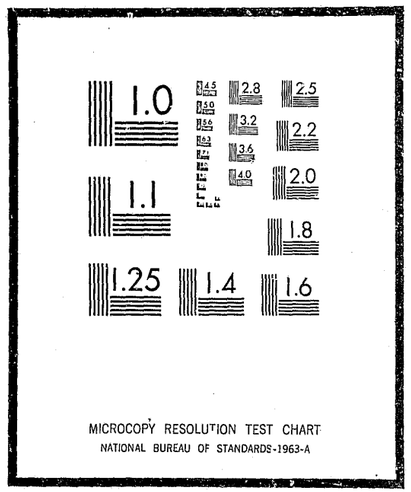
If you have issues viewing or accessing this file contact us at NCJRS.gov.

NCJRS

This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U.S. Department of Justice.

U.S. DEPARTMENT OF JUSTICE
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION
NATIONAL CRIMINAL JUSTICE REFERENCE SERVICE
WASHINGTON, D.C. 20531

Date filmed 7/14/76

Arizona-Department of Corrections

Offender Based State Correctional Information System

OBSCIS

Volume I —

SYSTEM PLAN

April 25, 1975

ACKNOWLEDGEMENT

This document was prepared for the Arizona State Department of Corrections by Computer Sciences Corporation. Guidance for the development of this document was provided by the joint DOC/ACJIS System Study and Design Group.

Members of the SSDG include:

Dr. A. LaMont Smith, Chairman	Department of Corrections
Richard Galbraith	Department of Corrections
Richard Poplawski	Department of Corrections
William Cooper	Justice Planning Agency
Robert Folk	Department of Public Safety
Carl Hubbard	Computer Sciences Corporation

The preparation of this System Plan has been financed through a grant from the Arizona State Justice Planning Agency.

TABLE OF CONTENTS

Section 1 - Executive Summary

Overview	1-1
OBSCIS Applications	1-1
OBSCIS Data Base	1-2
Arizona OBSCIS	1-3
Need for Systems Integration	1-3
Systems Applications	1-4
System Cost Summary	1-7
System Development Costs	1-7
Telecommunications Costs	1-8
Personnel Support Requirements	1-9
Computer Resource Requirements	1-10

Section 2 - System Design

System Configuration	2-1
Computer Utilization	2-1
Telecommunications Configuration	2-3
Telecommunications Cost Analysis	2-7
Adult Module	2-9
Juvenile Module	2-17
Community Services Module	2-20
OBSCIS Interface Module	2-22

Section 3 - System Implementation

System Implementation Plan	3-1
System Background	3-1
Project Management	3-2
Implementation Schedule	3-4
Adult Module Implementation	3-4
Adult Module Cost Analysis	3-5
OBSCIS Interface and Community Services Module Implementation	3-7
OBSCIS Interface and Community Services Module Cost Analysis	3-7
Systems Evaluation and Adaptation	3-9
Telecommunications Implementation	3-9
Cost Summary	3-10
Overall Cost Summary	3-11

Appendix A - A Comparison of the Planned Arizona Offender Based State Corrections Information System and the National Advisory Commission on Criminal Justice Standards and Goals for Corrections A-1

Appendix B - Security and Privacy Provisions for the Arizona Offender Based State Corrections Information System. B-1

Appendix C - Glossary C-1

LIST OF ILLUSTRATIONS

Chart A	Arizona Offender Based State Corrections Information System	2-1a
Figure 1	IBM 370 Utilization	2-4
Figure 2	DOC Telecommunications Network	2-5
Figure 3	Telecommunication Device Costs	2-8
Figure 4	DOC Telecommunications Configuration Cost	2-10
Figure 5	Arizona OBSCIS Adult Module	2-11
Figure 6	User Interface Capability	2-12
Figure 7	DOC Adult Module Cost Estimates	3-6
Figure 8	Community Services Cost Estimates	3-8
Figure 9	OBSCIS Interface Program Cost Estimates	3-8
Figure 10	Accumulated Costs by Implementation Phase	3-11

SECTION 1

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

OVERVIEW: The Offender Based State Corrections Information System (OBSCIS) Model is a general purpose tool that provides for compatibility with the needs and operating situations in all participating correctional entities. As such, it provides for uniformity of structure in reports between states and at the national level.

The OBSCIS model comprises a set of tools, prerequisite to the development of individual state corrections systems. The fact that the OBSCIS model is not a system bears elaboration. It is unlikely that a single system would meet the correctional systems information requirements within all participating states and also at the national level. The model, therefore, provides a basis for the design, development, and implementation of a state corrections system which will be consistent across state and federal lines. Specifically the model consists of two basic items:

- Applications - which define building blocks for the development of offender-based state corrections information systems.
- Data base - which provides uniformity and standardization in the data collected among all states.

OBSCIS APPLICATIONS: OBSCIS applications, in effect, are information processing common denominators for state corrections information systems. In this way, the applications represent the various functions in which data are collected and reported. Part of the capability for establishing a uniform corrections reporting system lies in identification of applications so that the same terminology means the same thing for all users. The OBSCIS applications are, therefore, representative of the basic common-denominator applications that are similar from one jurisdiction to another and consist of:

- Admission - collect basic offense information and establish the inmates offender record.
- Assessment - evaluate the diagnostic processes and recommendations and establish the offender's profile.

- Institutions - establish institutional program reporting and disciplinary incident reporting.
- Parole - provide the capability for parole status reporting and parole caseload analysis.
- Movement Status - provide for individual offender tracking and population movement reporting.
- Legal Status - prepare Parole Board dockets and provide continual monitoring of an inmate's parole and/or discharge eligibility dates.
- Management and Research - provide population statistics, trend analysis, population prediction, program evaluation, and research and inquiry.
- National Reporting - Participation in the national OBSCIS reporting.

OBSCIS DATA BASE: Support for the OBSCIS applications will be built on a uniform data base consisting of three separate strata of data elements:

- Core Data - consists of a group of data elements which defines the minimum level of data collection necessary to support all national programs.
- Recommended Data - consists of a group of data elements that are considered vital to the operating continuity of individual correctional systems but not essential to the national statistical reporting programs.
- Optional Data - consists of a group of data elements whose use and scope may vary due to state variations in organization, statutes, and requirements.

ARIZONA OBSCIS: During the past year, the Arizona Department of Corrections has conducted a Statewide analysis of needs in accordance with the Arizona Criminal Justice Information System State Master Plan. As a result of this analysis, a System Plan for the total Arizona OBSCIS is currently being developed. Implementation of this plan will require: (1) the development of a sophisticated computerized information system, (2) improvements in the capabilities of the Department to process offender information with greater accuracy and timeliness, and (3) a revision of the offender based reporting forms and procedures to allow for more complete and efficient information gathering.

NEED FOR SYSTEMS INTEGRATION: The overall goal of the Arizona Offender Based State Correctional Information System (OBSCIS) project is to implement an integrated system which meets both the management needs of the Arizona Department of Corrections and the information requirements of the larger criminal justice community. Modern departments of correction have reached a level of complexity that requires a sophisticated offender based information system to keep track of all the individuals under their jurisdiction, and to allow the appropriate placement of such individuals in the varying facilities and programs available within the Department. It is planned that two of the three Department of Corrections program modules be integrated into the Arizona Criminal Justice Information System (ACJIS) as outlined in the ACJIS Master Plan. A number of benefits will occur as a result of this integration, some of which are:

- The Department of Corrections data files will be processed on a computer solely dedicated to Criminal Justice applications, operating under the same security and privacy regulations as the Department.
- Direct interface between the Department of Correction files and other Criminal Justice data files would eliminate the need for duplicate recording of the same data among the various files.

- Access to the Department of Corrections data base can be made through telecommunications terminals at designated DOC locations linked to the Arizona Law Enforcement Telecommunications System (ALETS).
- Law Enforcement Officers making identification checks could be informed if a suspect is under jurisdiction of the Department of Corrections.
- Parole Officers could be notified of any new arrests and bookings involving persons under their supervision before the individuals have an opportunity to abscond.
- Updating of the Department's records could result in the automatic updating of Computerized Criminal Histories (CCH) eliminating the need for duplicate clerical effort.
- Computerized auditing of the Department's records with the Arizona Crime Information Center (ACIC) wanted persons files would become feasible.

In addition to case management reporting, the Arizona OBSCIS will provide the required information for: (1) evaluating the effectiveness of correctional programs, (2) the planning for future facilities and program needs, and (3) provide a rational basis for the allocation of budget resources.

SYSTEMS APPLICATIONS: The Arizona OBSCIS will meet or exceed all of the applications now recommended in the OBSCIS model[1]:

- Admission - an offender based record will be established for each admission into the jurisdiction of the Department of Corrections. This record will provide for cross index retrieval of information based on a wide variety of identifiers. Additional cross index retrieval is planned to reference all known aliases and to obtain information contained in any other Criminal

---

[1] OBSCIS Volume III - OBSCIS APPLICATION GUIDE (DRAFT), February 1975.

Justice Information Systems through participation in the Master Index of the State OBTS (Offender Based Tracking System). Admissions reporting will be provided on both a roster and a statistical basis.

- Assessment - the system will provide case summary reports including both an offender profile, and a report of the diagnostic process and recommendations. Automated scoring will be provided for diagnostic tests used by the adult institutions.

- Institutions - the system will provide for improved custody by more accurate population accounting and generation of exception rosters identifying all discrepancies between recommended custody level and current assignment. The system will also provide inmate reporting relative to major programs within the institutions and disciplinary incidents and their dispositions. In addition to the model applications, the Arizona OBSCIS provides for (1) improved classification through the scheduling of reclassification hearings, (2) generation of waiting lists for standard programs, (3) lists of inmates with special skills or that otherwise meet the criteria for special programs, and (4) periodic progress reports.

- Parole - the system will provide for (1) parole status reporting, (2) caseload analysis, and (3) reports of parole program participation.

- Movement Status - the system will provide for individual offender tracking, including the ability to monitor progress within special institutional programs. Regular statistical reports will summarize all population movements.

- Legal Status - the system will prepare Parole Board dockets and provide continual monitoring of an inmate's parole eligibility and discharge dates along with monitoring active detainers and pending litigation. The system will also provide certification of discharge for ex-offenders.

- Management and Research - the system will provide the Department of Corrections with routine statistical and exception case reporting. The data base has been designed to provide a permanent record for research purposes including trend analysis and population projection and will allow DOC to evaluate its programs in terms of recidivism and the goals established for those programs. Provision is made to remove all personal identifiers from inmate records to avoid conflicts between research requirements and security and privacy considerations.

- National Reporting - Arizona will participate in the national OBSCIS reporting as envisioned in the OBSCIS model. More immediately, the system will provide for automatic updating of the custody segments of the Computerized Criminal Histories (CCH - which is operational in Arizona), and provide automatic spinoff of the data required for the National Prisoner Statistics Program (NPS) and for the Uniform Parole Reports (UPR).

Beyond the applications envisioned in the OBSCIS model, the Arizona OBSCIS will implement additional applications based on an active interface with other Arizona Criminal Justice Agencies and their information systems. Law Enforcement agencies throughout the state will be able to obtain instant information on the current location and status of all adults under the supervision of the Department of Corrections. When the state OBTS Master Index is fully implemented this inquiry process will be a transparent part of the standard law enforcement identification check. In return, the Department of Corrections will be able to receive notification of all confirmed police contacts with persons under its supervision. The system will also provide for routine auditing of the Department's records against the wanted persons file of the Arizona Crime Information Center (ACIC). The courts in the two metropolitan areas of Arizona have an active information system which will be interfaced by the Arizona OBSCIS to provide monitoring of jail bookings and court actions involving persons under the jurisdiction of the Department of Corrections, and to provide background case information on new admissions to the Department.

The Arizona OBSCIS will be in full compliance with the core specification of the OBSCIS data base. The Arizona data element dictionary includes all but one of the recommended OBSCIS data elements (the "Cultural Identification" field was deemed inappropriate for use in Arizona) and most of the optional data elements included in the OBSCIS model. Additionally, the Arizona OBSCIS includes fields for periodic post-release status and performance reporting to enhance the evaluation capabilities of the system.

SYSTEM COST SUMMARY: Cost factors for the Arizona OBSCIS have been divided into four categories: (1) Systems development and integration into the Arizona Criminal Justice Information System (ACJIS), (2) DOC telecommunications interface requirements, (3) Personnel support and (4) Computer resource requirements. Detailed information and cost tables are included in Section III.

SYSTEMS DEVELOPMENT COSTS: Evaluation of the individual program modules specified in the DOC ACJIS System Integration Requirements has resulted in a detailed systems development and integration cost analysis. Included in this cost analysis are: (1) Individual computer program development costs, (2) Systems integration and operational check-out costs, and (3) Full program documentation.

Adult Module Cost Summary

Program development costs	$25,430
Program integration and implementation costs	$45,140
Total cost	$70,570

Community Services Module Cost Summary

Program development costs	$ 6,955
Program integration and implementation costs	$ 4,095
Total cost	$11,050

Systems Interface Module Cost Summary

Program development costs	$1,530
Program Integration and Implementation Costs	$2,130
Total Cost	$3,660

TELECOMMUNICATIONS COSTS: An analysis of the telecommunications requirements has resulted in dividing the telecommunications implementation costs into two categories: (1) near term or immediate requirements, and (2) long term planning requirements. Near term telecommunications requirements encompass the installation of video CRT terminals and printers at the DOC central office and Arizona State Prison (ASP) with teletype terminals in Tucson, to serve the southeast regional office, and at the Fort Grant conservation camp. Long term planning requirements include the installation of a video CRT terminal and printer at the new Arizona Medium Security Prison in Tucson and at a yet to be selected site for a Department of Correstions diagnostic center. The Arizona MSP telecommunications system will serve both the prisons' needs and those of the southeast region office. Teletype terminals will be installed at the Safford facility and a yet to be selected Maricopa Prison Facility.

Near Term Requirements Costs	First Year Cost	Annual Recurring
Department of Corrections Central Office	$ 8,736	$ 3,180
Arizona State Prison	$11,120	$ 3,204
Southeast Regional Office	$ 2,049	$ 1,823
Fort Grant Facility	$ 3,243	$ 3,034
Near Term Telecommunications Total	$25,148	$11,241

Long Term Planning Requirements Costs	First Year Cost	Annual Recurring
Medium Security Prison (Pima)	$11,006	$2,940
Maricopa Prison Facility	$ 2,049	$1,823
Diagnostic Center	$10,076	$2,160
Safford Facility	$ 3,243	$3,034
Long Term Telecommunications Total	$26,374	$9,957

The total first year systems development and operations costs for the Arizona OBSCIS is therefore $105,548 with an annual recurring telecommunications operations cost of $11,241.

PERSONNEL SUPPORT REQUIREMENTS: Implementation of the Arizona OBSCIS will require additional DOC staff positions to provide adequate systems support. An analysis of the staff positions necessary for the maintenance of the OBSCIS data base and supportive software systems shows a requirement for:

- A Correctional Information System Administrator to supervise and coordinate all activities interfacing with the OBSCIS data base including the coordination and processing of all offender records. Reporting responsibility for this position will be to the Deputy Director for Research Program Planning and Evaluation.
- A clerical supervisor to oversee and coordinate the activities of the statistical records clerks.
- Five (5) statistical clerks to process information within the DOC and interface that information with the OBSCIS data base. Included in the five statistical clerk job assignments would be:
  - two assignments to interface the Adult Module
  - one assignment to interface the Juvenile Module

- one assignment to interface the Community Services Module
- one assignment allocating half time between the Juvenile and the Community Services Modules

- A terminal operator at the DOC Central Office to interface data and information requests with the OBSCIS data base, and process incoming and outgoing DOC messages.

- A terminal operator at the Arizona State Prison to share duties on a half time basis at the communications center. The volume of information interfacing with the ASP will not require a full time terminal operator.

- Information processing support at the remaining facilities would require only part time support.

- Support for the software system will require one quarter time for both a programmer and a systems analyst. This level of support would accommodate ongoing programming modifications and systems enhancements.

COMPUTER RESOURCE REQUIREMENTS: The allocation of computer resources in support of the Juvenile Module at the DPD computer center is a continuing requirement and therefore entirely predictable:

Function	Central Processor Time	Cost
Juvenile Module Operation	4.2 hours/month	$420.00
Statistical GEDAN[1] Runs	0.8 hours/month	$ 80.00
Disk Storage and Handling		$ 80.00
Total Wage	5.0 hours/month	$580.00

The allocation of computer resources in support of the Adult and Community services modules at the DPS computer center can only be estimated by an evaluation of anticipated systems usage. The detailed analysis, shown in Section II, shows a requirement for approximately 11.5 hours per month.

---

1 Honeywell Systems Statistical Support Package

SECTION 2

SYSTEMS DESIGN

SYSTEM CONFIGURATION: The Arizona OBSCIS will include three separate data processing systems operating at two computer centers as shown on the following chart. As illustrated by this chart, the Juvenile Module will run on the Honeywell 6060 having no interface requirements with the remaining DOC systems. The Adult and Community Services Modules will run on the DPS IBM 370 allowing the full range of associated interface capabilities. These interface capabilities include:

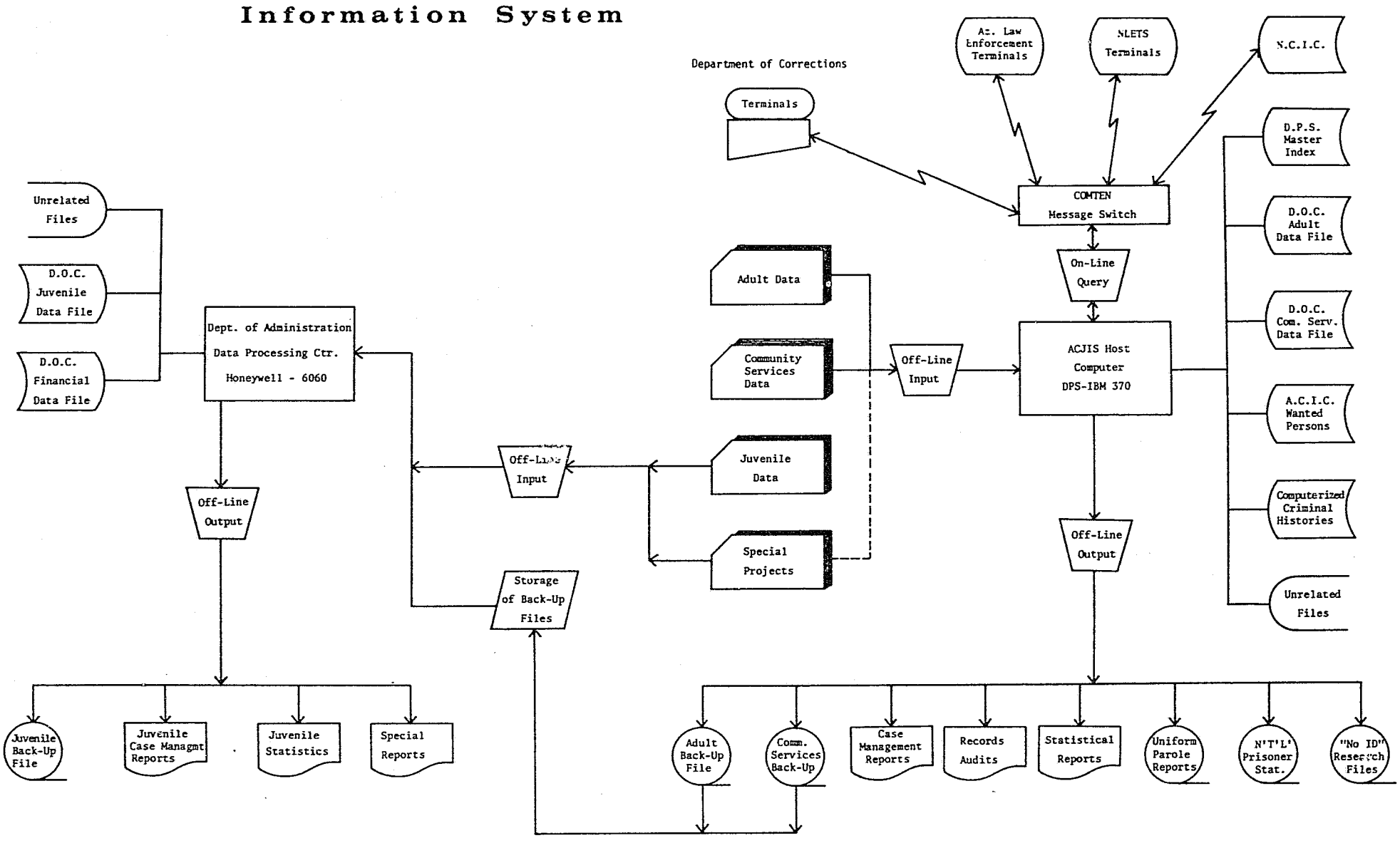
- Automatic interface to update the DPS Master Index and CCH files from changes made to the DOC Adult file.
- Automatic query search interface to the ACIC wanted persons file.
- Automatic generation of the basic Community Services information record for parolees from Arizona State Correctional Facilities.
- Automatic generation of data base back up tape files which can be run under existing programs on the Honeywell 6060.
- A full range of telecommunications interface capabilities which include: message switching, data base query, and input data preparation.
- Interface to the DOC Computerized Fiscal Systems whereby programs evaluations can include cost effectiveness analysis and interact with the fiscal funding requirements.

COMPUTER UTILIZATION: Computer utilization for the Juvenile Module will be a continuing requirement as illustrated in Section I. Computer utilization factors for the Adult and Community Services Modules can only be based on an accurate evaluation of the anticipated systems usage and corresponding computer support requirements. The anticipated utilization load that will be placed on the DPS computer center to support the DOC workload can be estimated from the transaction loading. The following assumptions form the basis for the analysis:

- Transactions will be input to the capture and edit module daily with an average input rate of less than 150 transactions per day.

Proposed July 1976

Arizona Offender Based State Corrections Information System



- Error rate on input transactions will result in no more than ten percent of the transactions being rejected for corrections.
- The Adult and Community Services File Update Modules will be run bi-monthly with an average transaction posting of less than 2500 transactions.
- User interface to terminal executable IBM 370 program modules via COMTEN-45 messages will result in run rates of less than 20 modules per day (this does not include message switching). Each run will access less than one percent of the Adult or Community Service Files active records and will result in less than five print lines per record accessed.
- Execution of program modules within the IBM 370 will be bound by the computer's ability to read and write data to a peripheral device (tape or disk); e.g., the programs are I/O bound.
- The file structure is assumed to be index sequential with all records contained in a single file.
- The Adult File will consist of 10,000 inmate records of which approximately 2000 will be active institutional.
- The Community Services File will consist of approximately 6000 records of which 2500 will be active parolee.
- Transactions will be sorted into File sequence prior to update processing.
- Batch user processing will generate no more than 20 reports per week and will report on an average of half the Adult or Community Services File active records generating less than five lines per record read.
- Accesses to the files will be via an IBM 3330 disk with head position times of 10 msec cylinder to cylinder, 30 msec for the entire pack and 50 msec maximum. Assume the worst case of a pack head position for every access requiring 30 msec for each file access.

Figure 1 shows the resulting number of disk file accesses required and the corresponding IBM 370 processor time required by DOC. There are no current charges for computer time and thus no cost estimates are included.

DOC will require disk file storage space to be allocated for the following requirements:

- Program files allowing 40,000 lines of code for the entire DOC Adult and Community Service Files would require 2,000,000 characters of disk storage.
- Data base storage plus two generation for back-up would require 19,500,000 characters of disk storage.

Therefore, DOC would require a maximum of 22,000,000 characters of disk file storage.

TELECOMMUNICATIONS CONFIGURATION: In conjunction with the implementation of the Arizona OBSCIS, the Department of Corrections plans to upgrade their telecommunications capabilities. This expanded telecommunications network has been defined for implementation in two phases. (See figure 2).

Phase 1 to define the near term requirements to encompass the interfacing of existing DOC facilities to the OBSCIS data base. These facilities include:

- Department of Corrections Central Office in Phoenix to be equipped with:
  - CRT Video Terminal
  - Printer
- Arizona State Prison at Florence to be equipped with:
  - CRT Video Terminal
  - Printer
- Fort Grant Facility to be equipped with:
  - Teletype ASR Model 33 Terminal

	File Accesses (Average)		File Accesses (Maximum)		Utilization Units (/Mo)*		Processor** Time (Hrs/Mo)	
	Adult Master	Transaction	Adult Master	Transaction	(Average)	(Maximum)	(Average)	(Maximum
Capture and Edit	None	5 /trans (1) 750 /day	None	5/trans (1) 750/day	60,000	60,000	0. 5	.5
Error Corrections	None	5 /trans 75 /day	None	5/trans(2) 750./day	6,000	60,000	0.05	.5
User Programs	60 /run 1,200 /day	6,000 to Reports	1000/run(3) 20,000/day	10,000 to Reports	290,400	1,240,000	2.4	10.3
File Update	2/trans 5000/update	1 /trans 2500/update	2/trans (4) 10000/update	1 /trans (4) 5000/update	60,000	120,000	.5	1.0
Batch User Processing	20,000/wk	100,000 to Reports	20,000/wk	100,000 to Reports	960,000	960,000	8.0	8.0
				Totals	1,376,000	2,440,000	11.5	20.3

*Utilization units include one file access unit to account for I/O bound processor time (e.g., the maximum computer utilization will be twice the I/O time). FILE UPDATE and CAPTURE AND EDIT were increased 4 times the access time to accommodate the edit processing.

**Processor time is based on 30 msec per file access.

Figure 1. IBM 370 Utilization

1. Interface with the Transaction file only
2. If all transactions were rejected
3. Index sequential accesses to one percent of the file on no more than 20 modules per day
4. Assumes a sequential search

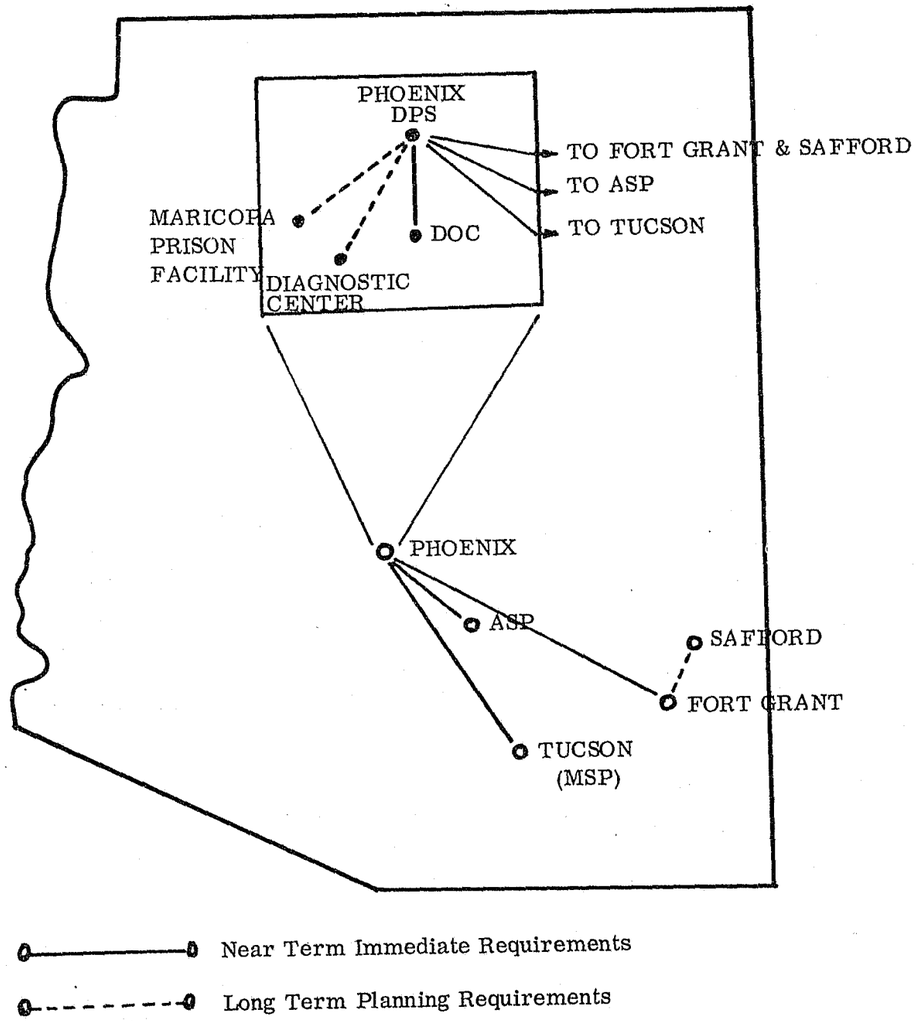


Figure 2. DOC Telecommunications Network

- Southeast Regional Office in Tucson to be equipped with:
  - Teletype ASR Model 33 Terminal

Phase 2 which satisfies the long term requirements encompasses the interfacing of planned DOC facilities to the OBSCIS data base. These facilities include:

- The planned Medium Security Prison to be located in Tucson will be equipped with:
  - CRT Video Terminal
  - Printer

  This system will also provide support to the Southeast Regional Office whose existing teletype terminal will be moved to the Safford Facility.
- A Diagnostic Center at a future designated location will be equipped with:
  - CRT Video Terminal
  - Printer
- The Medium Security Prison at a future designated location in Maricopa County will be equipped with:
  - Teletype ASR Model 33 Terminal
- The Safford Facility will receive the teletype terminal located at the Southeast Regional Office when that facility converts its OBSCIS interface to the Medium Security Prison's telecommunications network.

The DOC telecommunications network will be connected through the COMTEN-45 communications processor located at the DPS Computer Center. Through this connection, the Department's facilities will have access to:

- Arizona Crime Information Center (ACIC)
- National Crime Information Center (NCIC)
- Computerized Criminal Histories (CCH)
- Automatic Court Records for Maricopa and Pima Counties through LE-JIS

- National Law Enforcement Telecommunications System (NLETS)

as well as to the Department of Corrections data bank.

Wherever feasible, line costs will be shared with other Criminal Justice Agencies. All of the equipment and network hook-ups associated with this overall system will be dedicated solely to Criminal Justice applications.

TELECOMMUNICATIONS COST ANALYSIS: In order to assess the telecommunications cost factor, contact was made with Mr. D. Carlson of the Department of Public Safety to determine their teleprocessing interface capabilities and software support packages, and with Messrs. D. Conan and R. Norris of Courier Terminal Systems Inc. DPS provides fully supported software interface with:

- COURIER E265 CRT Video Terminal
- TELETYPE Corporation ASR Model 33 Teletype Terminal
- COURIER EP160 Printer (80-character line)
- COURIER EP260 Printer (132 character line)

In addition, support is being developed for the Teletype Model 40 devices which are fully supported by maintenance contracts including remote areas. Maintenance contracts for Courier devices are available within the metropolitan areas, and for an additional monthly fee, maintenance contracts are available for terminals within 100 miles of metropolitan areas.

The preponderance of devices currently interfacing with the DPS COMTEN-45 are Courier, and thus their interface requirements will be met for any DPS software modifications. In addition, terminal users receive rapid response from Courier in the event of any failures. This close coordination and cooperation makes Courier an obvious choice for this cost analysis. Figure 3 shows the associated costs for the DOC telecommunications system.

The following items are relevant to the costs shown in Figure 3 relative to the DOC telecommunications system:

	3 YEAR LEASE COST	PURCHASE COST	MAINTENANCE COST	INSTALLATION COST
COURIER E265 TERMINAL	157.00	3,750.00	37.00	N/A
COURIER EP160 PRINTER	180.00	4,820.00	30.00	N/A
COURIER EP260 PRINTER	199.00	6,300.00	50.00	N/A
TELETYPE ASR MODEL 33	113.35	N/A	N/A	162.00
DATA SET 2400 BAUD	65.00	N/A	N/A	150.00
DATA SET 300 BAUD	14.30	N/A	N/A	32.00
MULTI TERMINAL ADAPTER	38.00	N/A	N/A	N/A

Figure 3. Telecommunication Device Costs

- DPS purchase costs include one year's maintenance.
- To locate multiple terminals at the same location requires a multiple terminal adapter.
- For operating efficiency, Courier and Teletype Model 40 terminals require a 2400 baud line.
- Each line dedicated to DOC will require a corresponding data set at DPS.
- Maintenance contracts for the Arizona State Prison terminals will be $11 per month more than those shown above. This will affect the purchase costs also since it includes one year's maintenance.
- Courier and Teletype terminals cannot be multidropped from the same line.

Using the cost figures shown in Figure 3 and the DOC telecommunications configurations, Figure 4 shows the DOC telecommunications costs. The final costs may vary slightly from those shown, due to the line costs which are subject to line availability when the terminals are actually installed.

ADULT MODULE: The Arizona OBSCIS Adult Module has been designed as an integrated data processing system containing three program modules interfacing with four designated files as illustrated on Figure 5. User interface to the system is multilevel in that the user can access the system by way of his terminal in a teleprocessing environment or by submission of punched cards in a local batch processing environment. From an operational viewpoint, the user can select to interface with the system as specified in Figure 6, depending on the volume of data to be processed.

As an integrated data processing system, the Adult Module consists of the following independent program modules:

- Capture and Edit Module - all input transactions will be validated for value ranges, reasonableness, and for proper relationships with other data fields. Error listings will display the input transactions with the invalid fields indicated by up arrows, and all error conditions will be listed in a meaningful

(Text continues on page 2-13)

Facility	First Year Costs Equipment	Operation	Recurring Costs/Month	Total Cost/Month 3 Yr.	5 Yr.	Lease Cost/Month 3 Yr.
Department of Corrections	10,350.00	2,136.00	265.00	523.50	420.10	542.33
Arizona State Prison	8,984.00	2,136.00	267.00	486.88	398.93	541.17
Safford Facility	N/A	N/A	N/A	259.07	259.07	259.07
Ft. Grant	N/A	N/A	N/A	259.07	259.07	259.07
Medium Security Prison	8,870.00	2,136.00	245.00	469.06	379.00	523.33
Maricopa Prison Facility	N/A	N/A	N/A	158.22	158.22	158.22
Diagnostic Center	8,720.00	1,356.00	180.00	399.88	311.93	454.17
Southeast* Regional Office	N/A	N/A	N/A	158.22	158.22	158.22

Figure 4. DOC Telecommunications Configuration Cost

*Until the Medium Security Prison's Telecommunications Network is installed.

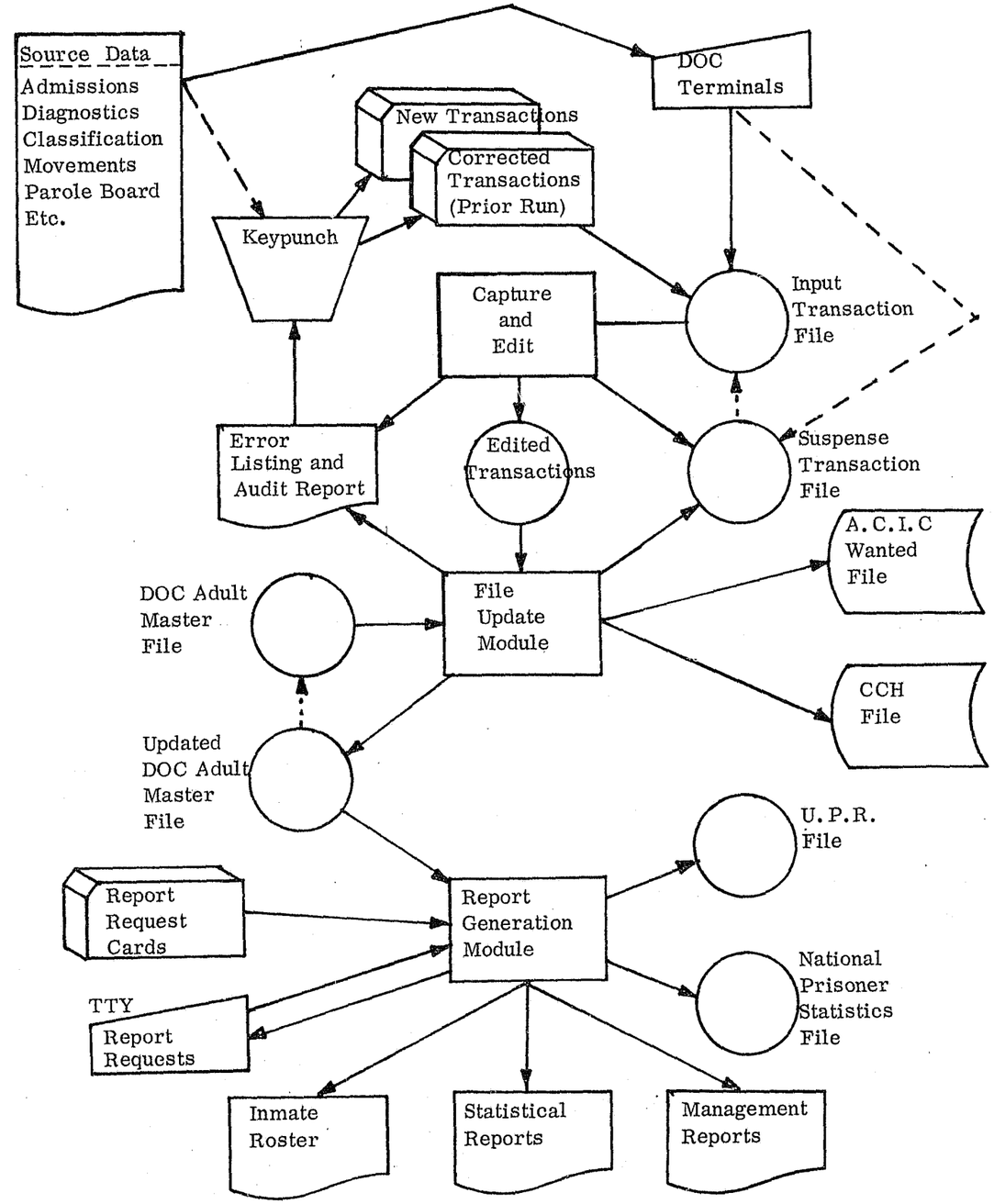


Figure 5. Arizona OBSCIS Adult Module

FUNCTION	TELEPROCESSING	LOCAL BATCH PROCESSING
Input transactions to update the data base	Yes	Yes
Correct transactions found to be in error	Yes	Yes
Query the Data Base for Specified Reports	Yes	Yes
Transmit Messages	Yes	No
Ad Hoc query to the Data Base	Yes[1]	Yes

Figure 6. User Interface Capability

[1] The Ad Hoc query capability consists of user specified conditional relationships among data elements in the data base. A query can be formatted via teleprocessing but can only be run in the local batch mode.

manner to assist in corrective action. Error transactions will be held in a suspense file awaiting corrective action and re-processing. An override capability will be provided to allow the Department of Corrections to process exception data (which the program has determined to be improper) into the data base.

- File Update Module - input transactions are further edited prior to processing into the data base. Procedures for reporting and correcting errors will be similar to those used in the Capture and Edit Module. Error free transactions (and/or those specified by the user exception processing data capability) will be processed against the data base.

- Report Generation Module - the Report Generation Module will incorporate all of the individual report programs and provide the user with a single report request interface. Reports may be requested and/or printed at users' terminals or as a local batch run.

Some of the more salient features of the Adult Module include the following capabilities:

- Input transaction accumulation to allow immediate input while maintaining scheduled processing.

- Automatic run scheduled, if more than a specified number of transactions have been accumulated.

- Creation of a transaction suspense file for transactions found to be in error by the Capture and Edit or File Update Modules.

- A users' terminal interface capability whereby error transactions can be corrected and automatically resubmitted for processing by the Capture and Edit Modules.

- An over-ride capability, at the DOC Central Terminal, to force exception data through the edit checks and onto the data base.

- Automatic notification to the DOC central terminal of all transactions that have been in the transaction suspense file for more than thirty days.
- Automatic purging of transactions that have been in the transaction suspense file for more than sixty days with notification to the DOC Central Terminal.
- Positive file update capabilities including ADD, CHANGE, REPLACE, and PURGE will be available to authorized DOC users.
- Automatic program audit trail accounting which provides counts for input transactions rejections, data base updates, and data base record counts for comprehensive data base management.
- Automatic interface to other Criminal Justice data files.
- Low volume report requests to the users' terminals.
- Ad Hoc query capability whereby the user can specify the selection criteria to select inmate records for reporting.
- Automatic conversion of coded items to narrative descriptions.
- Data base back-up produced automatically at each file update.

Individual programs constituting the Adult Module have been defined in terms of their principal functions in order to assess the design and implementation cost factors. Each of these Adult Module programs were reviewed and assigned to an implementation schedule to insure an orderly transition of data processing capabilities from the HIS 6060 to the DPS Computer Center. These implementation groups are described as follows:

- GROUP A - Group A programs will provide the Department of Corrections with a core program capability to establish and maintain the Adult data file at the DPS data center. This includes transaction editing, file update, and generation of the following reports:

- Master Record - the Master Record Report includes each data item for every record. This report is used primarily by the Research/ Information Section to assess information on each inmate and to audit the updating of the computer records.

- Name List - the Name List Report identifies basic information for each inmate including offence, court, and release data.

- GROUP B - Broup B programs will complete the DOC core programs and allow for the creation of a data base tape for utilization by existing GEDAN programs at the HIS 6000 computer center. This would extend the DOC data processing capability to the HIS 6000 systems' level but would require the continued use of that computer. Included in Group B reports are:

  - Coder Edit - the Coder Edit report includes line entries for 1, 2, and 3 year follow-up reports, recent releases, recent discharges, diagnostics due and exception reports for missing data elements.

  - Institutional Location Roster - the Institutional Location Roster provides basic population counts for each institutional location. Included in the roster are line entries for each inmate showing his work assignment, location, status, and his temporary location if out to court, etc., and a summary accumulation for all inmates reported for the institution.

- GROUP C - Group C programs would extend the DOC reporting structure to include all current operational Adult Module capabilities. The use of the HIS 6000 computer center would be optional and no longer an operational requirement for the Adult Module program support. Included in the Group C reports are:

  - Administrative Control Rosters - the Administrative Control Rosters provide inmate information that is required for efficient and effective

population control. Reports include line entries for each inmate specified for one or more of the following:

Inmates with detainers and/or notifications
Inmates with litigation pending
Inmates with disciplinary actions during the month
Inmates scheduled for, or currently on, temporary furlough
Inmates authorized for parole but not yet released
Current court referrals
Inmates scheduled for Parole Board hearings or tentative release within 60 days
Inmates who have received inter-institutional transfer within the last two movement reports
Assignment Discrepancy Roster

- Case Summary Query - the Case Summary Query Report provides summary information for the inmate's entire case record under the following categories:

  Sentence Information
  Prior Record
  Personal Background
  Program Information
  Movement History
  Follow-Up

- GROUP D - Group D programs will provide reporting enhancements to the existing DOC Adult Module capability. Included in the Group D reports are:

  - Absolute Discharge Certificate - an Absolute Discharge Certificate will be provided containing inmate discharge information.
  - Classification - the Classification Roster consists of the Program and Movement History sheets as specified in the case summary query,

along with a page to allow the inmates current work supervisor to record his job performance rating.

- Diagnostic Evaluation - the Diagnostic Evaluation report will score the diagnostic tests currently used by the staff at the Arizona State Prison. Test results will be returned in pre-formatted reports to the diagnostic staff.

- Name/Status Query - the Name/Status Query report provides basic inmate information to other Criminal Justice Agencies who have access via CASTLECOP terminals.

- Parole Board Progress - the Parole Board Progress Report consists of line entries for each inmate scheduled for appearance before the Board along with the program and Movement History report sheets from the Case Summary Query. A pre-release plan sheet is included for the counselor to incorporate his remarks.

- Periodic Statistics - Periodic Statistical Reports will report information on population counts, population characteristics, program summaries, movement summaries, and parole board statistics.

JUVENILE MODULE: The Arizona Department of Corrections has redesigned its information system for juvenile wards so that a single computerized data file will serve as the basis for population accounting, administrative statistics, and for monitoring individual progress and evaluating programs. The report program package includes a periodic statistical program, two types of control rosters (Location/Program Report and Hearing Board Control Roster), two types of case summaries (Master Record Report and Giagnostic Summary) and a specialized listing program. The usefulness of all these reports is extended by a parameter option which allows a variety of methods for specifying which cases be included on each report. Additionally, standard reports will be supplemented by the use of the report generators (primarily GEDAN) available through the State Data Processing Center.

- Periodic Statistics - the Periodic Statistics report serves as a reference sheet of counts relative to the Juvenile File. Specifically, the Periodic Statistics report contains:
  - One page of Juvenile population statistical counts.
  - Three pages of population profiles showing placements by county, Offenders age, ethnic background, etc., and a program profile showing placements by program.
  - One page showing counts of commitments and discharges.
  - One page showing revocations and transfers.
  - One page per institution of general statistical counts showing movements, offences, recommended programs, etc.
- Case Summaries - the Master Record Report includes each data item for every record. This report is used primarily by the Research/Information Section for the most current information on each active ward and to audit the updating of the computer records. Consequently, each time the Juvenile Master File is updated this Master Record Report is produced for all active wards in alphabetical order. Changes that occur between updates are posted in this report as they are coded for keypunching. Because this report is used for file maintenance by the data coders, all data items are shown in coded form.

The Diagnostic Summary Report serves as the face sheet for each individual case file. It is produced for each ward who completes a diagnostic program during the month, with one copy going to the institutional case file (which travels with the ward until his discharge) and one copy going into the Central case file. The report is designed for quick reference use by institutional counselors, parole officers and administrators - therefore, most coded items are translated and can be understood by anyone familiar with the Department's programs. Also, because this report is intended to serve as

an ongoing case tool, it provides spaces for posting current information which is important to caseworkers but which is not on the computer records at the time of diagnostic summary. The Diagnostic Summary Report contains the items most frequently referred to in a case file: the basic identifiers, a summary of the legal history, a summary of family background, flags to identify physical limitations, health problems and drug use, the results of the I.Q., reading and arithmetic tests given at diagnostic, the treatment objectives for the youth, and room to record the major program changes and transactions as they occur.

In addition to the standard methods of record selection for report production, the system includes parameter options to produce either the Master Record Report or the Diagnostic Summary for any group of wards as desired. One of these parameter options will produce the report for each individual requested (specified by File Number); this allows production of extra copies of an individual's case record for use in staffings, in preparation of pre-release parole plans, by agencies providing contract services, etc. A second option provides for producing the report for all members of a given category (e.g., those entering a special counseling program at one of the facilities, all those of certain age, etc.). This grouping option allows cases to be selected for membership in the specified group based on any combination of up to five different data elements listed on the computer file.

The parameter options form the basis for an individualized report generator for the Juvenile Information System. Using these same parameter specifications, an Alphabetical Index program has been developed which will produce (given a parameter card and a title card) a listing of all wards who meet the specified conditions. This allows for rapid response to administrative requests for lists of all those juveniles who..... This specialized program has two advantages over general report generators: it allows more rapid response because the only programming required is the parameter card

and optional title, and it allows coded data (for county, ethnic, etc.) to be translated for easier use.

- Control Rosters - identification of program assignments at the various treatment facilities is accomplished through the Location/Program Report. This report provides each facility or program administrator and the Youth Hearing Board with a roster of all youths at each facility including a capsule description of their program assignments at their current location and their last location along with their primary treatment objectives. The administrator and/or counselors then have the responsibility for insuring that each youth is participating in the recommended programs. Whenever changes become necessary in the program, the Youth Hearing Board is to be notified.

  While the Location/Program Report is an instrument enabling administrators to monitor the program requirements of all youths at their facility, the second control roster is actually an exception report which identifies cases requiring special review by the Youth Hearing Board. This Hearing Board Roster produces separate listings of youths meeting any of eight special conditions requiring either action by the Youth Hearing Board (like granting discharges to those completing the term of Departmental jurisdiction), changes in parole caseloads (parole suspensions, revocations, and institutional releases), or special review by a Hearing Board Officer (an unusually long stay at a given facility).

COMMUNITY SERVICES MODULE: The Community Services Module was developed as a caseload management system for persons under the parole supervision of the Community Services Division including the cases supervised through the Interstate Compact on Probation and Parole. The Arizona OBSCIS Community Services Module will consist of the existing capability converted to the DPS computer center enhanced by some of the report capabilities developed for the Adult Module. The resulting Community Services Module will have the following reporting Capability.

- Caseload Rosters/Statistics - the Caseload Rosters/Statistics Report includes population accounting by supervisor and statistical counts by Correctional Program Officer (CPO), jurisdiction, sex, etc.

- Interstate Compact (ISC) statistics on parolee and probation cases - the ISC Statistics Report provides counts, on a monthly and annual basis, for the number of parolees that have been: (1) accepted; (2) are currently under supervision; and (3) have been terminated.

- Master Record - the Master Record Report includes each data item for every record. This report is used primarily by the Research/Information Section to evaluate information on each parolee and to audit the updating of the computer records.

- Name List - the Name List Report identified basic information for each parolee including offence, court and release data.

- Name/Status Query - the Name/Status Query Report provides basic inmate information to other Criminal Justice Agencies who have access via CASTLECOP terminals.

- Periodic Statistics - Periodic Statistical Reports will report information on population counts, population characteristics, changes in supervision and special services summaries.

- Placement Roster - the Placement Roster identifies all parolees in contract placements or rehabilitation facilities with counts for each facility.

- Special Services Control Roster - the Special Services Control Roster lists the hotsheet information including last address for every parolee who absconds or escapes.

OBSCIS INTERFACE MODULE: The OBSCIS Interface Module has been designed to fulfill the file interface requirements as specified in the DOC/ACJIS integration Systems Requirements. Specifically, these interface requirements are:

- Telecommunications routing. This will involve the development of programming for the systems message switcher to allow for the desired distribution of reports to the various Department of Corrections terminals.
- LE-JIS/DOC Notifications. This interface will provide the Department of Corrections with notifications of court activities and jail bookings (as recorded in the LE-JIS system) of persons under the jurisdiction of the Department and will also create a query program to provide the Department with pre-sentence report information on new commitments.
- CCH Update. This program will provide for the automatic updating of the Computerized Criminal History files involving changes of custody within the Department of Corrections.
- State OBTS Master Index. The specifications for interfacing with this master index is dependent upon the state OBTS system design. The planning interfacing will insure that when the state OBTS master index is created, it will include cross reference indexing for the Department of Corrections.
- DOC modules interface. An interactive interface will be developed between the Adult Module and Community Services Module to eliminate the need for any duplicate coding of information contained on the two files.
- ACIC Wanted Persons File. This interface will provide a monthly audit comparing the wanted persons records listed on the Arizona Crime Information Center with the automated records of the Department of Corrections.

SECTION 3

SYSTEMS IMPLEMENTATION

SYSTEM IMPLEMENTATION PLAN: The Implementation Plan for the Arizona OBSCIS is designed to provide continuity for information handled within the Department of Corrections. This calls for planned systems development and the integration of that system, operationally, into the Department.

SYSTEM BACKGROUND: There were no central case files for adults and juveniles and no statistical reporting system when the Department was established in 1968. After July 1, 1969 an effort was begun to establish central master case files for all adults and juveniles under commitment to the Department. Staff in this area consisted of a statistician and a file clerk. The only statistics were contained in annual reports issued by the State Prison and the State Industrial School and allowed no department-wide comparisons. Requests for information could only be handled by manual tallies of case files.

As late as the Spring of 1971 the Department had no data processing equipment and no means of summary access to information on offender characteristics. Statistics in the Department consisted of only the most rudimentary counts of admissions and releases. Each management request for detailed information had to be handled on an individual project basis with laborious manual tabulations required, often with questionable accuracy. Frequently the information desired was not obtainable within any reasonable time frame. Sophisticated information for planning, evaluation, budget support, or for exchange with legislative or other criminal justice agencies was simply nonexistent.

The Arizona Department of Corrections Information System was initiated July 1, 1971 with the assistance of a Federal grant. Between 1971 and 1974 the Department of Corrections used a combination of agency resources and Part C block grants from LEAA to develop an Adult Inmate Population Accounting System, a Community Services Caseload Management System and a Juvenile Offender Based Tracking System. Along with developing these systems the Department has created a historical data base which is complete for all adult and juvenile admissions and releases beginning with the 1969 fiscal year.

At this stage in development, the Corrections Information System is capable of providing accurate accounting of the current status and location of all offenders under the supervision of the Department and summary statistics on a monthly basis. The system is also capable of responding to a wide variety of ad hoc requests for both name listings and statistical inquiries.

- Major Accomplishments

Fiscal Year	
1968 - 69	Department of Corrections established
1969 - 70	Establishment of Centralized Master Records Section
1971 - 72	Design of Initial Computerized Correctional Information System for Adult Institutions
1972 - 73	Completion of Adult Institutional Data Bank Implementation of Juvenile Correctional Information System
1973 - 74	Implementation of Community Services Caseload Management System
1974 - 75	Upgrade of Juvenile Module to provide OBTS and Program Monitoring
	Establishment of Statistical Research Unit within Department of Corrections
	System Design for Offender Based State Correctional Information System (OBSCIS) Integrated into Arizona Criminal Justice Information System (ACJIS)

PROJECT MANAGEMENT: The Arizona OBSCIS will be developed and maintained under the management control of the Arizona State Department of Corrections. This management control will be exerted by the Director of the Department

of Corrections through the Deputy Director for Research, Program Planning and Evaluation, in conjunction with an advisory committee including: the Correctional Information System Administrator, the Correctional Planner, the Department of Corrections EDP Coordinator, a Research and Statistical Analyst III, a representative of the Department of Public Safety Data Processing Staff, and a representative of the State Criminal Justice Analysis Statistical Center.

The Correctional Information System Administrator will supervise the daily operation of the system including coordination of the telecommunications network, liaison with the EDP technicians and supervision of the Central Office records processing staff.

The Department of Public Safety will provide for operation of the main frame hardware and associated supporting software. The Department of Corrections EDP staff will provide for the maintenance of the system software.

The Correctional Planner, Research and Statistical Analyst III, and representative of the State Criminal Justice Analysis Statistical Center will represent user requirements on the advisory committee.

During the primary development and implementation phase a more intensive management effort will be required than during the ongoing operation. Therefore, during the development three staff members of the Department of Corrections will have responsibility for specific areas under the general direction of the Deputy Director for Research, Program Planning and Evaluation. The Correctional Information System Administrator will be responsible for developing reporting forms and procedures, supervising the installation of the telecommunications network, and coordinating with the institutional staff. The Correctional Planner will coordinate the system development with other grant and planning projects and will supervise the Central Office records staff. The Research and Statistical Analyst III will provide the day-to-day coordination of the implementation project details including liaison with EDP technicians and the development of user manuals.

In the event that the advisory committee deems it necessary to modify the specifications of the system plan, such modifications as approved by the Director of the Department of

Corrections will be reported to the technical advisory committee of the Arizona Criminal Justice Information System before any changes are implemented.

IMPLEMENTATION SCHEDULE: Implementation of the Arizona OBSCIS has been scheduled by implementation phases to achieve an orderly transition from Department of Corrections individual program modules to an integrated OBSCIS system. This is, in essence, a continuation of the Department of Corrections efforts to achieve an integrated system operating within the Arizona Criminal Justice Information System (ACJIS) Master Plan. This development effort, of continued improvement in systems design and analysis, has culminated in the current contract to develop the Arizona OBSCIS Systems Plan and Program Specifications. Completion of these tasks will lead to the Arizona OBSCIS implementation schedule which consists of:

- Phase I — Adult Module Implementation
- Phase II — OBSCIS Interfacing and Community Services Module Implementation
- Phase III — Systems Evaluation and Adaptation
- Phase IV — Long Term Telecommunications Requirements

ADULT MODULE IMPLEMENTATION: Implementation of the Department of Corrections Adult Module at the DPS Computer Center has been scheduled by program groups in order to achieve a dual system operating in consort with the existing Adult Module. This will allow cross checking between the two systems thus allowing for a smooth transition from the operating Adult Module to the OBSCIS Adult Module. The implementation schedule of program groups consists of:

- Group A Programs - provides the DOC with a core program capability to establish and maintain the Adult Module data base at the DPS computer center.

- Group B Programs - completes the DOC core programs, allowing the DOC to generate a data base tape for utilization on the HIS 6000 computer center. This would extend the DOC data processing capability to the HIS 6000 systems' level but would require the continued use of that computer.
- Group C Programs - extends the DOC capability to include all current Adult Module capabilities. The use of the HIS 6000 computer center would be optional and no longer an operational requirement for the Adult Module program support.
- Group D Programs - provides reporting enhancements and interface capabilities to meet the requirements of the larger Criminal Justice Community.

ADULT MODULE COST ANALYSIS: Cost estimates for the Adult Module Program Development and Systems integration are shown in Figure 7. A detailed analysis of the programming requirements for each of the Adult Module programs provided the basis for determining the hours and associated costs. Incorporated into the analysis were:

- Programming costs
- Systems integration costs
- Systems documentation costs which encompass the program maintenance manual, users' manual and operations manual.
- Development and documentation of a control test data set to evaluate the systems performance and provide a stable data base for evaluation of future systems enhancements.

In this manner, each individual program was evaluated and the expected number of lines of code and associated number of programming hours derived. The resulting hours were divided between program coding and system testing and converted into costs using applicable State Data Processing Division rates.

PROGRAM MODULES	LINES OF CODE	PROGRAM DEVELOPMENT COSTS					
		CODING		TESTING		TOTAL	
		(HOURS)	($)	(HOURS)	($)	(HOURS)	($)
GROUP A PROGRAMS							
Capture and Edit	3500	210	3,635	410	7,105 (3)	620	10,740
Conversion (data base)	750	40	630	70	1,105	110	1,735
Data Element translation	1700	130	2,050	210	3,315	340	5,365
File Update	3500	170	2,980	450	7,890 (3)	620	10,870
Logical Parameter Request	1800	130	2,255	290	5,035 (3)	420	7,290
Master Record Report	800	60 (1)	950	110	1,735	170	2,685
Name List Report	800	60 (1)	950	110	1,735	170	2,685
		GROUP A TOTAL				2450	41,370
		CUMMULATIVE TOTAL				2450	41,370
GROUP B PROGRAMS							
Coder Edit	500	50	790	80	1,260	130	2,050
Institutional Location Roster	700	60	950	100	1,575	160	2,525
Subfile Creation	700	90 (1)	1,420	130	2,055	220	3,475
		GROUP B TOTAL				510	8,050
		CUMMULATIVE TOTAL				2960	49,420
GROUP C PROGRAMS							
Administrative Control Rosters	1200	110	1,735	110	1,740	220	3,475
Case Summary Query	700	80	1,260	110	1,740	190	3,000
		GROUP C TOTAL				410	6,475
		CUMMULATIVE TOTAL				3370	55,895
GROUP D PROGRAMS							
Absolute Discharge	150	30	475	30	475	60	950
Classification Report	400	40	625	60	950	100	1,575
Diagnostic Evaluation	650	80	1,260	80	1,265	160	2,525
Name Status Query	350	40	630	50	790	90	1,420
N. P. S. Data	400	-- (2)	---	60	950	60	950
Parole Board Progress Rosters	400	40	625	60	950	100	1,575
Periodic Statistics	600	80	1,260	120	1,895	200	3,155
U.P.R. Data	750	60	950	100	1,575	160	2,525
		GROUP D TOTAL				930	14,675
		CUMMULATIVE TOTAL				4300	70,570

Figure 7. DOC Adult Module Cost Estimates

(1) Hours shown depend on the Logical Parameter Request Module being included in the Adult Module
(2) Program Conversion
(3) Man hour rate increased to allow for specified Programmer/Analyst hours

OBSCIS INTERFACE AND COMMUNITY SERVICES MODULE IMPLEMENTATION:

The Arizona OBSCIS will interface with other Criminal Justice Agency data files to provide an efficient and orderly transfer of information. Principal interface capabilities of the Arizona OBSCIS will provide for:

- Automatic update to the CCH data files.
- Automatic update to the Master Index File.
- Automatic notification to DOC on query to the Master Index File by other agencies concerning persons under DOC supervision.
- Automatic and transparent interface with the ACIC Wanted Persons File.
- Information exchange between the Adult File and the Community Services File to initialize records for persons moving from one system to another.
- Automatic notification to DOC of LE-JIS bookings involving persons under DOC supervision.
- Automatic notification to DOC of LE-JIS court actions.
- Automatic pre-sentence data capture to provide initial record formatting for the Adult File.

Implementation of the Community Services Module will complete the DOC Operating System in support of the Arizona OBSCIS. The enhanced Community Services Module consists of converting the existing system and incorporating the Name List Report, Name/Status Query, Periodic Statistics Report and the Subfile Creation Program Modules from the Adult Module.

OBSCIS INTERFACE AND COMMUNITY SERVICES MODULE COST ANALYSIS:

Cost estimates for the OBSCIS Interface and Community Services Module Program Development and Systems Integration are shown in Figure 8. Analysis of the Community Service Module programs centered in two areas:

CONTINUED

1 OF 2

PROGRAM MODULES	LINES OF CODE	PROGRAM DEVELOPMENT COSTS					
		CONVERSION (Hours)	($)	TESTING (Hours)	($)	TOTAL (Hours)	($)
Caseload Rosters/Statistics	200	30	465	20	325	50	790
Conversion (data base)	150	30[1]	475	10	155	40	630
File Update	300	50	800	30	460	80	1,260
ISC Statistics	200	40	630	20	320	60	950
Master Record Report	400	60	950	40	625	100	1,575
Name List Report [2]	800	30	475	20	315	50	790
Name/Status Query [2]	350	20	310	10	165	30	475
Periodic Statistics Report [2]	600	50	790	40	630	90	1,420
Placement Roster	120	40	630	20	320	60	950
Special Services Control Roster	200	40	630	20	320	60	950
Subfile Creation [2]	700	50	800	30	460	80	1,260
					TOTAL	700	11,050

Figure 8. Community Services Cost Estimates

(1) New program coding hours
(2) Enhancements of Program Modules being developed for the DOC Adult Module

PROGRAM MODULE	LINES OF CODE	PROGRAM DEVELOPMENT COSTS					
		CODING (Hours)	($)	TESTING (Hours)	($)	TOTAL (Hours)	($)
OBSCIS Interface	800	90	1,500	130	2,160	220	3,660

Figure 9. OBSCIS Interface Program Cost Estimates

- Program conversion costs to transfer the Community Services Module operations from the State Data Processing Division to the DPS Computer Center.
- Program modification costs to allow selected Adult Module programs to operate using the Community Services data file.

Analysis of the OBSCIS Interface Program consists of defining the interface requirements for both teleprocessing and local batch mode operations. For those interface requirements that cannot be precisely defined due to concurrent file development or programming modifications within the other systems (Master Index) or (LE-JIS), the cost estimates (Figure 9) are based on prompt and adequate cooperation with the various keepers of the affected files.

SYSTEMS EVALUATION AND ADAPTATION: In order to provide an efficient data processing system, an integral part of the Systems Implementation Plan must provide for outside consultation to evaluate the system's performance. This evaluation will provide the basis for recommended systems and operations enhancements with the system in use by DOC. This will eliminate the continuation of possible "design bottlenecks" and improve the operational flow of information.

TELECOMMUNICATIONS IMPLEMENTATION: The telecommunications cost factors have been detailed in Section 1. The implementation of terminals to satisfy the near term or immediate telecommunications requirements are included in the Phase I implementation costs. Long term telecommunications requirements encompass the interfacing of planned DOC facilities to the OBSCIS data base and have also been detailed in Section 1. The implementation of these terminals have been defined as Phase IV in this implementation plan since the scheduling of those DOC facilities has not yet been finalized.

COST SUMMARY: The cost analysis for the systems implementation plan has been broken out by implementation phase and consists of:

- Fixed program implementation costs.
- First year telecommunications costs including equipment purchases.
- Recurring telecommunications costs for continued operation.

Phase I - Adult Module Implementation and Near Term Telecommunications Costs

Group A Programs	$41,370	
Group B Programs	$ 8,050	
Group C Programs	$ 6,475	
Group D Programs	$14,675	
Adult Module Total	$70,570	
Telecommunications	$25,148	First years' costs with $11,241 annual recurring
Phase I Total	$95,718	With $11,241 annual recurring

Phase II - OBSCIS Interfacing and Community Services Model Implementation Costs:

OBSCIS Interfacing	$ 3,660
Community Services Module	$11,050
Phase II Total	$14,710

Phase III - Systems Evaluation and Adaptation Costs:

Evaluation and adaptation of the completed operational system is estimated to be 5% of the systems cost, or $4,300.

Phase IV - Long Term Telecommunications Costs:

Telecommunications	$26,374	First years' cost with $9,957 annual recurring

OVERALL COST SUMMARY: The accumulated systems costs as defined by the implementation phases is shown in Figure 10.

	Cost	Total Cost	Recurring Cost	Total Recurring
Phase I	$95,718	$ 95,718	$ 11,241	$ 11,241
Phase II	$14,710	$110,428	0	$ 11,241
Phase III	$ 4,300	$114,728	0	$ 11,241
Phase IV	$26,374	$141,102	$ 9,957	$ 21,198

Figure 10. Accumulated Costs by Implementation Phase.

APPENDIX A

A COMPARISON OF THE PLANNED ARIZONA OFFENDER BASED STATE CORRECTIONS INFORMATION SYSTEM AND THE NATIONAL ADVISORY COMMISSION ON CRIMINAL JUSTICE STANDARDS AND GOALS FOR CORRECTIONS

The System Plan for the Arizona Offender Based State Corrections Information System will bring the Arizona State Department of Corrections into full compliance with the National Advisory Commission on Criminal Justice Standards and Goals for Correctional Information Systems (Chapter 15). The present paper gives a synopsis of each relevant standard and how it relates to the foregoing System Plan:

STATE CORRECTIONAL INFORMATION SYSTEM

Local and central correctional components of all sizes should be included in the state wide information system (Standard 15.1). The System Plan calls for case reporting throughout the Department of Corrections including all adult and juvenile facilities, community treatment centers, and parole offices.

Access should be provided through terminal at various points throughout the state. The System Plan provides for direct terminal access from the Central Office, the Arizona State Prison, Fort Grant Training Facility, and the Department's Southeast Area regional office in Tucson. The Plan allows for expansion by placing additional terminals at other facilities in the future.

The programmers and analysts for the Department should be assigned full time to it and should be under complete administrative control of the Department of Corrections. Under the Plan, the Electronic Data Processing staff of the Department's Division of Administration will have the responsibility of system maintenance and programming. During the development phase of the project Administration staff will be supplemented by contractual analysts and programmers.

The system should provide administrative control of security and privacy of records while encouraging research access. The basic security provisions will limit the dissemination of any information from the data base to criminal justice agencies. Provision is made for selective administrative identification of records requiring special security provisions, for example, court referrals who are not sentenced to prison, and provides for information on those cases to be released only after positive authorization by the Department of Corrections. At the same time, the System can produce copies of records from the data base with all personal identifiers removed to permit use by researchers.

The top administrators of the Department should have direct access to the information-statistics group. Such access will continue within the Arizona Department of Corrections.

The information-statistics function should be broad enough to support all divisions within the Department of Corrections. The System Plan will broaden the scope of support services already provided by the Department's information-statistics group and improve access by administrators throughout the Department to the information and statistics.

STAFFING *Priorities should be given to assigning an information manager with full responsibility for coordination of inputs into the system and editing and analyzing all output material (Standard 15.2).* While the input group and the research section currently function as separate but coordinated units, the System Plan provides for a Correctional Information System Administrator to supervise both the Central Records Processing Unit and the Research Unit.

Part-time staffing for small agencies is not applicable to the Arizona Department of Corrections.

The manager of the state system (and his staff) should provide training and technical consultation to staff throughout the Department. The duties of the Correctional Information System Administrator include coordination of the flow of case information throughout the Department. As such, he and his staff will be in direct contact with the field and administrative staff who are involved throughout the state in providing information for the system or who have requests for information in the system.

Training and effective communication of information should be provided for researchers and administrators. The services of the Staff Development Center will continue to be used to improve the effective communication of information and to help staff use the improvements offered by the Information System.

DESIGN CHARACTERISTICS *The Information System should be designed to facilitate four distinct functions (Standard 15.3): 1) Offender accounting; 2) Administrative-management decisionmaking; 3) Ongoing departmental research; and 4) Rapid response to ad hoc inqueries.* The routine offender accounting programs of the System will provide the status and location of every person under the jurisdiction and/or supervision of the Department of Corrections through both case rosters and summarized statistics. At the case management level, the System will routinely supply information to assist in classification and parole board decision making. Periodic statistical programs will support higher level planning and decision making. The data base has been specifically designed to allow easy recovery and statistical manipulation of data to support research functions. Ad hoc requests for rosters of special groups and/or individual case information can be met by on-line programs, with information generally being provided in less than an hour. Ad hoc requests for statistical information will generally be able to be satisfied within two working days.

The system should provide point in time net results. The System will be able to provide at any given point in time both basic population characteristics and program characteristics. The historical tracking capabilities will allow for the reconstruction of population/program characteristics for any previous point in time.

The system should provide period in time reports. The System will provide both listings and summary statistics of activities occuring over specified periods of time (admissions, releases, transfers and disciplinary reports). Those reports will be routinely produced on a monthly cycle. It will be possible to obtain the reports based on any desired set of population and/or time characteristics.

Automatic notification: the system should be designed to generate exception reports automatically. The System will provide routinely rosters of discrepancies between current assignment/status and classification level and of persons who have remained at a status/location for longer than the established time frame.

The system should provide statistical-analytical relationships. The System will allow for reporting correlations between any desired set of variables and outcomes. On a selective basis, statistical analysis can be made of any particular group of offender or offenders or for a given correctional program or facility.

CORRECTIONAL BASE DEVELOPMENT

The information-statistics function of offender accounting, administrative decisionmaking, ongoing research, and rapid response to questions should be reflected in the design (Standard 15.4). The data base should allow easy compilation of annual statistical reports and analysis of recidivism by offense and other characteristics. The data base should include all data required at decision points. The requirements of other Criminal Justice Information Systems for correctional data should be considered in the design and as interface between the corrections system and other criminal justice information systems develop. All of the foregoing considerations were covered in the development of the Department's data element dictionary. The Plan provides for specific interface between the corrections system and the State Offender Based Transaction System (OBTS), the Computerized Criminal Histories (CCH), the ACIC "wanted persons" list records, the Maricopa and Pima County courts information system (LE-JIS), the Uniform Parole Reports (UPR) and the National Prisoner Statistics (NPS). In addition, an on-line case query report will be available from all criminal justice agencies in the State.

All data base records should be individual based and the procedures for objectively coding data should be uniformly established. Throughout the development of the System, all data records have been individual based. The System Plan provides for complete documentation, including thorough, objective coding manuals. A major effort is being made to standardize all reporting procedures.

The integrity and quality of data in each record is the responsibility of the information group. Periodic audits should be made and quality control procedures established. The System Plan provides for central office processing of all records before entry onto the data base. The statistical clerks of the central records processing unit have continued to spend a major portion of their time in crosschecking and verifying the information contained in the files. The systems programming includes a number of automatic editing procedures to reject erroneous information and to provide a statistical clerk with audit lists for enhanced quality control.

The Corrections Information-Statistics System should be designed to accomodate expansion of the data base. The data base structure includes some fields defined specifically for expansion use.

Data bases should be designed for future analysis. The initial data base provides space for follow-up information that will be collected over a least a three-year

period. A large number of the potential benefits of the system for program evaluation will be realized two or three years after the implementation.

There needs to be an important feed back loop between administrative policies and data base content. The initial design of the corrections data base should recognize that change will be continual. The System is designed to provide administrative feed back of statistical changes resulting from changes in policies and to record any changes which may effect the content of the data base. Additional data elements, within limits, and additional reporting can be made to the system without interrupting the existing operational procedures.

PERFORMANCE EVALUATION

System evaluation measurement of recidivism in terms of both subsequent convictions and parole revocation should be measured for a minimum three year follow-up period (Standard 15.5). The System Plan provides for a follow-up review of all persons released from the Department's adult institutions -- one, two and three years after their release -- to provide a comprehensive evaluation of recidivism. For juveniles the follow-up evaluation terminates with the discharge from the Department's jurisdiction. With follow-up, recidivism reports will be based on comparisons of type of recidivism and characteristics of the recidivist.

Program evaluation should include specific measurement of effort, performance within the program, post-program performance, determination of efficiency of program, and study of process to determine which recipients of the program are more or less benefited. The System provides for measurement of immediate program performance for the offenders basic assignment at each facility, for his vocational training and his academic program. Program participation and performance will be compared to post-program performance in terms of specifics, i.e. post-institutional employment, and in terms of overall recidivism. The data base will provide capability of comparing success in specific programs by different offender characteristics. The Department's Project CLEAR will develop special statistical and classification programs to evaluate and predict the success and failure rates for specific classes of offenders participating in specific programs.

Assertions of system or program success should not be based on unprocessed percentages of offenders not reported in recidivism figures. The System will provide several specific measures of success, in addition to non-recidivism, and will be able to distinguish between those persons for whom successful adjustment to the community has been verified and those who are assumed to be successes based on a lack of recorded recidivism.

The only portion of the Corrections Standards and Goals for Information Systems which would not be met by the implementation of the Arizona Offender Based State Corrections Information System are those which specify the compilation of financial and staffing information. The Department will be able to meet those standards by correlating information from the Offender-Based System with information from the management information system currently under development in the Department's Division of Administration.

APPENDIX B

SECURITY AND PRIVACY PROVISIONS
FOR THE
ARIZONA OFFENDER BASED STATE CORRECTIONS INFORMATION SYSTEM

FOUNDATION: These provisions are based on Arizona State Law, the Security and Privacy rules contained in the Arizona Criminal Justice Information System Master Plan and the Arizona Department of Corrections' policies relating to the release of individual case information. These provisions will comply with existing Arizona law and the rules of the Arizona Criminal Justice Information System. Where conflicts appear between these provisions and law, Arizona law shall govern. Any differences in policy or interpretation regarding the Departmental rules and the policies of the Arizona Criminal Justice Information System will be submitted to the Security and Privacy Council of the Arizona Criminal Justice Information System for resolution.

The access restrictions and controls on dissemination of data from the Arizona Offender Based State Corrections Information System applies specifically to identifiable case information. Publication of aggregate statistics derived from the system relating to the Department's operations will be available as matters of public record.

DATA BASE CONTENT: All data in the Arizona Offender Based State Corrections Information System is entered by the Central Records Processing staff of the Department of Corrections from official records of criminal justice agencies. Each source document is audited before data is entered into the data base, and a second manual audit is made of all changes in the data base each time a case record is updated. Additional periodic audits are made by comparing the data in the Arizona Offender Based State Corrections Information System with the Computerized Criminal Histories and the "Wanted Persons File" of the Arizona Crime Information System.

The "capture and edit" program provides for automatic rejection of erroneous data with messages to allow for immediate correction. Additional edit programs provide for automatic notification when a record is incomplete, has reached a scheduled update time and/or contains apparent discrepancies between related items of information.

COMPUTER SECURITY: The Arizona Offender Based State Corrections Information System will operate at two locations: the Arizona Department of Public Safety computer center and the Data Processing Center of the Arizona State Department of Administration.

The Department of Public Safety computer center is dedicated solely to criminal justice agencies. Site security includes physical protection against both accidental and intentional intrusion, thorough screening of personnel and a requirement that all visitors be in the company of staff personnel at all times. Remote access to the data bank is limited to equipment dedicated solely to criminal justice use with terminals meeting the security rules of the Arizona Criminal Justice Information System. The Arizona OBSCIS data base will be protected by software permitting modifications of records only by entry from the Department of Corrections Central Office terminal or by local batch delivered by an authorized Department of Corrections employee. The Department of Public Safety computer logs all queries and other accesses to the data bank indicating the identification of the originator of the request.

The site security for the Data Processing Center of the Arizona State Department of Administration is similar to that of the Department of Public Safety computer center. The Arizona OBSCIS records housed at the data processing center are in protected files with access granted only through batch requests from the Arizona Department of Corrections. All output from any program utilizing these protected files are physically delivered to the central office of the Department of Corrections.

TELECOMMUNICATIONS: The Department of Corrections remote terminal will be linked to the Department of Public Safety Computer Center via dedicated overland telecommunications lines. Each terminal device will be located

in a physically secure area of the Department of Corrections facilities with access granted only to authorized Departmental personnel. Visitors will be permitted at the terminal sites only in the presence of an authorized staff member.

ACCESS TO RECORDS: Access to the Arizona Offender Based State Corrections Information System will be restricted to criminal justice agencies meeting the security and privacy regulations of the Arizona Criminal Justice Information System. Every such criminal justice agency will have direct access to a formatted query providing them with the personal identifiers and status information on any individual currently under the supervision of the Department of Corrections Community Services Division and any individual who is currently (or recently has been) under adult court commitment to the Department. All such reports will include a caveat which specifies the basis of identifying the record (by "State Identification Number", "Name and Date of Birth", or "Name Only").

Any other form of data access, including prior records, detailed program and disciplinary information, juvenile records, and group listings can only be made by authorized Department of Corrections officials from designated terminals. Dissemination and use of these reports will be based on both right to know and need to know criteria as specified in the Departmental rules governing the release of master offender file information.

Individual records will include a flag which may prohibit any access except through the Department of Corrections central office terminal and/or to automatically notify the Department of Corrections of any access to a record whenever the circumstances surrounding an individual case warrant extra security measures. A purging program provides for removing all personal identification from any specific record to permit the effective destruction of case records (when legally so ordered) without affecting the completeness of the data base for statistical compilations.

RESEARCH: The Arizona Offender Based State Corrections Information System is designed to encourage and facilitate research efforts. System software provides for copying selected portions of the data base for research use with all personal identifiers removed from the research copy to allow statistical research by other agencies (e.g., the Arizona Crime Statistical Analysis Center) without violating or endangering the security and privacy provisions of the Department of Corrections.

All research projects utilizing the Arizona Offender Based State Corrections Information System require prior approval by the Department of Corrections. If a research proposal is authorized which requires the use of personal identification for compiling results:

1) all parties to the research shall certify that the identified records will be used only as specified in the research proposal;

2) the Department's Division of Research, Program Planning and Evaluation will monitor the research effort to guarantee compliance with the security and privacy regulations, and;

3) upon completion of the research project, all materials identifying individual subjects will be returned to the Arizona State Department of Corrections.

APPENDIX C

GLOSSARY

Terminology used in the description of any Information Management System varies among individuals and groups. In order to prevent the misunderstanding of computer terminology as used in this report, the following definitions will apply:

Computer Center - the physical location of the computer, its associated peripheral equipment and the operational staff to run the center.

CRT Video Terminal - a Cathode Ray Tube terminal, which provides video displays of information to the user.

Data Bank - consists of the totality of information maintained by an organization relative to its operation including files, records, microfilm, logs, computerized data files, etc.

Data Base - a data base is the aggregation of all the computer files containing information relevant to the users' needs. Structurally, a data base consists of all control and operational files that are accessable by a user or by a data management system.

Data Element - an individual data item characterized by having a fixed size and format and containing no substructure. A data element provides the basic mechanism for storing data values.

Data File - a data file is structured from one or more data records containing information to be used for a specific purpose; i.e., Input Transaction File, Adult File, etc.

Data Record - a structured set of data elements which collectively define an occurrence or data set; i.e., inmate record, transaction record, etc.

EDP - an acronym for Electronic Data Processing which encompasses the usage of all associated data processing equipment.

Information System - the overall logical processor control, for data maintained in support of one or more operational activities, including software interface and information retrieval.

Local Batch Processing - interfacing with the computer by means of jobs submitted at the computer center.

Terminals - any device that allows the user to interface with the computer, at a location remote from the computer center.

On-Line - defines the actual use of a terminal connected to the computer; i.e., user interface for data preparation, data query, etc.

Program Module - the smallest programmed unit in a software system which can be utilized independent of any other programmed unit. A Program Module may consist of multiple sub-programs.

Telecommunications Processing (Teleprocessing) - interfacing with the computer by means of a terminal located remote from the computer center, generally at the user's location.

END