic pros and cons of PROMIS. Then, if needed, the analysis can serve as a means of communication with local funding authorities. It also provides a benchmark against which to judge prices quoted by contractors, vendors, and data processing service bureaus. Finally, the analysis can be reestimated under alternative assumptions, which enables the jurisdiction to evaluate potential modifications to the basic PROMIS system and procedures. Thus, although a cost-benefit analysis does not guarantee a successful PROMIS transfer, it can help a jurisdiction guard against many of the hazards that threaten any new computerized information system.

THE PROMIS TRANSFER CYCLE

Although estimates differ from one jurisdiction to another, the average jurisdiction can have PROMIS transferred, installed to its specifications, and in operation within 12 months. Much of this time is spent on project planning and coordination, analyses of existing procedures and reports, training, and preparing system documentation. Transfer of the PROMIS programs and tailoring the programs to meet local needs take from one to four months.

If a grant is needed to fund the transfer of PROMIS, the implementation period may exceed 12 months, because the lead time needed to write a grant and get it approved is unpredictable and depends on the availability of funds. However, once funded, a jurisdiction could procure hardware, implement new data collection procedures, transfer PROMIS software, test the system, and begin operations within a year.

The specific details of PROMIS transfer and implementation vary from jurisdiction to jurisdiction, but the process generally involves the following sequence of steps.

1. *Investigation Phase*

- a. Gather information on PROMIS and sample documentation from INSLAW.
- b. Study PROMIS concepts, capabilities, and techniques.
- c. Contact other PROMIS users.
- d. Attend a PROMIS Users Group meeting.
- e. Site visit to or by INSLAW to review PROMIS capabilities.

2. *Commitment Phase*

- a. Organize briefing to top management of the court.
- b. Obtain commitment of top management.
- c. Organize support from other public law agencies, as appropriate.

3. *System Justification Phase*

- a. Conduct a systems analysis, if not already completed.
- b. Obtain cost-benefit survey instrument from INSLAW.
- c. Gather required cost and benefit data.
- d. Review data with INSLAW.
- e. Review with top management the cost-benefit analysis results provided by INSLAW.

4. *Resource Identification Phase*

- a. Identify existing hardware resources that might be shared (e.g., county data processing, police, service bureau, university).
- b. Identify existing personnel resources available to assist in the implementation (e.g., project manager, systems analyst, programmer, paperwork and management analyst).
- c. Identify additional personnel and hardware required.
- d. Identify sources for grants and post-grant funding.

5. *Grant Preparation Phase*

- a. Obtain draft sample grant from INSLAW.
- b. Notify funding source of intention to submit a grant.
- c. Develop project budget and review with INSLAW.
- d. Submit grant application.

6. *Project Initiation Phase*

- a. Recruit or appoint systems manager.
- b. Prepare hardware and consultant RFPs with INSLAW's assistance.
- c. Conduct bidders' conferences and select contractors.
- d. Negotiate contracts.
- e. Recruit additional project staff, if required.
- f. Prepare detailed project work plan with milestones and products identified.

7. *Implementation Phase*

- a. Review manual procedures and case flow documented by the systems analysis in 3a. above.
- b. Design forms and review with INSLAW.
- c. Identify data elements, on-line inquiries, and printed reports required.
- d. Obtain PROMIS software and model documentation from INSLAW.
- e. Modify PROMIS software using the transfer tailoring package, with INSLAW's assistance, if necessary.
- f. Execute PROMIS documentation generator. (PROMIS automatically generates documentation providing a complete description of the system as tailored to local needs.)
- g. Test software.
- h. Develop users' manual.
- i. Implement new forms and procedures and conduct training.
- j. Test system and procedures.
- k. Make final adjustments to PROMIS software using the tailoring package.
- l. Monitor system performance.

8. *Post-implementation Phase*

- a. Perform periodic data-quality audits.
- b. Phase-out parallel manual operations.
- c. Update periodically the cost-benefit analysis.
- d. Attend Users Group meetings.
- e. Add desired software enhancements provided by INSLAW.
- f. Prepare for transition from reliance on grant(s) to post-grant funding.

In Conclusion . . .

In this period of national concern over productivity, courts are increasingly regarded as having a major responsibility and opportunity for spearheading a drive toward more effective processing of civil and criminal cases by implementing modern management and administrative methods.

Attempts to revamp concepts, strategies, and methods of operation are not accepted with equal enthusiasm by

all. Some decry new approaches and insist that the only solution to the problems at hand is to have more judges, more court administrators, and more support personnel. Assuredly, there is no substitute for them. But the principal point is that we are unlikely ever to have enough judges and support staff to overcome the increasing complexities faced by the courts. With supplementary tools such as PROMIS, however, the task of harnessing and effectively managing those complexities falls well within the realm of the possible.

APPENDIX A MANAGEMENT REPORT, GENERALIZED INQUIRY, AND FORMS MANAGEMENT PACKAGES

The extraordinary flexibility of the Management Report, Generalized Inquiry, and Forms Management Packages means that most of the reports and other documents required by a court can be generated by the PROMIS system.

As noted in Chapter 3, the Management Report Package presents case-flow management reports in the form of aggregate statistics, and the Generalized Inquiry Package presents descriptive data about individual cases. The Forms Management Package provides the documents that are a byproduct of case processing. All three packages can produce outputs either on demand or at specified intervals.

MANAGEMENT REPORT PACKAGE

The significance of the Management Report Package is twofold. First, it provides the court with a regular flow of aggregate data on its operations. For example, regular runs of the Management Report Package could be used by the chief judge or court administrator to monitor upsurges in the number of indictments in time to reassign judges from another division. Similarly, the court could compare, month to month, the proportions of various types of hearings that are postponed (and the reasons why) and thereby identify emerging problems in scheduling, witness notification, or police officer appearances.

Second, court officials can also respond to unanticipated requests by specifying the type of report they desire (from an assortment of seven) and by adjusting the range or focus of the data so that each report supplies pertinent data. Even if all informational needs could be predicted, many would arise so infrequently that to develop ad hoc computer programs to access the desired data would be difficult, if not impossible, to justify on a cost-benefit basis. With the Management Report Package, however, writing special programs to generate the required information is not necessary. The package's program is generalized and so flexible that it can field a wide range of statistical requests without requiring any programming effort.

The preparation of requests for management reports involves four steps: selecting the report type(s), indicating

the time period(s) and court branch, designating the report version (either work load or tracking), and deciding how extensively to fine-tune the data appearing under each of the report's various column headings. Each of these is discussed below.

Report Types

The first decision to be made is which of the package's seven statistical tables (reports) is desired and what level of detail is to be contained within the confines of its overall format. The seven reports describe what is happening at all points in the judicial process, in terms of cases, defendants, or charges, as follows.

- 1 **Summary activity:** provides a synopsis of what happened (e.g., postponements, dismissals, case findings) at each point in the judicial process.
- 2 **Activity by proceeding:** indicates for the proceeding requested (e.g., pretrial conferences, trials) the backlog of cases, the number of completed cases, the number of postponements, and the number of dispositions by type (e.g., dismissed, guilty, judgment for plaintiff).
- 3 **Defendant activity:** provides the number of cases involving each type of defendant activity (e.g., bench warrant or fugitive activity, findings of competency).
- 4 **Bail decisions:** indicates the type of bail release decisions for defendants in the appropriate cases.
- 5 **Reasons for postponements and discretionary actions:** provides a breakdown of reasons for postponements or dispositions, at any requested proceeding.
- 6 **Appeals:** indicates the number of notices of appeal filed; the number remanded, reversed, or affirmed by the appeals court; and post-appeal dispositions (retrial or other).
- 7 **Sentencing:** provides counts in each of the sentencing categories—such as imprisonment, fine, probation—along with breakdowns of lengths of time imposed, where applicable. For example, the

number of prison sentences of 1-5 years, the number from 6-10, and so on, would be listed.

Requests for the information contained in the above reports may be spurred by an internal request for a special study, a query from the media, a question from a local or state legislative committee, a request from another justice agency, or an appeal from a research group for data. If, through experience, certain types of information are found to be of particular value or are requested relatively frequently, they could be generated as routine periodic reports; otherwise, the reports would be prepared only on demand.

Time Periods and Court Branch

The court also has great flexibility in specifying the period to be studied. A given computer run could generate the seven reports, each containing data for four time periods. Those periods could encompass a week, month, quarter, year, or whatever other timespan is desired. For example, the first quarter of the current year could be compared with the similar period in each of three prior years for a group of specified charges.

The court branch (e.g., location) to be studied is also specified.

Work-load or Tracking Versions

Users of the package may also specify which version of a report is desired:

- 1 **Work-load version:** presents totals for various types of case-processing activities (work load) that were performed during a specified past period. For example, a report could indicate for specified case types the number of final dispositions, by category, that occurred during the period selected for study (say, June 1 through August 31, 1979, with breakdowns of each disposition category).
- 2 **Tracking version:** "follows" those cases received by the court during a certain period in the past (last quarter of 1979, for example) and presents totals regarding the current status of those cases as determined by judicial activities that occurred between the filing of the cases and the date of the report. For instance, a work-load report might indicate that 60 armed robbery cases were filed during the last quarter of 1979. The tracking version of the Management Report Package could reveal, as of today, the number and percentage of those 60 cases that resulted in various bail decisions, findings of no probable cause, guilty pleas, dismissals by the court at trial (and for what reasons), and sentences of various types.

Fine-tuning the Data

Running down the left side of each report are descriptions of the general nature of the statistics located in the various rows of the report. One row might be pending cases, for example.

A report can contain any number of columns. The columns can represent, at the discretion of the user, any data element or series of data elements stored in PROMIS. For instance, the columns of a three-column report might be designated as Judge A, Judge B, and Judge C, respectively; or Prosecutor A, Prosecutor B, and Defense Attorney C. Thus, the pending-cases row would indicate the number of cases pending for each of the persons designated by the column headings.

Column definitions may be refined even further in order to narrow the scope of the statistics. For example, a user might specify that column 1 pertain not just to Judge A but to Judge A's work (as described by the row headings, such as pending cases) involving male defendants, or career criminal defendants, or burglary defendants, or defendants exhibiting any combination of those characteristics (such as male career criminals arrested for burglary). Thus, each of the basic column headings can be fine-tuned by modifying it with up to any three PROMIS data elements, such as male, career criminal, and burglary arrest in the example just noted.

Users can perform this fine-tuning in addition to specifying which of the seven types of reports is desired, the time period and court branch to be studied, and whether PROMIS is to produce work-load or tracking statistics. These are the features that make the Management Report Package an extremely flexible analytic tool.

GENERALIZED INQUIRY PACKAGE

The Generalized Inquiry Package focuses not on aggregate numbers but on descriptive details (e.g., name of litigant, case type, names of witnesses) associated with each case selected for study by the court. As noted in other sections of this publication, PROMIS has anticipated a wide range of routine requests for descriptive information. But what about requests that are *not* routine and are difficult, if not impossible, to anticipate? This is precisely the type of request for which the Generalized Inquiry Package is designed.

As already suggested, the Generalized Inquiry Package can work to complement the Management Report Package. A statistical finding in the latter indicating an abnormally high (or low) figure for a factor being studied in a group of cases might well prompt the court to use the Generalized Inquiry Package to extract detailed information about the cases behind a particular statistical fact. Ex-

hibits 11 and 13 in Chapter 3 are sample reports produced by the Generalized Inquiry and Management Report Packages, respectively.

Examples of possible uses of the Generalized Inquiry Package include the following:

- The legislature requests that the Chief Judge testify on dispositions and sentencing in marijuana cases. In addition to the aggregate numerical information (e.g., number of dismissals, guilty pleas, sentences of various terms) available from the Management Report Package, the inquiry report constitutes a fact sheet on individual marijuana cases possessing certain characteristics, such as those that were dismissed, or involved guilty pleas, or resulted in sentences of various types. Such fact sheets can include information on the defendant (such as age, sex, race, extensiveness of prior criminal record, employment status), on the time and place of the offense and of the arrest, and on the numbers and types of witnesses and their relationship to the defendant.
- The court administrator wishes to determine the extent to which the citizen complaint unit is resolving, without recourse to criminal prosecution, disputes among individuals who are related to each other. Through the inquiry package, he receives a list of cases (including defendants' and victims' names) involving assault charges and a family relationship between victim and defendant. Their names are cross-checked against those in the files of the citizen complaint unit to determine the number of cases in which the complaint unit was unable to resolve disputes in a noncriminal context.
- A legislative committee holding hearings on a proposed victim compensation bill requests a list of cases filed with the court during the past six months that involved hospitalization of the victims. A generalized inquiry report is sent to the committee.

Court officials can initiate an inquiry using a fairly simple form, such as the one shown as Exhibit A.1, either by filling out the form themselves or by using it as a guide when verbally making the request.

As indicated by Exhibit A.1, the first item to be completed is a description of the request, including its purpose. This serves to sharpen the focus of the request both for the person making the request and the PROMIS systems manager.

Cases to be retrieved are first specified by date, item 2 of the form. If the requestor does not wish to limit the selection of cases to those occurring within a specified period, the "no date limitation" box is marked. If the requestor is interested only in cases associated with a given time frame, one of the remaining three boxes (initiated,

disposed, scheduled) is checked and the period desired is specified. If, for example, the "disposition" box is checked, this signifies that the report is to be limited to those cases in which a final disposition was reached during the specified period.

Item 3 permits those making inquiries to narrow their selection by indicating the type of case desired. "No case type limitation" may also be indicated. Similarly, by marking the appropriate box in item 4, the range of cases to be studied may be further narrowed by indicating an interest in only cases whose current status is active or closed. If, for instance, the "active" box of item 4 is checked, it means that, of the cases selected through items 2 and 3, the requestor is interested in only those cases that are still open.

In item 5, reports may be requested from any branch of the court. If no limitation is indicated, cases from all branches are included in the report.

In item 6, the requestor specifies the order in which cases are to appear, the items that are to be counted, and where new pages are to begin. For example, the chief judge could request a report of all negligence cases completed within the past six months for the purpose of comparing the number and amount of awards made in jury trials with those made in non-jury trials. The report could be sorted first by type of trial (jury or non-jury) and, within that, by type of case; within case type, cases could appear in order by amount of recovery. The request form would be completed to specify type of trial as the first sort field, case type as the second, and the amount of recovery as the third. If a tally was specified for the first two sort fields, the report would show the number of jury trials, the number of non-jury trials, and the number of cases for each type within trial type.

Item 7 of the request form permits the user to specify the particular sets of cases desired. This portion of the form has two sections, either or both of which may be used when making a request. The first section is used to select the cases to be included. For example, the requestor might wish to include a case only if it involved Judge Jones and witness Brown and certain other criteria. The second section of item 7 defines the inquiry in terms of cases to be excluded. For instance, one could exclude any case that involved robbery and (or) defense attorney White. When both the first and second sections of item 7 are used to limit the cases to be selected, the request could be expressed as follows: Include all cases involving Judge Jones and witness Brown, but exclude any cases involving robbery and defense attorney White. Item 7, therefore, enables one to fine-tune the inquiry after the general range of cases has been defined by items 2-5.

Item 8 permits the requestor to specify what data are to be printed for each case. The number of data elements

EXHIBIT A.1
SAMPLE OF PROMIS GENERALIZED INQUIRY
REQUEST FORM

Date _____ Requested by _____

1. *Briefly describe request, include purpose* _____

2. *Date limitation. Include only cases that have been (check one):*
 initiated scheduled for _____ (specify)
 disposed no date limitation
 in the period _____ through _____.

3. *Type of case.*
 major civil misdemeanor
 general civil felony
 domestic relations no case type limitation

4. *Current status. Include only cases that are:*
 active closed no status limitation

5. *Branch. Include only cases in:*
 Superior Court District Court no branch limitation

6. *Sort order (specify primary sort field first):*

<i>sort by:</i>	<i>tally (yes or no)</i>	<i>break (yes or no)</i>
a. _____	_____	_____
b. _____	_____	_____
c. _____	_____	_____

7. *Parameters. Include case only if* _____

Exclude case if _____

8. *Print fields. Print the following information for each case:* _____

9. *File. The report should be produced from the*
 current master file historical file (specify dates) _____

that may be specified is limited to what can be printed on one line of the output report.

Finally, item 9 lets the requestor specify whether the report is to be produced from data in the current master file or from one or more historical files. It is possible to specify both current and historical data for a report.

FORMS MANAGEMENT PACKAGE

The Forms Management Package can be used to define and produce case-related documents routinely used by the court. The manual production of subpoenas, complaints, notices, gummed labels for case jackets, and the like can consume a substantial portion of available clerical time. With PROMIS, such documents can be generated automatically in user-designed formats and with case information from the data base.

A court can design forms and documents to its own specifications by using the package's interactive tailoring program. This tailoring program provides the user with several options regarding document format. For example, a form letter or notice may be produced on a blank sheet of paper; for high-volume documents with standard text, preprinted forms can be used and the fill-in data can be supplied by the Forms Management Package. The user can specify whether variable data on a form are to be provided from the PROMIS data base or by the terminal operator.

Forms may be generated in batch mode for a defined set of cases or triggered on-line for a single case. For example, notices to appear could be automatically generated each day for all participants in cases scheduled for trial in 10 days. However, if a continuance is granted, an operator could specify at the terminal that notices to participants in that case are to be generated immediately.

In addition to the types of documents already described, additional word processing software, currently under development by INSLAW, will enable a court to generate many other types of documents. This new word processing subsystem will have the capabilities of the Forms Management Package plus the following enhancements:

- It will be possible to add, modify, and delete documents without requiring recompilation of programs.
- There will be no effective limitation on the number of documents that can exist.
- It will be possible for a clerk to design document formats.
- It will be possible to include pre-stored text of almost any size in a document.
- It will be possible to do calculations on document data (for example, a date might be defined as today's date plus 20 days).

Virtually all case-related paper can be system generated, and court clerks can be freed for other tasks.

APPENDIX B TECHNICAL DESCRIPTION OF ON-LINE PROMIS

The following is a brief description of the PROMIS software. Detailed documentation, consisting of Volume I: *Technical System Description* and Volume II: *System Transfer and Operation*, is available from INSLAW.

There are two versions of the on-line PROMIS software. One version, designed for use with buffered terminals, consists of a teleprocessing monitor (PROMIS's or the manufacturer's) and nine other on-line programs. This version is the one most likely to be run on a large mainframe that supports many terminals. The non-buffered version supports on-line (asynchronous) terminals and is most likely to be run on a minicomputer. In this version, one large on-line program controls the terminals that call a Data Base Access program for data requests.

The description that follows applies to both versions of on-line PROMIS. Differences between the two versions are noted, as appropriate.

SYSTEM FUNCTIONS

- On-line entry, update, and retrieval
- Reports production: on-line and batch
- Purging: batch
- Logging and recovery: on-line and batch
- User tailoring package: on-line
- Documentation generator: batch
- Data base adjustment: batch
- Court scheduling: on-line and batch

USER-DEFINED OPTIONS

- Data elements, including labels, size, edit criteria, and values
- Order of entry of data elements
- Cross-reference inquiries and display formats
- Report types, formats, and selection criteria
- Forms design (e.g., labels, subpoenas)
- On-line case purge and retention criteria

PRINTED OUTPUTS

Report Module

- Types
 - calendar or pending case reports
 - assignment reports
 - pending defendant status reports
 - disposition reports
 - cases with missing transactions
 - translation file listings (e.g., judge codes)

NOTE: User specifies selection criteria for above report types, including branch, case type, misdemeanor/felony indicator, and time parameter.

- Formats
 - case, capsule (1 line per case)
 - defendant, capsule (1 line per defendant)
 - case, long
 - case, short
 - defendant, long
 - defendant, short

NOTE: Within defendant and case formats, users can request the full record or only those data elements defined as report fields.

Statistical Reports

- Work-load or tracking statistics on any event or court proceeding, including numbers and reasons for postponements and dispositions and time-delay analysis of backlog at that proceeding
- Sentencing statistics
- Bail statistics
- Counts of defendants or cases
- Comparisons of similar cases (e.g., by charge, prosecutor, judge, and time periods)
- Processes cases in both on-line and historical files
- Easy-to-read formats in user's terminology

Generalized Inquiry Reports

- Simple statistics or descriptive data on any group of related cases
- Interactive program for easy entry and maintenance of requests

Forms

- Designed by user
- Triggered on-line or selected in batch using fixed criteria
- Prints any data element in data base; prints fixed information or variable information entered at terminal

Court Scheduling

- Batch reports, including a case-load summary, case load by stage, and scheduling performance reports

SOFTWARE REQUIREMENTS

Programming Language

- 1974 ANSI COBOL subset includes NUC1, SEQ1, INX1, REL1, LIB1, TBL1, NUC2 items; logical connectives: and, or, and not, or no-; level numbers 01-49; nonnumeric operands may be unequal in size; no restriction on number of transfers of data in display statement; nested if statements; until and varying options of perform statement; accept from data-name to obtain system date; divide remainder option; redefines clause may be nested
- SEQ2 item: value of ID is data-name
- INX2 item: start and read next

Other Required Software

- COM1 of COBOL or other facility to access, process, and create messages
- SEG2 of COBOL program overlay supplied by operating system
- IPC1 of COBOL or other facility for task-to-task communication
- Multiterminal access to one program copy
- SORT utility

PROGRAM DESCRIPTIONS

Number of Programs

- Buffered—on-line: 9 (menu, security, 2 inquiry, logging, entry, 2 data base access, edit) and a teleprocessing monitor; on-line support: 11 (screen file and code generators for above functions)
- Nonbuffered—on-line: 3 (data base access, entry and inquiry, logging)
- Buffered and nonbuffered batch subsystems: 28 (tailoring, reports, generalized inquiry, data base adjustment, management report)
- Court scheduling enhancements (buffered and nonbuffered): 4 additional on-line programs; 6 additional batch programs

On-line Program Size (on PDP 11/70)

Nonbuffered

Program	Data Division (bytes)	Procedure Division (COBOL verbs)	Link edit size (under IBM OS/VS COBOL, no segmentation)
PR0210 (On-line Entry/Inquiry)	17K	4300	70K
PR0255 (Data Base Access)	19K	2800	64K

Buffered

Program	Data Division (bytes)	File I/O Buffers (bytes)	Procedure Division (bytes) no segmentation
PR4810 (Update Data Base Access)	16910	5120	49402
PR4200 (Case-related Inquiry)	20104	3072	21904
PR4210 (Cross-reference Inquiry)	21418	4096	20988

NOTE: Execution size with segmentation and/or overlap will be less, depending on type of computer. Court scheduling software will add approximately 5800 bytes to the data division of the on-line update program.

On-line Environment

- Nonbuffered: three programs are active in the on-line environment—the On-line Entry and Inquiry, the Data Base Access, and the Transaction Logging programs. The On-line Entry and Inquiry program receives requests from terminals for data entry formats, edits transactions (displaying translations and identifying errors), passes valid transactions to the Data Base Access program, formats request for inquiries and passes formatted requests to the Data Base Access Program, and displays inquiry responses. The On-line Entry and Inquiry program is table driven, has a save area for each terminal, and keeps track of data and processing by terminal.

- **Buffered:** The on-line system consists of a monitor program, 9 on-line programs (menu, security, 2 inquiry, logging, entry, 2 data base accesses, and edit) and a teleprocessing monitor to control the on-line environment.

The buffered version generates working storage and procedure division code. In addition, it accesses generated files of screen formats for entry screens, menus, etc. No on-line program is interactive; that is, nothing is saved in the program for each terminal. Instead, required continuation data are saved on the screen.

DATA BASE AND FILE CHARACTERISTICS

Data Base Facts

- INSLAW's basic version: 16 case-related records; 7 translation records
- Approximately 4000 bytes per case (triable unit)
- Approximately 200 data elements

On-line Files

- Master (buffered and nonbuffered): 5 relative; 2 indexed
- Logging (buffered and nonbuffered): 1 sequential logging; 1 relative log control
- Court scheduling (buffered and nonbuffered): 1 indexed
- Screen images (buffered): 1 relative menu; 1 relative update; 1 relative inquiry
- Security (buffered): 3 relative
- Other (buffered): 1 relative, currently
- Report request
- Forms definition
- Generalized inquiry definition
- Management report definition

Batch Files

- Historical master (buffered and nonbuffered): 1 sequential
- Court scheduling: 2 sequential

HARDWARE REQUIREMENTS

Computer

- PROMIS is manufacturer-independent; it meets the COBOL compiler requirements and access methods of at least ten (10) minicomputer manufacturers. Programs are also compatible with the ANSI COBOL used by mainframes.

Terminal Support

- Asynchronous nonbuffered CRTS or printers
- Buffered terminal with following characteristics—
 - 1920-character buffer
 - forms mode, i.e., able to define data entry areas of a screen and protect field labels
 - able to send back to computer just the unprotected areas of screen
- Screen and cursor control functions—
 - clear screen
 - home cursor
 - place cursor at specific point on screen
 - send specified number of lines to other than the first line of the screen

TYPICAL HARDWARE CONFIGURATIONS

	Case Load			
	0-4,999	5,000-9,999	10,000-19,999	20,000-29,999
CPU Core	128K min	128-256K	142-512K	256-1024K
Data Base Size	25 MB	50 MB	100 MB	150 MB
Disk Space	100 MB	200 MB	300 MB	400 MB
Tape Drive	1 slow	1 fast	1 fast	1 fast
Printer Speed	180 CPS	600 LPM	1100 LPM	1100 LPM
Data Terminals (minimum)	2	5	10	20

END