

# PHILADELPHIA JUSTICE INFORMATION SYSTEM



MICROFICHE

Project Management Plan

MARCH 1976

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PHILADELPHIA JUSTICE INFORMATION SYSTEM

PROJECT MANAGEMENT PLAN

*prepared by the staff of*

NCJRS

AUG 5 1977

ACQUISITIONS

PJIS PROJECT

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REPORT NO. 3.0

JANUARY 1976

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## PHILADELPHIA STANDARDS AND GOALS

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LARRY POLANSKY, ESQUIRE  
EXECUTIVE DIRECTOR

### PJIS PROJECT

IRVING J. CHASEN  
DIRECTOR

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DAMIS COSTRACK RUN

## 1.0 PJIS Project Management

The PJIS staff has developed methods and tools for the monitoring and control of the PJIS development effort itself and the technical accuracy of the programs being developed. The complementary set of methods and tools are known as "Project Controls" and "Technical Controls" and explained in the following paragraphs.

## 2.0 Project Control

Project Control is viewed in terms of project planning and the subsequent project tracking. Both planning and tracking must address schedules, milestones, manpower, and budgets with the objectives of providing: a consistent, comprehensive development plan, and; a means for measuring progress. Though easily stated, project control can easily become overburdening and ineffective if approached improperly. Project Control must efficiently answer to the needs of several interests including: line supervision, high level management, cost accounting, and the development staff.

In order to facilitate the preparation of plans, the modification thereto, and the measurement of progress, in terms meaningful to each of the interested parties, the PJIS staff has developed an automated project control aid referred to as COSTRACK.

The tool is intended to require only the minimum essential information from the planners for developing new plans or modifying old plans. The tedium of: verifying consistency of planning, physical presentation of plans, computation of budgets, and the like is reduced or eliminated using COSTRACK.

Changes to plans are more readily made and more easily evaluated; more time is left for strategy.

For project planning, the COSTRACK system provides for:

- (1) organizing the development effort into a hierarchy of well-defined tasks,
- (2) scheduling the tasks and development phases within tasks,
- (3) assignment of personnel to tasks,
- (4) estimation of total expenditures, establishment of budgets, and expenditure rates, in terms of both dollars and manpower,
- (5) calendarized staffing plans by level of personnel,

- (6) dissemination of assignments and conveying long range plans and short range assignments to personnel,
- (7) verification of the accuracy of assignments and levels of efforts, and,
- (8) a comprehensive implementation plan for executive review.

For Project tracking the COSTRACK System provides for specifying level of accomplishment for each task and generates reports showing the "planned" accomplishment and "earned accomplishment and "earned" accomplishment in terms of "% completed" and "variance" from plan. A summary for tasks is graphed in a project status chart.

The District Attorney's Management Information System (DAMIS) has been planned using COSTRACK. This plan is used as an example to further explain the COSTRACK System. It is described as follows:

The Project plan in the exhibit includes the following parts:

- (1) Bar graph schedule (printout pages 3, 4, 5) is produced showing tasks for DAMIS along with the persons assigned to each task.
  - a. Principal tasks within the project
  - b. Subtasks within principal tasks
  - c. Sub-sub tasks within subtasks

The numbering allows the project planner to organize and track the project as a hierarchy of efforts.

The task numbers for DAMIS range from 50.00.00 to 59.99.99. This allows for ten major efforts to be identified within DAMIS (one major effort is Phase I, task 51.xx.xx with 99 subtasks permitted for each major effort and 99 sub-subtasks permitted for each sub-task.

The reason the numbers range from 50 to 59, is because DAMIS is one of several projects under the cognizance of PJIS and one of the major functions of this method of planning is to allow management to view the staff as a whole in addition to viewing each project individually. Thus, what is depicted herein is an excerpt from an overall plan. In the overall plan each major effort has a similar assigned numerical range for the tasks assigned and all falling within the range of 00.00.00 to 99.99.99. (Refer to Table 1).

The "bars" on the graph schedule are broken into weeks along the horizontal axis. The actual date and week number of the year are listed along the top of the graph. The "bar" component within each week is a number representing the number of days the man (identified with the task) will be working on the task that week. If the "bar" consists of all "5's", for example, the person is devoting full time to the task.

The DAMIS schedule covers more than one calendar year. To identify which year the effort is scheduled in, there is a "year" column which can be "1", "2", or "3". The calendar at the top of the page is for the current year.

The "bar graph schedule" described above is essentially a repeat of what the project planner enters into the automated scheduling aid.

In addition to the "bar" graph schedule the first part of the report includes a list of personnel and job milestones (page 1 and 2 of the printout). These items are optional but are included in the DAMIS plan.

The ensuing reports are derived from the basis data and constants prepared and modified infrequently (e.g. employee pay rates, calendar).

(2) Manpower Assignment Plan (pages 7, 8, 9 of printout)

This shows each of the tasks assigned to each man and the schedule of assignments. The total number of workdays assigned each week to the person is also depicted and is useful to the planner in evaluating the accuracy of the scheduling. At the bottom of this report is also a concise milestone report (page 10).

(3) Task Budget Performance Report (printout pages 11, 12, 13, 14)

The task budget performance report shows the total effort in person-days and dollars for total job and each task and each category therein (pages 8, 9, 10). The DAMIS cost-to-complete of \$39,038.00 for the tasks listed as of January 9, 1976. The total person-days (p/d) required is 707.0 p/d; each effort and subtask within the effort is similarly evaluated.

This report, Task Budget Performance Report, is presented in ascending task number sequence, displaying the total resources (time and cost) per task, subtotaled by subtask and task.

The additional columns to the right of the page are used for reporting progress of each task. This part of the report is not used in the DAMIS example. The project tracking usage will be presented and explained in later reports.

This report also indicates planned and earned person-days for each task, together with a person-day variance from the plan. This feature is particularly useful in determining specific variations during execution of a contract, but is seldom used at the planning or proposal stage. As an adjunct to this third report, a graphical representation of actual versus planned percentage of completion of the entire project is also provided.

(4) Planned Labor Expenditure Report (printout pages 15 and 16)

This report indicates the planned labor expenditures by week and on a cumulative basis. The report permits costs expressed in Direct Labor (actual salary), Labor and Fringe, Labor, Fringe, and overhead, and Labor, Fringe, overhead and Administrative costs. The PJIS Project anticipates the need for only "Direct Labor" (actual salary) costs and fringed direct labor reports.

(5) A Staffing Profile Report (printout page 29)

The weekly personnel requirements, shows the total project headcount requirements by project week. This report is useful in planning project personnel buildup and reduction actions.

(6) A Staffing profile by grade level (printout page 30)

The report, Weekly Level Count, shows headcount equivalents by grade level for each project week. This report provides detail backup for the preceding report.



<u>Tasks</u>	<u>Milestones</u>
PJIS 1.0.0 - 39.99.99	0.1.0 - 0.39.99
DAMIS 50.0.0 - 59.99.99	0.50.0 - 0.59.99
PRINS 60.0.0 - 69.99.99	0.60.0 - 0.69.99
OLB 70.0.0 - 79.99.99	0.70.0 - 0.79.99
COMMLINK 90.0.0 - 90.99.99	0.90.90 - 0.90.99
PRISON STATISTICS 91.00 - 91.99.99	0.91.0 - 0.91.99
VACS CASE & DEFENDANT FILE 92.0.0 - 92.99.99	0.92.90 - 0.92.99
PRINS CONVERSION 93.0.0 - 93.00.00	0.93.00 - 0.93.99
RJE 94.0.0 - 94.99.99	0.94.00 - 0.94.99
TRAINING/VACA/ABS 95	0.95.00 - 0.95.99

Table 1 - Task Number Ranges

In addition to the COSTRACK system individual assignments are discussed with each employee on, approximately, a monthly basis for the purpose of reviewing recent progress and problems and laying out short term milestones. To facilitate the review and planning, the milestone sheets (see figure 1) are filled-in following the review. A copy is kept by the employee and project leader.

(THESE ARE UPDATED MONTHLY AND DISCUSSED WITH EACH DESIGNER. EACH DESIGNER RECEIVES HIS OWN COPY AND SCHEDULES ARE MODIFIED TO REFLECT CURRENT PLANS.)

NAME

WEEK

WEEK ENDING

MILESTONE SCHEDULE FOR NEXT 4 WEEKS.

NEXT MILESTONE

IF ABOVE MILESTONES ARE NOT CORRECT, PLEASE BRING THEM TO THE ATTENTION OF YOUR GROUP LEADER.

3.0 PJIS Technical Controls

PJIS technical controls have been established to insure the technical accuracy of the software being developed. The technical controls consist of formal and internal documentation, Interface meetings, and program verification and validation. Figure 2 summarizes the technical controls and their components.

## TECHNICAL CONTROLS

### Formal Documentation

1. PJIS Software Systems Specification
2. PJIS Software Design Specification
3. Systems Sizing and Performance Calculations
4. System Integration and Test Plan
5. PJIS Software Description
6. Systems User's Manual
7. Log Books

### Internal Documentation

Transaction flows - Graphs the sequence of processes invoked for each transaction type.

1. Provides bases for structured walk-thru
2. Provides base needed for detailed simulation
3. Verify thruput times
4. Provide crosscheck of interfaces

Preliminary and internal program module function specifications

### Interface Meetings

Work meetings which:

1. Provide a forum for presentation of changes, problems, etc.
2. Solve problems "on the spot" or result in establishing the means for resolution
3. Provide a method to "keep alive" topics which need attention
4. Provide a log where resolutions are recorded
5. Provide a vehicle for dissemination of standards, intermediate design documentation, etc.
6. Provide a design review vehicle (e.g., where a meeting subject is a structured walk-thru)

### Unit Testing - Program verification and validation

Testing at program module level is demonstrated and signed off by PJIS Software system test supervisor. Tested module is catalogued, dated and given revision numbers.

### PJIS Test and Integration

1. Long range PJIS test & integration plan
2. Test supervisor indicated
3. Schedule correlated to integration requirements

### 3.1 Formal Documentation

The following paragraphs present an overview of the documents to be written as part of the PJIS development effort.

The attached tabulation lists all the documentation elements typically encountered in a development of a large scale real time system. These elements have been formed into sets to comprise the documents listed in the tabulation. The documents are briefly described in the following paragraphs and include the following:

1. PJIS Software Systems Specification
2. PJIS Software Design Specification
3. Systems Sizing and Performance Calculations
4. System Integration and Test Plan
5. PJIS Software Description
6. Systems User's Manual
7. Log Books

#### 1) PJIS Software Systems Specification

This document shall represent the top level PJIS software-oriented document. It serves the following purposes:

- a. It presents a system overview including system objectives, software system overview and hardware system overview. It could serve as a management level explanation of the system.
- b. It delineates the functional requirements in terms both hardware and software engineers understand and delineates system operational procedures.

This is the most important part of the documentation since it documents the understandings of the software engineer and the system engineer as to how the system will function from a systems performance, and user point of view.

#### 2) PJIS Software Design Specification

The PJIS software design specification is the primary design document used by the PJIS software design and implementation team. Its principal component is the detailed module design specifications. However, other very important documentation elements are also included as part of the PJIS software design specification, and include - transaction flowcharts, man/machine interfacing requirements, and a number of appendices required for a disciplined design and accomodating hardware/software interfaces (e.g., coding and interfacing conventions, program names and tags assignments, inter-program references and hardware/software interface descriptions). The appendices may only be necessary during a design phase of the job and not be required as part of a deliverable or permanent documentation set.

Total System Overview  
 Software System Overview  
 Hardware System Overview  
 Functional Requirements  
 Program Module Purpose  
 Detailed Program Module Design Specifications  
 Hardware/Software Interfaces  
 Tables, Design Concept  
 State Records, Design Concept  
 File Descriptions, Design Concept  
 Hardware Configuration Requirements  
 Coding and Interface Conventions  
 Program Names and Tags Assignment  
 Inter-program references  
 System Sizing:  
 Core Storage Requirements & Map  
 Mass Storage Requirements & Map  
 General Flowcharts  
 Transaction Flowcharts  
 Man/Machine Interface Requirements  
 Base Data for Performance Analyses  
 Performance Analyses  
 Unit (Module) Test Procedures  
 System Integration Plan  
 System Test Plan  
 Detailed Flowcharts  
 Module Code Edits  
 Tables, Detail Description  
 State Records, Detail Description  
 File Descriptions, Detail Description  
 Man/Machine Interface Detail Description (Usage)  
 Operating Instructions  
 Interface Meeting Notes  
 Problem Reports  
 Schedules  
 Data Base Overview  
 Data Base Design Concept  
 Data Base Detail Description ..

DOCUMENTS

1) Software Systems Specification (Requirements document)	X	X	X	X	X	X	X
2) Software Design Specification	X	X	X	X	X	X	X
3) System Sizing and Performance Calculations	X	X	X	X	X	X	X
4) System Integration and Test Plan	X	X	X	X	X	X	X
5) Software Description	X	X	X	X	X	X	X
6) System User's Manual	X	X	X	X	X	X	X
7) Software Log Book	X	X	X	X	X	X	X

### 3) Systems Sizing and Performance Calculations

The purpose of this document is to establish resource sizing requirements and to present models and calculations in support of the design. Elements comprising this text would include:

1. Systems sizing information such as core requirements/map and disc requirements/map and any other sub-system wherein the systems ability to meet the performance requirements is a function of the size.
2. System Model
3. Calculations supporting the systems performance requirements. This would include such things as: determination of cyclic and traffic dependent loading, I/O loading, determination of the function thruput times and queue sizing based on randomly distributed traffic and a probability of success.
4. Base Data in support of the calculations.

### 4) System Integration and Test Plan

The purpose of the system integration and test plan is to present an orderly and complete method of system integration and furnish a means for conducting an optimum test evaluation of the system. The duration of the plan is dependent on the finalization of the design and implementation of all the software elements comprising the system. The test plans include schedules which are related to the degree of progress attained in the software area. The test plan is designed to integrate not only the software but also the hardware modules of the system. In a large scale system this document of course becomes one of the most critical documents.

### 5) Program Description

The program descriptions are an extension of the program specifications and include the hard design data developed during the system development. Such things as file design concepts will progress to field and bit definitions (if such detail was not available at the point of developing the design specification) and specific operational rules for supervisory messages and specific displays will be explained. The detail modules specifications will be completed to include such items as - specific calling sequences, parameters passed, priority running levels, and other details that would typically be simply marked as "not available" at the time the design specification was produced.

### 6) User's Manual(s)

The purpose of the User's Manual is to present an explanation of the man/machine interface from the point of view of applying the system.

### 7) Log Books

Log Books are required to maintain the informal design documentation



required for smooth running projects. This would include such items as:

1. Program Tag Assignments
2. Interface Meeting Notes and Module Revision Assignments
3. Schedules

A documentation control procedure will be invoked for use in PJIS documents following their initial publication. The procedure uses the cover sheet revision control form illustrated in figure 3.

The procedure calls for the author to submit the revision to the person in charge of documentation who, in turn, assigns a revision number to it, performs a cursory check for format and completeness, and circulates the revision for required approvals. Modifications required as a result of the review and approval cycle are incorporated and re-approved on an informal basis.

During sign-off, the signatories or author will note on the cover sheet who is to receive copies of the revision. Following the approval, the person in charge of documentation will distribute copies to those designated on the cover sheet. The cover sheet itself, will be distributed to the entire design and implementation team to notify each designer of the change.

The person in charge of documentation will monitor the progress of the revision in a documentation log and maintain an updated document library.

REVISION CONTROL FORM

DATE: \_\_\_\_\_

DOCUMENT BEING REVISED \_\_\_\_\_

NAME: \_\_\_\_\_

DOCUMENT REVISION NUMBER \_\_\_\_\_

PAGES NUMBERS AFFECTED (from) \_\_\_\_\_, (to) \_\_\_\_\_ Number \_\_\_\_\_

NUMBER OF PAGES ADDED \_\_\_\_\_

NUMBER OF PAGES DELETED \_\_\_\_\_

REASON FOR REVISION \_\_\_\_\_

ORIGINATOR \_\_\_\_\_

USE \_\_\_\_\_

AUTHORIZING SIGNATURES: I. Chasen \_\_\_\_\_

D. Cloud \_\_\_\_\_

B. Kauffman \_\_\_\_\_

J. Springer \_\_\_\_\_

COPIES TO:

Figure 3

### 3.2 Internal documentation

The internal documentation consists of transaction flow diagrams and preliminary or internal program module specifications.

The transaction flow diagrams illustrate the sequence of program modules (processes) invoked in the processing of a "job" entry (where a "job" means any system stimuli requiring program processing). The transaction flow can be thought of as a very detailed Hierarchy Input-Process-Output (HIPO) diagram.

It should be noted that this differs from a program flow diagram. A program flow diagram describes the program construction; the transaction flow diagram describes the use of that structure. Because of the multitude of paths thru the program structure, transaction flows are necessarily limited to "normal" control paths and are produced only for the transactions which form a significant part of the system load or are time-critical, or are complicated.

The transaction flow serves many purposes:

- 1) provides a basis for the "structured walk-thru" of transactions
- 2) provides a cross-check of module interfaces
- 3) provides base needed for detailed simulation
- 4) verifies thruput time (response time)

Figure 4 illustrates the form and content of a sample transaction reviewed prior to becoming part of the software system design specification. The reviews are performed by line management with a sign-off procedure.

Internal program module design specifications provides a means for documenting software which is of an interim or ancillary nature.

Figure 1

TRANSACTION FLOW EXAMPLE

NARRATIVE

Start is from task scheduler

- ATC-1 examines first Q-block in ATC queue chain for incoming hit data..
- Hit is verified and mapped in originating position state record address.
- DMS is called to retrieve state record.

• DMS retrieves state record and queues record to "next Q".

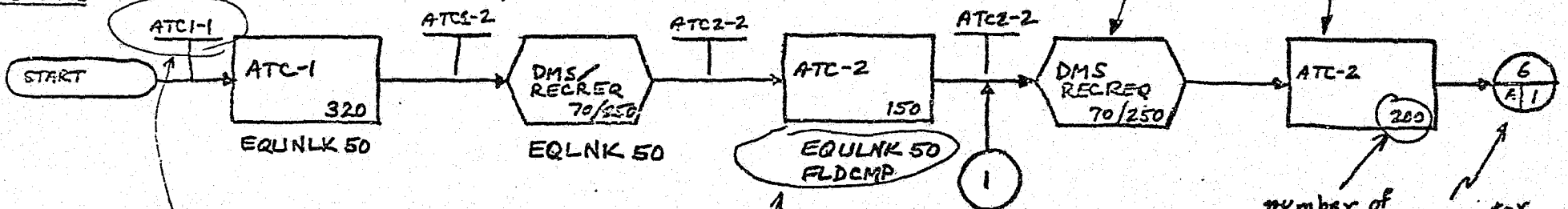
- ATC2 verifies hit data with originating position S.R.
- Determine destination state record
- Request S.R.

Short statement of routine's function relative to this job.

subroutine call

scheduled routine

FLOW & INTERFACE REFERENCE



OTHER DATA

Reference to a queue block for defining interfaces

- DMS worst case is 250 mem. cycles if S.R. is on disc and not fwd'd.
- Best case is 70 mem. cycles if in core.

names of subroutines invoked in this transaction's processing.

Entrance for call termination/initiation sequence

number of instructions executed by this routine for this transaction  
connector to another page of flow.

Transaction name

SIZE	CODE IDENT NO.	DIRECT ACCESS CALL (INITIATION)	R
B	46859		
SCALE			SHEET 1 of 16

### 3.3 Interface meetings

Interface meetings are working meetings held periodically (usually weekly or bi-weekly) and attended by members of the design and implementation staff. Other attendees, such as user representatives, may also attend depending on the problem.

The purpose of the working meeting is to:

1. Provide a forum for presentation of changes and problems.
2. Solve problems "on the spot" or result in establishing the means for resolution.
3. Provide a method to "keep alive" topics which need attention.
4. Provide a log where resolutions are recorded.
5. Provide a vehicle for dissemination of standards, intermediate design documentation and like information.
6. Provide a design review vehicle (e.g., where a meeting subject is a structured walk-thru).

### 3.1 Unit Testing

Unit testing provides a method of program verification and validation at the program module level. The program module is tested to verify compliance with the requirements of the module design specification (from the PJIS Software system design specification). The test is to be witnessed and signed off by the PJIS Software system test supervisor. The tested module is then incorporated (catalogued) into the program development library, dated, and given a revision number.

The module then is available for use as part of the overall PJIS Software package and no change can be made to the module without prior review and approval.

### 3.5 PJIS test and integration

A test supervisor will be appointed who will be responsible for developing a long range PJIS test and integration plan. The purpose of the plan is to provide an orderly and complete system integration and furnish a means for conducting an optimum test evaluation of PJIS. The duration of this test plan is dependent on the finalization of the design, and implementation of all of the software elements comprising the PJIS. The delivery and availability of the hardware and remote peripherals will also impact the test plan completion since the test plan is designed to integrate not only the software, but also the hardware modules into the PJIS system. The initial phases of testing are designed to test functions requiring only a minimum configuration. As testing progresses more complex functions will be attempted which require a more complete hardware system.

In addition to determining the required operating system capabilities, the early establishment of a firm data base structure is a critical item in the development of a concrete test and evaluation plan.

A pseudo data base must be constructed to reflect, in all functional aspects, the data base intended for use in the finalized PJIS system. The data base should be extensive enough, to encompass all functions PJIS can perform.

The test supervisor will also be responsible for facilitating testing and resolving problems encountered during systems test. The test supervisor will maintain a log of problems and system error reports so that failure due to hardware, system software or unit tested application modules can be referred to, and systematically corrected by the cognizant PJIS staff member.

EXHIBITS -

DAMIS COSTRACK RUN













STAFF LEVEL	ASSIGNMENT	TASK	YRS	WEEKS	D/L	WPK-DAYS
				1111111112222222222233333333334444444444555		
				1234567890123456789012345678901234567890123456789012		
				-----		
				MONTH-		111111111111111
				111122223333444455556666777778888999900000111122222		
				///////////////// WEEK ENDING FRIDAY //////////////////////		
				0123012201120012301220112001230122011200122011201123		
				9630630752962963074184185296306307307418529529630741		
				* * * * *		
1	C	PHIL NEFDLEMAN	0 0 1 1		12016.45	194.0
		DAMIS	50 0 0 1			
		PHASE I	51 0 0 1			
		ON-LINE ENTRY	51 1 0 1			
		DEBUG	51 1 1 1			
		OFF/DISP REPORT	51 2 0 1		54	
		REQUIREMENTS DEF.	51 2 1 1			3
		DRF DB MODIFY	51 2 2 1			25
		EXTRACT REPORT	51 2 3 1			555
		TEST	51 2 5 1			2
		SYSTEM BACKUP	51 3 0 1			3355
		CONVERSION	55 0 0 1			
		COURT/DA	53 1 0 1			322 5
		DEF/CASE ST	53 1 1 1			
		HELD/COURT	53 1 2 1			
		CP STATUS	53 1 3 1			
		MC STATUS	53 1 4 1			
		BOOKING TO DAMIS	54 0 0 1			
		EVENT PROCESSING	55 0 0 1			
		FIRST 5 EVENTS	55 1 0 1			
		DESIGN	55 1 2 1			
		** YEARLY TOTAL **			54	555555555 5
		DESIGN	55 1 2 2	55554444		
		REMAINING EVENTS	55 3 0 2			
		DESIGN	55 3 2 2	33333333333333		
		IMPLEMENT	55 3 3 2	22222222222222		
		TEST %H.O.#	55 3 5 2			555
		EVENT UPDATE	55 5 0 2	1111		
		DESIGN %VER,UPD.#	55 5 1 2			
		** YEARLY TOTAL **		555555555555555555555555		
				* * * * *		
2	B	EVA RASCKOWSKI	0 0 2 1		9346.23	177.0
		TEST %H.O.#	51 1 2 1			2
		PRINT REPORTS	51 2 4 1			55
		TEST	51 2 5 1			2
		NEW CASE ENTRY	52 0 0 1			
		NEW MC DATA	52 1 1 1			
		NEW CP DATA	52 1 2 1			
		NEXT EVENT	52 1 3 1			

WEEKS 1111111112222222222233333333334444444444555  
 1234567890123456789012345678901234567890123456789012

WEEKS 1111111111222222222233333333334444444444555  
1234567890123456789012345678901234567890123456789012

STAFF LEVEL ASSIGNMENT TASK YRS \*-----\* D/L - \$- WORK-DAYS

-MONTH- 1111111111111111  
11112222333444455556666777778888999900000111122222  
//////////////////// WFK ENDING FRIDAY //////////////////////  
0123012201120012301220112001230122011200122011201123  
9630630752962963074184185296306307307418529529630741

WITNESS ENT 52 1 4 1  
DEFENDANT 52 1 5 1  
IMPLEMENT 52 2 0 1 3555 55555  
\*\* YEARLY TOTAL \*\* 1 5555552 55555  
IMPLEMENT 52 2 0 2 5555  
TEST-H.O. 52 3 0 2 5  
DESIGN 55 3 2 2 333333333333333333  
IMPLEMENT 55 3 3 2 2222222222222222  
\*\* YEARLY TOTAL \*\* 2 55555555555555555555

3 C JACK MCAAN 0 0 3 1 3504.96 57.0  
TEST H.O. 51 1 2 1 3  
DOCUMENT 51 1 3 1 423  
DOCUMENT 51 2 6 1 22  
REQUIREMENTS DEF 55 1 1 1 22222222  
\*\* YEARLY TOTAL \*\* 1 45322244222  
DA EVALUATION 55 2 0 2 555  
PRELIM HEARING 55 2 1 2  
CP ARRAIGNMENT 55 2 2 2  
CP TRIAL 55 2 3 2  
MC TRIAL 55 2 4 2  
SENTENCING 55 2 5 2  
REQUIREMENTS DEF 55 3 1 2 22222  
\*\* YEARLY TOTAL \*\* 2 22222555

4 C GEORGE HUTTON 0 0 4 1 847.42 14.0  
REQUIREMENTS DEF. 51 2 1 1 1  
REQUIREMENTS DEF 52 1 0 1 22  
REQUIREMENTS DEF 55 1 1 1 11111112  
\*\* YEARLY TOTAL \*\* 1 2311111112

5 F DONALD KREBS 0 0 5 1 8238.34 190.0  
SELECTIVE PURGE 51 5 0 1 555  
REVISE PROGRAM 54 0 1 1 555  
IMPLEMENTATION 55 1 3 1 5555  
\*\* YEARLY TOTAL \*\* 1 5555555555  
IMPLEMENTATION 55 1 3 2 55  
SCREEN DEVEL 55 1 4 2 555  
TEST 55 1 5 2 55  
SCREEN DEF 55 3 4 2 333333333333

WEEKS 1111111111222222222233333333334444444444555  
1234567890123456789012345678901234567890123456789012

WEEKS 1111111111222222222233333333334444444444555  
1234567890123456789012345678901234567890123456789012

STAFF LEVEL ASSIGNMENT TASK YRS \*-----\* D/L -3- WORK-DAYS

-MONTH- 1111111111111111  
11112222333344445555666677778888999900000111122222  
////////////////// WEEK ENDING FRIDAY ////////////////////  
0123012201120012301220112001230122011200122011201123  
9630630752962963074184185296306307307418529529630741

IMPLEMENTATION 55 5 2 2 555  
EVENT TYPE 55 5 3 2  
DISP TYPE 55 5 4 2  
WITNESSING PROCES 56 0 0 2 222222222222  
SYSTEM MAINT 57 0 0 2  
DESTRUCTION ALERT 57 1 0 2 555555  
\*\* YEARLY TOTAL \*\* 2 555555555555555555555555555555

STAFF LEVEL	ASSIGNMENT	TASK	YRS	WEEKS	D/L	WORK-DAYS
6	A JOSEPH SPRINGER	0 0 6	1	* * * * *	3524.24	39.0
	SUPERVISION	58 0 0	1	1111111111111111		
	** YEARLY TOTAL **		1	1111111111111111		
7	E IRV CHASEN	0 0 7	1	* * * * *	0.0	0.0
8	G LOU SAULINO	0 0 8	1	* * * * *	0.0	0.0
9	F ANN WOODS	0 0 9	1	* * * * *	0.0	0.0
10	H BUD SHERLOCK	0 0 10	1	* * * * *	0.0	0.0
11	G MILT SORK	0 0 11	1	* * * * *	0.0	0.0
12	F AL GIACOMUCCI	0 0 12	1	* * * * *	1560.96	36.0
	PHASE I REV.	51 4 0	1	33333333333333		
	** YEARLY TOTAL **		1	33333333333333		
13	C BRUCE JAWER	0 0 13	1	* * * * *	0.0	0.0
14	I BRUCE KAUFFMAN	0 0 14	1	* * * * *	0.0	0.0
15	A DON CLOUD	0 0 15	1	* * * * *	0.0	0.0
16	C LANA BRACH	0 0 16	1	* * * * *	0.0	0.0
17	R RICH MCENNIS	0 0 17	1	* * * * *	0.0	0.0

WEEKS 1111111111222222222233333333334444444444555  
1234567890123456789012345678901234567890123456789012



WEEKS 1111111111222222222222223333333333334444444444555  
1234567890123456789012345678901234567890123456789012  
STAFF LEVEL ASSIGNMENT TASK YRS #-----  
-MONTH- 11111111111111  
11112222333344445555666677778888999900000111122222  
//////////////// WEEK ENDING FRIDAY ///////////////////////////////////  
0123012201120012301220112001230122011200122011201123  
9630630752962963074184185296306307307418529529630741

D/L -s- WORK-DAYS

99

DAMIS MILESTONES  
----PHASE I ----  
ONLINE CASE ENTRY 051 1 1  
OFFENSE/DISP REPRT 051 2 1  
----PHASE II ----  
CONVERT COURT DATA 053 1 1  
BOOKING 054 1 1  
EVENT PROCESSING 055 0 1  
PRELIM REQ DEF. 055 1 1  
VERIFICATION 056 0 1

\* \* \* \* \*

□ □ □ □ □

NEW CASE ENTRY 052 1 2  
5 EVENTS COMPL. 055 2 2  
PRELIM DA EVAL 055 3 2  
PHASE II CUIQVER 055 4 2  
DISTRUCTION ALERT 057 0 2

□ □ □ □ □

T O T A L 39038.32 707.0

NTASK- 93

TASK TOTALS				CURRENT		BUDGETARY		STATUS
TASK	DESCRIPTION	WORK DAYS	D/L \$-	PLANNED W-DAYS	-WK 1- % COMPL	EARNED W-DAYS	% COMPL	VARIANCE W-DAYS
51 1 1	DEBUG	9.0	544.77	0.0	0.0	0.0	0.0	0.0
51 1 2	TEST H.O.D.	5.0	285.11	0.0	0.0	0.0	0.0	0.0
51 1 3	DOCUMENT	9.0	544.77	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 51- 1	23.0	1374.65	0.0	0.0	0.0	0.0	0.0
51 2 1	REQUIREMENTS DEF.	4.0	242.12	0.0	0.0	0.0	0.0	0.0
51 2 2	ORF DB MODIFY	7.0	423.71	0.0	0.0	0.0	0.0	0.0
51 2 3	EXTRACT REPORT	15.0	907.95	0.0	0.0	0.0	0.0	0.0
51 2 4	PRINT REPORTS	10.0	517.60	0.0	0.0	0.0	0.0	0.0
51 2 5	TEST	4.0	224.58	0.0	0.0	0.0	0.0	0.0
51 2 6	DOCUMENT	4.0	242.12	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 51- 2	44.0	2558.08	0.0	0.0	0.0	0.0	0.0
51 3 0	SYSTEM BACKUP	16.0	968.48	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 51- 3	16.0	968.48	0.0	0.0	0.0	0.0	0.0
51 4 0	PHASE I REV.	36.0	1560.96	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 51- 4	36.0	1560.96	0.0	0.0	0.0	0.0	0.0
51 5 0	SELECTIVE PURGE	15.0	650.40	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 51- 5	15.0	650.40	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 51	134.0	7112.56	0.0	0.0	0.0	0.0	0.0
52 1 0	REQUIREMENTS DEF	4.0	242.12	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 52- 1	4.0	242.12	0.0	0.0	0.0	0.0	0.0
52 2 0	IMPLEMENT	63.0	3294.48	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 52- 2	63.0	3294.48	0.0	0.0	0.0	0.0	0.0
52 3 0	TEST-H.O.	5.0	257.20	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 52- 3	5.0	257.20	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 52	72.0	3803.80	0.0	0.0	0.0	0.0	0.0
53 1 0	CONPT/DA	12.0	726.36	0.0	0.0	0.0	0.0	0.0

TASK TOTALS				PLANNED	CURRENT	BUDGETARY	STATUS	
TASK	DESCRIPTION	WORK DAYS	D/L --	W-DAYS	-WK 1- % COMPL	EARNED W-DAYS	% COMPL	VARIANCE W-DAYS
	SUB-TOTAL FOR TASK 53- 1	12.0	726.36	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 53	12.0	726.36	0.0	0.0	0.0	0.0	0.0
54 0 1	REVISE PROGRAM	15.0	650.40	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 54- 0	15.0	650.40	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 54	15.0	650.40	0.0	0.0	0.0	0.0	0.0
55 1 1	REQUIREMENTS DEF	25.0	1513.25	0.0	0.0	0.0	0.0	0.0
55 1 2	DESIGN	36.0	2257.92	0.0	0.0	0.0	0.0	0.0
55 1 3	IMPLEMENTATION	30.0	1300.80	0.0	0.0	0.0	0.0	0.0
55 1 4	SCREEN DEVEL	15.0	650.40	0.0	0.0	0.0	0.0	0.0
55 1 5	TEST	10.0	433.60	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 55- 1	116.0	6155.96	0.0	0.0	0.0	0.0	0.0
55 2 0	QA EVALUATION	15.0	940.80	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 55- 2	15.0	940.80	0.0	0.0	0.0	0.0	0.0
55 3 1	REQUIREMENTS DEF	10.0	627.20	0.0	0.0	0.0	0.0	0.0
55 3 2	DESIGN	93.0	5359.65	0.0	0.0	0.0	0.0	0.0
55 3 3	IMPLEMENT	62.0	3573.12	0.0	0.0	0.0	0.0	0.0
55 3 4	SCREEN DEF	36.0	1560.96	0.0	0.0	0.0	0.0	0.0
55 3 5	TEST W.H.O.	15.0	940.80	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 55- 3	216.0	12061.72	0.0	0.0	0.0	0.0	0.0
55 5 0	EVENT UPDATE	4.0	250.88	0.0	0.0	0.0	0.0	0.0
55 5 2	IMPLEMENTATION	15.0	650.40	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 55- 5	19.0	901.28	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 55	366.0	20059.75	0.0	0.0	0.0	0.0	0.0
56 0 0	WITNESSING PROCES	24.0	1040.64	0.0	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 56- 0	24.0	1040.64	0.0	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 56	24.0	1040.64	0.0	0.0	0.0	0.0	0.0
57 1 0	DESTRUCTION ALERT	30.0	1300.80	0.0	0.0	0.0	0.0	0.0

TASK	DESCRIPTION	T A S K T O T A L S		D/L -\$\$-	PLANNED W-DAYS	C U R R E N T -WK 1- % COMPL	B U D G E T A R Y EARNED W-DAYS % COMPL	S T A T U S VARIANCE W-DAYS
		WORK DAYS						
	SUB-TOTAL FOR TASK 57- 1	30.0		1300.80	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 57	30.0		1300.80	0.0	0.0	0.0	0.0
58 0 0	SUPERVISION	39.0		3524.24	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 58- 0	39.0		3524.24	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 58	39.0		3524.24	0.0	0.0	0.0	0.0
95 1 0	TRAINING	5.0		258.80	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 95- 1	5.0		258.80	0.0	0.0	0.0	0.0
95 2 0	VACATION	10.0		561.45	0.0	0.0	0.0	0.0
	SUB-TOTAL FOR TASK 95- 2	10.0		561.45	0.0	0.0	0.0	0.0
	TOTAL FOR TASK 95	15.0		820.25	0.0	0.0	0.0	0.0
	T O T A L	707.0		39038.32	0.0	0.0	0.0	0.0

... CURRENT COST TO COMPLETE -- \$ 39038.32



	DIRECT LABOR		MLR	THRU G&A		
	EXPEND WEEKLY	EXPEND CUMLT V		EXPEND WEEKLY	EXPEND CUMLT V	
37	303.	303.	303.	303.	303.	303.
38	484.	787.	484.	787.	484.	787.
39	771.	1558.	771.	1558.	771.	1558.
40	1013.	2570.	1013.	2570.	1013.	2570.
41	961.	3532.	961.	3532.	961.	3532.
42	961.	4493.	961.	4493.	961.	4493.
43	1178.	5671.	1178.	5671.	1178.	5671.
44	1299.	6970.	1299.	6970.	1299.	6970.
45	1144.	8114.	1144.	8114.	1144.	8114.
46	1178.	9292.	1178.	9292.	1178.	9292.
47	1178.	10470.	1178.	10470.	1178.	10470.
48	1239.	11709.	1239.	11709.	1239.	11709.
49	996.	12705.	996.	12705.	996.	12705.
50	694.	13399.	694.	13399.	694.	13399.
51	996.	14396.	996.	14396.	996.	14396.
52	996.	15392.	996.	15392.	996.	15392.
53	1015.	16407.	1015.	16407.	1015.	16407.
54	1015.	17421.	1015.	17421.	1015.	17421.
55	1015.	18436.	1015.	18436.	1015.	18436.
56	1015.	19451.	1015.	19451.	1015.	19451.
57	1015.	20465.	1015.	20465.	1015.	20465.
58	1203.	21668.	1203.	21668.	1203.	21668.
59	1203.	22871.	1203.	22871.	1203.	22871.
60	1203.	24074.	1203.	24074.	1203.	24074.
61	889.	24963.	889.	24963.	889.	24963.
62	889.	25852.	889.	25852.	889.	25852.

	DIRECT LABOF		MLR	EXPEND CUMLTV	THRU G&A	
	EXPEND WEEKLY	EXPEND CUMLTV			EXPEND WEEKLY	EXPEND CUMLTV
63	889.	26741.	889.	26741.	889.	26741.
64	889.	27630.	889.	27630.	889.	27630.
65	889.	28520.	889.	28520.	889.	28520.
66	889.	29409.	889.	29409.	889.	29409.
67	889.	30298.	889.	30298.	889.	30298.
68	889.	31187.	889.	31187.	889.	31187.
69	889.	32076.	889.	32076.	889.	32076.
70	889.	32966.	889.	32966.	889.	32966.
71	889.	33855.	889.	33855.	889.	33855.
72	889.	34744.	889.	34744.	889.	34744.
73	889.	35633.	889.	35633.	889.	35633.
74	889.	36522.	889.	36522.	889.	36522.
75	622.	37144.	622.	37144.	622.	37144.
76	622.	37766.	622.	37766.	622.	37766.
77	622.	38388.	622.	38388.	622.	38388.
78	217.	38605.	217.	38605.	217.	38605.
79	217.	38822.	217.	38822.	217.	38822.
80	217.	39039.	217.	39039.	217.	39039.

STAFFING REQUIREMENTS  
YEAR 2

YEAR 1		YEAR 2		YEAR 3	
WEEK	STAFF	WEEK	STAFF	WEEK	STAFF
1	0	53	4	105	0
2	0	54	4	106	0
3	0	55	4	107	0
4	0	56	4	108	0
5	0	57	4	109	0
6	0	58	5	110	0
7	0	59	5	111	0
8	0	60	5	112	0
9	0	61	4	113	0
10	0	62	4	114	0
11	0	63	4	115	0
12	0	64	4	116	0
13	0	65	4	117	0
14	0	66	4	118	0
15	0	67	4	119	0
16	0	68	4	120	0
17	0	69	4	121	0
18	0	70	4	122	0
19	0	71	4	123	0
20	0	72	4	124	0
21	0	73	4	125	0
22	0	74	4	126	0
23	0	75	3	127	0
24	0	76	3	128	0
25	0	77	3	129	0
26	0	78	0	130	0
27	0	79	0	131	0
28	0	80	0	132	0
29	0	81	0	133	0
30	0	82	0	134	0
31	0	83	0	135	0
32	0	84	0	136	0
33	0	85	0	137	0
34	0	86	0	138	0
35	0	87	0	139	0
36	0	88	0	140	0
37	0	89	0	141	0
38	2	90	0	142	0
39	3	91	0	143	0
40	4	92	0	144	0
41	4	93	0	145	0
42	4	94	0	146	0
43	5	95	0	147	0
44	5	96	0	148	0
45	5	97	0	149	0
46	5	98	0	150	0
47	5	99	0	151	0
48	5	100	0	152	0
49	4	101	0	153	0
50	3	102	0	154	0
51	4	103	0	155	0
52	4	104	0	156	0



