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TRAINING
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GROUP

TECHNICAL REPORT 123

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**CHIEF OF NAVAL AIR TRAINING
RESOURCE PLANNING SYSTEM (RPS)
PROGRAMMER DOCUMENTATION**

MAY 1982

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TRAINING ANALYSIS AND EVALUATION GROUP
ORLANDO FLORIDA 32813

Technical Report 123

CHIEF OF NAVAL AIR TRAINING
RESOURCE PLANNING SYSTEM (RPS)
PROGRAMMER DOCUMENTATION

Thomas O. Peebles
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Training Analysis and Evaluation Group

May 1982

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Technical Report 123

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
I	INTRODUCTION	7
	Purpose of the Report.....	7
	Organization of the Report.....	7
II	OVERVIEW OF THE RESOURCE PLANNING SYSTEM.....	9
	System Options.....	9
III	RESOURCE PLANNING SYSTEM PROGRAMMER DOCUMENTATION.....	13

LIST OF ILLUSTRATIONS

<u>Figure</u>		<u>Page</u>
1	Resource Planning System (RPS) Master Menu.....	11
2	Overall System Flow Chart.....	14

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Training Wing Resource Requirements Calculations.....	10



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SECTION I

INTRODUCTION

The Chief of Naval Air Training (CNATRA) has the primary responsibility to provide undergraduate pilot and naval flight officer training for the Navy, Marine Corps, Coast Guard, and selected foreign nationals. To accomplish this mission, CNATRA is responsible for overall management functions including budget submissions to ensure that adequate funds are allocated to conduct all required training and operations. A variety of factors (i.e., availability of aircraft, manning levels, naval aviator/naval flight officer continuation rates) impact on CNATRA's planning and management functions and resource requirements. To facilitate the planning process and to provide faster and more accurate information analyses, the Chief of Naval Education and Training (CNET) tasked¹ the Training Analysis and Evaluation Group (TAEG) to design a resource requirements projection model for CNATRA. The Resource Planning System (RPS) was designed to efficiently manage and analyze the enormous amount of data necessary to determine the resource requirements to produce a specified number of pilots and/or naval flight officers.

Proper documentation is essential for effectively using and efficiently maintaining any computer software. The documentation should be comprised of both user and programmer information and be designed to fill the informational needs of the designated personnel who will ultimately be responsible for using the system and maintaining the software. Hodak, Parrish, and Middleton (1982)² provides user documentation for RPS. The information contained in this present report is intended to be used by the programmers and operating personnel specifically involved in maintaining the CNATRA RPS.

PURPOSE OF THE REPORT

The purpose of this report is to provide a brief overview of the Chief of Naval Air Training Resource Planning System and to provide detailed programmer documentation for all of the RPS subsystems.

ORGANIZATION OF THE REPORT

In addition to this introduction the report contains two other sections. Section II presents an overview of RPS and briefly describes the function of each option in the system. Section III provides detailed programmer documentation for each of the options in RPS.

¹CNET ltr Code 022 of 23 Dec 1981

²Gary W. Hodak, William F. Parrish, and Morris G. Middleton. Chief of Naval Air Training Resource Planning System (RPS). Technical Report 116, 1982. Training Analysis and Evaluation Group, Orlando, FL 32813.

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SECTION II

OVERVIEW OF THE RESOURCE PLANNING SYSTEM

The purpose of the RPS is to provide an easy and efficient means to determine the resources required to produce a specified number of naval aviators and naval flight officers. The model is based on a roll-back technique in which the desired output of naval aviators/naval flight officers is given as the independent variable. Then utilizing a specified predetermined training time and attrition rate, the model determines the number of students that must enter the pipeline and the number of support personnel, instructors, and aircraft required for each training wing (TRAWING) to meet the training objective. The overall resource requirements for each TRAWING are derived utilizing the equations shown in table 1.

Figure 1 presents the options that comprise the RPS. Five primary options may be selected by the user via the Master RPS Menu. When the user selects an option, the subsystem appears on the display as a list (menu) of additional options which allow the user to insert, delete, update, print, or analyze various data elements.

This system is designed to be highly interactive and user oriented; consequently, numerous messages and instructions are provided throughout to aid the user. Additionally, the system can accommodate a variety of users in both the initial insertion of data as well as in the analysis of these data.

The operating environment and special support software deserve special attention and are discussed in this overview. The RPS software is written in BASIC-2 and is designed to operate on a WANG 2200 VP or WANG 2200 MVP computer in either a multiplexed or non-multiplexed disk environment. All models of currently available WANG disks are supported. The RPS uses Key File Access Method Seven (KFAM-7) for initializing all of the system data key files and the help subsystem files. Full record protection is afforded by RPS and KFAM-7. The KFAM-7 programs used with the RPS have been modified to support additional error recovery tables. Therefore, only the KFAM-7 programs supplied with the RPS should be used.

In a multi-user environment, RPS assigns a unique station number to each user. This station number, along with the current date and disk address of the data files, is displayed in the upper right corner of the master menu and all subsystem menus.

SYSTEM OPTIONS

The Special Support Subsystem (Option \$) software consists of programs to initialize files, edit help files, rebuild key files, and provide error recovery. Two special support options are provided for error recovery. These options allow the user to reset the RPS Busy Flags and reset the User Table.

Technical Report 123

TABLE 1. TRAINING WING RESOURCE REQUIREMENTS CALCULATIONS

Flight Hours

$$\text{Annual Flight Hours (I)} = \text{Phased PTR (I)} \times \text{aircraft HRS/Student (I)}$$

$$\text{Total Annual Flight Hours} = \sum_{\substack{\text{Other} \\ \text{I} = \text{USN}}} \text{Annual Flight Hours (I)}$$

Where I is the type of student--USN, USMC, USCG, Foreign, Other.

PTR is pilot training rate

Aircraft

$$\text{A-3 Status Aircraft (I)} = \frac{\text{Annual Aircraft Flight Hours (I)}}{\text{Annual Aircraft Utilization (I)}}$$

$$\text{Total A-3 Status Aircraft} = \sum_{\substack{\text{Other} \\ \text{I} = \text{USN}}} \text{A-3 Status Aircraft (I)}$$

Group IX Enlisted

$$\text{Group IX Enlisted (I)} = \sum_J \text{A-3 Status Aircraft (I)} \times \text{Mo (I,J)}$$

Where Mo = Maintenance Factor and J = Squadron or Naval Air Station

$$\text{Total Group IX Enlisted} = \sum_{\substack{\text{Other} \\ \text{I} = \text{USN}}} \text{Group IX Enlisted (I)}$$

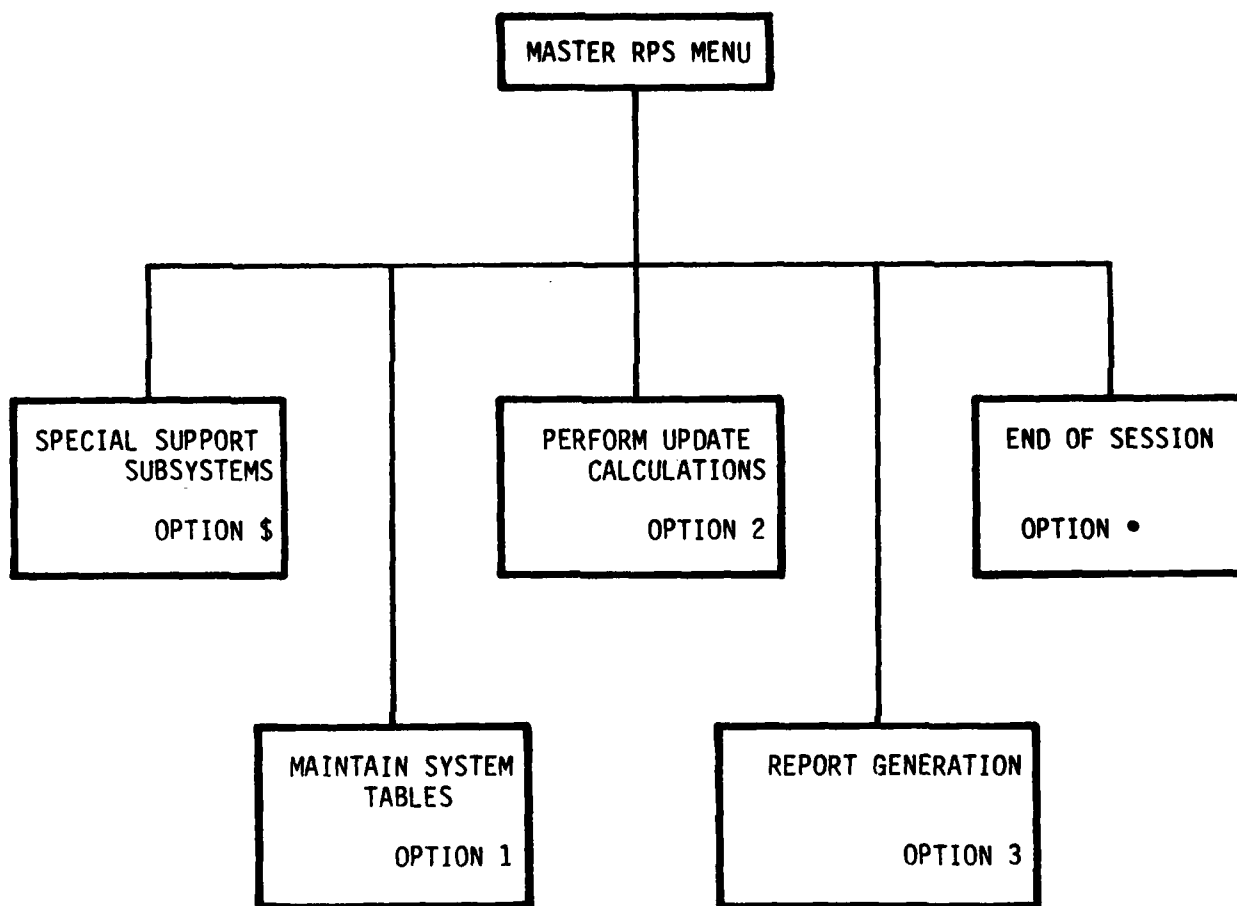


Figure 1. Resource Planning System (RPS) Master Menu

Technical Report 123

The help files may be used to provide messages to tell the user how to proceed at various places in the system. These help files may be customized by the user to place more or less emphasis on different parts of the system and to describe procedures or techniques which may be unique to the command.

The Maintain System Tables Subsystem (Option 1) allows the user to input, edit, delete, and print data items related to the pilot training rate (PTR). This also includes Planning Factors and Phasing Percentages.

The Perform Update Calculations Subsystem (Option 2) calculates the PTR file, the phased PTRs and the resource outputs. Additionally, this subsystem allows the user to print the Phase PTR.

The Report Generation Subsystem (Option 3) enables the user to print a variety of reports from the calculated PTR file and Phased FY requirements.

SECTION III

RESOURCE PLANNING SYSTEM PROGRAMMER DOCUMENTATION

The computer program documented in this section is designed to fill the informational needs of the programming personnel assigned to use the RPS. The documentation is structured exactly as the program options are presented in section II. Consequently, the programmer can readily follow the explanations. Figure 2 depicts the overall Resource Planning System.

The format of the documentation information is the same for each of the options. The Program Abstract will be encountered first. It contains a brief description of the option and specifies the computer hardware and memory requirements. Also contained on the form are listings of the required program and data files. The next form encountered is the system flow chart. It provides a graphic overview of the option being documented. Its major purpose is to show how the operations flow through the process rather than how the individual steps are completed. The third form (if applicable) provides the programmer with a list of all common data elements. And, lastly, a complete program listing is included.

The remainder of this section presents the detailed program abstracts and flow charts for the RPS.

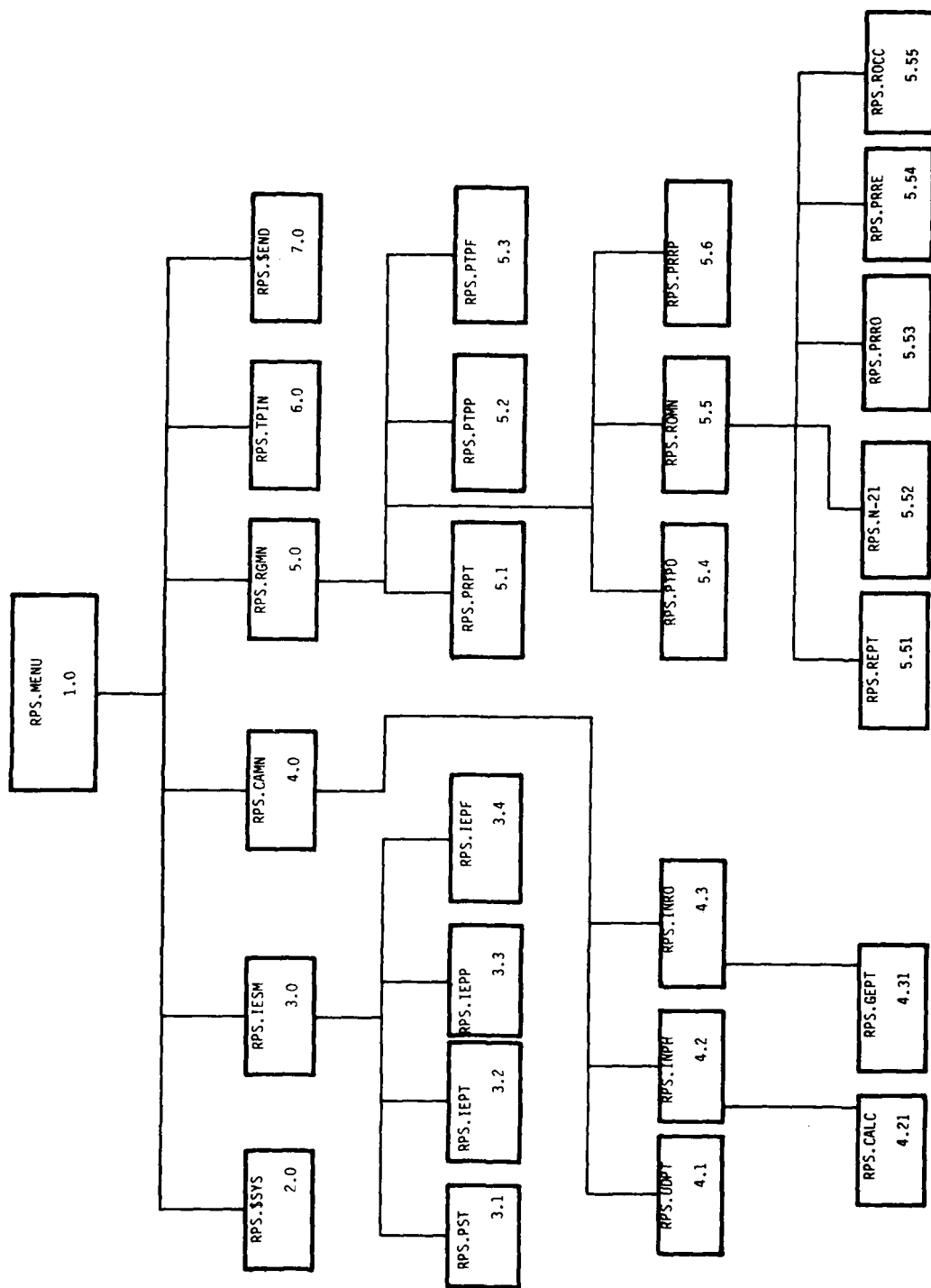


Figure 2. Overall System Flow Chart

Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RPS.MENU

1.0

Master Menu Display Program--upon user selection, this program loads RPS.\$SYS, RPS.IESM, RPS.CAMN, RPS.RGMN, RPS.TPIN or RPS.\$END which respectively perform the following functions:

Special Support Systems
Maintain System Tables
Perform Update Calculations
Report Generation
Training Phase Information
End of Session

HARDWARE: _____

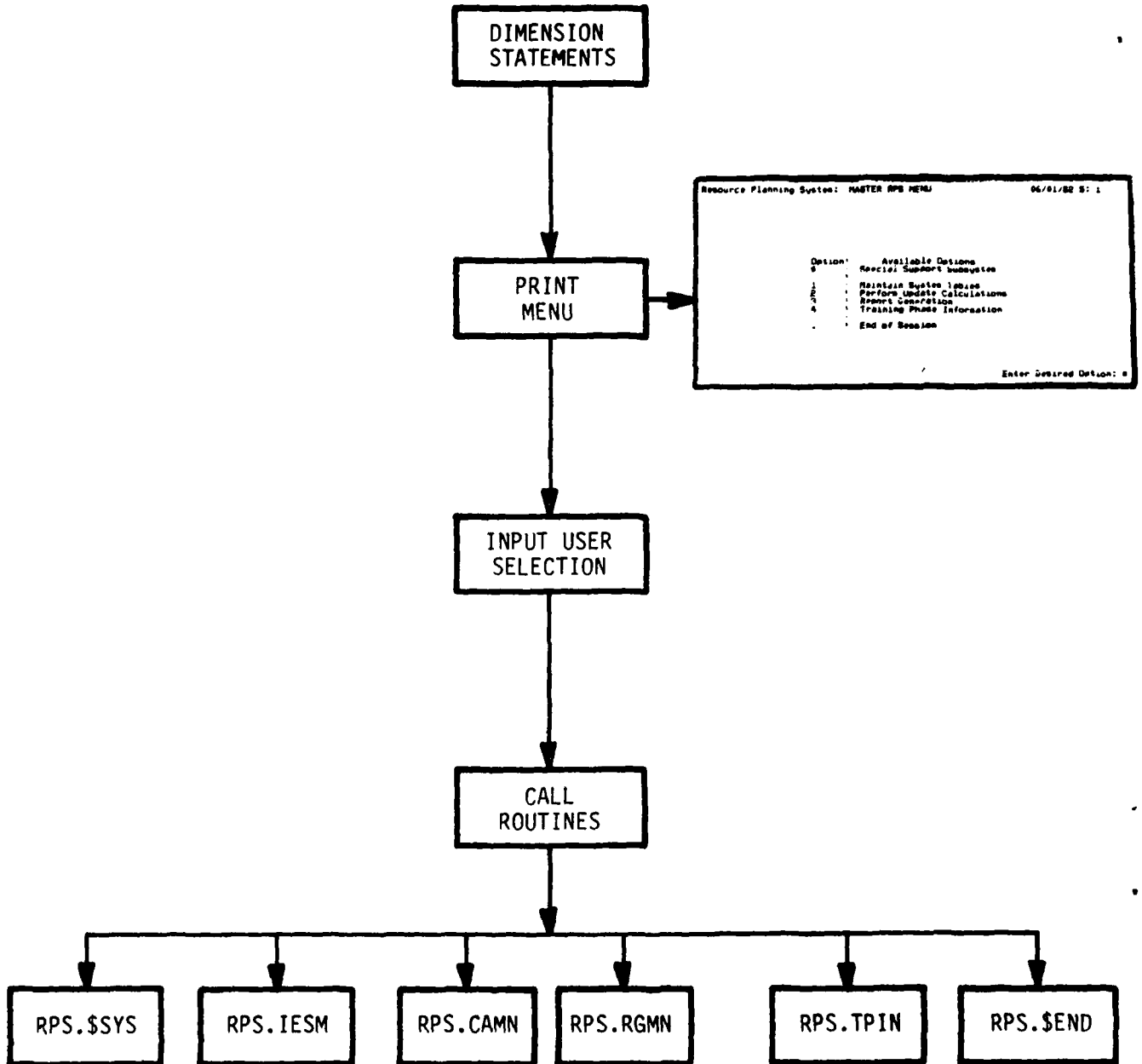
MEMORY: _____

PROGRAM FILES

DATA FILES

Technical Report 123

RPS.MENU
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: IESM

3.0

The Input/Edit Menu program will display the Resource Planning System input/edit subsystem menu. The options present are:

1. Maintain Pipeline Structure Table
2. Input/Edit PTR File
3. Input/Edit Phasing Percentages File
4. Input/Edit Planning Factor File
- Return to the Master Menu

HARDWARE: _____

MEMORY: _____

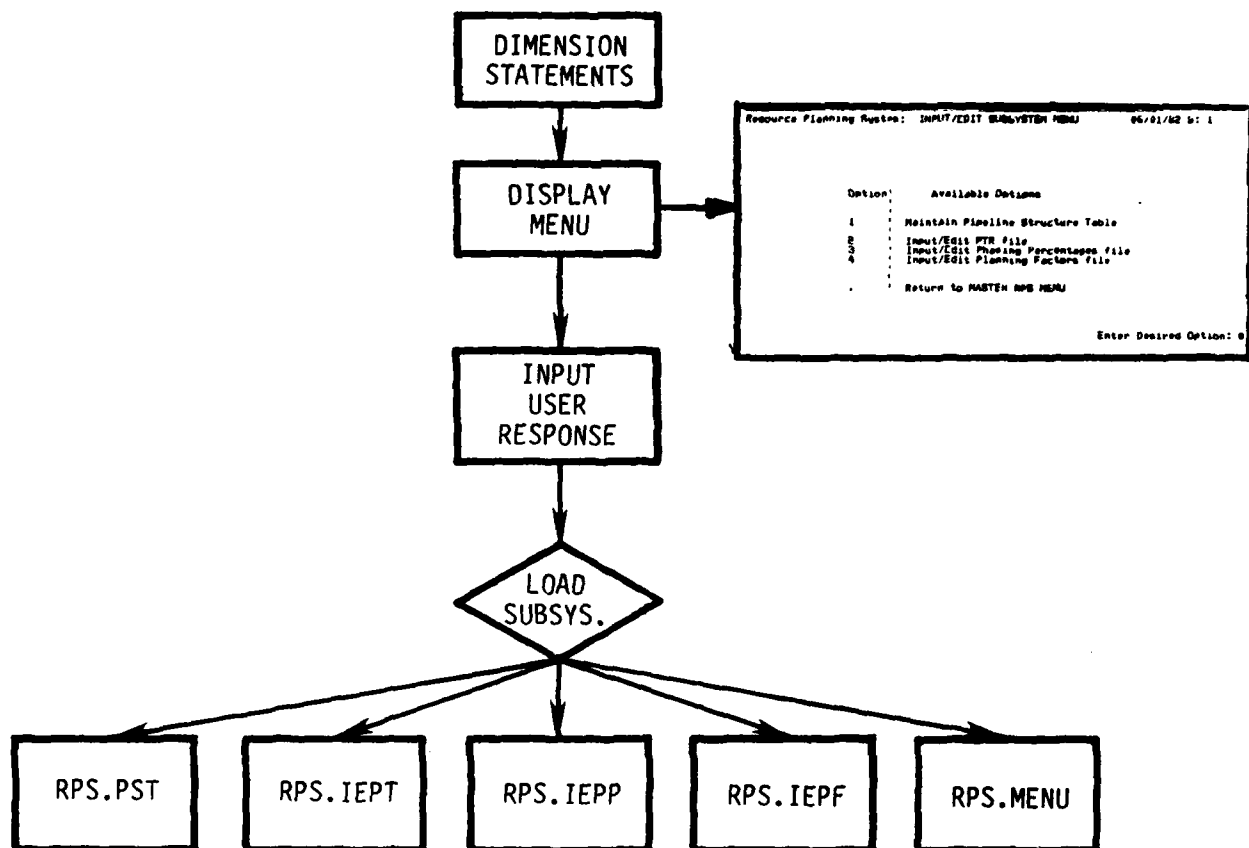
PROGRAM FILES
RPS.PST RPS.IEPT RPS.IEPP RPS.IEPF RPS.MENU

DATA FILES

Technical Report 123

RPS.IESM

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PST

3.1

RPS.PST is the program which creates and maintains the pipeline structure table. The output is too extensive to fit on one screen so it is paged across the screen in three steps. Possible options include:

Previous field or menu, Next field
Next page, Previous page, Right screen, Left screen,
Save table
Display help, Print table &
of line to edit.

HARDWARE: _____

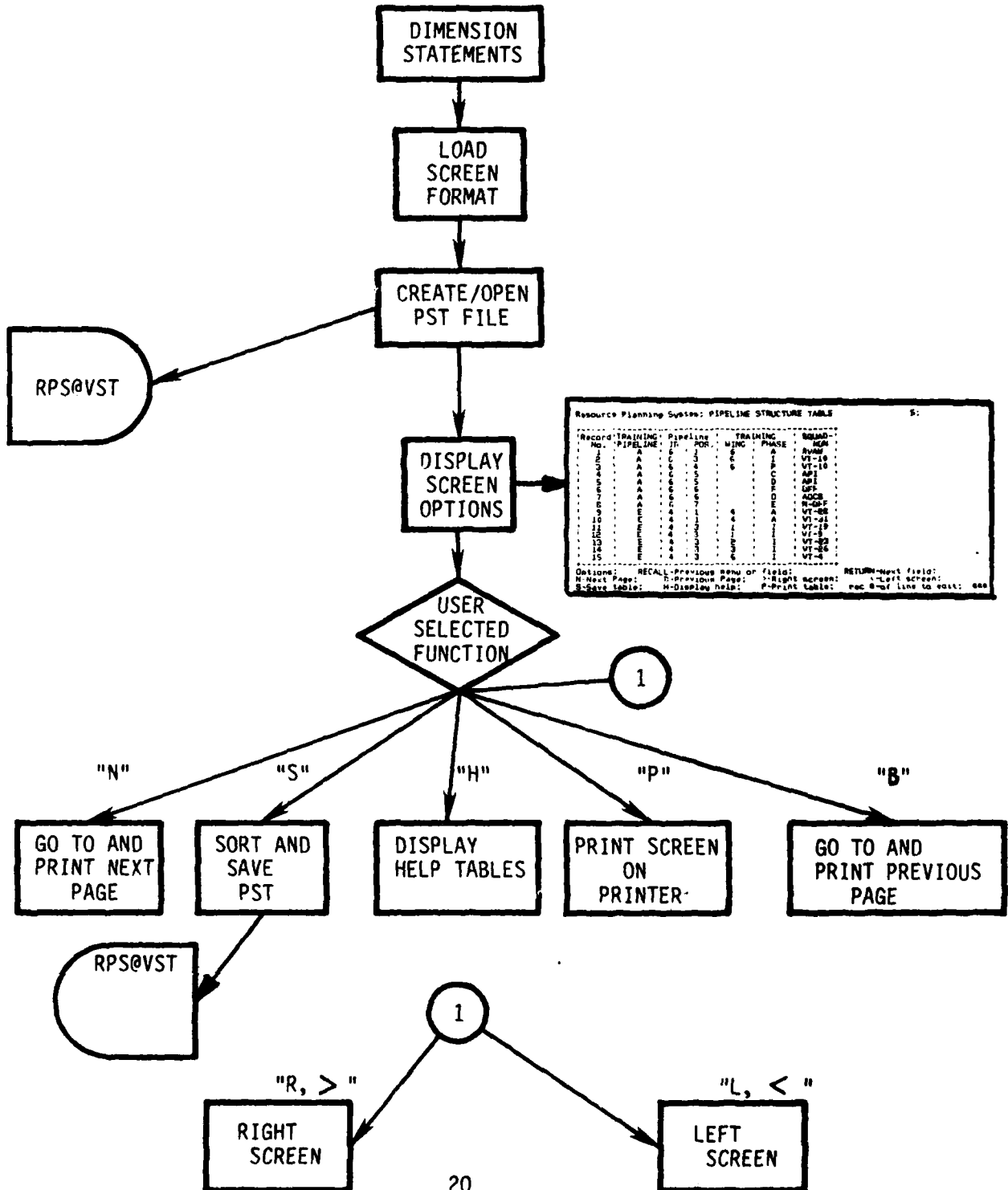
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS@VST

Technical Report 123

RPS.PST
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RPS.IEPT

3.2

This program is used to edit the PTR and attrition rate (ATR) file, RPS.FIPT. The user is given three edit options:

1. Edit for existing record
2. Add for new records
3. Delete for old records

KFAM file RPS.KIPT is used to Index the record that is to be input/edited. An extensive Input routine is used to setup the keyed record access.

HARDWARE: _____

MEMORY: _____

PROGRAM FILES

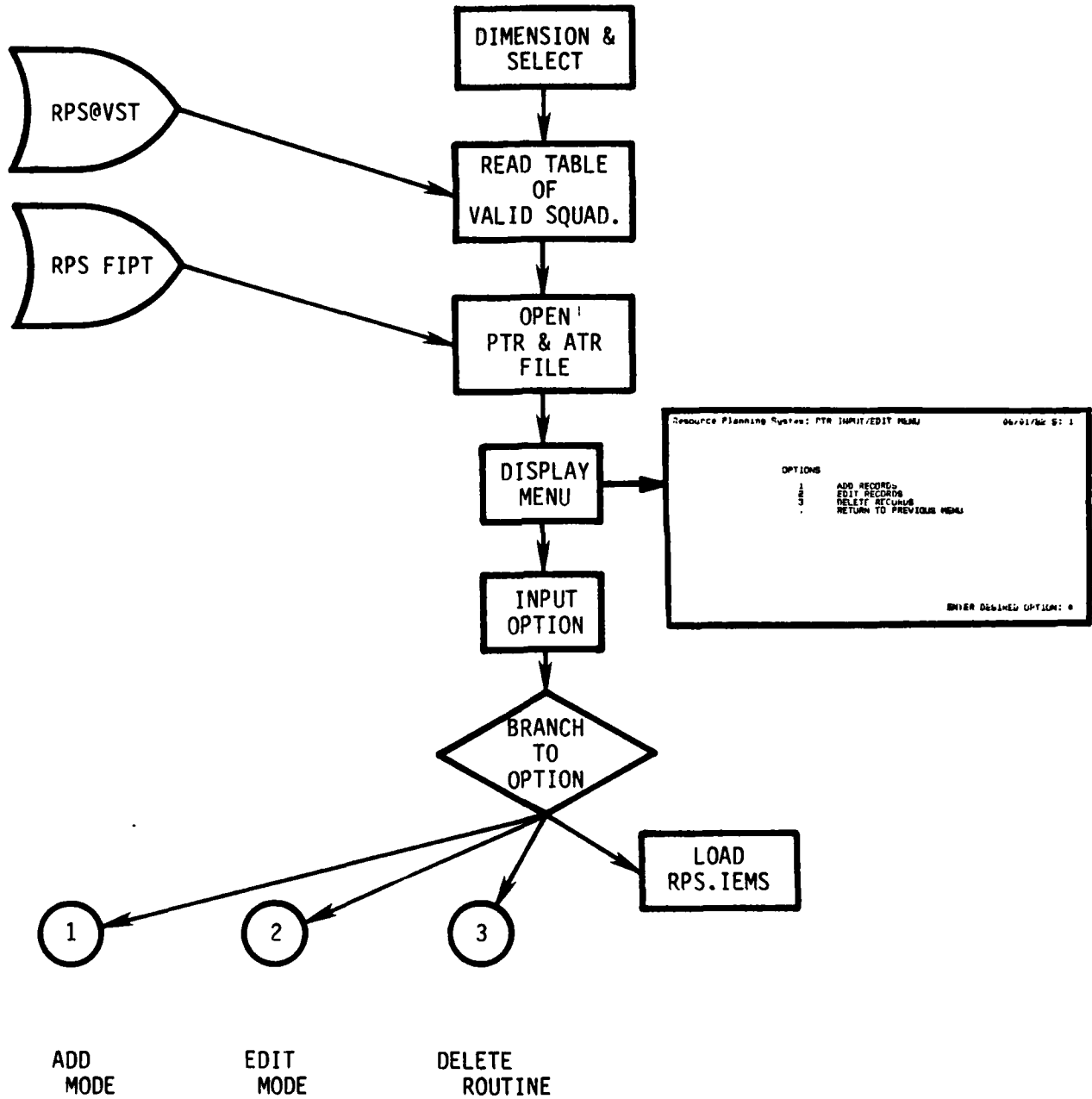
DATA FILES

RPS FIPT
RPS KIPT
RPSOVST

Technical Report 123

RPS.IEPT

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: IEPP

3.3

This program allows the user to add, edit and delete records from the phasing percentage file of the Resource Planning System. It contains a record of phasing percentages for each type training, pipeline ID and phase. The file is organized using KFAM-7 and records are blocked 2 per sector with a logical record length of 124 bytes. The key is stored in character form. The remaining fields are numeric and are stored in pack format. The key begins in position 1 of the logical record and position 3 of the fiscal record. The KFAM record protection is not used. In its place the record uses a status byte in position 5 of the logical record.

HARDWARE: _____

MEMORY: _____

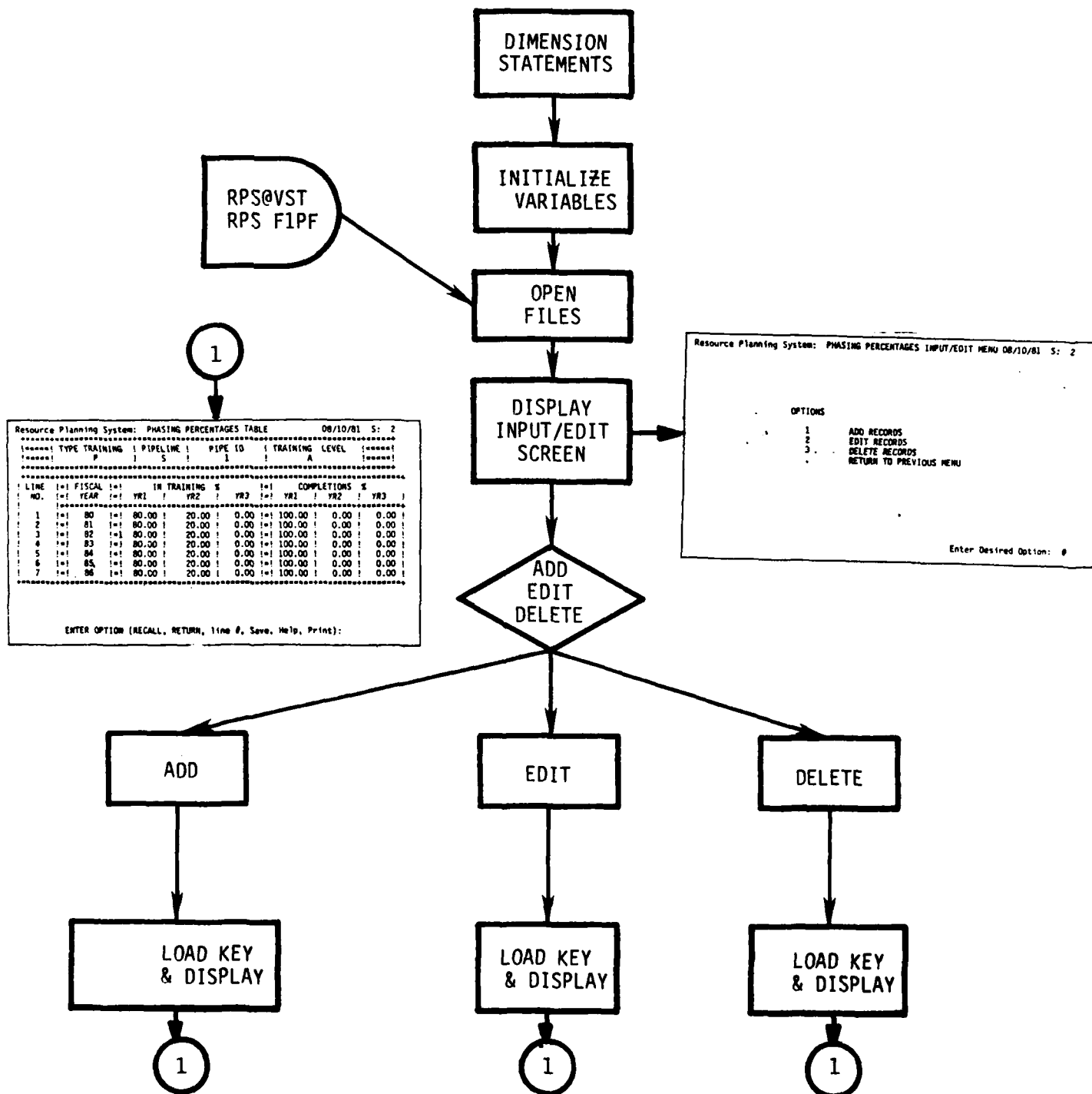
PROGRAM FILES

DATA FILES
RPS F1PP RPS K1PP

Technical Report 123

RPS.IEPP

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: IEPF

3.4

This program allows users to add, edit, and delete records from the planning factor file of the Resource Planning System. It contains a record of planning factors for each aircraft and flight simulation device used, subdivided by squadron level. The key is 15 bytes long and consists of a training type code, a pipeline ID, a phase, a squadron name, a training level code, a military branch code and an aircraft or simulator name. Records are blocked 3 per sector. The key begins in position 1 of the logical record and in position 3 of the fiscal record. The KFAM record protection is not used.

HARDWARE: _____

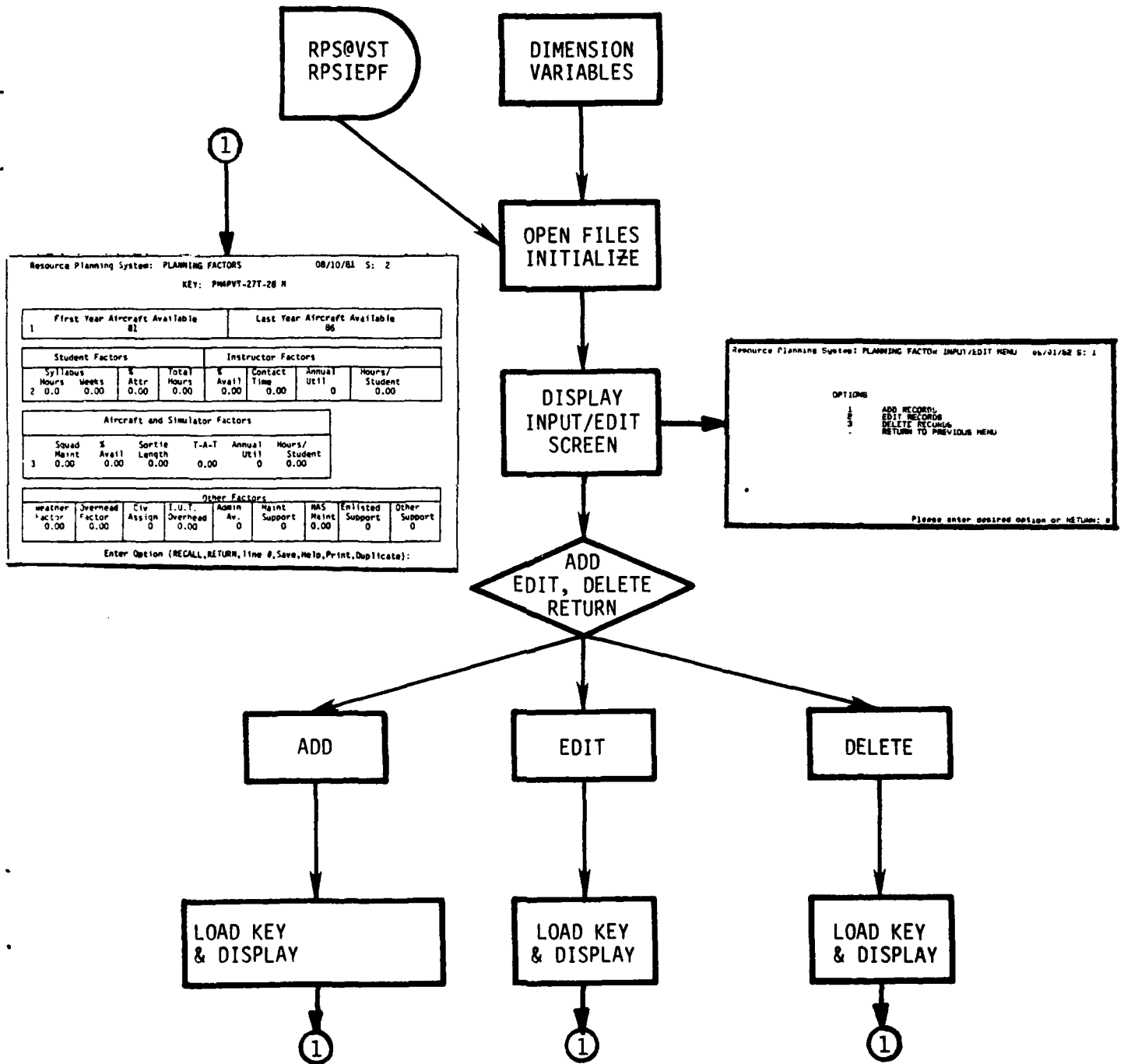
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS@VST RPS F1PF RPS K1PF

Technical Report 123

RPS.IEPF
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: CAMN

4.0

This program will display the project management system calculations subsystem menu. The options include:

- calculate PTR File
- calculate Phased PTRs
- calculate Resource Output File
- Return to Master Menu

HARDWARE: _____

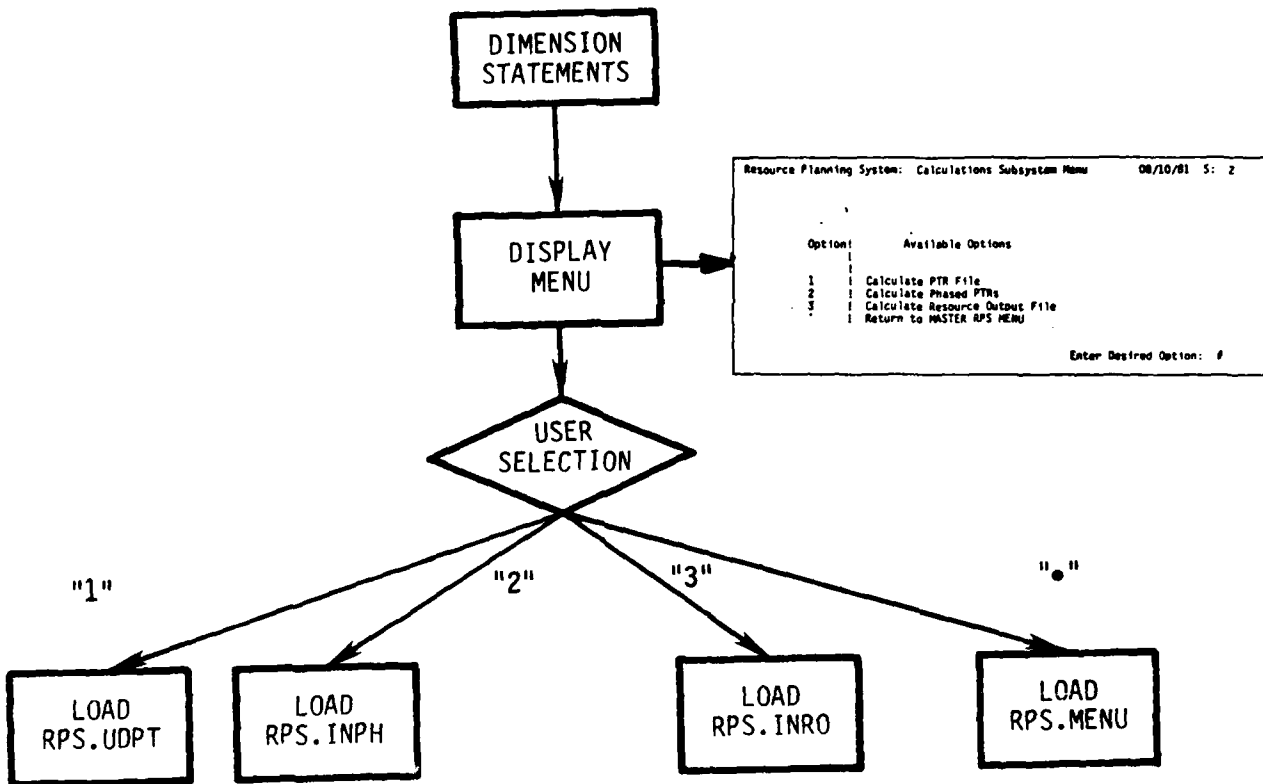
MEMORY: _____

PROGRAM FILES
RPS.UDPT RPS.INPH RPS.INRO RPS.MENU

DATA FILES

RPS.CAMN

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: UDPT

4.1

This program calculates PTRs in the PTR file. The desired outputs at the advanced level are entered by the user in the input/edit program for the PTR file. This program uses attrition rates to calculate the required outputs of each training level within each pipeline ID. The PTRs calculated are distributed to the various squadrons within each pipeline ID. Calculations are made according to the flow of each pipeline.

Processing is done by sequentially reading through the pipeline structure table to get pipeline structure and keys to access the student type and attrition rate tables in the PTR file.

HARDWARE: _____

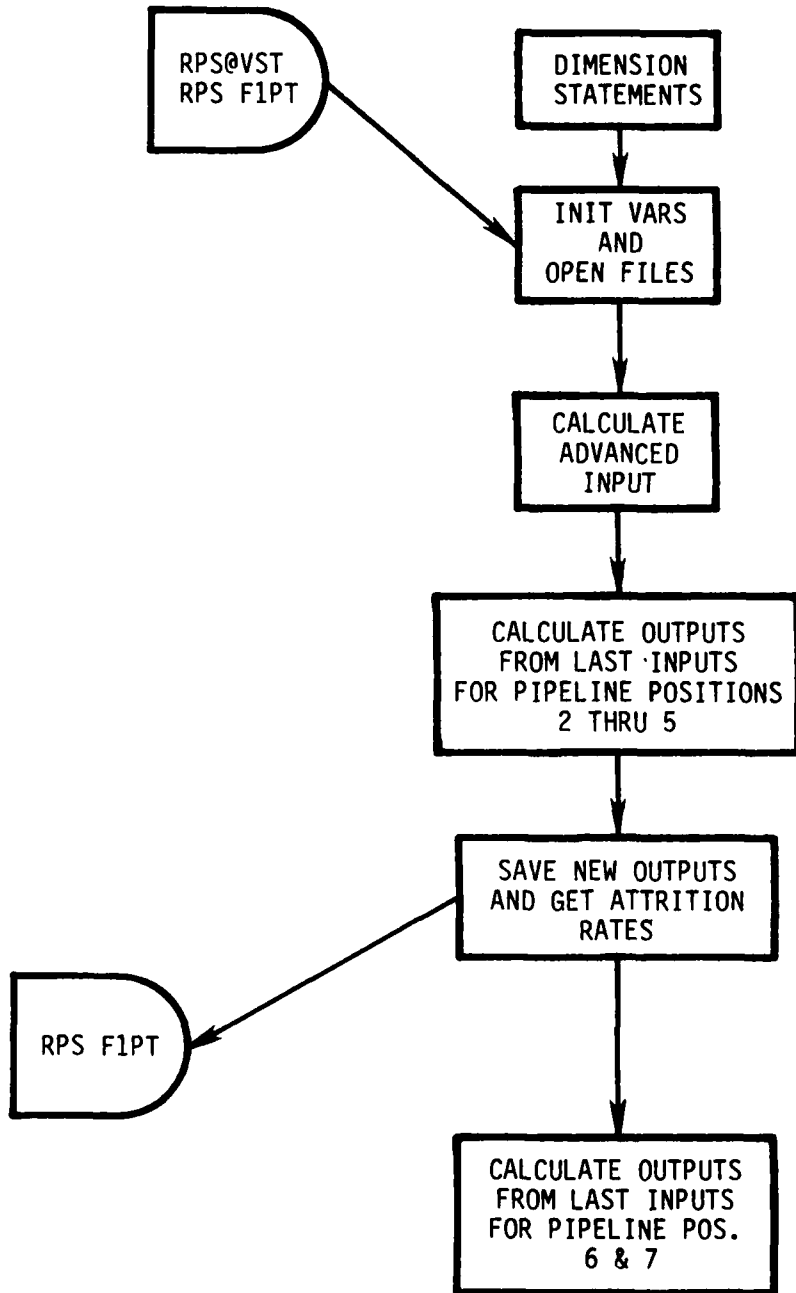
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS@VST RPS FIPT RPS KIPT

Technical Report 123

RPS.UOPT
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: CALC

4.21

This program calculates the phased PTRs based upon the PTR level in the PTR file. It uses the phasing percentages file to obtain the percentages for calculating the phased PTRs. As the phased PTRs are calculated, an output file is created which contains two records for each record of the PTR file. Both records will contain the PTRs, the phasing percentages, and the attrition rates. The first contains the phased PTRs for men in training. The second record in each set contains the phased PTRs for completion.

HARDWARE: _____

MEMORY: _____

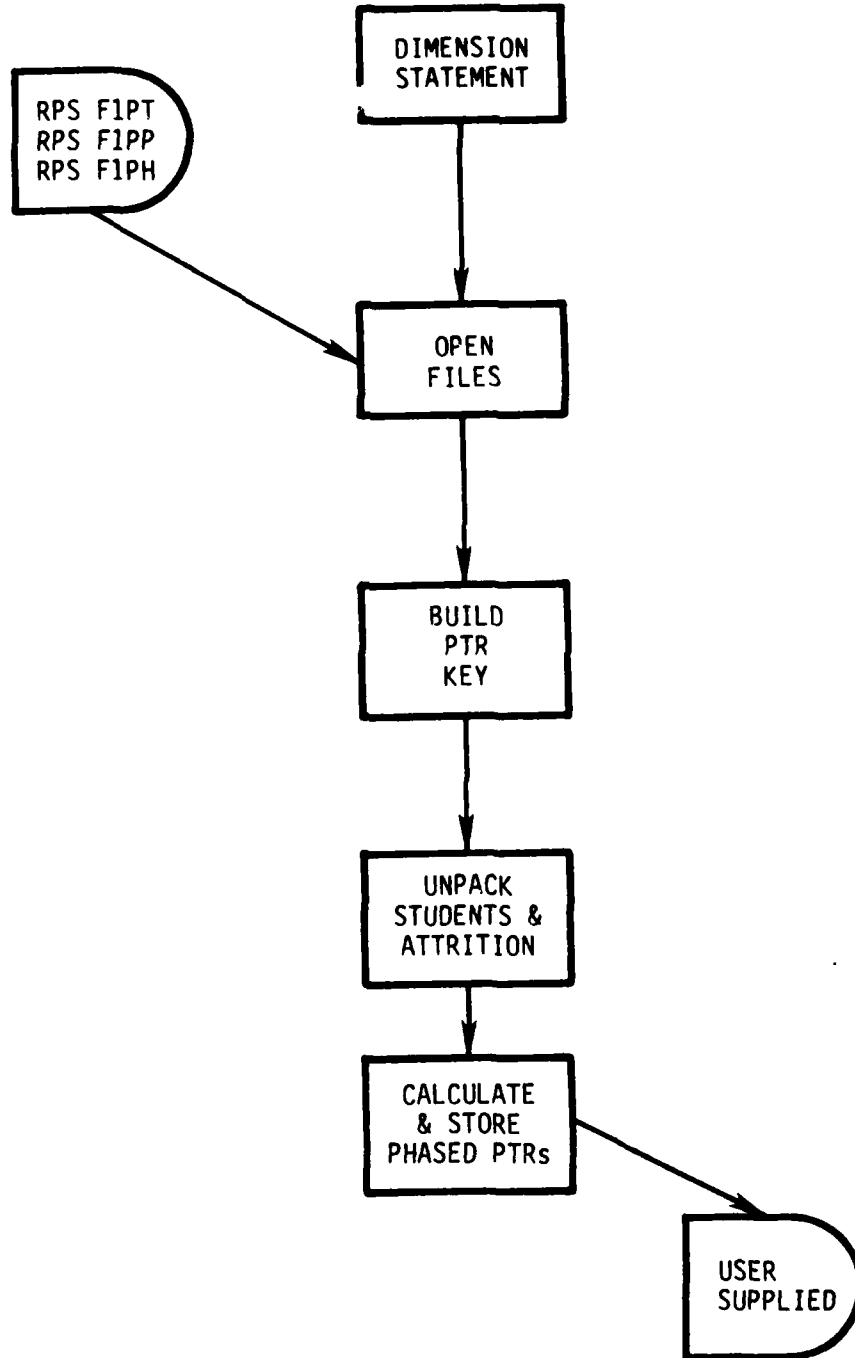
PROGRAM FILES

DATA FILES	
RPS F1PP	RPS K1PP
RPS F1PH	RPS K1PH
RPS F1PT	RPS K1PT

Technical Report 123

RPS.CALC

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: GEPT

4.31

RPS.GEPT calculates the data for the phased fiscal year requirements (resource output file). This information will be used to generate reports for each of 7 years. The data used to create this file is stored in files RPS F1PT and RPS F1PF. The information is stored in RPS F1RO or a user chosen resource file.

HARDWARE: _____

MEMORY: _____

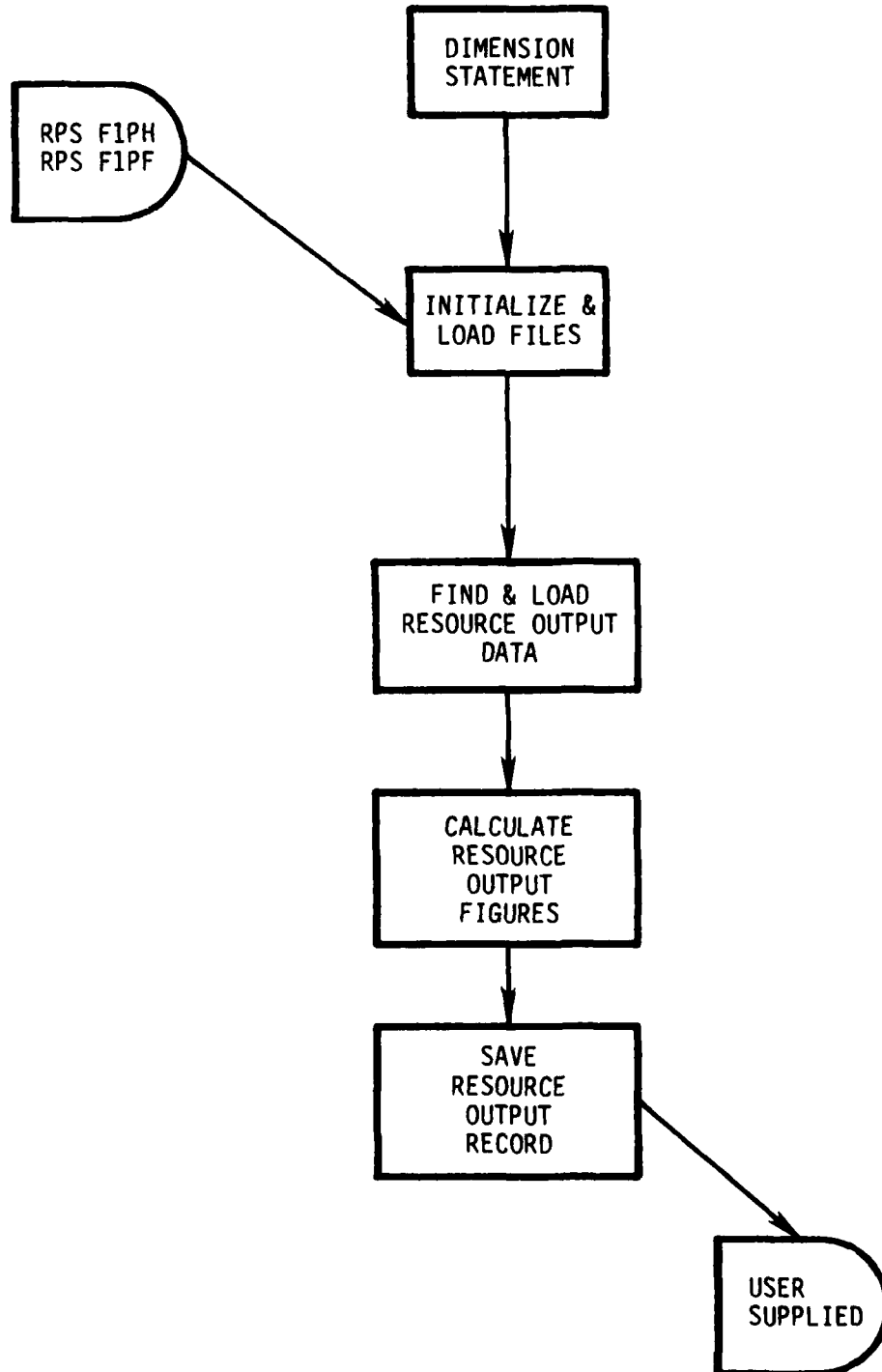
PROGRAM FILES

DATA FILES	
RPS F1PT	RPS K1PT
RPS F1PF	RPS K1PF
RPS F1PH	RPS K1PH

Technical Report 123

RPS.GEPT

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RGMN

5.0

This program will display the Resource Planning System resource output file report generation menu. Options from this program include;

1. PRINT PTR File
2. PRINT Phasing Percentages File
3. PRINT Phased PTR File
4. PRINT Planning Factors
5. PRINT Resource Output Reports
6. PRINT Report From Calculated PTR File
7. PRINT Planning Factor Keys

HARDWARE: _____

MEMORY: _____

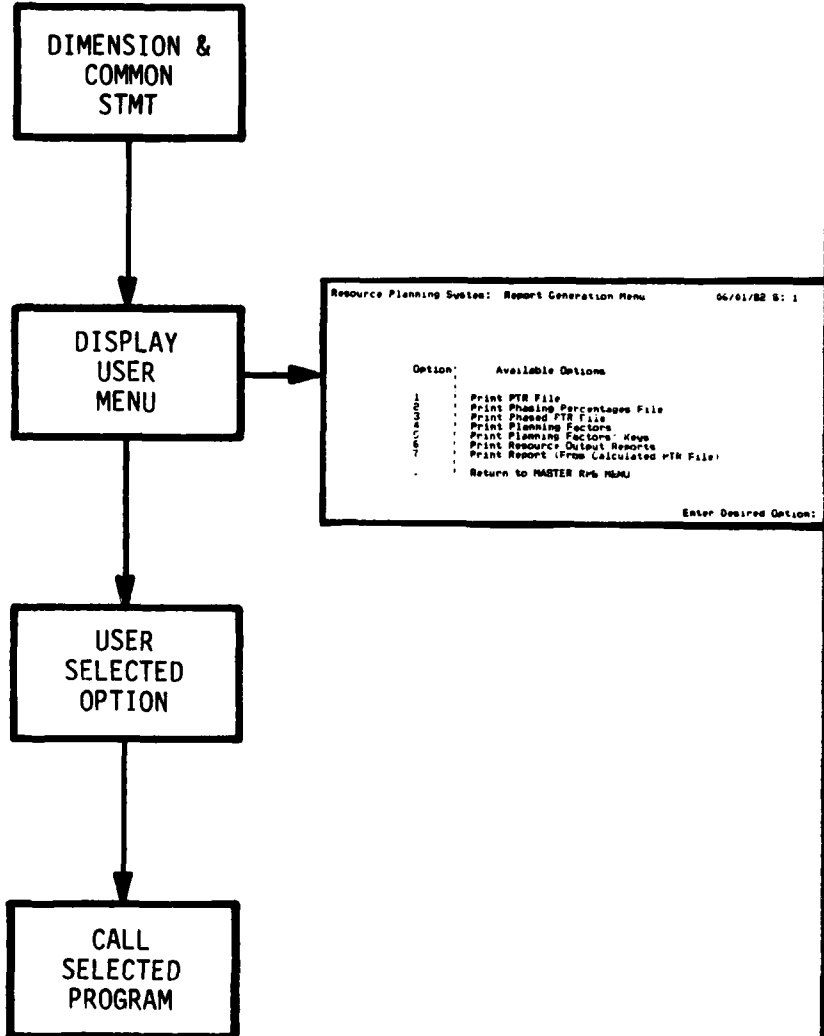
PROGRAM FILES
RPS.ROMN RPS.PRPT RPS.PRPP RPS.PRPO RPS.PRRP

DATA FILES

Technical Report 123

RPS.RGMN

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RPS.PRPF

5.3

This program allows the user to print the contents of the planning factors file of the Resource Planning System. Three options are available:

1. Print a specific record
2. Print all records
3. Print a range of records

HARDWARE: _____

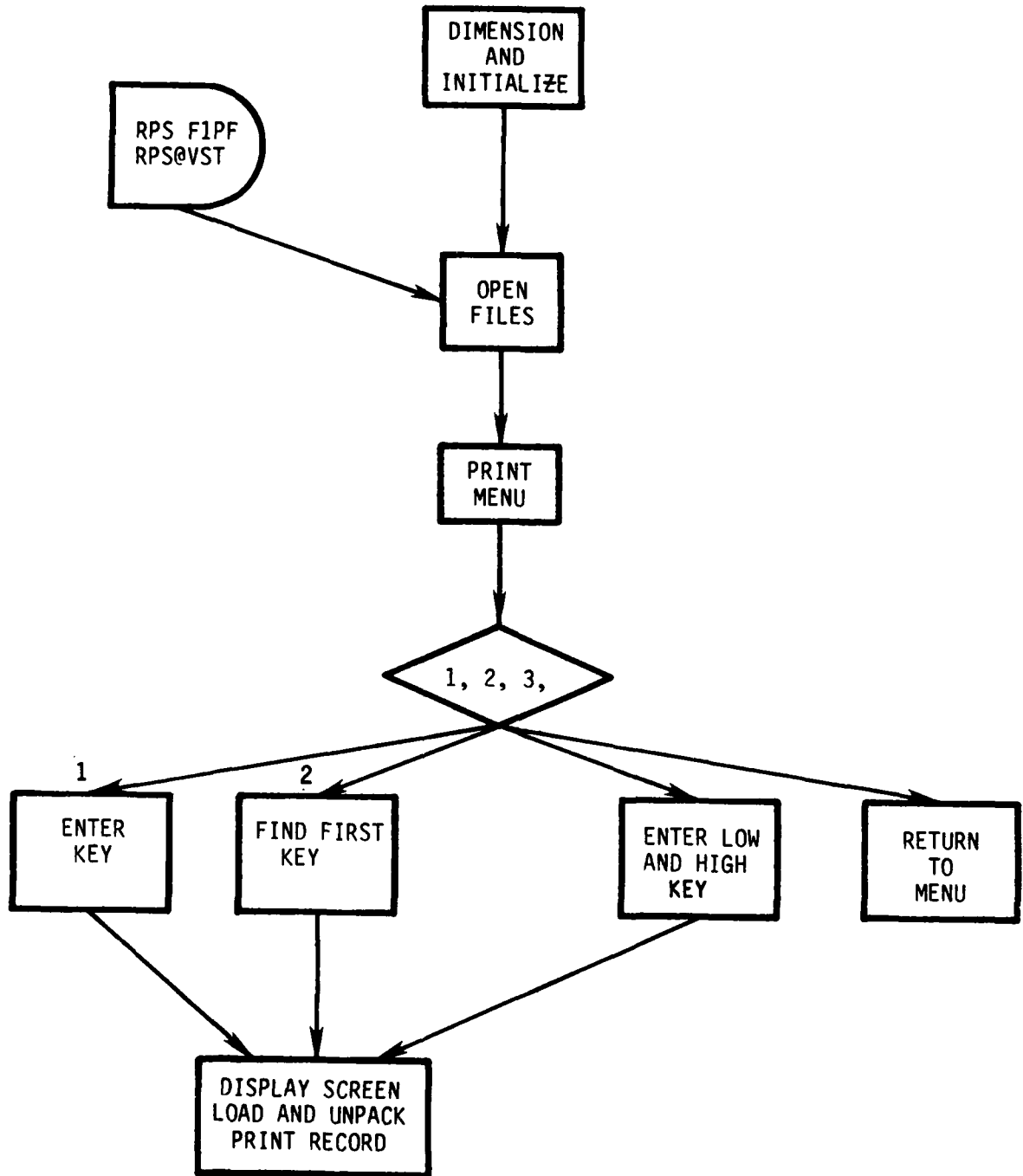
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS F1PF RPS K1PF RPS@VST

Technical Report 123

RPS.PRPF
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RPS.PRPT

5.1

This program allows the user to print the contents of the PTR and ATR file of the Resource Planning System. Three options are presented to the user:

1. Print a specific record
2. Print all records
3. Print a range of records

HARDWARE: _____

MEMORY: _____

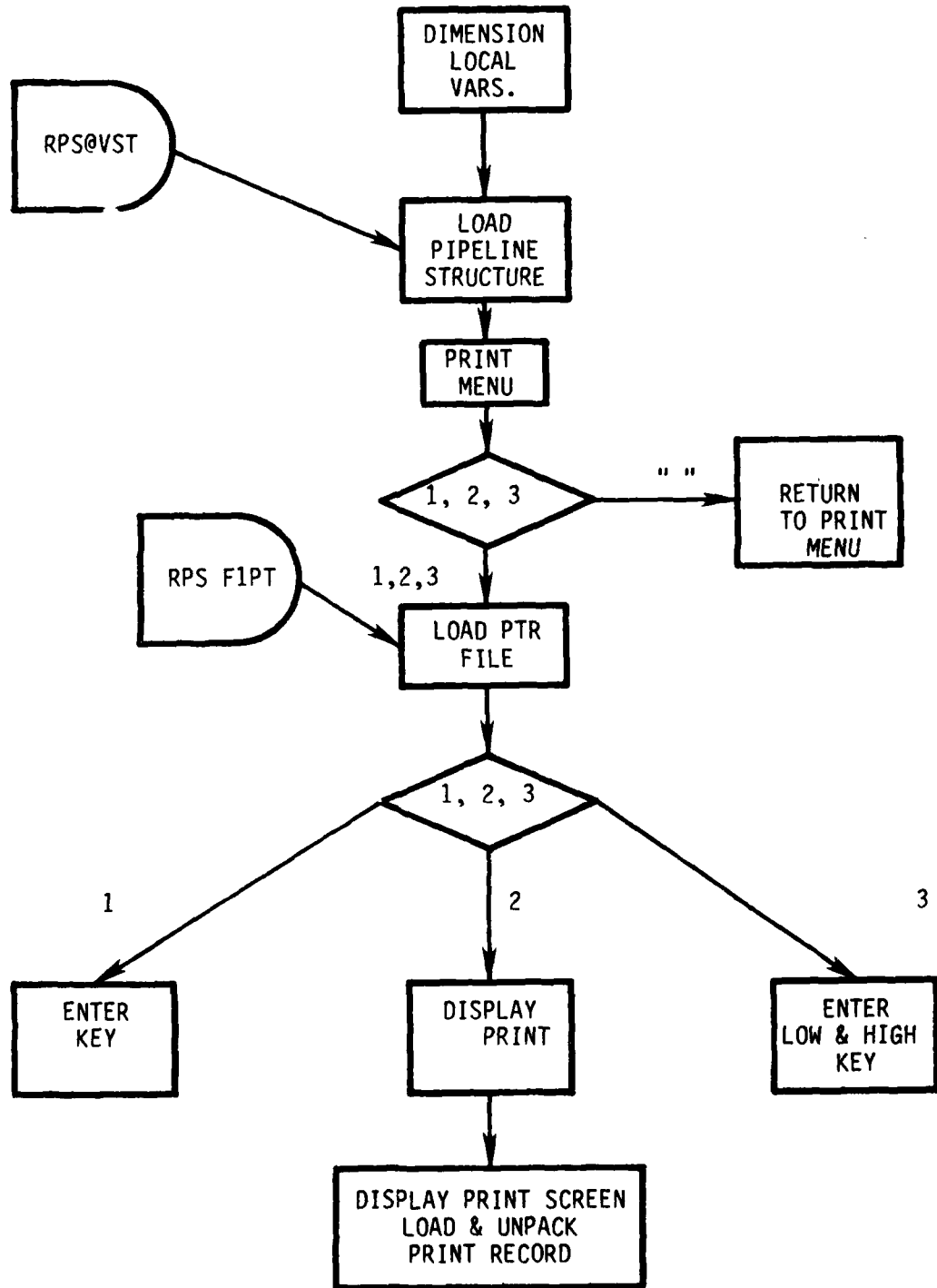
PROGRAM FILES

DATA FILES
RPS F1PT RPS K1PT RPS@VST

Technical Report 123

RPS.PRPT

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: ROMN

5.50

This program will display the Resource Planning System resource output file report generation menu. The menu includes the following options:

1. Phased FY Requirements
2. TRARON Military Manpower Report
3. Sequenced Resource Reports
4. Sequenced Resources Report #2
5. Resource Output Comparisons
- Return to Master Menu

HARDWARE: _____

MEMORY: _____

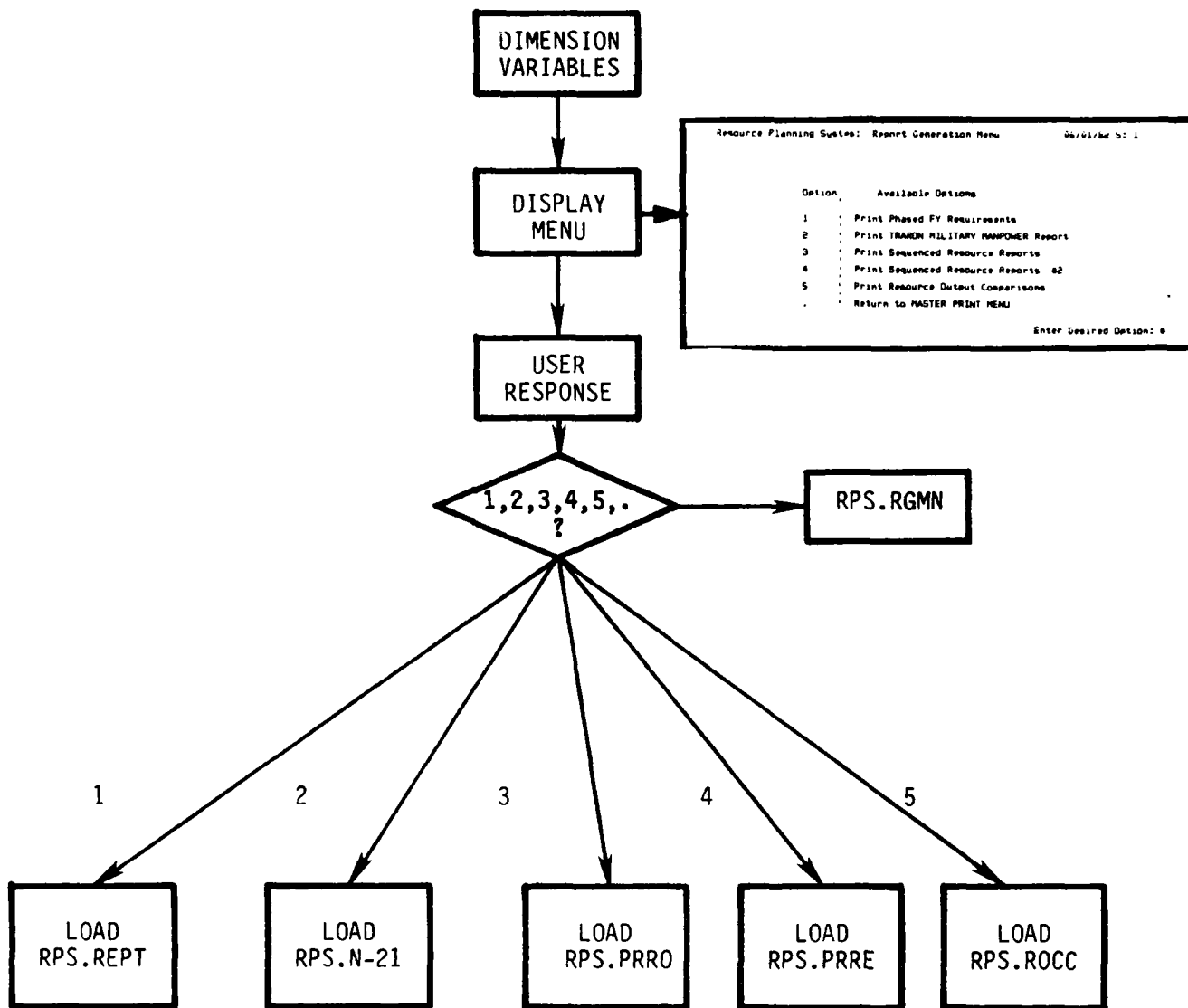
PROGRAM FILES
RPS.REPT RPS.N-21 RPS.PRRO RPS.PRRE RPS.ROCC RPS.RGMN

DATA FILES

Technical Report 123

RPS.ROMN

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PRRE

5.54

This program allows the user to print the contents of the resource output file of the Resource Planning System. When run, the program allows the user to choose his PST sort order. A range of keys is input and the resource output file is printed by the range specified in the PST.

HARDWARE: _____

MEMORY: _____

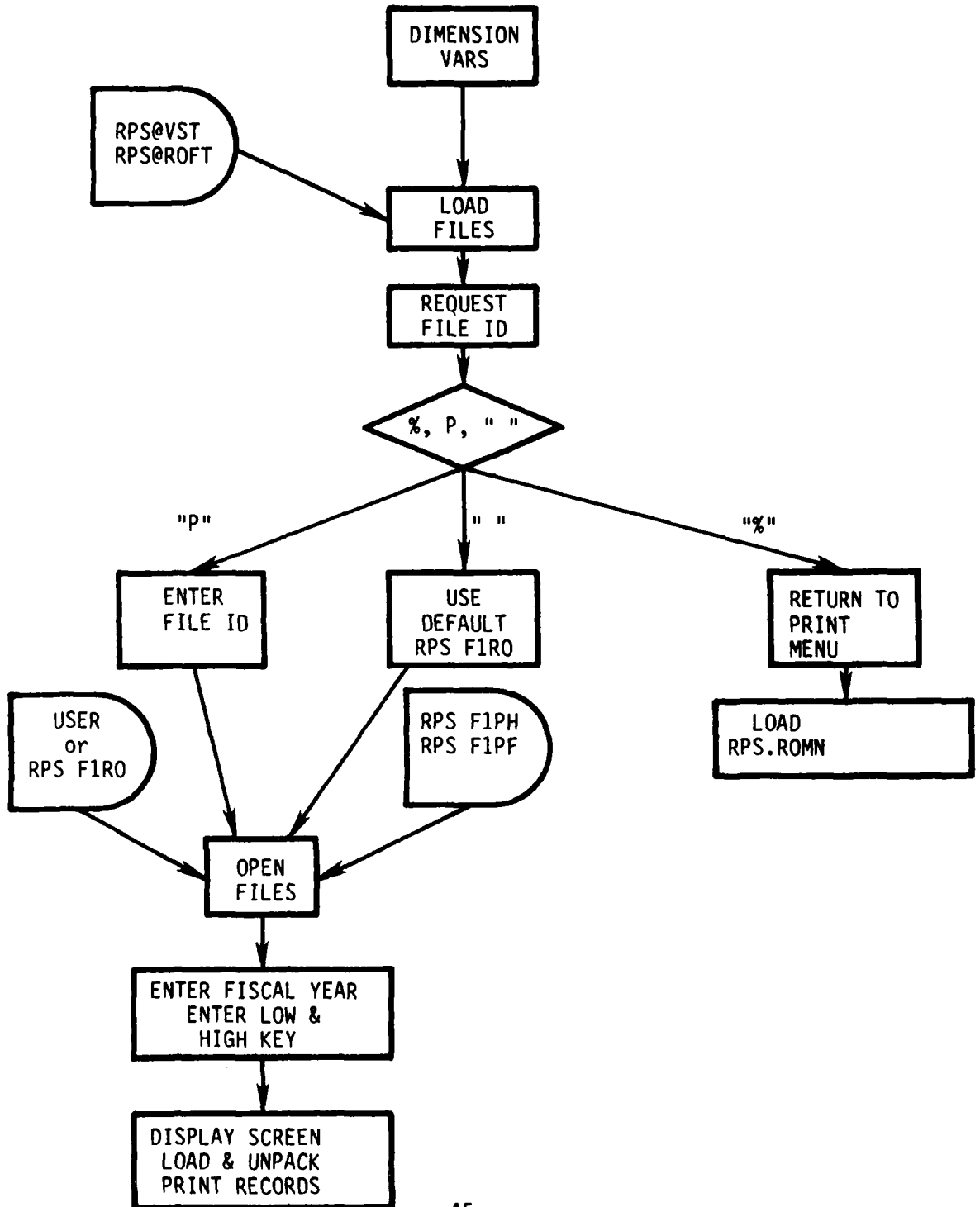
PROGRAM FILES

DATA FILES
RPS@VST
RPS@ROFT
RPS F1PH
RPS F1PF
RPS K1PH
RPS K1PF

Technical Report 123

RPS.PRRE

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PRRO

5.53

This program allows the user to print the contents of the resource output file of the Resource Planning System. When run, the program will give the user a choice of three print options:

1. Print a specific record
2. Print all records
3. Print a range of records

HARDWARE: _____

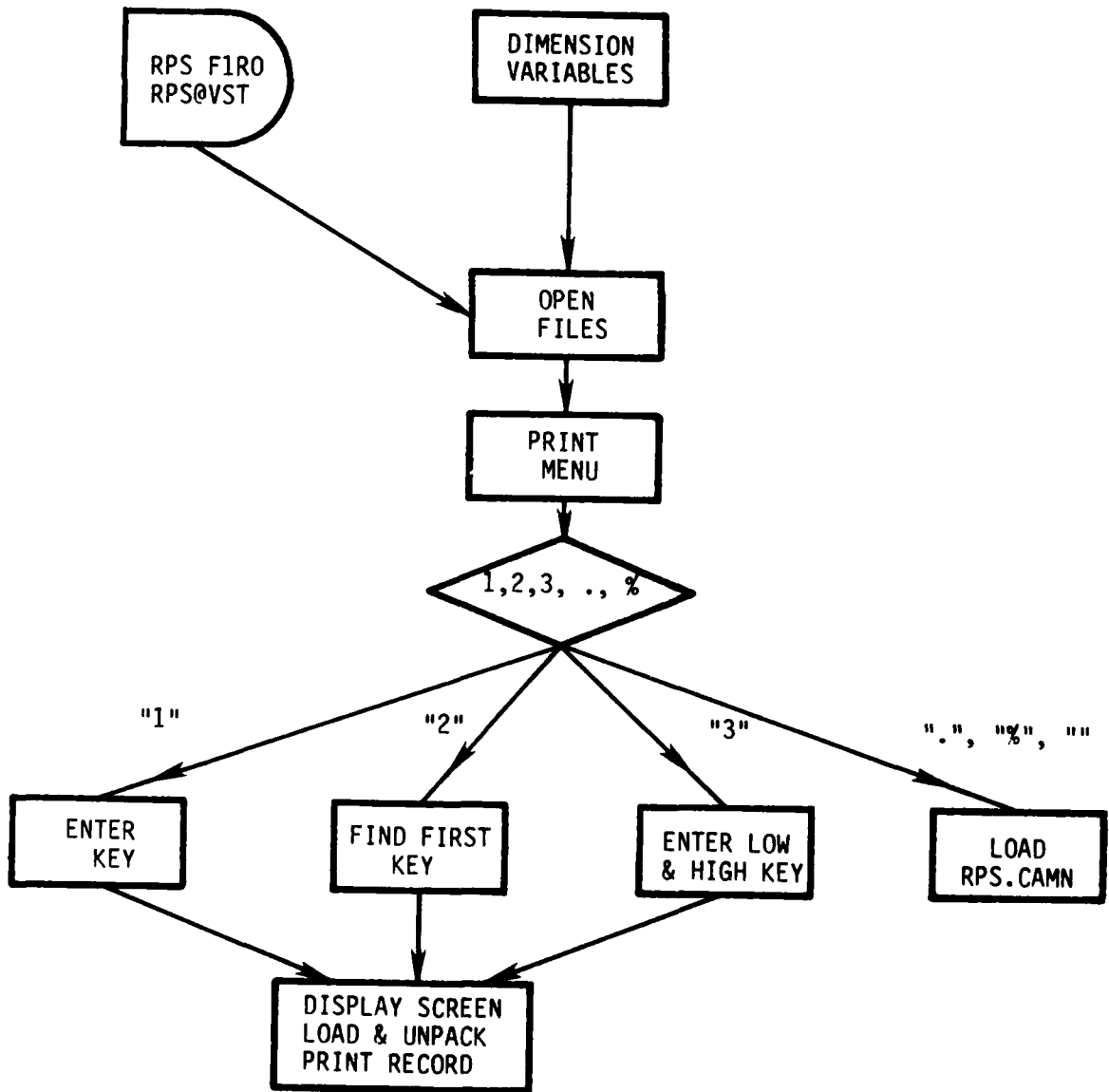
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS@VST RPS F1R0 RPS K1R0

RPS.PRR0

F L O W C H A R T



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: REPT

5.51

This program calculates and prints the data for the "Phased Fiscal Year Requirements in Pilot Training to Support Given PTR's" report for any or all of 7 fiscal years. The data used to make the calculations are stored in files RPS F1PT and RPS F1RO.

HARDWARE: _____

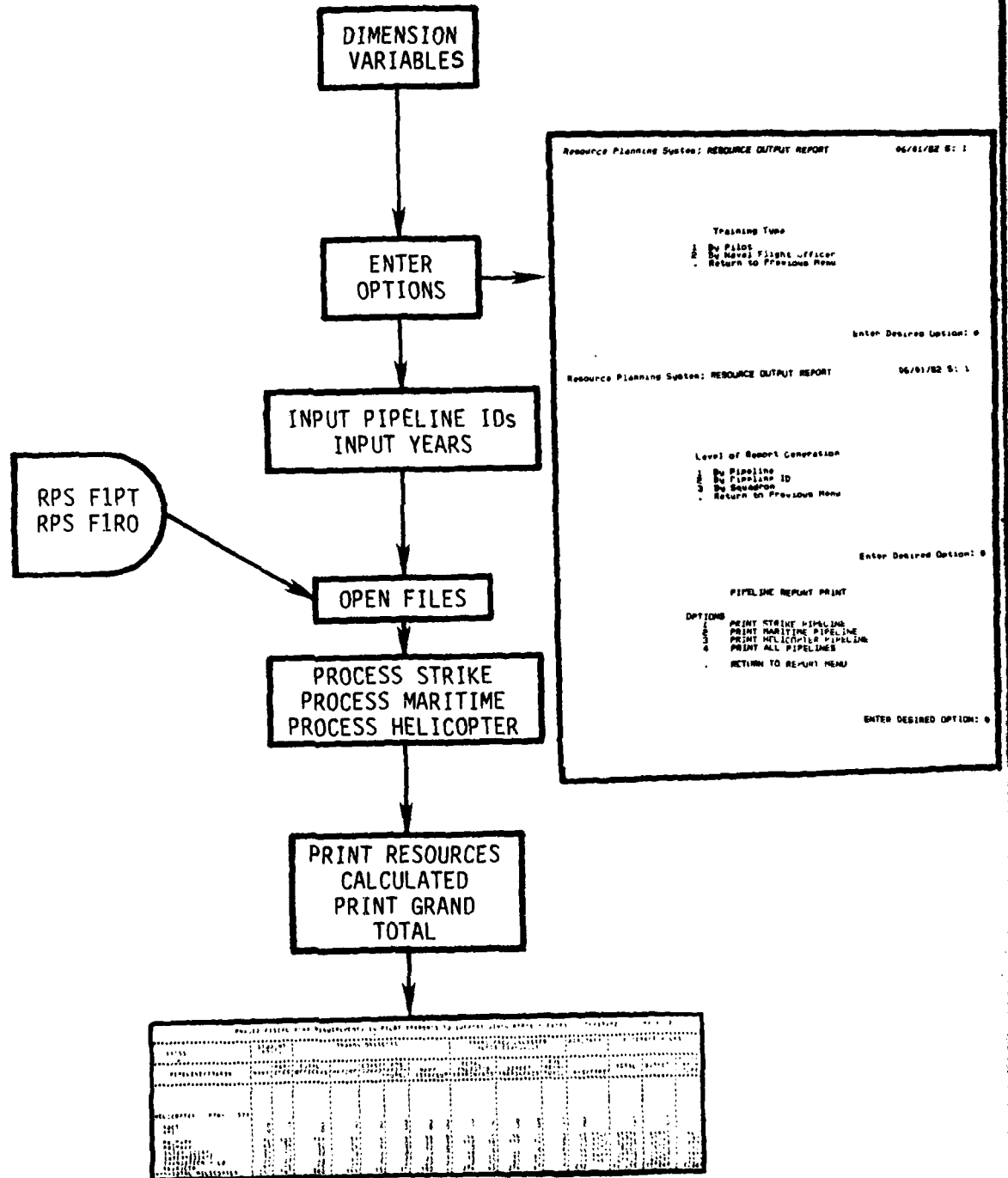
MEMORY: _____

PROGRAM FILES

DATA FILES
RPS F1PT RPS K1PT
RPS F1RO RPS K1RO

Technical Report 123

RPS.REPT
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PRRP

5.6

This program is used to print a variety of reports for the PTRs and phased PTR records. At report selection time, the user is given the opportunity to define the scope of the output.

HARDWARE: _____

MEMORY: _____

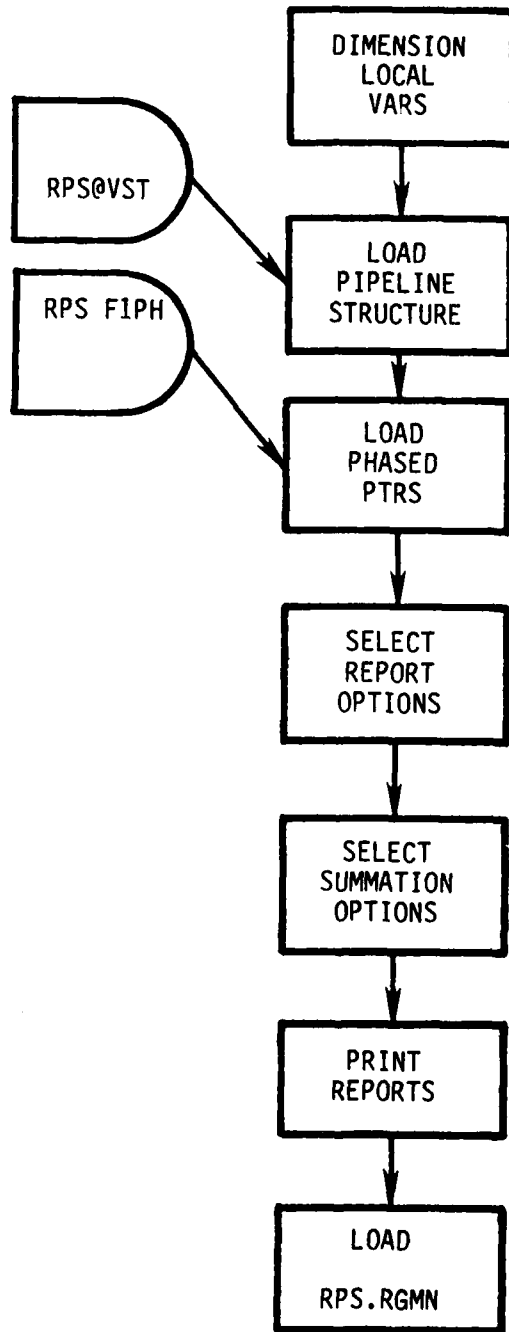
PROGRAM FILES

DATA FILES
RPS@VST RPS F1PH RPS K1PH

Technical Report 123

RPS.PRRP

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PRNT

RPS.PRNT is the Master Print Module. It works in conjunction with two other modules to produce Resource Planning System output reports. The module relations are as follows:

<u>Report</u>	<u>Module 1</u>	<u>Module 2</u>	<u>Module 3</u>
PTR File	RPS.PRNT	RPS.PTPT	RPS.ptPT
Phasing %s	RPS.PRNT	RPS.PTPP	RPS.ptPP
Phase PTR	RPS.PRNT	RPS.PTPH	RPS.ptPh
Planning Factor	RPS.PRNT	RPS.PTPF	RPS.ptPF

HARDWARE: _____

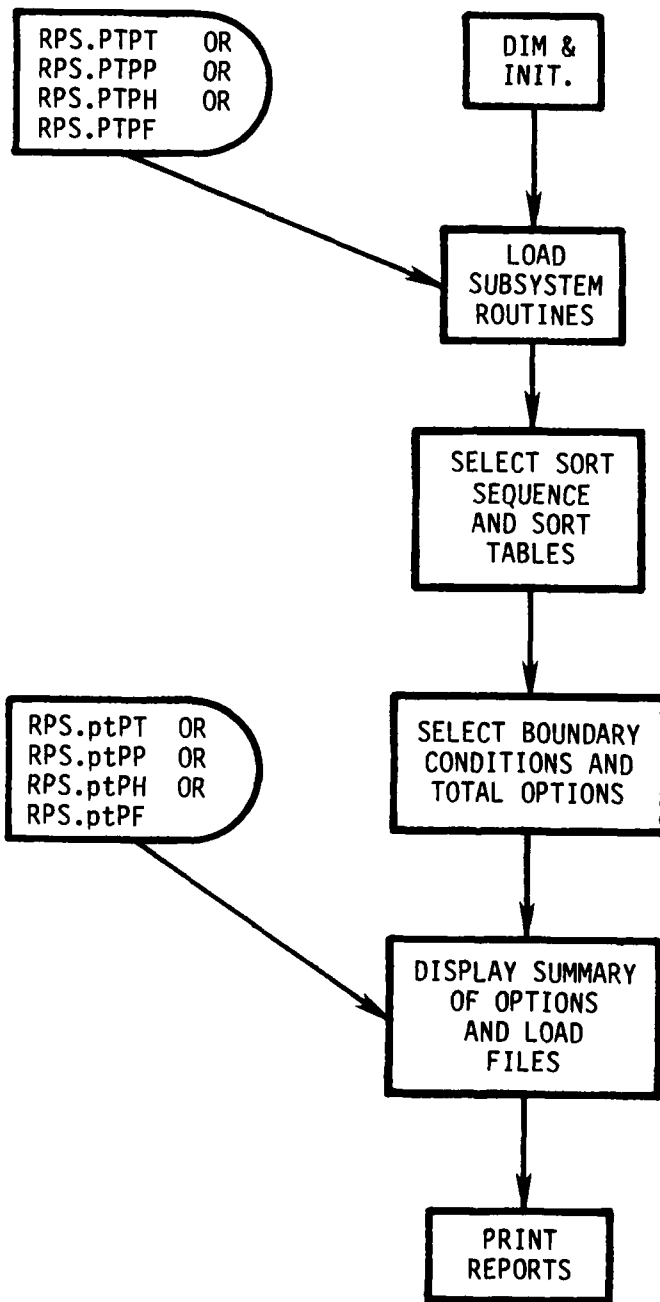
MEMORY: _____

PROGRAM FILES	
RPS.PTPT	RPS.ptPT
RPS.PTPP	RPS.ptPP
RPS.PTPH	RPS.ptPH
RPS.PTPF	RPS.ptPF

DATA FILES

Technical Report 123

RPS.PRNT
FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PTPP

This program is a print option overlay used to setup the summary option table.

HARDWARE: _____

MEMORY: _____

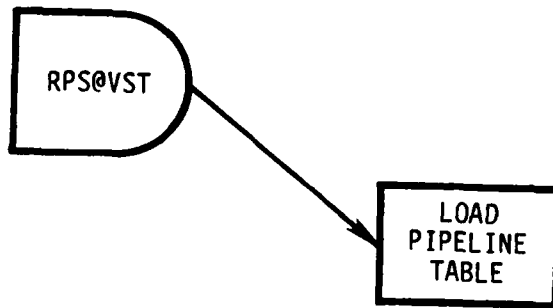
PROGRAM FILES

DATA FILES
RPS@VST

Technical Report 123

RPS.PTPP

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PTPT

This program is the Resource Planning System print option overlay used for printing the PTR file output report.

HARDWARE: _____

MEMORY: _____

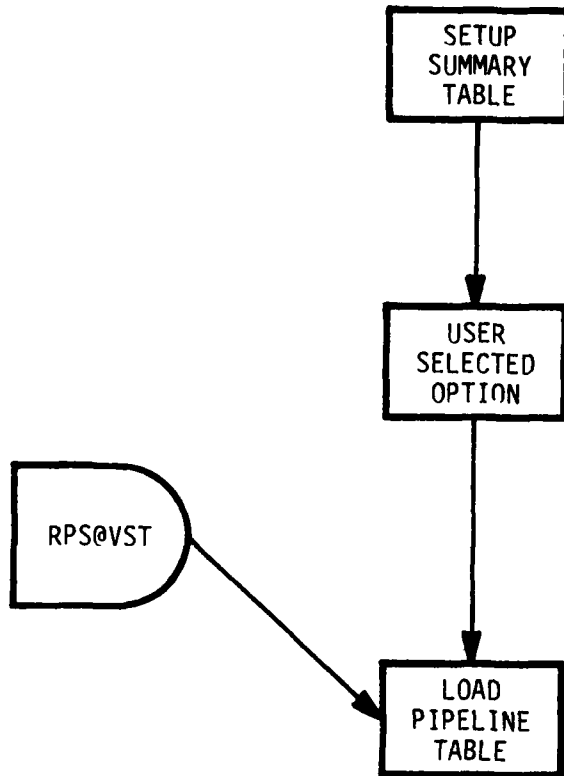
PROGRAM FILES

DATA FILES

Technical Report 123

RPS.PTPT

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: RPS.PTRO

This program is a print option overlay routine used to display the setup summary options table for the sequenced resource report.

HARDWARE: _____

MEMORY: _____

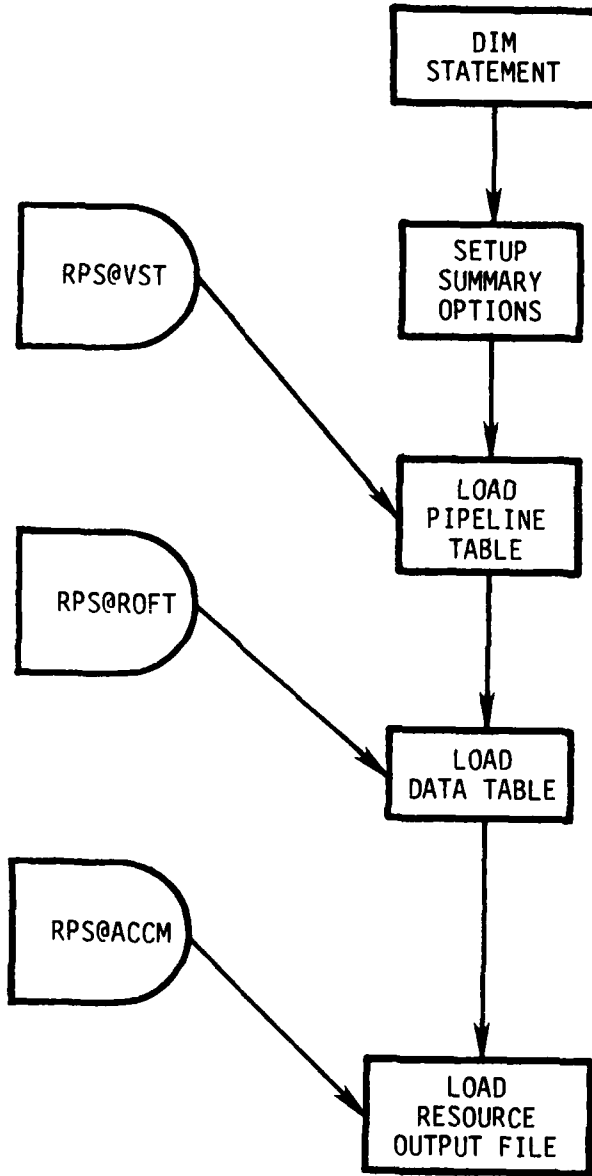
PROGRAM FILES

DATA FILES

Technical Report 123

RPS.PTRO

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: PTPF

This module is a print option overlay routine used in the Resource Planning System to setup summary option tables for printing the planning factor output.

HARDWARE: _____

MEMORY: _____

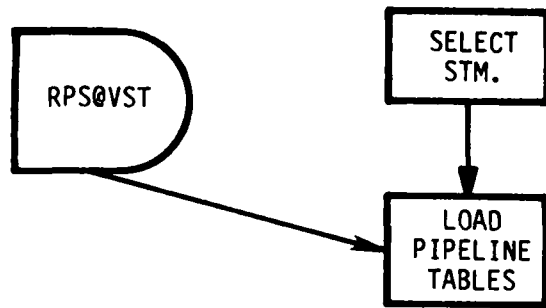
PROGRAM FILES

DATA FILES

Technical Report 123

RPS.PTF

FLOW CHART



Technical Report 123

PROGRAM ABSTRACT

SYSTEM: RPS

PROGRAM: ptPP

Resource Planning System print execution program for listing the phasing percentage file. This program is overlaid with the PRNT program and the PTPP program.

HARDWARE: _____

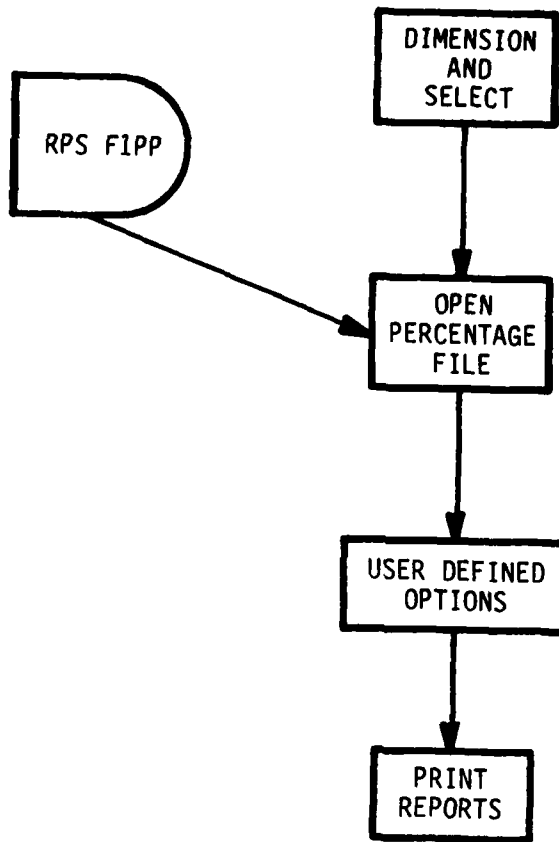
MEMORY: _____

PROGRAM FILES

DATA FILES

Technical Report 123

RPS.dtPP
FLOW CHART



Technical Report 123

RPS F1PP

FILE ABSTRACT

This file contains phasing percentages data for use in computing the phased PTR requirements for in-training and completions.

RECORD LENGTH: 124
BLOCKING FACTOR: 2 RECORDS/SECTOR
FILE TYPE: KFAM-7
KEY FILE: RPS K1PP

PROGRAM MODULE INTERFACE

ACCESS	UPDATE
RPS.PTPP RPS.CALC	RPS.IEPP

NOTES:

Technical Report 123

RPS F1PP

FILE FLOW

ACCESS MODULES



Record Pos.	String Pos.	No. of Char.	Bytes Packed	Description	Comments
1	1	1	1	Type Training Code	New
2	2	1	1	Training Pipeline Code	New
3	3	1	1	Training Phase	New
4	4	1	1	Production Base	
5	5	1	1	Type Substation (in weeks)	(00.0)
6	6	7	7	Y11111	
7	7	26	19	INTRAINING 1 no. 1 for year 1	(00.00)
8	8	27	20	INTRAINING 1 no. 2 for year 1	(00.00)
9	9	28	21	INTRAINING 1 no. 3 for year 1	(00.00)
10	30	29	22	INTRAINING 2 no. 1 for year 2	(00.00)
11	31	30	23	INTRAINING 2 no. 2 for year 2	(00.00)
12	32	31	24	INTRAINING 2 no. 3 for year 2	(00.00)
13	33	32	25	INTRAINING 2 no. 4 for year 2	(00.00)
14	34	33	26	INTRAINING 2 no. 5 for year 2	(00.00)
15	35	34	27	INTRAINING 2 no. 6 for year 2	(00.00)
16	36	35	28	INTRAINING 2 no. 7 for year 2	(00.00)
17	37	36	29	INTRAINING 2 no. 8 for year 2	(00.00)
18	38	37	30	INTRAINING 2 no. 9 for year 2	(00.00)
19	39	38	31	INTRAINING 2 no. 10 for year 2	(00.00)
20	40	39	32	INTRAINING 2 no. 11 for year 2	(00.00)
21	41	40	33	INTRAINING 2 no. 12 for year 2	(00.00)
22	42	41	34	INTRAINING 2 no. 13 for year 2	(00.00)
23	43	42	35	INTRAINING 2 no. 14 for year 2	(00.00)
24	44	43	36	INTRAINING 2 no. 15 for year 2	(00.00)
25	45	44	37	INTRAINING 2 no. 16 for year 2	(00.00)
26	46	45	38	INTRAINING 2 no. 17 for year 2	(00.00)
27	47	46	39	INTRAINING 2 no. 18 for year 2	(00.00)
28	48	47	40	INTRAINING 2 no. 19 for year 2	(00.00)
29	49	48	41	INTRAINING 2 no. 20 for year 2	(00.00)
30	50	49	42	INTRAINING 2 no. 21 for year 2	(00.00)
31	51	50	43	INTRAINING 2 no. 22 for year 2	(00.00)
32	52	51	44	INTRAINING 2 no. 23 for year 2	(00.00)
33	53	52	45	INTRAINING 2 no. 24 for year 2	(00.00)
34	54	53	46	INTRAINING 2 no. 25 for year 2	(00.00)
35	55	54	47	INTRAINING 2 no. 26 for year 2	(00.00)
36	56	55	48	INTRAINING 2 no. 27 for year 2	(00.00)
37	57	56	49	INTRAINING 2 no. 28 for year 2	(00.00)
38	58	57	50	INTRAINING 2 no. 29 for year 2	(00.00)
39	59	58	51	INTRAINING 2 no. 30 for year 2	(00.00)
40	60	59	52	INTRAINING 2 no. 31 for year 2	(00.00)
41	61	60	53	INTRAINING 2 no. 32 for year 2	(00.00)
42	62	61	54	INTRAINING 2 no. 33 for year 2	(00.00)
43	63	62	55	INTRAINING 2 no. 34 for year 2	(00.00)
44	64	63	56	INTRAINING 2 no. 35 for year 2	(00.00)
45	65	64	57	INTRAINING 2 no. 36 for year 2	(00.00)
46	66	65	58	INTRAINING 2 no. 37 for year 2	(00.00)
47	67	66	59	INTRAINING 2 no. 38 for year 2	(00.00)
48	68	67	60	INTRAINING 2 no. 39 for year 2	(00.00)
49	69	68	61	INTRAINING 2 no. 40 for year 2	(00.00)
50	70	69	62	INTRAINING 2 no. 41 for year 2	(00.00)
51	71	70	63	INTRAINING 2 no. 42 for year 2	(00.00)
52	72	71	64	INTRAINING 2 no. 43 for year 2	(00.00)
53	73	72	65	INTRAINING 2 no. 44 for year 2	(00.00)
54	74	73	66	INTRAINING 2 no. 45 for year 2	(00.00)
55	75	74	67	INTRAINING 2 no. 46 for year 2	(00.00)
56	76	75	68	INTRAINING 2 no. 47 for year 2	(00.00)
57	77	76	69	INTRAINING 2 no. 48 for year 2	(00.00)
58	78	77	70	INTRAINING 2 no. 49 for year 2	(00.00)
59	79	78	71	INTRAINING 2 no. 50 for year 2	(00.00)
60	80	79	72	COMPLETION 1 no. 1 for year 1	(00.00)
61	81	80	73	COMPLETION 1 no. 2 for year 1	(00.00)
62	82	81	74	COMPLETION 1 no. 3 for year 1	(00.00)
63	83	82	75	COMPLETION 1 no. 4 for year 1	(00.00)
64	84	83	76	COMPLETION 1 no. 5 for year 1	(00.00)
65	85	84	77	COMPLETION 1 no. 6 for year 1	(00.00)
66	86	85	78	COMPLETION 1 no. 7 for year 1	(00.00)
67	87	86	79	COMPLETION 1 no. 8 for year 1	(00.00)
68	88	87	80	COMPLETION 1 no. 9 for year 1	(00.00)
69	89	88	81	COMPLETION 1 no. 10 for year 1	(00.00)
70	90	89	82	COMPLETION 1 no. 11 for year 1	(00.00)
71	91	90	83	COMPLETION 1 no. 12 for year 1	(00.00)
72	92	91	84	COMPLETION 1 no. 13 for year 1	(00.00)
73	93	92	85	COMPLETION 1 no. 14 for year 1	(00.00)
74	94	93	86	COMPLETION 1 no. 15 for year 1	(00.00)
75	95	94	87	COMPLETION 1 no. 16 for year 1	(00.00)
76	96	95	88	COMPLETION 1 no. 17 for year 1	(00.00)
77	97	96	89	COMPLETION 1 no. 18 for year 1	(00.00)
78	98	97	90	COMPLETION 1 no. 19 for year 1	(00.00)
79	99	98	91	COMPLETION 1 no. 20 for year 1	(00.00)
80	100	99	92	COMPLETION 1 no. 21 for year 1	(00.00)
81	101	100	93	COMPLETION 1 no. 22 for year 1	(00.00)
82	102	101	94	COMPLETION 1 no. 23 for year 1	(00.00)
83	103	102	95	COMPLETION 1 no. 24 for year 1	(00.00)
84	104	103	96	COMPLETION 1 no. 25 for year 1	(00.00)
85	105	104	97	COMPLETION 1 no. 26 for year 1	(00.00)
86	106	105	98	COMPLETION 1 no. 27 for year 1	(00.00)
87	107	106	99	COMPLETION 1 no. 28 for year 1	(00.00)
88	108	107	100	COMPLETION 1 no. 29 for year 1	(00.00)
89	109	108	101	COMPLETION 1 no. 30 for year 1	(00.00)
90	110	109	102	COMPLETION 1 no. 31 for year 1	(00.00)
91	111	110	103	COMPLETION 1 no. 32 for year 1	(00.00)
92	112	111	104	COMPLETION 1 no. 33 for year 1	(00.00)
93	113	112	105	COMPLETION 1 no. 34 for year 1	(00.00)
94	114	113	106	COMPLETION 1 no. 35 for year 1	(00.00)
95	115	114	107	COMPLETION 1 no. 36 for year 1	(00.00)
96	116	115	108	COMPLETION 1 no. 37 for year 1	(00.00)
97	117	116	109	COMPLETION 1 no. 38 for year 1	(00.00)
98	118	117	110	COMPLETION 1 no. 39 for year 1	(00.00)
99	119	118	111	COMPLETION 1 no. 40 for year 1	(00.00)
100	120	119	112	COMPLETION 1 no. 41 for year 1	(00.00)
101	121	120	113	COMPLETION 1 no. 42 for year 1	(00.00)
102	122	121	114	COMPLETION 1 no. 43 for year 1	(00.00)
103	123	122	115	COMPLETION 1 no. 44 for year 1	(00.00)



UPDATE MODULES

PROGRAM SUPPORT STATEMENTS



Technical Report 123

RPS.F1PH

FILE ABSTRACT

This file is generated from the PTR and phasing percentage files. It contains everything (except resources) needed to generate various reports concerning the phases PTRs. Each record contains phasing percentages PTRs, attrition percentages and phased outputs for the corresponding squadron.

RECORD LENGTH: 496
BLOCKING FACTOR: 2 SECTORS/RECORD
FILE TYPE: KFAM-7
KEY FILE: RPS K1PH

PROGRAM MODULE INTERFACE

ACCESS	UPDATE
RPS.PRRP RPS.PRRE	RPS.CALC

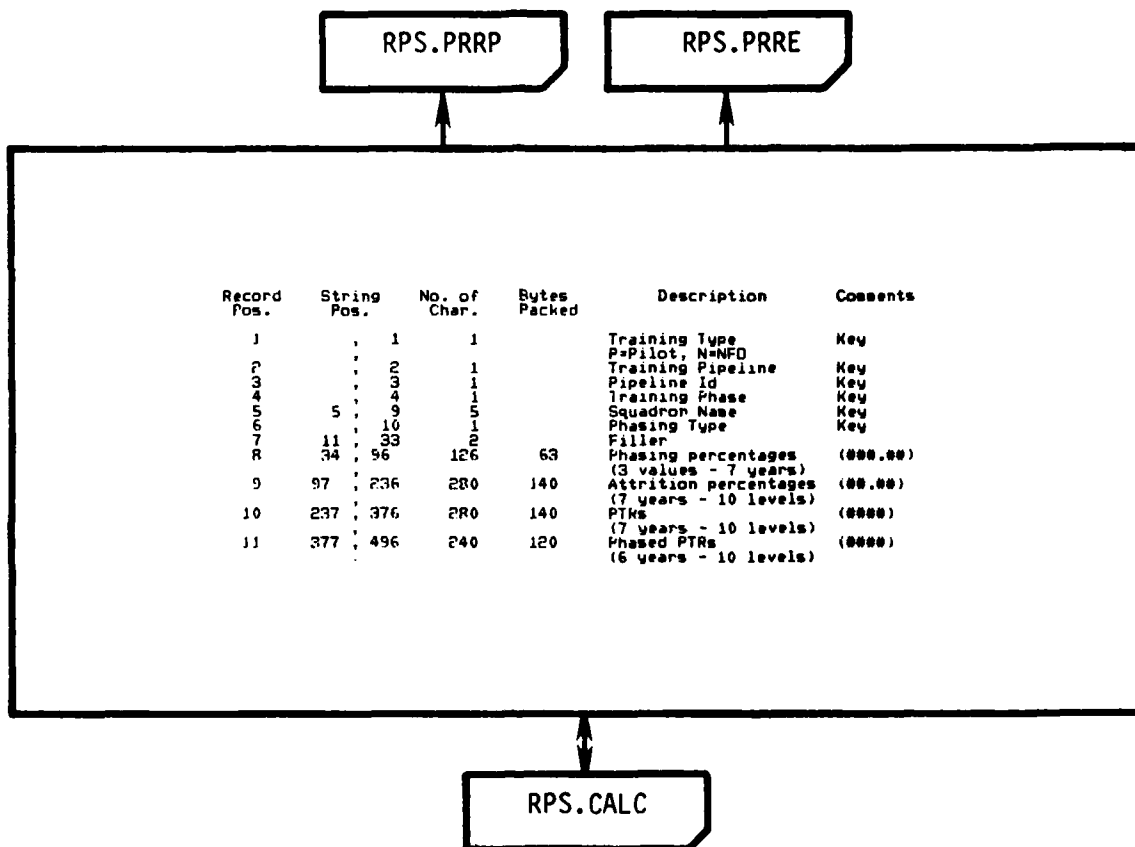
NOTES:

Technical Report 123

RPS F1PH

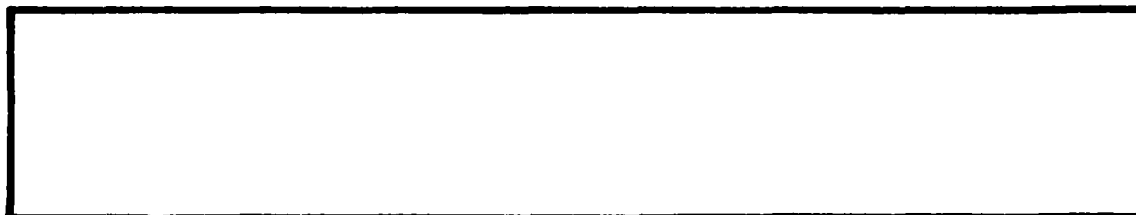
FILE FLOW

ACCESS MODULES



UPDATE MODULES

PROGRAM SUPPORT STATEMENTS



Technical Report 123

RPS F1PF

FILE ABSTRACT

This file contains planning factor data for use in predicting resource requirements for projected training rates of pilots and flight officers. There is a record for each aircraft and flight simulation device used by each squadron.

RECORD LENGTH: 83
BLOCKING FACTOR: 3 RECORDS/SECTOR
FILE TYPE: KFAM-7
KEY FILE: RPS K1PF

PROGRAM MODULE INTERFACE

ACCESS	UPDATE
RPS.GEPT RPS.PTPF RPS.PRRE	RPS.IEPF

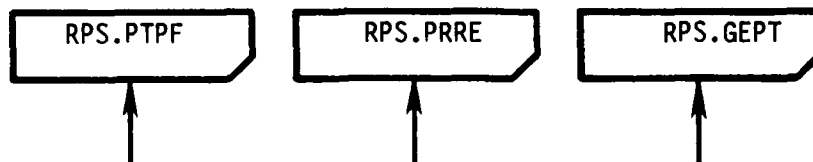
NOTES:

Technical Report 123

RPS F1PF

FILE FLOW

ACCESS MODULES

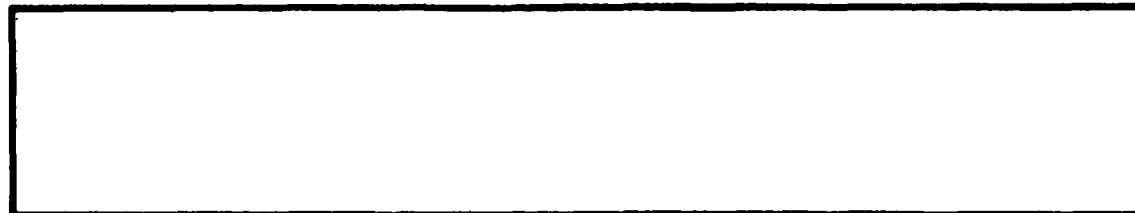


Record No.	Start Pos.	Field Length	Format Spec.	Description	Var. Name	Comments
1	1	1	A34	Training Type Code	X6	Rev 1
2	2	2	I	Pipeline Code	X6	Rev 1
3	3	3	I	Pipeline ID	X6	Rev 1
4	4	4	I	Training Phase	X6	Rev 1
5	5	9	I	Squadron Name	X6	Rev 1
10	10	10	I	Acft. or Bus. No.	X6	Rev 1
9	11	10	I	Military Branch	X6	Rev 1
8	16	16	I	Protect Status Byte	X6	
9	17	17	P1	Year Avail.	A9(1) (00)	
10	18	18	P1	Last Year	A9(2) (00)	
11	19	18	PE-1	Syllabus Hours	A9(3) (000.00)	
12	21	18	PE-2	Syllabus Weeks	A9(4) (00.00)	
13	23	18	PE-3	Attrition Percentage	A9(5) (00.00)	
14	25	18	PE-4	Total Hours	A9(6) (0000.00)	
15	27	18	PE-5	Instr. 1 Avail.	A9(7) (00.00)	
16	29	18	PE-6	Contact Time	A9(8) (00.00)	
17	31	18	PE-7	Instr. Annual Util.	A9(9) (0000)	
18	33	18	PE-8	Instr. Mrs./Student	A9(10) (0000.00)	
19	35	18	PE-9	Sched. Maintenance	A9(11) (00.00)	
20	37	18	PE-10	Acft. 1 Avail.	A9(12) (00.00)	
21	39	18	PE-11	Schedule Length	A9(13) (00.00)	
22	41	18	PE-12	Turn Around Time	A9(14) (00.00)	
23	43	18	PE-13	Acft. Annual Util.	A9(15) (0000)	
24	45	18	PE-14	Acft. Hours/Student	A9(16) (0000.00)	
25	47	18	PE-15	Weather Factor	A9(17) (00.00)	
26	49	18	PE-16	Overhead Factor	A9(18) (00.00)	
27	51	18	PE-17	Civilian Assigned	A9(19) (0000)	
28	53	18	PE-18	J.U.T. Overhead	A9(20) (00.00)	
29	55	18	PE-19	Admin. Av.	A9(21) (0000)	
30	57	18	PE-20	Maint Sup	A9(22) (0000)	
31	59	18	PE-21	M&M Maintenance	A9(23) (00.00)	
32	61	18	PE-22	Enlisted Support	A9(24) (0000)	
33	63	18	PE-23	Other Support	A9(25) (0000)	
34	65	18	PE-24	Filler		



UPDATE MODULES

PROGRAM SUPPORT STATEMENTS



Technical Report 123

RPS F1R0

FILE ABSTRACT

This file contains the resource output information used in printing the resource output report.

RECORD LENGTH: 1,984
BLOCKING FACTOR: 8 SECTORS/RECORD
FILE TYPE: KFAM-7
KEY FILE: RPS K1R0

PROGRAM MODULE INTERFACE

ACCESS	UPDATE
RPS.INRO RPS.N-21 RPS.PRRO RPS.REPT	RPS.GEPT

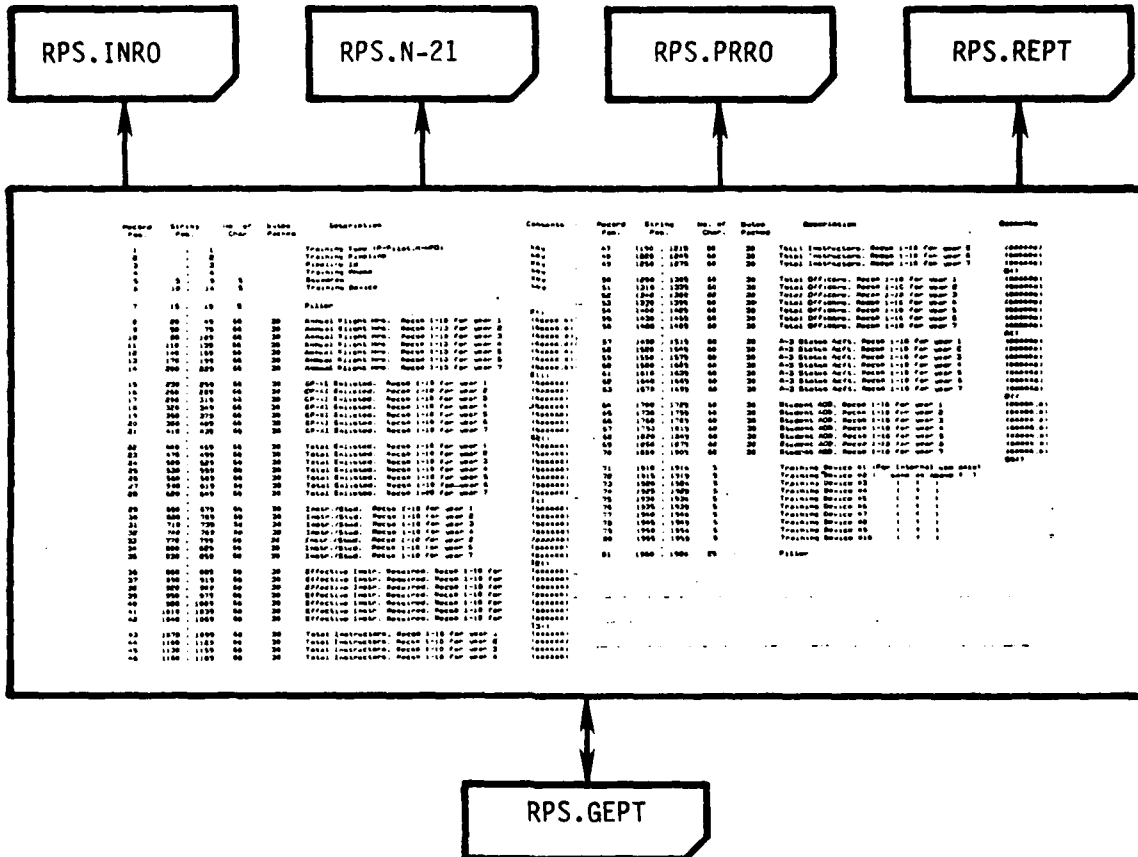
NOTES:

Technical Report 123

RPS F1R0

FILE FLOW

ACCESS MODULES



UPDATE MODULES

PROGRAM SUPPORT STATEMENTS



Technical Report 123

RPS FIPT

FILE ABSTRACT

This file contains data for the PTR and the ATR. Each record contains all the PTRs and ATRs for 7 years and 10 student types.

RECORD LENGTH: 495

BLOCKING FACTOR: 2 SECTORS/RECORD

FILE TYPE: KFAM-7

KEY FILE: RPS KIPT

PROGRAM MODULE INTERFACE

ACCESS	UPDATE
RPS.UDPT RPS.CALC RPS.GEPT RPS.REPT RPS.PtPT	RPS.IEPT

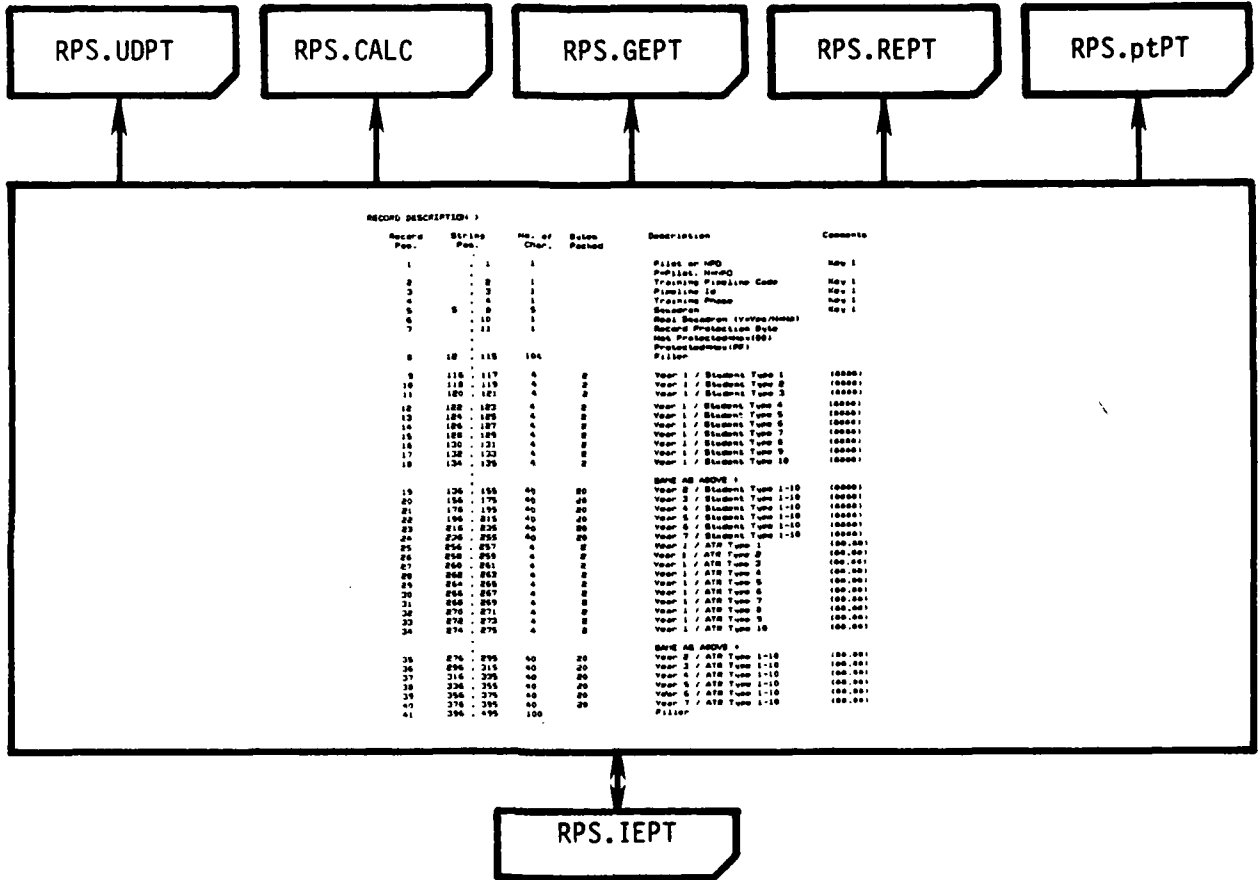
NOTES:

Technical Report 123

RPS FIPT

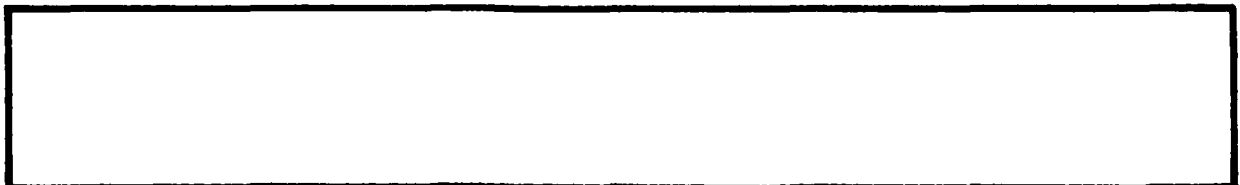
FILE FLOW

ACCESS MODULES



UPDATE MODULES

PROGRAM SUPPORT STATEMENTS



Technical Report 123

RPS@SYS1

FILE ABSTRACT

This file contains the Resource Planning System's protect flag. It also keeps track of the current users, their station numbers, and which files each user has open.

RECORD LENGTH: 21 SECTORS

BLOCKING FACTOR:

FILE TYPE: STANDARD

KEY FILE:

PROGRAM MODULE INTERFACE

ACCESS	UPDATE

NOTES:

Technical Report 123

RPS@SYS1

FILE FLOW

ACCESS MODULES

RECORD DESCRIPTION:				
PL/COPI POSITION	WANG VARIABLE	NUMBER OF CHARACTERS	DESCRIPTION	COMMENTS
Relative Sector 0				
1	P68(1)	1	Protect flag	
2	R68(2,79)	79	System flags (not used)	
3	R0		Record counter (not used)	
Relative Sectors 1-2				
1	F8(1)<1,10>	10	User ID	
2	F8(1)<11,3>	3	Station # (packed)	
3	F8(1)<14,3>	3	Program address	
4	F8(1)<17,3>	3	Data file address	
5	F8(1)<20,11>	11	Unused (filler)	
Similar for the other 15 elements of F8(). (The system allows up to 15 users with a 16'th reserved for the system.)				
Relative Sector 3				
1	F08(1)<1,8>	8	File name	
2	F08(1)<9,3>	3	Data file address	
3	F08(1)<12,3>	3	Key file address	
4	F08(1)<15,1>	1	Key file # (packed)	
5	F08(1)<16,1>	1	File type (D-Data, K-Kfile, L-Link)	
Similar for the other 15 elements of F08(). (Max of 16 open files per user.)				
Relative Sectors 4-18				
Similar to sector 3				

UPDATE MODULES

PROGRAM SUPPORT STATEMENTS

Technical Report 123

RPS@PARM

FILE ABSTRACT

This file is created in the Resource Planning System setup program (RPS.ADRS). In it are stored parameters used throughout the RPS.

RECORD LENGTH: 3 SECTORS

BLOCKING FACTOR:

FILE TYPE: STANDARD

KEY FILE:

PROGRAM MODULE INTERFACE

ACCESS	UPDATE

NOTES:

Technical Report 123

RPS@PARAM

FILE FLOW

ACCESS MODULES

RECORD DESCRIPTION:

RECORD POSITION	WANG VARIABLE	NUMBER OF CHARACTERS	DESCRIPTION	COMMENTS
1	A0\$(1)	3	Address of RPS data files	
2	A0\$(2)	3	Reserved data file address	
3	A0\$(3)	3	Reserved data file address	
4	A0\$(4)	3	Reserved data file address	
5	A0\$(5)	3	Reserved data file address	
6	A0\$	3	Address of RPS programs	
7	P0\$	3	Printer address	
8	C0\$	3	Console address	
9	D0\$	8	Current date	
10	D2\$	2	Fiscal year	

UPDATE MODULES

PROGRAM SUPPORT STATEMENTS

Technical Report 123

RPS@VST

FILE ABSTRACT

This file contains a list of all pipeline structures for this system.

RECORD LENGTH: 150 RECORDS/BLOCK

BLOCKING FACTOR: 14 SECTORS/BLOCK

FILE TYPE: STANDARD

KEY FILE:

PROGRAM MODULE INTERFACE

ACCESS	UPDATE

NOTES:

Technical Report 123

RPS@VST

FILE FLOW

ACCESS MODULES

RECORD DESCRIPTION >

Record Pos.	String Pos.	No. of Char.	Bytes Packed	Description	Comments
1	, 1	1		TRAINING PIPELINE	
2	, 2	1		PIPELINE ID	(#)
3	3 , 4	2		PIPELINE POSITION	(##)
4	, 5	1		TRAINING WING	(#)
5	, 6	1		TRAINING PHASE	
6	7 , 11	5		VALID SQUADRON	
7	12 , 13	2		DISTRIBUTION RATE	(##.##)
8	14 , 18	5		UIC	(#####)
9	19 , 20	2		AG	
10	21 , 22	2		SAG	

UPDATE MODULES

PROGRAM SUPPORT STATEMENTS

Technical Report 123

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