



**A COMPUTERIZED SUBJECT-IN-PROCESS SYSTEM:
DEVELOPMENT OF A REGIONAL PROTOTYPE FOR TEXAS**

**Prepared for the North Central Texas Council of Governments
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**Institute of Urban Studies
The University of Texas at Arlington**

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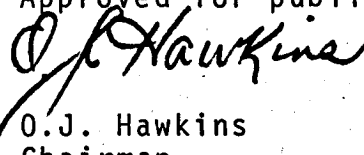
**Project SEARCH Staff
California Crime Technological Research Foundation
1927 13th Street
Sacramento, California 95814**

PREFACE

This report is one of a series of publications designed to disseminate the results of the various special projects conducted in association with Project SEARCH. Most of these special projects were undertaken because there were potential technical or operational implications of significant interest to all participating states. However, the projects were conducted by individual states and primarily addressed intra-state problems.

In approving the publication of these special project reports, the SEARCH Project Group is attempting primarily to accomplish wide dissemination of all of the results coming from SEARCH-associated efforts. It should not be assumed, in these special project reports, that recommendations and conclusions presented by the authors are endorsed by either the SEARCH participants or by LEAA. Rather, the SEARCH Project Group believes that this report is of sufficient quality and comprehensiveness that it deserves consideration in any similar project.

Approved for publication



O.J. Hawkins
Chairman
SEARCH Project Group

F O R E W O R D

This report describes the design and implementation of a criminal justice subject-in-process system developed as a special project under Project SEARCH. The Texas Criminal Justice Council, the North Central Texas Council of Governments, the City of Fort Worth, and the Institute of Urban Studies cooperated in the project.

We would like to express special thanks to the many staff members from these organizations without whom the project would not have been possible. We would also like to express our appreciation to the personnel of the various criminal justice agencies involved in development of the system.

In May, 1971 the system contained approximately 3000 individual records, including parole and probation records which were converted from the files of county, state, and federal agencies. The system has been well received and is providing a needed service to the criminal justice community.

May, 1971

James W. Stevens
Project Manager
Institute of Urban Studies

Allan K. Butcher
Criminal Justice Specialist
Institute of Urban Studies

Frederic Keithley
Director of Criminal Justice
North Central Texas Council
of Governments

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I. INTRODUCTION

The relative autonomy of agencies involved in the criminal justice process and the fact that these agencies represent every level of government--city, county, state, federal--have resulted in a lack of coordination within the process and a scarcity of knowledge about the total criminal justice system. A criminal suspect may be arrested by city police, held in a county jail, tried in a state court, incarcerated in a state institution or supervised by a county probation officer. Consequently, the many separate agencies which deal with an individual subject may not have access to the same information about that subject and may not be able to determine his status in the process at any given time. Each agency thus tends to function as an independent unit, largely uninformed about the activities of the other agencies that comprise the criminal justice "process." Other problems which may arise because of this isolation are fragmentation of records, duplication of effort, poor interagency communications, and time lags or bottlenecks within the process.

It was with these and related problems in mind that the national Project SEARCH staff and the staff of the Texas Criminal Justice Council reached an agreement to develop a prototype subject-in-process tracking system in a single county in Texas as this state's special project under SEARCH.

The Subject-in-Process Concept

A subject-in-process system traces the movement of accused offenders through the criminal justice process from initial arrest to final release by recording and maintaining data relevant to the progress of subjects through the process. The steps in the process are arrest, arraignment, indictment, prosecution (including trial), and disposition (probation, incarceration, parole). Any one of these may provide the point of exit from the system for any given subject. A record containing arrest and identification data is created when an accused felon is arrested, and this record is then built and updated as the subject moves through the criminal justice system. When a subject exits from the system, his record may be forwarded to a designated central index for inclusion in a criminal history file. With the possible exception of some identifiers such as file or arrest numbers, only data with inter-agency or "process" relevance are recorded; items of solely intra-agency interest are usually not contributed to the record. Thus the emphasis of the subject-in-process concept is on "system"; the concept views the criminal justice process as a complex, interrelated whole in which the actions of each agency have meaning for other agencies within the system. The collection of data for the system and the use of the information derived from these data should reflect this emphasis.

Inherent in the concept is the assumption that the data base developed by recording the movement of accused offenders through the system will facilitate analysis and evaluation of the entire criminal justice system and of the functioning of each agency as it relates to the total system. It is assumed that the same data base will also provide various types of operational, management, research, and planning

data for use by individual criminal justice agencies. In addition, the current status of any subject in the process can be retrieved at any time, a capability which would end the uncommon yet embarrassing "loss" of subjects somewhere in the criminal justice system.

An alerting capability can notify an agency that a subject in its custody is already being processed or is under the supervision of another criminal justice agency. System users can also retrieve data for setting bail, presentence reports, or a variety of questions which arise among members of the criminal justice community. Also, depending on the desires of the user agencies and the extent of the data collected for the system, a wide variety of periodic reports can be produced from aggregate data.

The Texas Subject-in-Process System

The subject-in-process project plan submitted by the Texas Criminal Justice Council to national Project SEARCH delineated the following six broad project objectives:

1. Create a substantial data base of complete transaction-based offender records to provide a means of evaluating and measuring a criminal justice process.
2. Provide an available base of comprehensive information on crime and criminals for research, diagnostic, and management purposes.
3. Establish ongoing data requirements, collection, reduction, and dissemination procedures to gain experience for implementing a statewide criminal justice reporting system.
4. Provide a basis for utilizing operations research techniques, such as input/output simulation models as a means of testing new approaches or concepts of systems alternatives.
5. Prepare for the integration of this subsystem into the

state's Criminal Justice Information and Communications System.

6. Provide experience and documented methodology for establishing and maintaining a model system for other states or jurisdictions.

During the initial stages of the project, it became apparent to the North Central Texas Council of Governments (NCTCOG) and the project staff that two of these original objectives were beyond the scope of the subject-in-process project as designed for Tarrant County. The portion of Objective Number 3 which calls for establishment of data requirements and procedures for a statewide criminal justice reporting system has become the goal of a separate project currently being conducted in the state under the auspices of the Criminal Justice Council. Objective Number 5, dependent to a great extent on the completion of Objective Number 3, would be included as a project objective should a decision be made at some time in the future to broaden the geographic scope of the subject-in-process system to include an entire region in Texas. The prototype subject-in-process tracking system implemented in Tarrant County therefore was based primarily on four of the original six project objectives.

II. SYSTEM DESIGN

Development of the Master File

The master file for the subject-in-process tracking system is a product of both planned development and natural evolution. Each step in the process was discussed in detail with those officials who are familiar with the daily operations of the criminal justice system in Tarrant County. Thus, local practices were reflected in the design of the master file. For example, since few, if any, examining trials are held in Tarrant County, no fields were included in the master file for recording such data.

Identification of Data Elements

During the early stages of master file development, lists of proposed data elements were taken to participating agencies several times for review. The need for lengthy discussions and many modifications which were made in the system indicate the difficulty involved in designing a file record which can accurately reflect the nuances of the criminal justice process in a major metropolitan area.

Once the data elements were identified and approved for inclusion in the file, a process of determining entry formats was begun. The project staff wished to ensure that data entering the master file would be as complete and accurate as possible. This made necessary the design of specific-purpose transactions and the establishment of edit programs which would permit the entry of valid information and complete transactions only.

The data elements were grouped in chronological sequence as were the entry transactions. Those data elements reflecting events occurring in irregular sequence were designed to be entered through a variable data transaction not subject to the strict edit requirements imposed on the other transactions. Among the irregular data elements are criminal history information (available one to six weeks following the entry of arrest transactions), appeals information (not existent in every subject's case), certain personal identifiers not available for every subject, and diagnostic information provided on inmates by the Texas Department of Corrections. In addition, as the file was developed, certain data elements were placed in this variable transaction as a matter of convenience. This was done when the original transaction required the addition of more vital data elements, thus causing a shift of the less important elements from the structured transaction to this variable transaction.¹

Code Sources

The publication "Standardized Data Elements for Criminal History Files"² provided a coding structure which was derived in part from that developed by the National Crime Information Center. The Texas special project followed the guidelines established by this SEARCH report, not only by adopting all of the data elements prescribed in the report, but also by initially using the offense coding structure established therein. The terminology used in this somewhat abbreviated coding

¹See Transaction S1, Appendix A.

²Standardized Data Elements for Criminal History Files, Project SEARCH staff (Sacramento: California Crime Technological Research Foundation, 1970).

structure and in the NCIC structure to describe certain types of offenses was not consistently compatible with the legal terminology contained in the Texas Penal Code.

It was decided, therefore, that the standard coding for offenses would be drawn from the coding structure used by the Texas Department of Public Safety, which had earlier modified the NCIC structure to describe more closely the offenses as defined in the Texas Penal Code. Since the basic numeric structure of all three codes is the same, there is no real problem of transferability as a result of this decision. The coding structure described in the SEARCH report was found to be quite satisfactory, although some of the alternatives are not provided for in the Texas Penal Code.

A problem area within the coding structure prescribed by the SEARCH report was the requirement that project participants utilize the SEARCH-NCIC codes for fingerprint classification. Project planners discovered that the Tarrant County Sheriff's Department -- the agency from which the majority of such information for the project was received -- uses this code only when an inquiry must be made through the NCIC network. Otherwise, the traditional Henry method of fingerprint classification is used. Rap sheets and fingerprint cards kept on file by that Department normally do not carry both the NCIC coding and the traditional coding.

When a fingerprint description must be transmitted to NCIC by personnel of the Tarrant County Sheriff's office, a print specialist actually reclassifies the fingerprint in question to fit the NCIC format. Apparently there are no accurate means of translating the traditional classification directly into the NCIC code. Since there was no way to

fit the existing fingerprint classifications into the system's file format and since it was thought to be unreasonable to ask that the law enforcement agencies classify each set of fingerprints twice, the decision was made to leave the fingerprint classification section of the master file blank. Fingerprint classification is a problem which deserves further study by those concerned with continuing research into criminal justice and law enforcement information systems.

Appendix A contains a summary of the data elements in the master file. Locally developed codes are shown in Appendix B.

Data Collection and Forms Design

Below is a summary description of the data collection methods and source documents used in capturing information for input to the master file. Several of the documents were designed by the project staff to facilitate data collection. The term "turnaround" is used to describe forms sent by the project staff to participating agencies for the purpose of eliciting specific responses, which are returned on the same form. Thus, the forms were termed "turnarounds."

FORMS USED

DPS Fingerprint Card
 Arrest Report
 Offense Report
 Form DA 460

PROCEDURES: STATE AND LOCAL AGENCIES

Arrest

Arresting agencies have been asked to provide the Tarrant County Sheriff's Department with copies of these forms when charges are filed against a subject in the Justice of the Peace Court. The Sheriff's Department fingerprints subjects for cities in the county other than Arlington and Fort Worth and coordinates the

collection of arrest information before its transmittal to the Data Control Center.¹

Rap Sheet Turnaround
(Appendix C-3)

Date Transferred to
County Turnaround
(Appendix C-1)

Date Charges Filed
Turnaround
(Appendix C-1)

Charges Filed Slips
(Appendix C-2)

A part-time member of the Institute's project staff works in the Sheriff's office 20 hours per week to assist in data collection and to coordinate the flow of information through that office to the Data Control Center. Data are transmitted from the Sheriff's office to the Data Control Center by a Fort Worth Municipal Court employee who retrieves data packets once a day from the Sheriff's office and the Criminal District Clerk's office. The staff member in the Sheriff's office ensures that rap sheet information for each subject is transmitted to Control when it is received from the Texas Department of Public Safety and/or the Federal Bureau of Investigation, usually one to six weeks following the arrest and booking of a suspect. This delay does not affect the loading of arrest data into the master file because criminal history data are treated as supplemental information. In order to double check the information obtained regarding the filing of charges, a procedure was worked out with the two Justices of the Peace in Precinct 1. Their clerical personnel have been provided forms with which to transmit data at the time charges are filed. The forms are picked up daily by a project staff member. After charges are filed against a subject, the project receives no further information regarding his case until the indictment phase.

Indictment

Indictment Listing

Indictments are usually returned by Tarrant County grand juries on Tuesdays and Thursdays of each week, with the total number of indictments averaging approximately 60 per week. Vital information regarding indictments is transmitted by

¹The Data Control Center, manned by a portion of Fort Worth's data processing staff, is the location at which all programming, data coordination, and input coding for the project occur.

telephone from the Sheriff's Department to the Institute's project secretary who transcribes the data on court turnarounds. These forms are then returned to the Criminal District Clerk's office on the same day for insertion into case files.

Pretrial and Trial

Court Turnaround (Appendix C-4)

Once delivered to the District Clerk's office, the court turnarounds become the instrument by which all pertinent pre-trial and trial information is transmitted to the Data Control Center. The forms contain five parts and are pressure-sensitive, i.e., they are carbonless. Each page is identical except for the color and was designed to transmit specific information. For example, the first copy (white) transmits data regarding arraignment and counsel. The second (yellow) page was designed to cover information regarding pretrial and trial activities while the third (pink) reflects the disposition of an appeal, if any, to the Texas Court of Criminal Appeals. The fourth page (green) provides for information regarding attempted revocation of a probated sentence, and the fifth copy (blue) remains in the case file maintained by the District Clerk. This gives that office a record of the complete array of information which has been forwarded to the Data Control Center.

Probation

Court Turnaround

Although the records of all persons on probation were converted from the files of the adult probation office, no procedures were established for the continuing collection of information from that office. Instead, it was determined that the court turnaround form would provide all the information necessary to monitor that particular phase of the criminal justice process. One portion of the turnaround indicates the levying of a probated sentence and at the same time shows the length of that sentence. Another portion serves to enter data into the master file when and if the probation is revoked. If no revocation notice is received by the

time the probated sentence is to have expired, the subject's expiration date is confirmed with the probation office and his record is exited from the system.

Corrections

When a subject has been sentenced by a court to serve a period of confinement and the Data Control Center receives notice from the Sheriff's Department that the subject has been released to the Texas Department of Corrections, a request is sent to the Institute for Contemporary Corrections at Huntsville where a staff member gathers the needed information from the computerized records of the Texas Department of Corrections. This information is then returned to the Data Control Center by mail.

Parole

Parole information is received from the personnel of the Fort Worth District Parole Office. When a subject is released to the supervision of one of the Fort Worth parole officers, the Data Control Center receives a copy of the Arrival Notice which is sent to the parole officer prior to the release of the subject. Subsequent data come in the form of monthly changes in status reports which include parole revocations.

Arrival Notice

Change in Status Report

FORMS USED

Usual Arrest Forms

PROCEDURES: FEDERAL AGENCIES

Arrest

The central arresting agency for federal law enforcement organizations in Tarrant County is the United States Marshal for the Northern District of Texas. Once a week a member of the project staff collects arrest data from the Marshal's office on those subjects who have been arrested by federal agencies during the preceding week. This information is then taken to the Data Control Center where it is coded for entry into the master file.

Indictment, Pretrial, and Trial**Court Turnarounds**

All information on the indictment of subjects by federal grand juries in Tarrant County and the subsequent prosecution of these subjects is obtained from the office of the United States Attorney for the Northern District of Texas. A member of the Attorney's staff, who has substantial responsibility for the processing of these cases, transcribes the needed data onto the court turnaround forms which are picked up once a week by the Data Control Center's coding clerk.

Probation and Parole

Since federal parolees are supervised by the United States Probation Office, the project staff was able to consolidate the required data collection for these two federal areas of the criminal justice system. Initially, active parole and probation records on file at the beginning of the project were converted by a part-time member of the Institute staff. Subsequent changes in the U. S. Probation Office files have been documented by that agency's clerical staff and transmitted to the Data Control Center weekly.

Corrections

No attempt was made to capture correctional data for subjects under the control of the United States Bureau of Prisons.

Technical ConsiderationsHardware

In the initial planning stages, the subject-in-process system was envisioned as an operation whereby both input and output would be batch processed at one time, and the output distributed to the using agencies on an overnight or periodic basis. Further investigation of agency needs, however, proved this approach impractical because of the anticipated delays in processing and disseminating the requested infor-

mation. In addition, as master files grew larger, more and more computer time would have been required to process output.

When instructions were received from the Project SEARCH and the Texas Criminal Justice Council staffs to develop an on-line teleprocessing network, programming was begun, and IBM 2740 terminals were selected as output devices. The decision was made that the master file would continue to be built and updated using keypunched cards on a batch basis, with data to be retrieved from the system through the terminals placed in selected agencies. The system was implemented on an IBM System 360-40 leased by the City of Fort Worth.

Software

The system utilized the IBM-supplied teleprocessing software package, "Filing and Source Data Entry Techniques for Easier Retrieval" (FASTER). FASTER, which operates under the Disk Operating System (DOS), is a macroprogramming language which enables a programmer to quickly design and implement teleprocessing applications. Because of the late start of the Texas project, FASTER was utilized exclusively.

FASTER has its limitations too, such as large core requirements (80,000 bytes in Fort Worth's system), inability to handle variable-length records, and somewhat restricted flexibility for source data entry. In addition, output messages must be queued in core rather than on disk, thereby making core utilization rather inefficient. Since master file creation and updating are done on a batch basis (to ensure control of the input data), the most serious limitation has been FASTER's inability to handle variable-length records. This has meant that the design of output reports was limited to showing only three previous

arrests and three previous trial results even though the subject's records may have shown more.

An additional limitation was the inability to inquire into the master file using only a subject's name. In order for name search to be effective, new techniques and additional core storage would be required. The obvious advantage to a search by name is that the user would not find it necessary to consult a cross-reference master list for social security number and arrest date in order to locate a subject within the system.

The subject's social security number and date of arrest are used for inquiry in the Texas system because of on-line file organization. Since there is a separate master record created for each arrest, some offenders have multiple records in the file. In order to retrieve information about a specific offense, both social security number and arrest date must be entered through the terminal. This procedure necessitates the use of cross-reference listing of the on-line file showing name, social security number, and arrest date. At the request of user agencies, an inquiry-response program was added to permit the recall of all arrest dates of a specific subject, using social security number as the only entry criterion. This procedure allows user agencies to retrieve information on subjects whose exact prior arrest dates are unknown.

File Creation and Maintenance

Creation of the master file and subsequent maintenance is accomplished by a series of transactions. The master file, which contains 1022 bytes of data, is built and updated by 31 different card

formats or transactions. Each transaction is edited and corrected, if necessary, before it enters the master record. Each master record is further expanded so that certain data elements (e.g., race, arresting agency, offense), which are originally entered as numeric codes, are expanded into English statements for terminal output. This brings the total length of each master record to over 1100 bytes. Because of the master record length, the records which are kept on-line for inquiry have been reduced to the minimum; only those data elements which appear as output on the 2740 terminals are included. These elements are shown below:

- . Social Security Number
- . Current Arrest Date
- . Name
- . Sex
- . Race
- . Date of Birth
- . Height
- . Previous Arrest Charge No. 1¹
- . Previous Arrest Charge No. 2
- . Previous Arrest Charge No. 3
- . Previous Arrest Date No. 1
- . Previous Arrest Date No. 2
- . Previous Arrest Date No. 3

¹Three most recent arrests in which no prosecution resulted.

- . Previous Offense Charge No. 1¹
- . Previous Offense Charge No. 2
- . Previous Offense Charge No. 3
- . Previous Offense Date No. 1
- . Previous Offense Date No. 2
- . Previous Offense Date No. 3
- . Offense No. 1 Conviction (Yes or No)
- . Offense No. 2 Conviction (Yes or No)
- . Offense No. 3 Conviction (Yes or No)
- . Arresting Agency
- . System Status (brief description as to where the subject is within the criminal justice system)

See Appendix A for a summary of the data elements contained in the master records and Appendix G for an example of output from the 2740 terminals. Below is a brief flow chart of the basic steps in the system.

¹Three most recent offenses in which court action resulted, with provision for entry of "yes" or "no" regarding conviction on each offense.