NOTICE

THIS DOCUMENT HAS BEEN REPRODUCED FROM MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED IN THE INTEREST OF MAKING AVAILABLE AS MUCH INFORMATION AS POSSIBLE
NASA TECHNICAL MEMORANDUM

NASA TM-78284

PAYLOAD CREW TRAINING SCHEDULER (PACTS) USER'S MANUAL

Prepared by

David L. Shipman
Systems Analysis and Integration Laboratory

July 1980

NASA

George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama
## Payload Crew Training Scheduler (FACTS) User's Manual

### Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Subject</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I GENERAL</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>101 Purpose</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>102 Applicability</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>103 Definitions</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>II RESPONSIBILITIES</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>201 Documentation Maintenance</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>202 Training</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>203 Program Utilization</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>III SYSTEM DESCRIPTION</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>301 Univac 1108 Computer System</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>302 PDP Computer Systems</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>303 Marshall Interactive Planning System (MIPS)</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>304 PACTS System</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>IV SYSTEM OPERATION</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>401 PACTS Data Base Module (PACTDB)</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>402 PACTS Scheduler Module (PACTS)</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>403 PACTS Timeline Editor Module (PACTED)</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>404 PACTS Report Generator Module (PACTRG)</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>V PACTS OPERATING PROCEDURES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>501 Univac 1108 Logon/Logoff Procedures</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>502 MIPS Commands</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>503 PACTS Commands</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>504 PDP Commands</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
# PAYLOAD CREW TRAINING SCHEDULER (PACTS) USER'S MANUAL

## APPENDIX

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>16</td>
</tr>
<tr>
<td>B</td>
<td>18</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
</tr>
<tr>
<td>D</td>
<td>29</td>
</tr>
<tr>
<td>E</td>
<td>33</td>
</tr>
<tr>
<td>F</td>
<td>38</td>
</tr>
<tr>
<td>G</td>
<td>42</td>
</tr>
<tr>
<td>H</td>
<td>49</td>
</tr>
<tr>
<td>I</td>
<td>51</td>
</tr>
<tr>
<td>J</td>
<td>58</td>
</tr>
<tr>
<td>K</td>
<td>62</td>
</tr>
<tr>
<td>L</td>
<td>66</td>
</tr>
<tr>
<td>M</td>
<td>67</td>
</tr>
</tbody>
</table>
CHAPTER I: GENERAL

101 PURPOSE

This manual provides procedures for operating the Payload Crew Training Scheduler (PACTS).

102 APPLICABILITY

The provisions of this handbook are applicable to all Marshall Space Flight Center (MSFC) organizations which use PACTS for scheduling purposes.

103 DEFINITIONS

For definitions applicable to this manual, see Appendix A.
CHAPTER II: RESPONSIBILITIES

201 DOCUMENTATION MAINTENANCE

The Operations Planning and Analysis Branch, Systems Analysis and Integration Laboratory is responsible for documentation maintenance and will:


2. Update PACTS documentation periodically and notify users of any changes to operating procedures.

202 TRAINING

The Operations Planning and Analysis Branch will provide training to PACTS users on an individual request basis.

203 PROGRAM UTILIZATION

MSFC organizations which use PACTS for scheduling purposes will:

1. Provide trained personnel to run the PACTS program.

2. Provide Cathode Ray Tube (CRT) terminals for accessing the UNIVAC 1108 and PDP 11/70 and 11/45 computers to run the PACTS program.
CHAPTER III: SYSTEM DESCRIPTION

301 UNIVAC 1108 COMPUTER SYSTEM

PACTS is designed to run on the UNIVAC 1108, Executive 8 computer system at operating level 33R2. The UNIVAC 1108 is a large class general purpose computer with a variety of peripheral equipment available including line printers, plotters, and interactive CRT terminals.

At MSFC, interactive access to the UNIVAC 1108 is by telephone line using a Modem (data set). A Modem converts computing equipment digital signals into signals that can be used by the voice-oriented transmission system. Actual hookup between the CRT terminal and the UNIVAC 1108 is accomplished by dialing the computer number and pulling the white receiver button up when a high pitched tone is heard. The hookup is terminated by replacing the telephone receiver in its cradle.

302 PDP 11/70 AND 11/45 COMPUTER SYSTEMS

The PDP 11/70 and 11/45 are mini class general purpose computers which provide high speed, real time access for large multi-user, multi-task, time-shared applications requiring large amounts of addressable memory space. The PDP 11/70 is the larger of the two computers and is linked to the UNIVAC 1108 by two 1200 baud telephone lines which limit the transfer of data across the lines to 1200 bits per second. The MIPS program is mounted in resident storage in the PDP 11/70; thus, UNIVAC 1108 MIPS data can be transferred directly to the PDP 11/70 MIPS files.

Although the PDP 11/45 is smaller, it has additional features which are useful for running PACTS. Specifically, it is equipped with an Interactive Graphics Display System which is linked to a CALCOMP 960 plotter. IGDS is used to interact with PACTS and the 960 plotter is used to produce 30 x 60 inch waterfall schedules. Univac 1108 data is transferred to and from the PDP 11/45 by two methods. The first method is to transfer the data to the PDP 11/70 via the 1200 baud telephone lines and store it on a cartridge disk. This disk is
manually transferred from the PDP 11/70 to the PDP 11/45. An alternate method of transferring data is to store the UNIVAC 1108 data on a magnetic tape which can be hand transported to the PDP computer room and mounted in the PDP 11/45 tape drive. A chart of the UNIVAC 1108 - PDP 11/70/45 hardware system showing these data transfer features is shown in Figure 1.

MARSHALL INTERACTIVE PLANNING SYSTEM (MIPS)

The Marshall Interactive Planning System (MIPS) is designed to provide the user with a close interface to his analysis through the use of interactive graphics at a remote computer terminal. The standard systems approach is employed in MIPS whereby analysis and utility modules (programs) can be linked together with a simple interactive control language. The user is able to use MIPS to coordinate the sequence of execution of modules, to facilitate the handling of data, and to control the problem flow. The user of MIPS is, in effect, interactively constructing a computerized solution to a planning problem while working at the CRT.

The PACTS program was built using MIPS. A user of PACTS is actually running the computerized MIPS solution (latest version of the program) to the Payload Crew Training Scheduling problem. The sequence of execution, data handling and problem flow were determined previously and are invisible to the PACTS user. The PACTS user sees only a set of tutorials which advise him of what input data is required and after PACTS has been run, he will see the scheduling results (output). All other operations of the scheduler and MIPS are masked to the PACTS user.

PACTS SYSTEM

PACTS is a fully automated, interactive, computerized scheduling program equipped with tutorial displays. The tutorial displays are sufficiently detailed for use by a user having no previous computer terminal experience. The man machine interface (computer terminal) uses a cursor-CRT technique for making real time scheduling changes.
FIGURE 1. UNIVAC 1108 - PDP 11/70/45 HARDWARE SYSTEM
PACTS is designed to operate on the UNIVAC 1108, Executive 8, in the MIPS operating mode. It has the capability to load PACTS output into the PDP 11/45 Interactive Graphics Display System (IGDS) which will permit schedule interaction by the user and will printout a 30 by 60 inch annotated waterfall schedule using the CALCOMP 960 plotter.

Other functional features of the system are:

The system can schedule up to three overlapping missions.

PACTS has four independent modules; an input module, Payload Crew Training Data Base (PACTDB); a computation module, Payload Crew Training Scheduler (PACTS); an editing module, Payload Crew Training Editor (PACTED); and an output module, Payload Crew Training Report Generator (PACTRG).

A system flowchart of the four modules with the PDP 11/70 and 11/45 conversion programs is shown in Figure 2.

Figure 2 explanation:

PACTDB creates a Name Directed File (NDF) which contains data that is stored and retrieved by name.

PACTS uses the Name Directed File (NDF) to create a List Directed File (LDF), which contains event timeline data that is stored and retrieved when specified acceptance conditions are met, and an ON/OFF file which contains crew activity data.

PACTED uses the List Directed File (LDF) and Name Directed Files (NDF) to allow manual editing and the writing of new List Directed Files (LDF) and ON/OFF files.

PACTRG used the Name Directed File (NDF), the List Directed File (LDF) and the ON/OFF file to generate specialized tabulations and plots.
FIGURE 2  PACTS SYSTEM FLOW CHART
The PDP 11/70 PACTS Extract Program (PEP) converts and transfers the List Directed File (LDF) to a disk cartridge for transfer to the PDP 11/45.

The PDP 11/45 PACTS Design File Program (PDFP) converts and transfers the List Directed File (LDF) to IGDS.

A Scheduler Operational Flow is shown in Figure 3.
FIGURE 3. SCHEDULER OPERATIONAL FLOW
CHAPTER IV: SYSTEM OPERATION

401 PACTS DATA BASE MODULE (PACTDB)

PACTDB module performs data input and editing of a PACT Name Directed File (NDF) to be used in module PACTS. Data which can be inputted or edited are the lists of TAE groups, list of payload specialists and their initial locations, list of work locations, travel cost, travel time data to and from a location, detailed group and task activity element (TAE) data and list of resources. Special provisions are included to initialize an empty data file. The module includes an option to print the entire data base on an alternate print file for any specified mission and in the same format as the CRT displays. The only exception is that the travel cost/time data is displayed in matrix form in the alternate print file. A program block diagram and computer configuration are included in Appendix B.

The user can run PACTS in batch mode or online from a CRT. The only option which is restricted is the detailed group and TAE data which must be run on the CRT.

PACTDB is an all tutorial program which uses standard input images and has two menus, PACTDB main menu and travel cost and time data menu. A complete set of tutorial displays for PACTDB is included in Appendix C.

402 PACTS SCHEDULER MODULE (PACTS)

PACTS module receives input data from the PACTDB module, performs scheduling operations and transfers the results to the PACTRG module. PACTS has options to create a MIPS file, to transfer to PACTDB, setup input data, generate trial schedules and select the best, display a summary of the best schedule, tabulate schedule and write in the output file, transfer to PACTRG, and save control data for future use. Utilizing a pseudo-random selection process, PACTS generates a family of schedules and selects the best on the basis of user determined priorities, such as schedule cost and number of activities scheduled. After selection, TAES are scheduled at the earliest opportunity time, without violating resource and travel constraints. A program block diagram and computer configuration are included in Appendix D.
PACTS accepts input from the TAE data base created by the PACTDB module which can be assessed for editing purposes from PACTS. Schedule control and mission level data may be input from the terminal or stored and retrieved from a MIPS name-directed file (NDF). This data may also be edited to test alternative schedules.

PACTS produces a schedule summary table for display at the terminal and a schedule tabulation on the alternate print file. The module also produces a List Directed File (LDF) and an ON/OFF file. The user may transfer to the PACTRG module to display these files.

PACTS is an all tutorial program which uses standard input images and has two menus, PACTS main menu and a Setup/Edit Input Data Menu. A complete set of tutorial displays for PACTS is included in Appendix E. PACTS is available at a CRT terminal or in batch mode.

PACTS TIMELINE EDITOR MODULE (PACTED)

Payload Crew Training Editor (PACTED) is an interactive module which displays and edits the timeline produced by the scheduling module (PACTS). PACTED uses the List Directed File (LDF) created by PACTS and the Name Directed File (NDF) created by PACTDB to create a Scratch File for editing. Upon completion of editing PACTED writes updated List Directed Files and ON/OFF Files. Travel analysis is performed only when the option to edit the event timeline is being executed. Data which may be displayed and edited are the crew timeline, the event timeline, and the composite timeline. Additional options are available to delete a TAE group from the timeline, delete a crew from the timeline, and to write new timeline files. Finally, options are available for transfer either to PACTRG module or PACTDB module. A program block diagram and computer configuration are included in Appendix F.

PACTED is an all tutorial module which uses standard input images and has a main menu, input menu, output menu and a control menu. A complete set of tutorial displays for PACTED is included in Appendix G. PACTED is available at a CRT terminal or in batch mode.
PAYLOAD CREW TRAINING REPORT GENERATOR (PACTRG)

Payload Crew Training Report Generator (PACTRG) uses the PACT database file containing Training Activity Element (TAE) descriptions and the output files from the module PACTS containing the crew training schedule to generate specialized tabulations and plots. Tabulations available are: a composite schedule, a composite schedule with cost and duration, a schedule summary for all the TAE groups, unscheduled time for all crewmen, a schedule for an individual crewman, and unscheduled time and locations for an individual crewman. Tabulations on the terminal may be omitted when producing tabulations on the print file. The module includes an option to print on the page file all tabulations for a specified time frame. Bar graph plots available are: a schedule for all TAE groups, scheduling opportunities for all TAE groups, unscheduled time for all crewmen, a timeline of locations, a resource utilization timeline, and a location timeline for an individual crewman. A program block diagram and computer configuration are included in Appendix H. The user can run PACTRG in batch mode or online from a CRT. The only exception is that plots must be run on the CRT.

PACTRG is an all tutorial program which uses standard input images and has a main menu and a display menu. A complete set of tutorial displays for PACTRG is included in Appendix I.

PACTS/IGDS INTERFACE MODULES

Several programs have been developed which, when used with the general file transfer capability of MIPS provide display of a crew training schedule through the Interface Graphics Design System (IGDS) on the CALCOM 960 plotter (Ref: Fig. L-1, App. L).

PACTS List-Directed File Conversion Program (PACT36):

PACT36 was developed to convert the 24-word list-directed file output by the PACTS module to a 36-word list-directed file containing 4 character alphanumeric data for transfer from the UNIVAC 1108 to the PDP 11/70.

A 36-word list-directed file has been created with an expiration date of ten years. The maximum number of records that can be written on the file is 5000. If the user should need a larger file...
or more than one file, the MIPS CF Command on the UNIVAC 1108 or the IN Command on the PDP 11/70 may be used. An example of a PACT36 run and a CF and IN Command are included in Appendix L.

MIPS GET Command and UPFIT Module:

After running PACT36, the user may use the MIPS GET Command on the PDP 11/70 or the UPFIT Module on the UNIVAC 1108/80 to write the file to tape for transfer to the PDP 11/70. Examples of a GET Command and the use of the UPFIT Module are included in Appendix L.

PACTS Extract Program (PEP):

PEP on the PDP 11/70 reads the list-directed file, reformats the data and writes a sequential file for use as input to the PACTS Design File Program (PDFP) on the PDP 11/45. Output from PEP may be written directly to a small disk pack by selecting the option for the disk drive on which the disk has been mounted. Examples of PEP runs are included in Appendix L.

PACTS Design File Program (PDFP)

PDFP on the PDP 11/45 uses files written by the PEP module on the PDP 11/70 as input. PDFP stores three levels of data in the design file. Level two contains the event bars. Level three contains the test associated with each bar (words 7, 8, 10, 11, 12, 13, and 14 from the 36-word list-directed file). The first level contains a frame and the alphanumeric dates associated with the event bars.

The lengths of the event bars are calculated from the event times read from the list-directed file, i.e., length (in days) = (end of event) - (start of event). PDFP uses a scale of 50 units of resolution (UORs) per day. The height of each bar is 72 UORs and text dimensions are: height = 50 UORs, and width = 50 UORs.

Minimum and maximum X-coordinates are 2736 and 18,300 UORs respectively. Minimum and maximum Y-coordinates are 0 and 7650 UORs initially. For each new year to be stored Y-axis coordinates are calculated using the formulas YMIN = YMAX + 1000 and YMAX = YMAX + 7650.
UNIVAC 1108 LOGON/LOGOFF PROCEDURES

UNIVAC 1108 LOGON Procedure (Refer to Appendix J)

The user dials 3-4850 on the modem telephone of any terminal that is linked to the UNIVAC 1108. Upon hearing a high pitch sound, the user pulls the white receiver button upward which completes the modem connection. The telephone receiver will then be placed along side the modem telephone.

Note: A busy signal upon completion of dialing means all the UNIVAC 1108 lines are busy and the user must wait.

As soon as the user pulls the white receiver button up, the CRT screen will activate and the user will see the words SIGNON. The user must then type in the number of the terminal being used and strike the return key.

Note: During all interaction with the computer, the user acknowledges the end of his input with the return key.

The computer will acknowledge the user's terminal number by typing ENTER USERID/PASSWORD: Beginning with this acknowledgement, the computer will call for user input by the symbol > at the start of each input line. For this particular input, the user must type in \texttt{ PACTS/HCC} after the symbol >.

The computer will acknowledge the USERID/PASSWORD by printing out several lines of information concerning the UNIVAC 1108 system. Then it calls for user input with the symbol >. The user must then type in \texttt{@MIPS,L}. This command brings the MIPS system to the user's terminal. The user must now use MIPS commands to direct computer operations.

UNIVAC 1108 LOGOFF Procedure (refer to Appendix J)

The user issues two commands to terminate the UNIVAC 1108 hookup. The first command \texttt{@FIN} advises the computer that
the run is finished. The computer will then print the run ID, time, date, and other accounting information and will end its communication with *TERMINAL INACTIVE*.

The second command @@TERM advises the computer to terminate the connection between the CRT and the UNIVAC 1108. The computer responds by dropping the line which causes the modem to disconnect.

502 MIPS COMMANDS (Refer to Appendix K)

After the user has completed the UNIVAC 1108 logon procedures and has typed in @MIPS, the terminal mode will be MIPS. All further command lines on the CRT terminal will be preceded by the word MIPS>, (e.g., MIPS> RUN PACTDB).

MIPS will first ask the user for the ORGANIZATION NO./PROJECT ID/Terminal SITE ID. The user must provide this information.

MIPS will acknowledge the above information with a request to SELECT NEW PRINT FILE OPTION. 1 - WRITE PRINT ON PAPER 2 - WRITE PRINT ON FICHE. The user must select one of these options.

MIPS will acknowledge the print file option by giving the print file a number. The user will then give the command RUN PACTDB or RUN PACTS. The computer responds by moving to the next line on the CRT terminal. The user then types GO. MIPS will then bring in the PACTS module requested. The user must now use PACT commands to direct further computer operations.

To terminate MIPS, the user types STOP (Refer to Appendix K). This command terminates MIPS but leaves the terminal hooked up to the UNIVAC 1108 computer. To terminate the UNIVAC 1108 hookup, the user must use the UNIVAC 1108 commands. (Refer to Appendix J).

503 PACTS COMMANDS

The user calls up the PACT modules, PACTDB, PACTS, PACTED or PACTRG using the MIPS command RUN (selected module) and GO. The UNIVAC 1108 computer will bring the selected module to the CRT terminal and then PACTS commands must be used to
control operations of the computer. These commands are all
tutorial (self explanatory) and are shown in Appendices C, E, G,
and I. The command to terminate PACTDB, PACTS, PACTED
or PACTRG is always option $\theta$ on the main menu which returns
the control of computer operations to MIPS.

504 PDP COMMANDS

PDP LOGON Procedures (Refer to Appendix L)

The user enters the following commands from a terminal:

$>$ HEL [100, 1]/ SAIL

$>$ RUN DP;MIPS

PDP LOGOFF Procedures (Refer to Appendix L)

The user enters the following command from a terminal:

MIPS $>$ STOP

$>$ BYE

PDP Programs (Refer to Appendix L)

The user may run the following programs from a terminal:

PEP PDP 11/70 MIPS
MIPS $>$ RUN PEP
MIPS $>$ GO

PDPF PDP 11/45
MCR $>$ INS [15, 2] PDPF
MCR $>$ FIX PDPF
MCR $>$ RUN PDPF ($$)
MCR > UNF PDFP
MCR > REM PDFP

DECWRITER COMMANDS

Mount/Dismount Disk PDP 11/70

> MOU DK\(_n\): /OVR (n = 0 or 1 drive)
  .
  .
  .

> DMO DK\(_n\):

Install MIPS PDP 11/70

> Set /UIC = [100, 1]

> @ MIPSTASKS

Mount/Dismount Disk PDP 11/45

MCR > LOA DK

MCR > MOU DK: /OVR
  .
  .
  .

MCR > DMO DK:

MCR > UNL DK
APPENDIX A

List - Directed File - Files whose records contain identical lists of data. The corresponding data value in each list is the same parameter for every list in the file, e.g., event timeline.

Marshall Interactive Planning System (MIPS) - A computer program which facilitates the handling and execution of other computer programs.

Name-Directed File - Files which contain data that are associated with names, e.g., Training contains training requirements for Spacelab payload crewmen.

On/Off File - Files which are data oriented rather than retrieval oriented, e.g., crew activity.

Payload Crew Training Data Base (PACTDB) - A data base file for storage of Spacelab payload crew training requirements.

Payload Crew Training Report Generator (PACTRG) - A computer program which utilizes PACTS files to generate Spacelab payload crew training reports.

Payload Crew Training Scheduler (PACTS) - A computer program which utilizes PACTDB files to schedule Spacelab payload crew training.

Task Activity Element (TAE) - The smallest identifiable activity in which the payload crew trains.
APPENDIX B

PACTDB MODULE BLOCK DIAGRAM
AND COMPUTER CONFIGURATION
PACTDB MODULE BLOCK DIAGRAM

- List/Edit Payload Specialist Data
- Select File
- Main Control
- Print Entire Data Base for a Mission on Alternate Print File
- List/Edit Groups
- List/Edit Detailed Group and Tae Data
- Edit Today Costs for Work Locations
- Edit Resources
- Travel Data Control
- List/Edit Initial Locations
- List/Edit Work Locations
- List/Edit Travel Cost/Time Data to a Location
- List/Edit Travel Cost/Time Data from a Location
Computer Configuration

Language - Fortran

Core Requirement - 39.75K

Input Files: A PACT Data Base Name-directed File to input/edit data
APPENDIX C

PACTDB TUTORIAL DISPLAYS
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Main Menu page.</td>
</tr>
<tr>
<td>C2</td>
<td>Main menu page, Option 1, has been selected by the user. When the return key is hit, the page will turn. Note: An illegal number or no number will turn the page back to the main menu when the return key is hit.</td>
</tr>
<tr>
<td>C3</td>
<td>User has specified a file labeled TRAINING. The computer has asked for a write key which the user must know to access the file. The write key is entered directly on the five ampersands (@@@@@) to prevent its divulgence to unauthorized viewers. If the key is correct, the page will turn when the return key is hit. Otherwise, the user will be asked to enter the correct key.</td>
</tr>
<tr>
<td>C4</td>
<td>Main Menu, Option 2, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C5</td>
<td>The user must specify a mission if different from the current mission shown. Note: There may be no current mission shown, in which case, the user must specify a mission. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C6</td>
<td>The user can add, delete or edit TAE groups. The Insert New command will add a new TAE group after the last TAE group listed, e.g., Insert LST would add LST following SLSY53. The Insert New After Old command would add a new TAE group after the old TAE grouping. Insert LSS After INS003 would add LSS between INS002 and INS004. The Delete Old command will delete the TAE group specified, e.g., Delete 1ES027 would cause 1ES027 to be deleted. The Redraw command would be given to update the screen after all changes have been made, e.g., after adding and deleting TAE groups.</td>
</tr>
<tr>
<td>C6A</td>
<td>The Edit Old command allows the user to proceed to another page and change detail TAE data, e.g., EDIT INS005 calls up page C7. If the return key is hit with no entry, the page will turn to the Main Menu.</td>
</tr>
<tr>
<td>C7</td>
<td>Tutorial instructions for editing the selected TAE group. When the return key is hit, the page will turn.</td>
</tr>
</tbody>
</table>
C8 Detailed TAE Group Data. When S is entered followed by hitting the return key, the page will turn to the Main Menu.

C9 Main Menu Option 3 has been selected by the user. When the return key is hit, the page will turn.

C10 User has specified a file labeled TRAINING. The computer has asked for a write key which the user must know to access the file. The write key is entered directly on the five ampersands (@@@@) to prevent its divulgence to unauthorized viewers. If the key is correct, the page will turn when the return key is hit. Otherwise, the user will be asked to enter the correct key. Note: File and key specified only once.

C11 The user must specify a mission if different from the current mission shown. Note: There may be no current mission shown in which case, the user must specify a mission. When the return key is hit, the page will turn.

C12 User must select a TAE group to edit, e.g., 1NS005. When the return key is hit, the page will turn.

C13 Tutorial instructions for editing the selected TAE Group. When the return key is hit, the page will turn.

C14 Detailed TAE Group Data. When S is entered followed by hitting the return key, the page will turn to the Main Menu.

C15 Main Menu Option 4 has been selected by the user. When the return key is hit, the page will turn.

C16 Travel Menu Option 1 has been selected. When the return key is hit, the page will turn.

C17 The user can add and delete initial locations. The commands are the same as Page C6.

C18 Travel Menu, Option 2 has been selected by the user. When the return key is hit, the page will turn.
The user can add and delete work locations. Commands are the same as page C5.

Travel Menu, Option 3 has been selected by the user. When the return key is hit, the page will turn.

The user must specify a location, e.g., LA. When the return key is hit, the page will turn.

The user can add time and cost data, e.g., Europe = 100 100 will add 100 in the cost column and 100 in the time column by Europe after the command Redraw is given. When the return key is hit with no entry, the page is turned to the Travel Menu.

Travel Menu, Option 4 has been selected by the user. When the return key is hit, the page will turn.

The user must specify a location, e.g., LA. When the return key is hit, the page will turn.

The user can add time and cost data, e.g., Europe = 100 100 will add 100 in the cost column and 100 in the time column by Europe after the command Redraw is given. When the return key is hit with no entry, the page is turned to the Travel Menu.

Travel Menu, Option 0 has been selected. When the return key is hit, the main menu page will return.

Main Menu, Option 5 has been selected by the user. When the return key is hit, the page will turn.

The user must specify a mission if different from the current mission shown.

To add a payload specialist, the user types Insert New e.g., Insert PS6 to add a location, the user types old = Initial Location Code, e.g., PS7 = DENVER. When the return key is hit with no entry, the page will turn to the main menu.
Main Menu, Option 6 has been selected by the user. When the return key is hit the page will turn.

The user can assign TDY costs to one location by command LOCATION = COST e.g., EUROPE = 60 or to all locations by command ALL = COST e.g. ALL = 60.

Main Menu, Option 7 has been selected by the user. When the return key is hit the page will turn.

The user can add and delete resources using commands insert, insert after, and delete.

Main Menu, Option 8 has been selected by the user. When the return key is hit, the page will turn.

The user must specify a mission is different from the current mission shown.

The computer prints out the indicated information on the line printer. When the return key is hit with no entry, the page will turn to the main menu.

Main Menu, Option 0 has been selected by the user. When the return key is hit, the page will turn and PACTS will be terminated. The system will then be in the MIPS mode.

Standard UNIVAC 1108 Termination Procedures.

NOTE: 1. Tutorial Display Data in this appendix is SL1 Mission Data.

2. PACTDB can be called by standard UNIVAC 1108 and MIPS procedures as shown on the tutorial displays on pages 27 and 28; however, PACTDB can also be called up by using PACTS Main Menu Item 2 or PACTED Main Menu Item 7.
PORT 25/49 SIGNON - HOST1(2X0) UP HOST2(2X0) UP
DTK051
ENTER USERID/PASSWORD:
>FACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL3GR2BHOST1(RSI)*

RUN NUMBER 12

LAST RUN AT: 070280 083555
DATE: 070280 TIME: 083933
>OMIPS,L
RIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 06/25/79 05:41:52

TOTAL SUP TIME = 19.85 HR
SELECT NEW PRINT FILE ON PAPER
1 - WRITE PRINT FILE ON PAPER
2 - WRITEx PRINT FILE ON PICTURE
A PRINT FILE HAS BEEN ESTABLISHED NAMED RPS09354528FS.
INSERT COMMANDS ! (INSERT HELP FOR TUTORING)
RIPS> RUN PACTDC
RIPS> GO
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDV COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS
PAYLOAD CREW TRAINING SCHEDULER DATABASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATABASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATABASE

MIPS>1
SPECIFY FILE NAME OF PACTS DATA BASE FILE
CURRENTLY
MIPS>TRAINING
NDF TRAINING LAST WRITE 08/23/78 13:19:04 1% OF USABLE SPACE
WHAT IS WRITE KEY FOR FILE TRAINING
MIPS>099999
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>2
LIST OF TAE GROUPS FOR MISSION

SL1

FOLLOWING COMMANDS ARE INVALID

EDIT OLD
EDIT OLD AFTER OLD
EDITT OLD
EDIT OLD

AFTER FDF

36
LIST OF TAE GROUPS FOR MISSION SL1

The following commands are valid:
- INSERT NEW
- INSERT NEW AFTER OLD
- DELETE OLD
- EDIT OLD

POCC1
MIN1
SHR1
OBX51
OBX52
OBX53
RE841
SLE81
SLE62
SLE63
SLE64
SLE65
SLE66
SLE67
SLE68
SLE69
SLE70
SRE60
SHL1

REPE18
USER158
MIPS
INSTRUCTIONS FOR EDITING A GROUP OF TAES

LOCATE CROSSHAIRS ON VALUE TO BE CHANGED, ENTER CONTROL CHARACTER AND RETURN KEY
(IF CROSSHAIR(S) ARE NOT VISIBLE THEY MAY BE OFF SCREEN - TURN THUMB WHEELS AND/OR PRESS RETURN KEY)

THE FOLLOWING CONTROL CHARACTERS ARE VALID, OTHERS WILL BE IGNORED

E - ENTER NEW VALUE OVERSTRIKING OLD VALUE
B - ENTER NEW VALUE AT BOTTOM OF SCREEN
O OR O - OMIT ALL DATA FOR THIS ITEM
R - REDRAW ENTIRE SCREEN
S - RETURN TO PRECEEDING MENU
1,2...9 - REDRAW SCREEN STARTING WITH INDICATED TAE
A - ADD OR INSERT ANOTHER TAE TO THIS GROUP

QUESTION 'WHICH TAE' WILL BE ASKED AND SCREEN WILL BE REDRAWN
D - DELETE A TAE (QUESTION 'WHICH TAE' WILL BE ASKED)
H - WILL REDISPLAY THIS PAGE
N - NEXT GROUP TO BE DISPLAYED

QUESTION 'WHICH GROUP TO BE DISPLAYED NEXT' WILL BE ASKED

NOTE: WHEN EDITING RESOURCES, EQUIPMENT, OR CREW/AN, THE ENTIRE STRING MUST BE ENTERED SEPARATED BY SPACES
WHEN EDITING A DATE THE MONTH, DAY AND YEAR MUST BE ENTERED (MM/DD/YY)

READ/COPY - THIS INPUT WILL NOT BE INTERPRETED

MIPS"
<table>
<thead>
<tr>
<th>Training Activity Element (TAE) Number</th>
<th>Description</th>
<th>TAE ID</th>
<th>Availability Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Science, hardware, &amp; procedures</td>
<td>SHIP</td>
<td>3/1/78 TO 12/1/78</td>
</tr>
<tr>
<td>2</td>
<td>DDS Interface TNG(1)</td>
<td>DDSI</td>
<td>2/1/80 TO 6/1/80</td>
</tr>
<tr>
<td>3</td>
<td>DDS Interface TNG(2)</td>
<td>DDS2</td>
<td>3/1/80 TO 5/30/80</td>
</tr>
<tr>
<td>4</td>
<td>DDS Refresher Training</td>
<td>DDS3</td>
<td>7/1/80 TO 12/2/80</td>
</tr>
</tbody>
</table>
PAYLOAD CREW TRAINING SCHEDULER DATA BASE  ( PACTDB )

0 - TERMINE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>3
DO YOU WISH TO CHANGE MISSION ID
MIPS>NO
INSTRUCTIONS FOR EDITING A GROUP OF TAE'S

LOCATE CROSSHAIRS ON VALUE TO BE CHANGED, ENTER CONTROL CHARACTER AND RETURN KEY
(IF CROSSHAIRS ARE NOT VISIBLE THEY MAY BE OFF SCREEN - TOUCH TAES LABELS AND PRESS RETURN KEY)

THE FOLLOWING CONTROL CHARACTERS ARE VALID, OTHERS WILL BE IGNORED

E - ENTER NEW VALUE OVERSTRIKING OLD VALUE
B - ENTER NEW VALUE AT BOTTOM OF SCREEN
0 OR O - OMIT ALL DATA FOR THIS ITEM
R - REDRAW ENTIRE SCREEN
S - RETURN TO PRECEEDING MENU
1,2,...9 - REDRAW SCREEN STARTING WITH INDICATED TAE
A - ADD OR INSERT ANOTHER TAE TO THIS GROUP
Q - QUESTION 'WHICH TAE' WILL BE ASKED AND SCREEN WILL BE REDRAWN
D - DELETE A TAE ( QUESTION 'WHICH TAE' WILL BE ASKED )
H - WILL REDISPLAY THIS PAGE
M - NEXT GROUP TO BE DISPLAYED

NOTE: WHEN EDITING RESOURCES, EQUIPMENT, OR CREW/MA, THE ENTIRE
STRING MUST BE ENTERED SEPARATED BY SPACES.
WHEN EDITING A DATE THE MONTH, DAY AND YEAR MUST
BE ENTERED ( MM/DD/YY )

READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
<table>
<thead>
<tr>
<th>TRAINING ACTIVITY ELEMENT (TAE) NUMBER</th>
<th>DESCRIPTION</th>
<th>LOCATION CODE</th>
<th>DELAY (DV)</th>
<th>DURATION (HRS)</th>
<th>RESOURCES</th>
<th>PRIORITY (H,M,L)</th>
<th>EQUIPMENT</th>
<th>PAYLOAD CREWMAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DESCRIPTION: SCIENCE, HUMANE, &amp; PROCEDURES</td>
<td>TAE ID: SHLP</td>
<td>3/1/79</td>
<td>TO</td>
<td>12/1/79</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>2</td>
<td>DESCRIPTION: DDS INTERFACE TNG(1)</td>
<td>TAE ID: DDS1</td>
<td>2/1/80</td>
<td>TO</td>
<td>6/1/80</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>3</td>
<td>DESCRIPTION: DDS INTERFACE TNG(2)</td>
<td>TAE ID: DDS2</td>
<td>3/1/80</td>
<td>TO</td>
<td>5/30/80</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
<tr>
<td>4</td>
<td>DESCRIPTION: DDS REFRESHER TRAINING</td>
<td>TAE ID: DDS3</td>
<td>7/1/80</td>
<td>TO</td>
<td>12/3/80</td>
<td>ALL</td>
<td>ALL</td>
<td>ALL</td>
</tr>
</tbody>
</table>
08/24/78 10:04:49

PAYLOAD CREATING SCHEDULER DATABASE (PCDB)
TRAVEL COST AND TRAVEL TIME DATA

0 - RETURN TO MAIN CONTROL
1 - EDIT LIST OF INITIAL LOCATIONS
2 - EDIT LIST OF WORK LOCATIONS
3 - EDIT TRAVEL COST/TIME DATA TO A PARTICULAR LOCATION
4 - EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION

MIPS>2
LIST OF WORK LOCATIONS

FOLLOWING COMMANDS ARE VALID
INSERT NEW
INSERT NEW AFTER OLD
DELETE OLD
REDRAW

KSC
ARMS
ARMS
SF
RSFC
MUIRCH
RHURY
JAPAN
POZU
PARIS
MUNICH
FRANK
LONDON
ORLEAN
TOULOU
BREMEN
LINDAU
MIPS

50
TRAVEL COST AND TRAVEL TIME DATA

0 - RETURN TO MAIN CONTROL
1 - EDIT LIST OF INITIAL LOCATIONS
2 - EDIT LIST OF WORK LOCATIONS
3 - EDIT TRAVEL COST/TIME DATA TO A PARTICULAR LOCATION
4 - EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION
MIPS>3
TRAVEL COST AND TRAVEL TIME DATA

0 = RETURN TO MAIN CONTROL
1 = EDIT LIST OF INITIAL LOCATIONS
2 = EDIT LIST OF WORK LOCATIONS
3 = EDIT TRAVEL COST/TIME DATA TO A PARTICULAR LOCATION
4 = EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION
<table>
<thead>
<tr>
<th>Location</th>
<th>Cost</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>812</td>
<td>2</td>
</tr>
<tr>
<td>Boston</td>
<td>130</td>
<td>1</td>
</tr>
<tr>
<td>FNC</td>
<td>123</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>281</td>
<td>1</td>
</tr>
<tr>
<td>Philly</td>
<td>215</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>250</td>
<td>1</td>
</tr>
<tr>
<td>Porz</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Paris</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Munich</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Frank</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Orleans</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Toulouse</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bremen</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lindau</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Aarhus</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>SF</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>LA</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>MSFC</td>
<td>170</td>
<td>1</td>
</tr>
</tbody>
</table>
MIPS

4 - EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION
3 - EDIT TRAVEL COST/TIME DATA TO A PARTICULAR LOCATION
2 - EDIT LIST OF WORK LOCATIONS
1 - EDIT LIST OF INITIAL LOCATIONS
0 - RETURN TO MAIN CONTROL

TRAVEL COST AND TRAVEL TIME DATA
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - Specify PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>5
**LIST OF PAYLOAD SPECIALIST FOR MISSION SL1**

Following commands are valid:
- Insert New
- Insert New After Old
- Delete Old
- Redraw

*Old = Initial Location Code*

<table>
<thead>
<tr>
<th>ID</th>
<th>Home</th>
<th>ID</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS1</td>
<td>LA</td>
<td>MS1</td>
<td>JSC</td>
</tr>
<tr>
<td>PS2</td>
<td>BOSTON</td>
<td>MS2</td>
<td>JSC</td>
</tr>
<tr>
<td>PS3</td>
<td>EUROPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS4</td>
<td>EUROPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS5</td>
<td>EUROPE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MIPS
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>6
TDY COST FOR WORK LOCATIONS

FOLLOWING COMMANDS ARE VALID
LOCATION = COST
ALL = COST
REDRAW

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TDY COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC</td>
<td>36</td>
</tr>
<tr>
<td>RICH</td>
<td>36</td>
</tr>
<tr>
<td>MSFC</td>
<td>36</td>
</tr>
<tr>
<td>CANADA</td>
<td>40</td>
</tr>
<tr>
<td>PHILY</td>
<td>36</td>
</tr>
<tr>
<td>JAPAN</td>
<td>76</td>
</tr>
<tr>
<td>SF</td>
<td>40</td>
</tr>
<tr>
<td>PZ</td>
<td>68</td>
</tr>
<tr>
<td>PARIS</td>
<td>68</td>
</tr>
<tr>
<td>MUNICH</td>
<td>68</td>
</tr>
<tr>
<td>FRANCE</td>
<td>68</td>
</tr>
<tr>
<td>LONDON</td>
<td>68</td>
</tr>
<tr>
<td>ORLEANS</td>
<td>68</td>
</tr>
<tr>
<td>TOULOU</td>
<td>68</td>
</tr>
<tr>
<td>BREMEN</td>
<td>68</td>
</tr>
<tr>
<td>LINZIAU</td>
<td>68</td>
</tr>
<tr>
<td>Aarhus</td>
<td>68</td>
</tr>
<tr>
<td>JSC</td>
<td>36</td>
</tr>
<tr>
<td>LA</td>
<td>48</td>
</tr>
<tr>
<td>EUROPE</td>
<td>68</td>
</tr>
</tbody>
</table>
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>7
LIST OF RESOURCES

FOLLOWING COMMANDS ARE VALID

INSERT NEW
INSERT NEW AFTER OLD
DELETE OLD
REDRAW

MIPS>
PAYLOAD CREW TRAINING SCHEDULER DATA BASE ( PACTDB )

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>8
SPECIFY MISSION

- CURRENTLY SL1

LIST OF TAE GROUPS FINISHED
GROUP AND TAE DATA FINISHED
INITIAL LOCATIONS FINISHED
WORK LOCATIONS FINISHED
PAYLOAD SPECIALIST FINISHED
TOY LIST COMPLETE
RESOURCES LIST COMPLETE
LIST OF PACS DATA BASE COMPLETE
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED

PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTS8)

0 - TERMINATE
1 - SPECIFY PACS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TOY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACS INPUT DATA BASE

08/24/78 10:46:12
08/24/78 10:46:12

PAYLOAD CREW TRAINING SCHEDULER DATA BASE ( PACTDB )

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>0
TOTAL SUP TIME = 1.58 MIN
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS100629*P*F*.
INSERT COMMANDS: (INSERT HELP FOR TUTORING)
MIPS>STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
NORMAL EXIT. CPU TIME: 295 TOTAL SUPS: 14885 (MILLISEC)
DS>STOP: MIPS
>FIN

RUNID: ELPACT  ACCT: 1HEL12493200  PROJECT: JACKIEBIN207
STOP: MIPS
TIME:  SUPS: 00:01:47.014  CBSUPS: 030037005
CPU: 00:00:11.721  I/O: 00:00:35.924
CC/ER: 00:00:59.368  WAIT: 00:15:42.083
IMAGES READ: 66  PAGES: 33

TECHNICAL TYPE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE
AVAILABLE, EX: U34, U30, BC, OR BCB. ALL QASG CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY.
EXAMPLE: QASG,T FILENAME,T,REELNR CHANGE TO QASG,T FILENAME,UBS,REELNR

TERMINAL INACTIVE?
>00TERM
APPENDIX D

PACTS MODULE BLOCK DIAGRAM AND COMPUTER CONFIGURATION
PACTS MODULE BLOCK DIAGRAM

CREATE PERMANENT MIPS FILE

GENERATE TRIAL SCHEDULES AND SELECT BEST

SAVE DATA

SCHEDULAR MAIN CONTROL

DISPLAY SUMMARY OF BEST SCHEDULE

WRITE OUTPUT FILES

TRANSFER TO REPORT GENERATOR

SETUP/EDIT INPUT DATA

LOAD DATA FROM PREVIOUS CASE

EDIT TAE GROUP LIST

EDIT PS LIST

EDIT MISSION LIST

EDIT FIX ORDER LIST

LOAD RESOURCE & TRAVEL COST/TIME DATA

EDIT CONTROL DATA

LOAD THE MODELS

NUMBER OF SCHEDULES TO ATTEMPT
RANDOM NUMBER SEED

CURRENT EVALUATION PRIORITIES ARE AS FOLLOWS
- NUMBER OF TAE'S SCHEDULED
- AVERAGE NUMBER OF TAE'S/SCHEDULED
- SCHEDULE COST
- INPUT CHANGES, IF DESIRED
- ENTER 0 TO DISCARD
LOAD CONTROL AND MISSION LEVEL DATA

LOAD TRAVEL COST/TIME AND RESOURCE DATA

EDIT CONTROL AND MISSION LEVEL DATA

LOAD TAE MODELS

GENERATE TRIAL SCHEDULES AND SELECT BEST

WRITE OUTPUT FILES AND TABULATE SCHEDULE

DISPLAY SUMMARY OF BEST SCHEDULE

SAVE INPUT DATA FROM THIS CASE

DISPLAY BEST SCHEDULE (PACTRG)
Computer Configuration

Language: FORTRAN

Core Requirement = 33.27K

Input Files: Name-Directed File (NDF) which contains mission dependent data and TAE models.

Output Files: List Directed Files (LDF) which contains schedule time, resource, and travel cost/time data.

ON/OFF file contains Crew activities.
APPENDIX E

PACTS TUTORIAL DISPLAYS
## PACTS EXPLANATORY NOTES

<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Main Menu page</td>
</tr>
<tr>
<td>E2</td>
<td>Main Menu, Option 1, has been selected by the user. When the return key is hit, the page will turn. Note: Options 4, 5, and 6 are not available.</td>
</tr>
<tr>
<td>E3</td>
<td>Name-directed, list-directed, or ON-OFF files can be created by the user, e.g., PACTS-LD is a list directed file.</td>
</tr>
<tr>
<td>E4(A, B, C)</td>
<td>Name-directed, list-directed, or ON-OFF files can be created by the user, e.g., PACTS-OF-1 is an ON/OFF file.</td>
</tr>
<tr>
<td>E5</td>
<td>Main Menu, Option 2, has been selected by the user. Note: Options 4, 5, and 6 are not available.</td>
</tr>
<tr>
<td>E6</td>
<td>The PACTDB menu is available to the user. Note: For use of this menu, refer to Appendix C. PACTDB menu, Option @, has been selected by the user which return the user to the PACTS menu.</td>
</tr>
<tr>
<td>E7</td>
<td>Main Menu, Option 3, has been selected by the user. Note: At this point options 4, 5, and 6 are not available.</td>
</tr>
<tr>
<td>E8</td>
<td>The SETUP/EDIT INPUT DATA Menu is available to the user.</td>
</tr>
<tr>
<td>E9</td>
<td>Setup Menu, Option 1, has been selected by the user.</td>
</tr>
<tr>
<td>E10</td>
<td>A file name and case number must be supplied by the user, e.g., PACTS-SCHED, Case 11.</td>
</tr>
<tr>
<td>E11</td>
<td>Setup Menu, Option 2, has been selected by the user.</td>
</tr>
<tr>
<td>E12</td>
<td>A file for reading travel/cost and resource data must be specified by the user, e.g., TRAINING.</td>
</tr>
<tr>
<td>E13</td>
<td>Setup Menu, Option 3, has been selected by the user.</td>
</tr>
<tr>
<td>E14</td>
<td>The number of schedules to run and random seed must be specified by the user, e.g., 1 1.</td>
</tr>
<tr>
<td>E15</td>
<td>The evaluation criteria must be specified by the user, e.g., 1 2 3.</td>
</tr>
<tr>
<td>E16</td>
<td>Setup Menu, Option 4, has been selected by the user.</td>
</tr>
<tr>
<td>Page No.</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>E17</td>
<td>The user may insert or delete tours and assign starting and ending dates for a tour, e.g., DELETE , INSERT , and 7/1/78 8/1/79</td>
</tr>
<tr>
<td>E18</td>
<td>Setup Menu, Option 5, has been selected by the user. (Not available)</td>
</tr>
<tr>
<td>E19</td>
<td>Setup Menu, Option 6, has been selected by the user.</td>
</tr>
<tr>
<td>E20</td>
<td>The user may specify that mission data be loaded from a PACTDB file, e.g., TRAINING.</td>
</tr>
<tr>
<td>E21</td>
<td>Setup Menu, Option 7, has been selected by the user.</td>
</tr>
<tr>
<td>E22</td>
<td>The user must specify the mission, e.g., SL1.</td>
</tr>
<tr>
<td>E23</td>
<td>The user may insert, delete, or assign locations to the Payload Specialists, e.g., INSERT PS7, DELETE PS7, PS7 = KOKO.</td>
</tr>
<tr>
<td>E24</td>
<td>Setup Menu, Option 8, has been selected by the user.</td>
</tr>
<tr>
<td>E25</td>
<td>The user may insert or delete TAE groups, e.g., INSERT HS7, INSERT HHS8 AFTER MEU, DELETE HS7, DELETE HHS8.</td>
</tr>
<tr>
<td>E26</td>
<td>Setup Menu, Option 9, has been selected by the user.</td>
</tr>
<tr>
<td>E27</td>
<td>The user may insert or delete TAE groups into the fixed order scheduling list, e.g., insert INS001.</td>
</tr>
<tr>
<td>E28</td>
<td>Setup Menu, Option 10, has been selected by the user.</td>
</tr>
<tr>
<td>E29</td>
<td>The PACTDB file containing the TAE models must be specified, e.g., TRAINING.</td>
</tr>
<tr>
<td>E30</td>
<td>Setup Menu, Option 0, has been selected.</td>
</tr>
<tr>
<td>E31</td>
<td>Main Menu, Option 4, is now ready and has been selected. Note: Options 5 and 6 are still unavailable.</td>
</tr>
<tr>
<td>E32</td>
<td>PACT is generating schedule.</td>
</tr>
</tbody>
</table>
Main Menu, Option 5, has been selected by the user. Note: Options 5 and 6 are ready.

Main Menu, Option 5, has been selected by the user. Note: Options 5 and 6 are ready.

Main Menu, Option 6, has been selected by the user.

The user must specify the LDF and ON/OFF files, e.g., PACTLD and PACTOF.

Main Menu, Option 7, has been selected by the user. The user must specify the LDF and ON/OFF files, e.g., PACTLD and PACTOF.

Main Menu, Option 7, has been selected by the user. The user has an option to write the files and go to the Report Generator by answering YES or to go directly to the Report Generator by answering NO.

Main Menu, Option 0, returns user to PACTS.

Main Menu, Option 8, has been selected by the user.

The file for writing the data must be specified by the user e.g., TRAINING, CASE 11.

Main Menu, Option 0, has been selected by the user which puts the user back into the MIPS system.

Standard UNIVAC 1108 Termination Procedures.

NOTE: 1. Tutorial Display Data in this Appendix is SL1 Mission Data.

2. PACTS can be called up by standard Univac procedures as shown on the tutorial on Pages 37 and 37A.
PORT 25/49  SIGNON - HOST1(2X0) UP HOST2(2X0) UP
DTR051
ENTER USERID/PASSWORD:
>PACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIXAC 1100 OPERATING SYSTEM LEV. AL36R2BH0S11(RSI):
*******************************************************************************

RUN NUMBER 12

LAST RUN AT: 070220 083555
DATE: 070220       TIME: 083933
>@MIPS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 06/21/79  10:59:43
TOTAL SUP TIME =  1.77 MIN
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS142010%P8F8.
INSERT COMMANDS : (INSERT  HELP  FOR TUTORING)
MIPS>RUN PACTS
MIPS>GO
PAYLOAD CREW SCHEDULER

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 4, 5 AND 6 ARE NOT AVAILABLE
MIPS
PAYLOAD CREW SCHEDULER

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATABASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 4, 5 AND 6 ARE NOT AVAILABLE
MIPS>1
THE ENTRY OF A $ SIGN WILL ABORT FILE CREATION
WHAT IS THE NAME OF THE FILE TO BE CREATED?
UP TO 12 CHARACTERS ( A-Z, 0-9, - )
MIPS>PACT-LD-4
SPECIFY THE TYPE OF FILE BY NUMBER
1- NAME-DIRECTED
2- LIST-DIRECTED
3- ON-OFF
MIPS>2
SPECIFY THE MAXIMUM NUMBER OF RECORDS
MIPS>5000
SPECIFY A READ KEY IF DESIRED
MIPS>
SPECIFY A WRITE KEY IF DESIRED
MIPS>
SPECIFY NAME OF PERSON RESPONSIBLE FOR THIS FILE
MIPS>SHIPMAN
HOW LONG IS THE FILE TO BE MAINTAINED - DAYS?
MIPS>1
SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS>PACTS OUTPUT FILE
DOES A DICTIONARY CURRENTLY EXIST FOR THIS FILE?
MIPS>NO
SPECIFY THE NUMBER OF WORDS PER RECORD
MIPS>12
SPECIFY FORTRAN DISPLAY FORMAT FOR DATA - DEFAULT
(((1X,1PSE14.6))
USE ; TO CONTINUE FORMAT ONTO NEXT CARD
72 CHARACTERS PER CARD, 4 CARDS MAXIMUM
MIPS>
SPECIFY MnEMONIC FOR WORD 1
MIPS>A
SPECIFY MnEMONIC FOR WORD 2
MIPS>B
SPECIFY MnEMONIC FOR WORD 3
MIPS>
THE ENTRY OF A @ SIGN WILL ABORT FILE CREATION
WHAT IS THE NAME OF THE FILE TO BE CREATED?
UP TO 12 CHARACTERS (A-Z, 0-9, -)
MIPS>FACTS-OF-2
SPECIFY THE TYPE OF FILE BY NUMBER
1- NAME-DIRECTED
2- LIST-DIRECTED
3- ON-OFF
MIPS>3
SPECIFY THE MAXIMUM NUMBER OF RECORDS
MIPS>10000
SPECIFY A READ KEY IF DESIRED
MIPS>
SPECIFY A WRITE KEY IF DESIRED
MIPS>
SPECIFY NAME OF PERSON RESPONSIBLE FOR THIS FILE
MIPS>DAVID SHIPMAN
HOW LONG IS THE FILE TO BE MAINTAINED - DAYS?
MIPS>180
SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS>OUTPUT FILE FOR SL1
PAYLOAD CREW SCHEDULER

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 4, 5 AND 6 ARE NOT AVAILABLE
MIPS>2
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILLED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>0
MIPS3

OPTIONS 4, 5, 6 ARE NOT AVAILABLE

8 - Save data from this case for future use
7 - Transfer to report generator (Packet)
6 - Tabulate schedule and write output file
5 - Display summary of best schedule
4 - Generate trial schedules and select best
3 - Set up/edit input data
2 - Transfer to Data Base Editor (Packet)
1 - Create a permanent MIPS file
0 - Terminate

Payload Crew Scheduler
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS
SPECIFY FILE NAME CONTAINING PACTS DATA
RIPS>PACTS-SCHED
ENTER CASE IDENTIFIER , 6 CHARACTERS MAX.
RIPS>CASE11
6 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>2
SPECIFY FILE FOR READING TRAVEL/COST AND RESOURCE DATA
MIPS>TRAINING
TRAVEL COST/TIME AND RESOURCE DATA IS LOADED
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
MIPS>
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>3
CURRENT EVALUATION PRIORITIES ARE AS FOLLOWS

NUMBER OF TAES SCHEDULED
AVERAGE NUMBER OF TAES/GROUP SCHEDULED
SCHEDULE COST

INPUT CHANGES, IF DESIRED
ENTER 0 TO DISCARD
MIPS>1 2 3
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>4
<table>
<thead>
<tr>
<th>TOUR</th>
<th>STARTING DATE</th>
<th>ENDING DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESA1</td>
<td>10/9/78</td>
<td>12/8/78</td>
</tr>
<tr>
<td>ESA2</td>
<td>7/26/79</td>
<td>12/22/79</td>
</tr>
<tr>
<td>ESA3</td>
<td>5/2/80</td>
<td>12/5/80</td>
</tr>
<tr>
<td>ESA4</td>
<td>2/3/81</td>
<td>7/7/79</td>
</tr>
<tr>
<td>ESA5</td>
<td>4/2/81</td>
<td>9/14/79</td>
</tr>
<tr>
<td>US1</td>
<td>1/3/79</td>
<td>7/3/79</td>
</tr>
<tr>
<td>US2</td>
<td>2/4/80</td>
<td>8/3/79</td>
</tr>
<tr>
<td>US3</td>
<td>3/6/79</td>
<td>1/16/80</td>
</tr>
<tr>
<td>US4</td>
<td>8/3/80</td>
<td>8/14/79</td>
</tr>
<tr>
<td>OR1</td>
<td>8/3/79</td>
<td>5/17/79</td>
</tr>
<tr>
<td>OR2</td>
<td>1/9/80</td>
<td>6/27/79</td>
</tr>
<tr>
<td>JAP1</td>
<td>2/3/81</td>
<td>12/5/80</td>
</tr>
</tbody>
</table>

The following companies have valid inserts. Insert your ID and delete your ID as required.

Tour definitions are valid until the end of the starting date.
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>6
CURRENT MISSIONS ARE:
ENTER NEW MISSION LIST, IF DESIRED
MIPS>SL1
DO YOU WANT TO LOAD MISSION LEVEL DATA FROM A PACTDB FILE?
MIPS>YES
SPECIFY FILE FOR LOADING MISSION LEVEL DATA
CURRENTLY:
MIPS>TRAINING
MISSION LEVEL DATA HAS BEEN LOADED
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
MIPS>
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>?
PAYLOAD SPECIALISTS FOR SL1

THE FOLLOWING COMMANDS ARE VALID
INSERT PAYLOAD SPECIALIST
DELETE PAYLOAD SPECIALIST
PAYLOAD SPECIALIST + LOCATION CODE
REDRAW

<table>
<thead>
<tr>
<th>PAYLOAD SPECIALIST</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS1</td>
<td>LA</td>
</tr>
<tr>
<td>PS2</td>
<td>BOSTON</td>
</tr>
<tr>
<td>PS3</td>
<td>EUROPE</td>
</tr>
<tr>
<td>PS4</td>
<td>EUROPE</td>
</tr>
<tr>
<td>PS5</td>
<td>EUROPE</td>
</tr>
<tr>
<td>MS1</td>
<td>JSC</td>
</tr>
<tr>
<td>MS2</td>
<td>JSC</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>0</td>
<td>RETURN TO MAIN CONTROL</td>
</tr>
<tr>
<td>1</td>
<td>LOAD DATA FROM PREVIOUS CASE</td>
</tr>
<tr>
<td>2</td>
<td>LOAD RESOURCE AND TRAVEL COST/TIME DATA</td>
</tr>
<tr>
<td>3</td>
<td>EDIT CONTROL DATA</td>
</tr>
<tr>
<td>4</td>
<td>EDIT TOUR DEFINITIONS</td>
</tr>
<tr>
<td>5</td>
<td>EDIT WORK DAY DURATIONS</td>
</tr>
<tr>
<td>6</td>
<td>EDIT MISSION LIST</td>
</tr>
<tr>
<td>7</td>
<td>EDIT LIST OF PAYLOAD SPECIALISTS</td>
</tr>
<tr>
<td>8</td>
<td>EDIT LIST OF TAE GROUPS</td>
</tr>
<tr>
<td>9</td>
<td>EDIT FIXED ORDER LIST</td>
</tr>
<tr>
<td>10</td>
<td>LOAD TAE MODELS</td>
</tr>
</tbody>
</table>

MIPS>8
0 - RETURN TO MAIN CONTROL
1 - LOAD DATA FROM PREVIOUS CASE
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
3 - EDIT CONTROL DATA
4 - EDIT TOUR DEFINITIONS
5 - EDIT WORK DAY DURATIONS
6 - EDIT MISSION LIST
7 - EDIT LIST OF PAYLOAD SPECIALISTS
8 - EDIT LIST OF TAE GROUPS
9 - EDIT FIXED ORDER LIST
10 - LOAD TAE MODELS

MIPS>10
PAYLOAD CREW SCHEDULER

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTION 4 IS READY
OPTIONS 5 AND 6 ARE NOT AVAILABLE
MIPS>4
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED = 86041  COST = $138367.50

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 5 AND 6 ARE READY
MIPS>5
<table>
<thead>
<tr>
<th>GROUP</th>
<th>TASKS</th>
<th>SCHEDULED</th>
<th>FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>7</td>
<td>7</td>
<td>4, 5</td>
</tr>
<tr>
<td>PHASE</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SLSYS1</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>SLSYS2</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>SLSYS3</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**SCHEDULE: 86041 MISSIONS: SL1**

**COST: 138367.50**

*COPY - THIS INPUT WILL NOT BE INTERPRETED*
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED = 8E041
COST = $138367.50

1 = TERMINATE
2 = CREATE A PERMANENT MIPS FILE
3 = TRANSFER TO DATA BASE EDITOR (PACTDB)
4 = SETUP/EDIT TRIAL SCHEDULES AND SELECT BEST
5 = TABULATE SCHEDULE AND WRITE OUTPUT (PACTRG)
6 = TRANSFER TO REPORT GENERATOR (PACTRG)
7 = SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 5 AND 6 ARE READY

MIPS>6
SELECT PRINT AND FILE OPTIONS.

DEFAULT PRINT OPTION
0 = NO PRINT OUT
1 = PRINT ON TIMES ONLY
2 = PRINT ALL TIMES

DEFAULT FILE OPTION
0 = NO FILE
1 = WRITE LDF FILE
2 = WRITE ON/OFF FILE
3 = WRITE BOTH

ENTER CHANGES

MIPS>

SPECIFY FILE NAME FOR WRITING THE FOLLOWING
CREW TRAINING TIMELINE ( LDF )
MIPS> PACTLD
WHAT IS WRITE KEY FOR FILE PACTLD
MIPS> 000000

SPECIFY FILE NAME FOR WRITING THE FOLLOWING
(IF NAME INCLUDES $ IT WILL BE TEMPORARY)
SCHEDULE TIMELINE ( ON/OFF )
FILE NAME WILL DEFAULT TO 0000000000
MIPS> PACTOF
DO YOU WANT TO ADD MORE SUBJECTS TO EXISTING DATA FILE
MIPS> NO
WHAT IS WRITE KEY FOR FILE PACTOF
MIPS> 000000
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED - 86041  COST - $ 138367.50

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

MIPS>7
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED = 86041   COST = $ 138367.50

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATABASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

MIPS>8
SPECIFY FILE NAME FOR WRITING PACTS DATA
MIPS>PACTS-SCHED
ENTER CASE IDENTIFIER 6 CHARACTERS MAX.
MIPS>CASE11
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED = 86041  COST = $ 133367.50

0 - TERMINATE
1 - CREATE A PERMANENT MIPS FILE
2 - TRANSFER TO DATA BASE EDITOR (PACTDB)
3 - SETUP/EDIT INPUT DATA
4 - GENERATE TRIAL SCHEDULES AND SELECT BEST
5 - DISPLAY SUMMARY OF BEST SCHEDULE
6 - TABULATE SCHEDULE AND WRITE OUTPUT FILE
7 - TRANSFER TO REPORT GENERATOR (PACTRG)
8 - SAVE DATA FROM THIS CASE FOR FUTURE USE

MIPS>0
TOTAL SUP TIME = 1.58 MIN

IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS100629*PSFS.
INSERT COMMANDS: (INSERT HELP FOR TUTORING)
MIPS>STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
NORMAL EXIT. CPU TIME: 295 TOTAL SUPS: 14885 (MILLISECOND)
DS>STOP: MIPS
>OFIN

RUNID: ELPACT ACCT: 1HEL12493200 PROJECT: JACKIEBIN207
STOP: MIPS
TIME: SUPS: 00:01:47.014 CBSUPS: 030037005
CPU: 00:00:11.721 I/O: 00:00:35.924
CC/ER: 00:00:59.368 WAIT: 00:01:54.083
IMAGES READ: 66 PAGES: 33

- TECHNICAL NOTE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE AVAILABLE, EX: U34, U30, BC, OR BC9. ALL QASG CARDS THAT NOW USE 'T' EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY. EXAMPLE: QASG,T FILENAME,T REELNO CHANGE TO QASG,T FILENAME, UBS, REELNO
- TERMINAL INACTIVE:
>QOTERM
APPENDIX F

PACKED MODULE BLOCK DIAGRAM
AND COMPUTER CONFIGURATION
PACED MODULE BLOCK DIAGRAM

- Usage Information
- Delete Group from Timeline
- Display/Edit Crew Timeline
- Delete Crew from Timeline
- Main Menu
- Display/Edit Composite Timeline
- Display/Edit Event Timeline and Post Process Travel
- Transfer to PACTDB
- Transfer to PACTRG
- Write New Timeline Files

**Select Print and File Options**

**Default Print Option** = 1
0 - No Print Out
1 - Print on Times Only
2 - Print All Times

**Default File Option** = 3
0 - No File
1 - Write LOF File
2 - Write On/Off File
3 - Write Both
PACTED SYSTEM FLOW CHART
Computer Configuration

Language - FORTRAN

Core Requirement - 35.47K

Input Files: Name Directed File (NDF) which contains mission dependent data and TAE Models. List Directed File (LDF) which contains mission timeline status.

Output Files: List Directed File (LDF) which contains mission timeline status. ON/OFF File which contains crew activities.
APPENDIX G

PACTED TUTORIAL DISPLAYS
### PACTED EXPLANATORY NOTES

<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>Main Menu Page</td>
</tr>
<tr>
<td>G2</td>
<td>Main Menu Page; Option 1, has been selected by the user. When the return key is hit, the page will turn. Note: An illegal number or no number will turn the page back to the main menu when the return key is hit.</td>
</tr>
<tr>
<td>G3</td>
<td>Editing Instructions for PACTED.</td>
</tr>
<tr>
<td>G4</td>
<td>Main Menu Page, Option 2, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G5</td>
<td>The user must specify a starting time if different from the one shown or if there is no starting time shown. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G6</td>
<td>Upon completion of printing the composite timeline, the terminal will give an audible beep and the crosshairs will appear on the screen. The user may make changes to the page, call for the next page, time point or crewman or terminate the editing on this page. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G7</td>
<td>Main Menu Page, Option 3 has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G8</td>
<td>The user must specify a starting time if different from the one shown or if there is no starting time shown. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G9</td>
<td>Upon completion of printing the event timeline, the terminal will give an audible beep and the crosshairs will appear on the screen. The user may make changes to the page, call for the next page, time point or crewman, or terminate the editing on this page. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>G10</td>
<td>Main Menu Page, Option 4, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
</tbody>
</table>
The user must specify the TAE Group to be deleted from the timeline. When the return key is hit, the group will be deleted and the page will turn.

Main Menu Page, Option 5, has been selected by the user. When the return key is hit, the page will turn.

The user must specify the crewman (crewmen) for which a timeline is to be displayed. When the return key is hit, the page will turn.

The user must specify a starting time if different from the one shown or if there is no starting time shown. When the return key is hit, the page will turn.

Upon completion of the printing of the composite timeline for the specified crewman, the terminal will give an audible beep and the crosshairs will appear on the screen. The user may make changes to the page, call for the next page, time point or crewman, or terminate the editing on this page. When the return key is hit, the page will turn.

Main Menu Page, Option 6 has been selected by the user. When the return key is hit, the page will turn.

The user must specify a start and end time for deletion if different from the time shown or if no times are shown. When the return key is hit, the terminal will prompt the user to specify the crewman to be selected. The user must then specify the crewman to be deleted. When the return key is hit the page will turn.

Main Menu Page, Option 7, has been selected by the user. When the return key is hit, the terminal will transfer to PACTDB.

Main Menu Page of PACTDB is on the screen. The user may exercise all options as described in Appendix C or select option 0 to return to the PACTED. When the return key is hit, the terminal will return to PACTED.

Main Menu Page, Option 8, has been selected by the user. When the return key is hit, the page will turn.
The user must specify the file for writing the new training timeline. When the return key is hit, the terminal will prompt the user for a write key. If the proper write key is not supplied, the files will not be written. When the return key is hit, the terminal will prompt the user for an ON/OFF name. The user must supply a file name. When the return key is hit, the terminal will prompt the user to determine if more subjects are to be added to the file. The user must answer yes or no. When the return key is hit, the terminal will prompt the user for a write key for the ON/OFF file. If the proper write key is not provided, the file will not be written. When the return key is hit, the page will turn.

Main Menu Page, Option 9, has been selected by the user. When the return key is hit, the terminal will transfer to PACTRG.

Main Menu Page of PACTRG is on the screen. The user may exercise all options as described in Appendix I or select Option 0 to return to the PACTED. When the return key is hit, the terminal will return to PACTED.

Main Menu Page, Option 0, has been selected by the user. When the return key is hit, the terminal will return to the MIPS mode.

Standard UNIVAC 1108 Termination Procedure.

NOTE: 1. Tutorial Display Data in this Appendix is SL1 Mission Data.

2. PACTED can be called up using standard UNIVAC 1108 and MIPS procedures as shown on tutorials on Pages 46 and 47.

3. File names must be specified prior to editing as shown on Page 48.
PORT 25/26 SIGNON - HOST1(2X0) UP HOST2(2X0) UP

ENTER USERID/PASSWORD:
>PACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL36R2BH0ST1(RSI)*
******************************************************************************

RUN NUMBER 11

LAST RUN AT: 070280 071857
DATE: 070280 TIME: 083554
>@MIPS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 06/20/79 04:54:18
TOTAL SUP TIME = 0.65 MIN
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS1320541P8F8.
INSERT COMMANDS: (INSERT HELP FOR TUTORING)
MIPS>RUN PACTED
MIPS>GO
PAYLOAD CREW TRAINING EDITOR (PACTED)

SPECIFY NAME OF PACTS NAME-DIRECTED FILE
CURRENTLY
MIPS>TRAINING

SPECIFY NAME OF LIST-DIRECTED FILE FOR TIMELINE INPUT DATA
MIPS>PACTLD
PAYLOAD CREW TRAINING EDITOR (PACTED)
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)
PAYLOAD CREW TRAINING EDITOR (PACTED)

MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATABASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS>1
EDITING INSTRUCTIONS

LOCATE CROSSHAIRS ON VALUE TO BE EDITED, ENTER COMMAND CHARACTER, AND PRESS RETURN KEY.
(If crosshairs are not visible they may be off screen, turn track wheels and/or press return key.)

EDITING COMMAND CHARACTERS ARE LISTED BELOW.

E  - ENTER NEW VALUE, OVERSTRIKING OLD VALUE
B  - ENTER NEW VALUE IN BLANK AREA OF SCREEN
A  - ADD SPECIFIED TAE(S) TO A GROUP
     (MULTIPLE QUESTIONS WILL BE ASKED)
D  - DELETE SPECIFIED TAE (EVENT)
R  - REDRAW SCREEN
S  - STOP EDITING
T  - SPECIFY TIME POINT FOR NEXT PAGE
C  - CONTINUE, BEGINNING WITH NEXT TIME POINT
N  - BEGIN PROCESSING ANOTHER CREWMAN
H  - REDISPLAY THIS TUTORING (HELP)

READ/COPY - THIS INPUT WILL NOT BE INTERPRETED

MIPS>
PAYLOAD CREW TRAINING EDITOR ( PACTED )
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE ( PACTDB )
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR ( PACTRG )

MIPS>2
<table>
<thead>
<tr>
<th>GROUP</th>
<th>ID</th>
<th>LOCATION</th>
<th>ON TIME</th>
<th>OFF TIME</th>
<th>CREATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>RSFC</td>
<td>0/6/78</td>
<td>0/6/78</td>
<td>PS3</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO4</td>
<td>PSFC</td>
<td>0/6/78</td>
<td>0/6/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO3</td>
<td>RSFC</td>
<td>0/6/78</td>
<td>0/6/78</td>
<td>PS2</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO6</td>
<td>RSFC</td>
<td>0/6/78</td>
<td>0/6/78</td>
<td>PS2</td>
</tr>
<tr>
<td>CREWENT</td>
<td>2</td>
<td>KILCOY</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>2</td>
<td>TRICOU</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>4</td>
<td>CLON</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>4</td>
<td>KLOM</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>6</td>
<td>PESCOUT</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>7</td>
<td>LAPROU</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>CREWENT</td>
<td>8</td>
<td>DCOV</td>
<td>RSFC</td>
<td>0/7/78</td>
<td>PS3</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>LA</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>BOSTON</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>EUROPE</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>JSC</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>HOME</td>
<td>0</td>
<td>LAC</td>
<td>0/12/78</td>
<td>0/12/78</td>
<td>PS1</td>
</tr>
<tr>
<td>HOME</td>
<td>0</td>
<td>BOSTON</td>
<td>0/12/78</td>
<td>0/12/78</td>
<td>PS1</td>
</tr>
<tr>
<td>HOME</td>
<td>0</td>
<td>JSC</td>
<td>0/12/78</td>
<td>0/12/78</td>
<td>PS1</td>
</tr>
<tr>
<td>HOME</td>
<td>0</td>
<td>EUROPE</td>
<td>0/12/78</td>
<td>0/12/78</td>
<td>PS1</td>
</tr>
<tr>
<td>HOME</td>
<td>0</td>
<td>EUROPE</td>
<td>0/12/78</td>
<td>0/12/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>PORZ</td>
<td>0/30/78</td>
<td>0/30/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>PORZ</td>
<td>0/30/78</td>
<td>0/30/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>JSC</td>
<td>0/30/78</td>
<td>0/30/78</td>
<td>PS1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO1</td>
<td>EUROPE</td>
<td>0/30/78</td>
<td>0/30/78</td>
<td>PS1</td>
</tr>
<tr>
<td>EXPLOR</td>
<td>1</td>
<td>PORZ</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>EXPLOR</td>
<td>2</td>
<td>PORZ</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
<tr>
<td>EXPLOR</td>
<td>3</td>
<td>PORZ</td>
<td>0/1/78</td>
<td>0/1/78</td>
<td>PS1</td>
</tr>
</tbody>
</table>
PAYLOAD CREW TRAINING EDITOR (PACTED)

MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS>4
PAYLOAD CREW TRAININGEDITOR (PACTED)
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATABASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS>5
<table>
<thead>
<tr>
<th>GROUP TO</th>
<th>ID</th>
<th>LOCATION</th>
<th>ON TIME</th>
<th>OFF TIME</th>
<th>COMMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUNNEL TO: REFC</td>
<td>1</td>
<td>LA</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 1</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 3</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 4</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 5</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 6</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 7</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>CRITENT 8</td>
<td>1</td>
<td>MSFC</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>TUNNEL TO: LA</td>
<td>1</td>
<td>LA</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>TUNNEL TO: PORZ</td>
<td>1</td>
<td>PORZ</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>TUNNEL TO: PARIS</td>
<td>1</td>
<td>PARIS</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
<tr>
<td>TUNNEL TO: FRANK</td>
<td>1</td>
<td>FRANK</td>
<td>8/3/79</td>
<td>8:00</td>
<td>8:00</td>
</tr>
</tbody>
</table>
PAYLOAD CREW TRAINING EDITOR (PACTED)

MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS>6
ENTER START TIME AND END TIME FOR DELETION
ENTER 'ALL' FOR COMPLETE DATA
USE MM/DD/YY MM/DD/YY FORMAT
CURRENTLY START = 7/1/78 END = 1/1/85
MIPS>
SPECIFY CREWMAN(s) TO DELETE FOR SPECIFIED TIME
ENTER BLANK IMAGE TO RETURN TO MAIN MENU
ENTER 'ALL' TO DELETE ALL CREWMAN FOR TIME FRAME
MIPS>
PAYLOAD CREW TRAINING EDITOR ( PACTED )

MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE ( PACTDB )
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR ( PACTRG )

MIPS>?
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

0 - TERMINATE
1 - SPECIFY PACTS DATA BASE FILE
2 - EDIT LIST OF TAE GROUPS
3 - EDIT DETAILED TRAINING ACTIVITY ELEMENT (TAE) DATA
4 - EDIT TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT TDY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE

MIPS>0
PAYLOAD CREW TRAINING EDITOR (PACTED)
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS> 8
PRINTING OF ON AND OFF TIMES IN PROGRESS
WRITING OF FILES IN PROGRESS
SPECIFY FILE NAME FOR WRITING THE FOLLOWING
CREW TRAINING TIMELINE ( LDF )
MIPS>PACTLD
WHAT IS WRITE KEY FOR FILE PACTLD
MIPS>BBBBBBBB

SPECIFY FILE NAME FOR WRITING THE FOLLOWING
(IF NAME INCLUDES $ IT WILL BE TEMPORARY)
SCHEDULE TIMELINE ( ON/OFF )
FILE NAME WILL DEFAULT TO
MIPS>PACTOF
DO YOU WANT TO ADD MORE SUBJECTS TO EXISTING DATA FILE
MIPS>NO
WHAT IS WRITE KEY FOR FILE PACTOF
MIPS>BBBBBBBB
PAYLOAD CREW TRAINING EDITOR (PACTED)
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE (PACTDB)
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR (PACTRG)

MIPS>9
PACTRG MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION (HELP)
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE

MIPS>0
PAYLOAD CREW TRAINING EDITOR ( PACTED )
MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION
2 - DISPLAY/EDIT COMPOSITE TIMELINE
3 - DISPLAY/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 - DELETE GROUP FROM TIMELINE
5 - DISPLAY/EDIT CREW TIMELINE
6 - DELETE CREW FROM TIMELINE
7 - TRANSFER TO PACT DATA BASE MODULE ( PACTDB )
8 - WRITE NEW TIMELINE FILES
9 - TRANSFER TO PACT REPORT GENERATOR ( PACTRG )

MIPS>0
TOTAL SUP TIME = 1.58 MIN
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS1006291PS$. 
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS>STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
NORMAL EXIT. CPU TIME: 295 TOTAL SUPS: 14885 (MILLISECON
DS)STOP: MIPS
>FIN

RUNID: ELPACT ACCT: 1HE412493200 PROJECT: JACKIEBIN207
STOP: MIPS
TIME; SUPS: 00:01:47.014 CBSUPS: 030537005
CPU: 00:00:11.721 I/O: 00:00:35.924
CC/ER: 00:00:59.368 WAIT: 00:15:42.083
IMAGES READ: 66 PAGES: 33

---------------------------------------------------------------

TECHNION TYPE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE
AVAILABLE, EX: U34, U30, B3, OR B39. ALL OASG CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY.
EXAMPLE: OASG,T FILENAME,T,REELNR CHANGE TO OASG,T FILENAME,UB3,REELNR
---------------------------------------------------------------

$TERMINAL INACTIVE$ >00TERM
APPENDIX H

PACTRG MODULE BLOCK DIAGRAM
AND COMPUTER CONFIGURATION
PACTRG MODULE BLOCK DIAGRAM

**NOTE: TUTORING INFORMATION MAY BE DISPLAYED FROM ANY TABULATION OR PLOT**
COMPUTER CONFIGURATION

Language - FORTRAN

Core Requirement - 31.63K

Input Files - Name-Directed File (NDF) containing mission dependent data and T\&E Models. List Directed File (LDF) containing schedule time, resource and travel cost/time data. ON/OFF File containing crew activities.
APPENDIX I

PACTRG TUTORIAL. DISPLAYS
PACTRG EXPLANATORY NOTES

Page No. Explanation

11 PACTRG may be accessed through the Payload Crew Scheduler (Option 7 Main Menu) or by using standard UNIVAC 1108 and MIPS procedures as shown on tutorials on pages 58 and 11.

12 PACTRG Main Menu.

13 Main Menu, Option 1, has been selected by the user. When the return key is hit, the page will turn.

14 Usage information.

15 Main Menu, Option 2, has been selected by the user. When the return key is hit, the page will turn.

16 PACTRG Display Menu.

17 Display Menu, Option 1, has been selected by the user. When the return key is hit, the page will turn.

18 User must specify PACTS Name-Directed File supporting report generations, e.g., TRAINING. NOTE: Option 14 can also be used prior to selection of any other options.

19 User must specify PACTS List-Directed File supporting report generation, e.g., PACTLD. NOTE: Option 15 can be used prior to the selection of any other option. When the return key is hit, the page will turn.

20 User must insert start and end times if different event from the ones shown or if there is none shown. When the return key is hit, the page will turn.

21 Composite schedule. When the return key is hit, the page will turn.

22 Display Menu, Option 2, has been selected by the user. When the return key is hit, the page will turn.

23 User must insert start and end times if different from those shown or if there is none shown. When the return key is hit, the page will turn.

24 Composite Schedule with Cost and Duration. When the return key is hit, the page will turn.
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I15</td>
<td>Display Menu, Option 3, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I16</td>
<td>User must specify legend for display, e.g., PACTLD. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I17</td>
<td>Mission to be scheduled must be selected. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I18</td>
<td>User must provide start time and delta time if different or if none shown. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I19</td>
<td>Schedule for all TAE Groups. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I20</td>
<td>Display Menu, Option 4, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I21</td>
<td>User must specify mission, e.g., SL1. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I22</td>
<td>Schedule Summary for ALL TAE Groups. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I23</td>
<td>Display Menu, Option 5, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I24</td>
<td>User must specify legend, e.g., PACTLD. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I25</td>
<td>User must specify start time and delta time if different from those shown or if none shown. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I26</td>
<td>User must specify mission, e.g., SL1. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I27</td>
<td>Scheduling Opportunities for all Groups. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I28</td>
<td>Display Menu, Option 6, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
</tbody>
</table>
User must specify legend, e.g., PACTLD. When return key is hit, page will turn.

User must supply start time and delta time if different from those shown or if none shown. When return key is hit, page will turn.

Composite Crewman Unscheduled Time. When return key is hit, page will turn.

Display Menu, Option 7, has been selected by the user. When return key is hit, page will turn.

User must supply start and end time if different from those shown or if none shown. When return key is hit, page will turn.

Unscheduled time. When return key is hit, page will turn.

Display Menu, Option 8, has been selected by the user. When return key is hit, page will turn.

User must specify start and end times if different from those shown or if none shown. When return key is hit, page will turn.

Composite Travel Schedule. When return key is hit, page will turn.

Display Menu, Option 9, has been selected by the user. When return key is hit, page will turn.

User must specify legend, e.g., PACTLD. When return key is hit, page will turn.

User must specify start time and delta time if different from those shown or if none shown. When return key is hit, page will turn.

Composite Timeline for Locations. When return key is hit, page will turn.

Display Menu, Option 10, has been selected by the user. When return key is hit, page will turn.
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I43</td>
<td>User must specify legend, e.g., PACTLD. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I44</td>
<td>User must specify start time and delta time if different from those shown. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I45</td>
<td>User must specify mission. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I46</td>
<td>Composite Resource Timeline. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I47</td>
<td>Display Menu, Option 11, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I48</td>
<td>User must specify start and end times. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I49</td>
<td>User must specify crewman for display. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I50</td>
<td>Crewman Schedule PSl. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I51</td>
<td>Display Menu, Option 12, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I52</td>
<td>User must specify legend, e.g., PACTLD. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I53</td>
<td>User must specify start time and delta time. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I54</td>
<td>User must specify crewman for display. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I55</td>
<td>User must specify the mission. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I56</td>
<td>Location Timeline for PSl. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I57</td>
<td>Display Menu, Option 13, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>I58</td>
<td>User must specify start and end time. When the return key is hit, the page will turn.</td>
</tr>
</tbody>
</table>
User must specify crewman for display. When the return key is hit, the page will turn.

 Unscheduled Time for PS1. When the return key is hit, the page will turn.

 Display Menu, Option 14, has been selected by the user. When the return key is hit, the page will turn.

 User must specify PACTS Name-Directed File. When the return key is hit, the page will turn.

 Display Menu, Option 15, has been selected by user. When the return key is hit, the page will turn.

 User must specify PACTS List-Directed File. When the return key is hit, the page will turn.

 Display Menu, Option 16, has been selected by the user. When the return key is hit, the page will turn.

 User must specify PACTS ON/OFF File. When the return key is hit, the page will turn.

 Display Menu, Option 17, has been selected by the user. When the return key is hit, the page will turn.

 Main Menu, Option 3, has been selected by the user. This Option prints the Display on the Alternate Print File. When the return key is hit, the page will turn.

 Print Option Menu. User may select, one at a time, as many of these options as desired. When the return key is hit, the page will turn.

 Print Option Menu, Option 1, has been selected by the user. When the return key is hit, the page will turn.

 User must specify start and end times. When the return key is hit, the page will turn.

 User must specify the mission. When the return key is hit, the page will turn.
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>173</td>
<td>Print Option Menu, Option 0, has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>174</td>
<td>PACTRG is exited through the PACTRG Main Menu, Option 0. When the return key is hit, PACTRG will terminate and the terminal will be returned to MIPS.</td>
</tr>
<tr>
<td>175</td>
<td>Standard UNIVAC 1108 termination procedures.</td>
</tr>
</tbody>
</table>

**NOTE:**

1. Tutorial Display Data in this appendix is SL1 Mission Data.

2. PACTRG can be called up by standard UNIVAC 1108 and MIPS procedures as shown on the tutorial displays on pages II and IIA. However, PACTRG can also be called up by using Option 7 of PACTS Main Menu or Option 9 of PACTED.
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 06/21/79 10:59:43
TOTAL SUP TIME - .65 MIN
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS140227*P*F0.
INSERT COMMANDS: (INSERT HELP FOR TUTORING)
MIPS>RUN PACTRG
MIPS>GO
PACTRG MAIN MENU

1 - DISPLAY USAGE INFORMATION (HELP)
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE
PACTRG MAIN MENU

06/21/79 14:05:01

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION ( HELP )
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE

MIPS>1
USAGE INFORMATION

* PLOTS CAN BE DISPLAYED ONLY ON TEXTRONIX

* FILE(S) NEEDED FOR DISPLAY WILL BE ASKED FOR IF THEY HAVE
  NOT BEEN SUPPLIED

* AT THE END OF EACH DISPLAY THE USER SHOULD
  * ENTER A BLANK IMAGE TO CONTINUE DISPLAYS
  * ENTER 'NEXT' TO STOP THIS DISPLAY OPTION AND CONTINUE
    TO NEXT SELECTED OPTION
  * ENTER 'STOP' TO STOP ALL DISPLAYS AND RETURN TO
    LAST DISPLAY
  * ENTER 'TIME' TO RETURN TO TIME QUESTION FOR DISPLAY
  * ENTER 'MISSION' TO RETURN AND INPUT NEW MISSION(S)
  * ENTER 'CREW' TO RETURN AND INPUT NEW CREW
  * ENTER 'LEGEND' TO RETURN AND INPUT NEW LEGEND
  * ENTER 'HELP' TO DISPLAY TUTORING

**III NOTE: AN INPUT IS TRANSMITTED WHEN THE RETURN KEY
IS PRESSED

* 'STOP' AND 'RETURN' IS EFFECTIVE AT ANY TIME
  READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
  MIPS>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
      *** BY INDIVIDUAL CREWAN ***
11 - TABULATE SCHEDULE FOR A CREWAN
12 - PLOT LOCATION TIMELINE FOR A CREWAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWAN
      *** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY
15 - INPUT LIST-DIRECTED FILE CURRENTLY
16 - INPUT ON/OFF FILE CURRENTLY

RIPS
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
     *** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>1
SPECIFY NAME OF PACTS LIST-DIRECTED FILE

CURRENTLY

MIPS > PACTLD

177
<table>
<thead>
<tr>
<th>GROUP ID</th>
<th>THE ID</th>
<th>THE DESCRIPTION</th>
<th>LOCATION</th>
<th>START TIME</th>
<th>END TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS3</td>
<td>PS4</td>
<td>TRAVEL FROM: EUROPE TO: MSFC</td>
<td>8/1/79</td>
<td>8/4/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: LA TO: MSFC</td>
<td>8/1/79</td>
<td>8/4/79</td>
<td></td>
</tr>
<tr>
<td>PS2</td>
<td></td>
<td>TRAVEL FROM: BOSTON TO: MSFC</td>
<td>8/1/79</td>
<td>8/4/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>TRAVEL FROM: JSC TO: MSFC</td>
<td>8/1/79</td>
<td>8/4/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT MILOU NASA/ESA OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT TNGOU TRAINING OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT TROU ORB OD OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT SHOU SHUTTLE OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT PLEXOU PL SCIENCE OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT PLEXOU PL INTER OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT MROU MISSION PLANNING OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT DSOU DDS OVERVIEW</td>
<td>MSFC</td>
<td>8/1/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>TRAVEL FROM: MSFC TO: LA</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>TRAVEL FROM: MSFC TO: BOSTON</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS4</td>
<td></td>
<td>TRAVEL FROM: MSFC TO: EUROPE</td>
<td>8/1/79</td>
<td>8/13/79</td>
<td></td>
</tr>
<tr>
<td>PS4</td>
<td></td>
<td>TRAVEL FROM: MSFC TO: EUROPE</td>
<td>8/1/79</td>
<td>8/13/79</td>
<td></td>
</tr>
<tr>
<td>PS4</td>
<td></td>
<td>TRAVEL FROM: MSFC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: MSFC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: MSFC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: JSC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: JSC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: JSC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td></td>
<td>TRAVEL FROM: JSC TO: JSC</td>
<td>8/1/79</td>
<td>8/11/79</td>
<td></td>
</tr>
</tbody>
</table>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU  
1 - TABULATE COMPOSITE SCHEDULE  
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION  
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS  
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS  
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS  
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN  
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN  
8 - TABULATE TRAVEL SCHEDULE  
9 - PLOT TIMELINE OF LOCATIONS  
10 - PLOT RESOURCE UTILIZATION TIMELINE  

*** BY INDIVIDUAL CREWEN ***  
11 - TABULATE SCHEDULE FOR A CREWEN  
12 - PLOT LOCATION TIMELINE FOR A CREWEN  
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWEN  

*** INPUT FILE SETUP ***  
14 - INPUT NAME-DIRECTED FILE  
15 - INPUT LIST-DIRECTED FILE  
16 - INPUT ON/OFF FILE  

MIPS>2
<table>
<thead>
<tr>
<th>GROUP</th>
<th>DATE</th>
<th>TIME</th>
<th>LOCATION FROM</th>
<th>LOCATION TO</th>
<th>DESCRIPTION</th>
<th>START TIME</th>
<th>END TIME</th>
<th>T WORK</th>
<th>T COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/5/78</td>
<td>EUROPE</td>
<td>RSFC</td>
<td>TRAVEL</td>
<td>8/5/78</td>
<td>8/6/78</td>
<td></td>
<td>1590.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td>LA</td>
<td>RSFC</td>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td></td>
<td>1730.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td>BOSTON</td>
<td>RSFC</td>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td></td>
<td>1840.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td>JSC</td>
<td>RSFC</td>
<td>TRAVEL</td>
<td>8/6/78</td>
<td>8/6/78</td>
<td></td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>Mars/ESA Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>1.50</td>
<td>2082.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>Training Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>2.00</td>
<td>2692.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>SL Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>2.50</td>
<td>3002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>Shuttle Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>3.00</td>
<td>3982.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>PL Science Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>3.50</td>
<td>4502.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>PL Integ Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>4.00</td>
<td>5622.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>Mission Planning Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>4.50</td>
<td>6272.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>PSC</td>
<td>RSFC</td>
<td>DSS Overview</td>
<td>8/7/78</td>
<td>8/7/78</td>
<td>5.00</td>
<td>6982.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td>RSFC</td>
<td>LA</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td></td>
<td>2172.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td>RSFC</td>
<td>BOSTON</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td></td>
<td>2282.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td>RSFC</td>
<td>EUROPE</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td></td>
<td>2602.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td>RSFC</td>
<td>EUROPE</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td></td>
<td>3302.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td>RSFC</td>
<td>EUROPE</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/12/78</td>
<td></td>
<td>3642.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td>RSFC</td>
<td>JSC</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td></td>
<td>3982.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td>RSFC</td>
<td>JSC</td>
<td>TRAVEL</td>
<td>8/11/78</td>
<td>8/11/78</td>
<td></td>
<td>4602.00</td>
</tr>
</tbody>
</table>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION ON TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>3
ENTER START TIME AND DELTA TIME OF EACH PLOT CURRENTLY:
START TIME IN MM/DD/YY FORM
7/1/78
MIPS

DELTA TIME IN WEEKS

06/22/79 10:42:54
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Plot Bar Graph of Schedule Summary for All Groups</td>
</tr>
<tr>
<td>2</td>
<td>Tabulate Composite Schedule with Cost and Duration</td>
</tr>
<tr>
<td>3</td>
<td>Plot Bar Graph of Schedule for All Task Groups</td>
</tr>
<tr>
<td>4</td>
<td>Tabulate Schedule Summary for All Task Groups</td>
</tr>
<tr>
<td>5</td>
<td>Plot Bar Graph of Schedule for All Groups</td>
</tr>
<tr>
<td>6</td>
<td>Tabulate Unscheduled Time for All Crewmen</td>
</tr>
<tr>
<td>7</td>
<td>Tabulate Unscheduled Time for All Crewmen</td>
</tr>
<tr>
<td>8</td>
<td>Plot Travel Schedule</td>
</tr>
<tr>
<td>9</td>
<td>Plot Timeline of Locations</td>
</tr>
<tr>
<td>10</td>
<td>Plot Resource Utilization Timeline</td>
</tr>
<tr>
<td>11</td>
<td>Tabulate Schedule for a Crewman</td>
</tr>
<tr>
<td>12</td>
<td>Plot Location Timeline for a Crewman</td>
</tr>
<tr>
<td>13</td>
<td>Tabulate Unscheduled Time and Locations for a Crewman</td>
</tr>
<tr>
<td>14</td>
<td>Input Name-Directed File Currently</td>
</tr>
<tr>
<td>15</td>
<td>Input List-Directed File Currently</td>
</tr>
<tr>
<td>16</td>
<td>Input Om/Off File Currently</td>
</tr>
<tr>
<td><strong>MIPS4</strong></td>
<td>Return to Main Menu</td>
</tr>
</tbody>
</table>

**MIPS**

06/22/79 10:44:21

SELECT DISPLAY OPTION(S) DESIRED
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE

*** BY INDIVIDUAL CREWMAN ***

11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE  CURRENTLY  TRAINING
15 - INPUT LIST-DIRECTED FILE  CURRENTLY  PACTLD
16 - INPUT ON/OFF FILE  CURRENTLY  PACTOF

MIPS>5
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM 7/01/78
DELTA TIME IN WEEKS 52
INPUT LEGEND DESIRED FOR DISPLAY (UP TO 36 CHARACTERS)
CURRENTLY: PACTLDPACTOF
NIPS>
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM
          DELTA TIME IN WEEKS
          7/01/78        52
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE

III BY INDIVIDUAL CREWMAN III

11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

III INPUT FILE SETUP III

14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>7
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE

*** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>8
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
<th>Source</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>205</td>
<td>Start</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COMPOSITE TRAVEL SCHEDULE**

**Schedule ID: 86041**

06/22/79 11:00:13
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE

*** BY INDIVIDUAL CREWEN ***

11 - TABULATE SCHEDULE FOR A CREWEN
12 - PLOT LOCATION TIMELINE FOR A CREWEN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWEN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM
7/01/78
DELTA TIME IN WEEKS
52
0 - RETURN TO MAIN MENU

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

14 - INPUT NAME-DIRECTED FILE
15 - INPUT LIST-DIRECTED FILE
16 - INPUT ON/OFF FILE

MIPS> 10
INPUT LEGEND DESIRED FOR DISPLAY (UP TO 36 CHARACTERS)
CURRENTLY: PACTLDPACTLD
MIPS>PACTLD
ENTER START TIME AND DELTA TIME OF EACH PLOT

CURRENTLY:

START TIME IN MM/DD/YY FORM

DELTA TIME IN WEEKS

7/01/78

52
ENTER MISSION(S) DESIRED
ENTER 'ALL' FOR ALL MISSIONS INVOLVED
IMPS
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS> 11
ENTER START TIME AND END TIME FOR TABLES
ENTER 'ALL' FOR COMPLETE DATA
USE MM/DD/YY MM/DD/YY FORMAT
CURRENTLY START = 7/1/78 END = 12/3/80
MIPS)
<table>
<thead>
<tr>
<th>GROUP</th>
<th>THE ID</th>
<th>LOCATION</th>
<th>DESCRIPTION</th>
<th>START TIME</th>
<th>END TIME</th>
<th>WORK DAYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAVEL</td>
<td>FROM: LA TO: MSFC</td>
<td></td>
<td></td>
<td>2/6/78</td>
<td>2/9/78</td>
<td>2</td>
</tr>
<tr>
<td>ORIENT</td>
<td>NILEDU</td>
<td>MSFC</td>
<td>NILEMU/ESA OVERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>TIBOU</td>
<td>MSFC</td>
<td>TRIBBO OVERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>SLOU</td>
<td>MSFC</td>
<td>SL OBERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>EMBO</td>
<td>MSFC</td>
<td>EMBO OBERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLICOU</td>
<td>MSFC</td>
<td>PLICO OVERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLEXOU</td>
<td>MSFC</td>
<td>PLEX OVERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>RPOU</td>
<td>MSFC</td>
<td>RPO OVERVIEW</td>
<td>2/7/78</td>
<td>2/7/78</td>
<td>1</td>
</tr>
<tr>
<td>ORIENT</td>
<td>BRICOU</td>
<td>MSFC</td>
<td>BRIC OVERVIEW</td>
<td>2/6/78</td>
<td>2/10/78</td>
<td>4</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>FROM: MSFC TO: LA</td>
<td></td>
<td></td>
<td>2/11/78</td>
<td>2/11/78</td>
<td>1</td>
</tr>
<tr>
<td>NONE</td>
<td>LA</td>
<td></td>
<td></td>
<td>2/12/78</td>
<td>10/4/78</td>
<td>4</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>FROM: LA TO: PORZ</td>
<td></td>
<td></td>
<td>10/7/78</td>
<td>10/12/78</td>
<td>6</td>
</tr>
<tr>
<td>1EB914</td>
<td>SBISC</td>
<td>PORZ</td>
<td>SA DISCIPLINE PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB916</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB921</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB922</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB923</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB924</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>FROM: PORZ TO: PARIS</td>
<td></td>
<td></td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB914</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB916</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB917</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB919</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>1EB920</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/78</td>
<td>10/12/78</td>
<td>1</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>FROM: PARIS TO: MUNICH</td>
<td></td>
<td></td>
<td>10/25/78</td>
<td>10/28/78</td>
<td>4</td>
</tr>
<tr>
<td>1EB923</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>10/25/78</td>
<td>11/1/78</td>
<td>7</td>
</tr>
<tr>
<td>1EB924</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>11/1/78</td>
<td>11/4/78</td>
<td>3</td>
</tr>
<tr>
<td>1EB925</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>11/4/78</td>
<td>11/7/78</td>
<td>3</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>FROM: MUNICH TO: FRANK</td>
<td></td>
<td></td>
<td>11/21/78</td>
<td>11/28/78</td>
<td>8</td>
</tr>
<tr>
<td>1EB927</td>
<td>1</td>
<td>FRANK</td>
<td>PHASE 2</td>
<td>11/21/78</td>
<td>11/28/78</td>
<td>8</td>
</tr>
<tr>
<td>1EB928</td>
<td>1</td>
<td>FRANK</td>
<td>PHASE 2</td>
<td>11/28/78</td>
<td>11/30/78</td>
<td>3</td>
</tr>
</tbody>
</table>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
    *** BY INDIVIDUAL CREWMAN ***

11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>12
INPUT LEGEND DESIRED FOR DISPLAY (UP TO 36 CHARACTERS)
CURRENTLY: PACTLDPACTOF
MIPS)
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM
7/01/78
DELTA TIME IN WEEKS
52
MIPS>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWEN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
     *** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS)13
ENTER START TIME AND END TIME FOR TABLES
ENTER 'ALL' FOR COMPLETE DATA
USE MM/DD/YY MM/DD/YY FORMAT
CURRENTLY START = 7/1/78       END = 12/3/80
MIPS>
<table>
<thead>
<tr>
<th>START</th>
<th>END</th>
<th>DURATION</th>
<th>LAST LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREW MEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREW MEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREW MAN ***
11 - TABULATE SCHEDULE FOR A CREW MAN
12 - PLOT LOCATION TIMELINE FOR A CREW MAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREW MAN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE
     CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE
     CURRENTLY PACTLD
16 - INPUT ON/OFF FILE
     CURRENTLY PACTOF

MIPS>14
SELECT DISPLAY OPTION(S) DESIRED

6 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE

*** BY INDIVIDUAL CREWEN ***

11 - TABULATE SCHEDULE FOR A CREWEN
12 - PLOT LOCATION TIMELINE FOR A CREWEN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWEN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE   CURRENTLY   TRAINING
15 - INPUT LIST-DIRECTED FILE   CURRENTLY
16 - INPUT ON/OFF FILE         CURRENTLY

MIPS>15
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***
1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
     *** INPUT FILE SETUP ***
14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY

MIPS>16
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU

*** SUMMARY ***

1 - TABULATE COMPOSITE SCHEDULE
2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL TAE GROUPS
4 - TABULATE SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PLOT BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL GROUPS
6 - PLOT UNSCHEDULED TIME FOR ALL CREWMEN
7 - TABULATE UNSCHEDULED TIME FOR ALL CREWMEN
8 - TABULATE TRAVEL SCHEDULE
9 - PLOT TIMELINE OF LOCATIONS
10 - PLOT RESOURCE UTILIZATION TIMELINE
     *** BY INDIVIDUAL CREWMAN ***
11 - TABULATE SCHEDULE FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** INPUT FILE SETUP ***

14 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
15 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>0
PACTRG MAIN MENU

06/22/79  11:29:11

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION ( HELP )
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE

MIPS>3
SELECT PRINT OPTION(S) DESIRED:

0 - RETURN TO MAIN MENU
1 - PRINT ALL TABLES
  *** SUMMARY ***
2 - PRINT COMPOSITE SCHEDULE
3 - PRINT COMPOSITE SCHEDULE WITH COST AND DURATION
4 - PRINT SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PRINT UNSCHEDULED TIME FOR ALL CREWMEN
6 - PRINT TRAVEL SCHEDULE
    *** BY INDIVIDUAL CREWMAN ***
7 - PRINT SCHEDULE FOR A CREWMAN
8 - PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
    *** INPUT FILE SETUP ***
9 - INPUT NAME-DIRECTED FILE    CURRENTLY TRAINING
10 - INPUT LIST-DIRECTED FILE   CURRENTLY PACTLD
11 - INPUT ON/OFF. FILE         CURRENTLY PACTOF

MIPS>
SELECT PRINT OPTION(S) DESIRED:

0 - RETURN TO MAIN MENU
1 - PRINT ALL TABLES
   *** SUMMARY ***
2 - PRINT COMPOSITE SCHEDULE
3 - PRINT COMPOSITE SCHEDULE WITH COST AND DURATION
4 - PRINT SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PRINT UNSCHEDULED TIME FOR ALL CREWMEM
6 - PRINT TRAVEL SCHEDULE
   *** BY INDIVIDUAL CREWMEM ***
7 - PRINT SCHEDULE FOR A CREWMEM
8 - PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREWMEM
   *** INPUT FILE SETUP ***
9 - INPUT NAME-DIRECTED FILE CURRENTLY
10 - INPUT LIST-DIRECTED FILE CURRENTLY
11 - INPUT ON/OFF FILE CURRENTLY
MIPS>1
ENTER START TIME AND END TIME FOR TABLES
ENTER 'ALL' FOR COMPLETE DATA
USE MM/DD/YY MM/DD/YY FORMAT
CURRENTLY START = 7/1/78 END = 12/3/80
MIPS>
SELECT PRINT OPTION(S) DESIRED:

0 - RETURN TO MAIN MENU
1 - PRINT ALL TABLES
   *** SUMMARY ***
2 - PRINT COMPOSITE SCHEDULE
3 - PRINT COMPOSITE SCHEDULE WITH COST AND DURATION
4 - PRINT SCHEDULE SUMMARY FOR ALL TAE GROUPS
5 - PRINT UNSCHEDULED TIME FOR ALL CREWMEN
6 - PRINT TRAVEL SCHEDULE
   *** BY INDIVIDUAL CREWMAN ***
7 - PRINT SCHEDULE FOR A CREWMAN
8 - PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
   *** INPUT FILE SETUP ***
9 - INPUT NAME-DIRECTED FILE CURRENTLY TRAINING
10 - INPUT LIST-DIRECTED FILE CURRENTLY PACTLD
11 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>0
PACTRO MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION ( HELP )
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE

MIPS>0
TOTAL SUP TIME = 1.58 MIN
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS100629*P&S$.
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS>STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS>YES
NORMAL EXIT. CPU TIME: 295 TOTAL SUPS: 14885 (MILLISECON
DS)STOP: MIPS
>OFIN

RUNID: ELPACT ACCT: 1HEL12493200 PROJECT: JACKIEBIN207
STOP: MIPS
TIME; SUPS: 00:01:47.014 CBSUPS: 030037005
CPU: 00:00:11.721 I/O: 00:00:35.924
CC/ER: 00:10:59.368 WAIT: 00:15:42.083
IMAGES READ: 66 PAGES: 33

TECHNICAL TYPE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE
AVAILABLE, EX: U34, U39, 8C, OR 8C9. ALL QASG CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO U95 IMMEDIATELY.
EXAMPLE: QASG,T FILENAME,T,REELMR CHANGE TO QASG,T FILENAME,US9,REELMR

>OSTERM

>OSTERM
APPENDIX J

UNIVAC 1108 LOGON/LOGOFF PROCEDURES
PORT 25/26 SIGNON - HOST1(2X0) UP HOST2(2X0) UP
DTK051
ENTER USERID/PASSWORD:
PACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL36R2BHOST1(RSI)*
*****************************************************************

RUN NUMBER 11

LAST RUN AT: 070280 071857
DATE: 070280 TIME: 083554
@MIPS,L
APPENDIX K

MIPS COMMANDS
PORT 25/26  SIGNON -  HOST1(2X0) UP  HOST2(2X0) UP
DTK051
ENTER USERID/PASSWORD:
>PACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL36R2HOST1(RSI)*
******************************************************************************

RUN NUMBER 11

LAST RUN AT: 070280 071857
DATE: 070280   TIME: 083554
>QMIPS,L
OFF-LINE FILE MAINTENANCE PROCESSOR LAST RUN AT 03/31/78 09:13:14
ENTER ORGANIZATION NO./PROJECT ID/Terminal Site ID
RIPS>EL12/PACTS/DTKG31
Total CPU time = 1.79 min
SELECT KEY PRINT FILE OPTION:
1 - Write Print File on Paper
2 - Write Print File on Fiche
RIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED RIPS100111EPGFS.
INSERT COMMANDS (INSERT HELP FOR TUTORING)
RIPS>RUN PACTDB
RIPS>GO
TOTAL SUP TIME = 1.58 MIN
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS> YES
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS> 1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS100629*PIFS.
INSERT COMMANDS: (INSERT HELP FOR TUTORING)
MIPS> STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS> YES
NORMAL EXIT. CPU TIME: 295 TOTAL SUPS: 14885 (MILLISECON
DS) STOP: MIPS
> @FIN

RUNID: ELPACT ACCT: 1HEL12493200 PROJECT: JACKIEB1M207
STOP: MIPS
TIME: SUPS: 00:01:47.014 CBSUPPS: 030037005
CPU: 00:00:11.721 I/O: 00:00:35.924
CC/ER: 00:00:59.368 WAIT: 00:15:42.083
IMAGES READ: 66 PAGES: 33

TECHNICAL TYPE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE
AVAILABLE, EX: U34, U36, 8C, OR 8CB. ALL @AGS CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO U95 IMMEDIATELY.
EXAMPLE: @ASG,T FILENAME,T,REELHR CHANGE TO @ASG,T FILENAME,U95,REELHR

APPLELINAL INACTIVES
>@STER
APPENDIX L

PDP COMMANDS AND

UNIVAC 1108

PACT36 AND UFPIT

COMMANDS
FIGURE L-1  PACTS/IGDS INTERFACE PROGRAMS
MICRO-PROCESSOR PROCEDURE
(To be used temporarily until automatic system installed)

1. Power On:
   Floppy Disk Unit (Back)
   Micro-processor (Front)
   Terminal (Back)

2. Initialize Floppy Disk Unit
   Put Floppy Disk 2 into Slot 2 of Unit

3. Initialize Micro-processor
   Press Stop
   Press Reset
   Press Examine
   Press Run

4. Initialize Terminal
   Press Space Bar One Time
   Type PDPICM1

5. Remove Floppy Disk
PORT 25/23 SIGNON - HOST1(2X0) UP HOST2(2X0) UP
DYNOS
ENTER USERID/PASSWD:
>ELPACTS/HCC

DESTROY USERID/PASSWORD ENTRY
SUNIUAC 1100 OPERATING SYSTEM VER. CI 33R3HOST1(RSI)

RUN NUMBER 20

LAST RUN AT: 082179 080112

DUP ID, NEW ID IS C2170
DATE: 082179 TIME: 121053
>CMIPS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 08/21/79 11:18:21
TOTAL SUP TIME = .65 MIN
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS> 1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS1212061PFS.
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS> READY PACTLD
SPECIFY FILE NAME FOR READING THE FOLLOWING
PACTS 24 WORD LIST-DIRECTED FILE
MIPS>PACTLD
LDF   PACTLD   LAST WRITE 08/31/79 10:28:51   7% OF USABLE SPACE
SPECIFY ACCEPTANCE CONDITIONS, ENTER HELP FOR TUTORING
UP TO 4 LINES, USE ; FOR CONTINUATION
MIPS>
SPECIFY FILE NAME FOR WRITING THE FOLLOWING
36 WORD LIST-DIRECTED OUTPUT FILE
MIPS>PACT36
PORT 25/26 SIGNON - HOST1(2X0) UP  HOST2(2X0) UP
DTK051
ENTER USERID/PASSWORD:
PACTS/HCC

*DESTROY USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL36R2BHOST1(RSI)*

RUN NUMBER 11

LAST RUN AT: 070280  071857
DATE: 070280     TIME: 083554
>nmips,l
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 07/17/80 04:07:47
TOTAL CPU TIME = .57 MIN
SELECT NEW PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE
MIPS>1
A PRINT FILE HAS BEEN ESTABLISHED NAMED MPS075259*PSFS.
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS>RUN UPFIT
MIPS>GO
SELECT DIRECTION OF FILE TRANSFER
  0 - TERMINATE PROGRAM EXECUTION
  1 - GET MIPS FILE FROM PDP TAPE
  2 - SEND MIPS FILE TO PDP ON TAPE

MIPS>2
ENTER A 24 CHARACTER DESCRIPTION FOR TAPE-SAVE LABEL
MIPS>SL1 PACT36

** ** WAITING ON TAPE TO BE MOUNTED ** **

IF TAPE IS INPUT TAPE THE TAPE NUMBER
SHOULD BE CALLED INTO THE TAPE LIBRARY
LIBRARY PHONE #: IS -- 3-4477

ENTER MIPS FILE TO BE USED IN TRANSFER
MIPS>PACT36

DO YOU WISH TO DISPLAY DATA ON ALTERNATE PRINT FILE
MIPS>NO

EVENT DAT1 DAT2 DAT3 DDUR WDUR GRUP GRP2 TCST TLOC
TLC2 LOC LOC2 CR1 CR12 CR2 CR3 C3-4 CR4 CR5
C5-6 CR6 CR7 C7-8 CR8 CR9 9-10 CR10 RES1 R1-2
RES2 RES3 R3-4 RES4 RES5 RE-5

ENTER THE ABOVE MNEMONICS WHICH REPRESENT ALPHANUMERIC DATA
SEPARATE MNEMONICS WITH A SPACE
MIPS>DAT1 DAT2 DAT3 GRUP GRP2 TCST TLOC TLC2 LOC LOC2 CR1 CR12 CR2 CR3 C3-4 ;
MIPS>CR4 CR5 C5-6 CR6 CR7 C7-8 CR8 CR9 9-10 CR10 RES1 R1-2 ;
MIPS>RES2 RES3 R3-4 RES4 RES5 RE-5

250 RECORDS WRITTEN TO TAPE...UPFIT STILL ACTIVE
500 RECORDS WRITTEN TO TAPE...UPFIT STILL ACTIVE
750 RECORDS WRITTEN TO TAPE...UPFIT STILL ACTIVE
1000 RECORDS WRITTEN TO TAPE...UPFIT STILL ACTIVE

SELECT DIRECTION OF FILE TRANSFER
0 - TERMINATE PROGRAM EXECUTION
1 - GET MIPS FILE FROM PDP TAPE
2 - SEND MIPS FILE TO PDP ON TAPE

MIPS> 0
NEW TAPE NUMBER IS ----
23350
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
MIPS>
TOTAL SUP TIME = 5.05 MIN
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS> NO
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS> STOP
MIPS IS EXITING
PRINT FILES WILL BE DELETED IF NOT TRANSMITTED
IS THE CURRENT PRINT FILE TO BE TRANSMITTED?
MIPS> NO
NORMAL EXIT. CPU TIME: 20 TOTAL SUPS: 7116 (MILLISECONDS)
DS> STOP: MIPS
>FIN

RUNID: PACTS  ACCT: 1HEL12401300  PROJECT: JACKIEBIN207
LOAD UNLABELED BLANK TP1 PDPTAP -1 PACTS
LOAD UNLABELED BLANK TP10 PDPTAP -1 PACTS
0 ANSWER WITH REEL NO. ON TP10
0 23360
*** SAVE *** 23360 TP10 PDPTAP
LOAD UNLABELED BLANK TP3 PDPTAP -1 PACTS
0 ANSWER WITH REEL NO. ON TP3
0 04869
*** SAVE *** 04869 TP3 PDPTAP
LOAD UNLABELED BLANK TP9 PDPTAP -1 PACTS
0 ANSWER WITH REEL NO. ON TP9
0 23350
*** SAVE *** 23350 TP9 PDPTAP
STOP: MIPS
PACTS FIN
TIME: TOTAL: 00:05:07.643 CBSUPs: 101170559
CPU: 00:01:22.197 I/O: 00:01:37.923
HEL [100,13]
PASSWORD:

RSX-11M BL22   MULTI-USER SYSTEM

GOOD AFTERNOON
02-JUL-80 14:13 LOGGED ON TERMINAL TT4:

! ! PLEASE PURGE YOUR FILES. THE DISKS ARE GETTING FULL.

 ALL TASKS MUST BE BUILT WITH THE /FP SWITCH OPTION.
 EXAMPLE: TKB>FILENAME/FP=FILENAME
 THIS WILL PREVENT FALSE FLOATING POINT ERRORS.

MIPS
PDP11/70 MIPS SYSTEM INITIALIZATION NOW IN PROGRESS
PDP 11/70 MIPS IS NOW AT YOUR SERVICE
DO YOU WISH TO ESTABLISH A NEW PRINT FILE?
MIPS> YES
A PRINT FILE HAS BEEN CREATED NAMED DP:E100,1J04141707.APF
INSERT COMMANDS
MIPS> GET
THE ENTRY OF A $ WILL ABORT THIS PROCEDURE
SPECIFY THE NAME OF THE PDP LOCAL FILE
TO RECEIVE THE UNIVAC CENTRAL FILE
MIPS> Pact36
SPECIFY NAME OF UNIVAC CENTRAL FILE TO RETRIEVE
MIPS> Pact36
SPECIFY THE READ KEY
MIPS>
PROCEDURE SUCCESSFULLY INITIATED
MIPS> STOP
FILE WILL BE DELETED IF NOT PRINTED
IS THE CURRENT PRINT FILE TO BE PRINTED?
MIPS> YES
MIPS IS EXITING
>
PDP11/70 MIPS SYSTEM INITIALIZATION NOW IN PROGRESS
PDP 11/70 MIPS IS NOW AT YOUR SERVICE
DO YOU WISH TO ESTABLISH A NEW PRINT FILE?
MIPS>YES
   A PRINT FILE HAS BEEN CREATED NAMED DP:E100,1JT04141837.APFILE
   INSERT COMMANDS
MIPS>ST PACT36
   DP0:E100, 2]PACT36  LD INSTALLED 7/30/79 15:55 BY D SHIPMAN
   36 WORD EXPANDED LIST-DIRECTED FILE FOR
   5000 RECORDS. 36 WORDS EACH. KEEP PERIOD 3650 DAYS
   LAST LOCAL WRITE 3/31/80 12:35
   GET TRANSMISSION COMPLETED 3/31/80 12:35

   STATUS COMPLETED
MIPS>
GOOD AFTERNOON,

SL-4005-7914187 LOADED ON TERMINAL T141:

EXACTLY 7 SIGNS WERE POSTED IN THE TERMINAL ROOMS CONCERNING THE LINE PRINTER AND SPOOLING TO THE PRINTER, PLEASE READ IT:)

KEEP YOUR FILES PURGED.

NOTICE

---

A NEW 368 KEGABYTE DRIVE IS NOW ONLINE. IT'S DEVICE NAME IS D02, IS CRITICALLY LAY OR FREE SPACE, CONTACT ME TO GET YOUR UIC SET UP ON D02.

---

SPECIAL NOTICE

---

HARRELL PHILLIPS

---

PDP 11/70 MIPS GET PAC36
PDP 11/70 MIPS GET PACT36

PDP 11/70 MIPS SYSTEM INITIALIZATION NOW IN PROGRESS
PDP 11/70 MIPS IS NOW AT YOUR SERVICE
DO YOU WISH TO ESTABLISH A NEW PRINT FILE?
MIPS>YES
A PRINT FILE HAS BEEN CREATED NAMED DP:[E100,1]TT14111316.APF
INSERT COMMANDS
MIPS>ST PACT36
DP0[E100, 2]PACT36 LD INSTALLED 7/30/79 15:55 BY D SHIPMAN
36 WORD EXPANDED LIST-DIRECTED FILE FOR
5000 RECORDS. 36 WORDS EACH. KEEP PERIOD 3650 DAYS
LAST LOCAL WRITE 8/29/79 17:7
GET TRANSMISSION COMPLETED 8/29/79 17:7
STATUS COMPLETED
MIPS>GET
THE ENTRY OF A $ WILL ABORT THIS PROCEDURE
SPECIFY THE NAME OF THE PDP LOCAL FILE
TO RECEIVE THE UNIVAC CENTRAL FILE
MIPS>PACT36
SPECIFY NAME OF UNIVAC CENTRAL FILE TO RETRIEVE
MIPS>PACT36
SPECIFY THE READ KEY
MIPS>
PROCEDURE SUCCESSFULLY INITIATED
MIPS>STOP
FILE WILL BE DELETED IF NOT PRINTED
IS THE CURRENT PRINT FILE TO BE PRINTED?
MIPS>YES
MIPS IS EXITING
>BYE

HAWE A GOOD MORNING
31-AUG-79 11:15 TT14: LOGGED OFF
>
>SET /UIC=[100,10]
>MOU DKO: /OUR:
>MIPS
>PP11/70 MIPS SYSTEM INITIALIZATION NOW IN PROGRESS
>TOP 11/70 MIPS IS NOW AT YOUR SERVICE
>DO YOU WISH TO ESTABLISH A NEW PRINT FILE?
>MIPS>YES
>A PRINT FILE HAS BEEN CREATED NAMED DP:\10013100095342.APF
>INSERT COMMANDS
>MIPS>RUN PEP
>MIPS>GO
>
>NONEXISTENT MODULE REFERENCED

MODULE ASSUMED TO BE A FUNCTION MODULE
RUN PEP

PACTS SCHEDULE DATA EXTRACT PROGRAM
SELECT ONE OF THE FOLLOWING:
  0 - EXIT PROGRAM
  1 - EXTRACT SCHEDULE DATA FROM A LIST-DIRECTED FILE
>MIPS>1
INPUT THE MIPS DATA FILE NAME
CONTAINING PACTS SCHEDULE DATA
MIPS>PACT36

SELECT DEVICE FOR STORING OUTPUT:
  1 - DK0:
  2 - DK1:
  3 - SYO:
  4 - DPO:
MIPS>1

344 DATA RECORDS HAVE BEEN STORED ON DK0:\100, 1117777.DAT
PACTS SCHEDULE DATA EXTRACT PROGRAM
SELECT ONE OF THE FOLLOWING:
  0 - EXIT PROGRAM
  1 - EXTRACT SCHEDULE DATA FROM A LIST-DIRECTED FILE
>MIPS>0
IS THE CURRENT PRINT FILE TO BE PRINTED?
>MIPS>YES
DO YOU WISH TO ESTABLISH A NEW PRINT FILE?
>MIPS>NO
>INSERT COMMANDS
MIPS>S

MIPS>STOP
MIPS IS EXITING
DKO DK1:
>
*** DK0: -- DISMOUNT COMPLETE
SET /UIC=[1,1]
INITIALIZATION ERROR - LARGE TELSTRONIX ASSUMED
MIPS INTERFACE WILL BE PERFORMED

<<< MODULE INITIATED >>>
MIPS 1.0

PACTS SCHEDULE DATA EXTRACT PROGRAM

-- SELECT ONE OF THE FOLLOWING:
   0 - EXIT PROGRAM
   1 - EXTRACT SCHEDULE DATA FROM A LIST-DIRECTED FILE

MIPS> 1

INPUT THE MIPS DATA FILE NAME
CONTAINING PACTS SCHEDULE DATA
MIPS> PACTS86

SELECT DEVICE FOR STORING OUTPUT:
   1 - DK0:
   2 - DK1:
   3 - SY0:
   4 - DPO:

MIPS> 1

344 DATA RECORDS HAVE BEEN STORED ON DK0:100, 1J17777>DAT
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED

MIPS>

PACTS SCHEDULE DATA EXTRACT PROGRAM

-- SELECT ONE OF THE FOLLOWING:
   0 - EXIT PROGRAM
   1 - EXTRACT SCHEDULE DATA FROM A LIST-DIRECTED FILE

MIPS> 0

<<< MIPS MODULE TERMINATED >>>

MODULE EXITING
DKO DK:

*** DKO: -- UNMOUNT COMPLETE
SET /DUC=E1+11

>
MCR> LOA DK
MCR> MOU DK: /0VR
MOUNT-** VOLUME INFORMATION**
DEVICE =UK0
CLASS =FILE II
LABEL =JSEL15
UIE =II, II
ACCESS =CRWED, RWED, RWEI, RWED
CHARAC =II
MCR> INS [15,2] PDFP
MCR> FIX PDFP
MCR> RUN PDFP$
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>DK:C100, 1117777, DAT
WAS THIS FILE LOADED FROM TAPE? (YES OR NO)
>NO
ENTER DESIGN FILE NAME
>G15,2] PACTS, DGN
DESIGN FILE IS BEING WRITTEN
DESIGN FILE HAS BEEN WRITTEN
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>STOP
PDFP -- STOP PACTS DESIGN FILE PROGRAM

MCR> UNF PDFP
MCR> REM PDFP
MCR> DM0 DK;
--- F114CP -- UK0; ** DISMOUNT COMPLETE **
MCR> UNL DK
MCR>
INS PDFP
MCR>FIX PDFP
MCR>RUN PDFP
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>85581.DAT
ENTER DESIGN FILE NAME
>115,2]TEST.DGN
ENTER CELL LIBRARY FILE NAME
>115,2]TRAINING.LIB
DESIGN FILE IS BEING WRITTEN
SPECIFY CELL NAME FOR BACKGROUND DATA FOR THE YEAR 1978

SPECIFY CELL NAME FOR BACKGROUND DATA FOR THE YEAR 1979

SPECIFY CELL NAME FOR BACKGROUND DATA FOR THE YEAR 1980
>1980BK
*DESIGN FILE HAS BEEN WRITTEN*
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>STOP
PDFP -- STOP PACTS DESIGN FILE PROGRAM
36-Word List-directed File Format

A 36-word list-directed file has been created with an expiration date of ten years for the user. The maximum number of records that can be written on the file is 5000. If the user should need a larger file or more than one file, the MIPS CF command on the 1108 or the IN command on the PDP may be used, and the PACT36 dictionary specified, as shown below.

MIPS > CF
   THE ENTRY OF A $ SIGN WILL ABORT FILE CREATION
   WHAT IS THE NAME OF THE FILE TO BE CREATED?
   UP TO 12 CHARACTERS ( A-Z, 0-9, -)

MIPS > FILE NAME
   SPECIFY THE TYPE OF FILE BY NUMBER
   1-NAME-DIRECTED
   2-LIST-DIRECTED
   3-ON-OFF

MIPS > 2
   SPECIFY THE MAXIMUM NUMBER OF RECORDS

MIPS > 5000
   SPECIFY A READ KEY IF DESIRED

MIPS >
   SPECIFY A WRITE KEY IF DESIRED

MIPS >
   SPECIFY NAME OF PERSON RESPONSIBLE FOR THIS FILE

MIPS > DAVID SHIPMAN
   HOW LONG IS THE FILE TO BE MAINTAINED - DAYS?

MIPS > 3650
   SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE

MIPS > 36 WORD IDF FOR TRANSFER TO PDP VIA COMM. LINK
   DOES A DICTIONARY CURRENTLY EXIST FOR THIS FILE?

MIPS > YES
   SPECIFY NAME OF FILE

MIPS > PACT36
   FILE SUCCESSFULLY CREATED
PDP 11/45 LIST DIRECTORY (DK)

MCR> LDA DK
MCR> MOUNT VOLU: / OUR
DEVICE = DK0
CLASS = FILE 11
LABEL = JBL15
UTC = E1, E1
ACCESS = [R, W, E, D, E]
HARC = E
MCR>PDP
PDP> DK: [**] / LI

DIRECTORY DK0: [15, 23]
6-SEP-79 09:39

TOTAL OF 0 BLOCKS IN 0 FILES

DIRECTORY DK0: [100, 13]
6-SEP-79 09:39

<table>
<thead>
<tr>
<th>BLOCKS</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>122</td>
<td>30-AUG-79</td>
<td>12:47</td>
</tr>
<tr>
<td>121</td>
<td>30-AUG-79</td>
<td>12:59</td>
</tr>
<tr>
<td>116</td>
<td>04-SEP-79</td>
<td>10:11</td>
</tr>
<tr>
<td>116</td>
<td>04-SEP-79</td>
<td>10:22</td>
</tr>
<tr>
<td>116</td>
<td>04-SEP-79</td>
<td>10:34</td>
</tr>
</tbody>
</table>

TOTAL OF 592 BLOCKS IN 5 FILES

DIRECTORY DK0: [100, 23]
6-SEP-79 09:39

<table>
<thead>
<tr>
<th>BLOCKS</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>14-AUG-79</td>
<td>07:17</td>
</tr>
<tr>
<td>2</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
<tr>
<td>1</td>
<td>30-JUL-79</td>
<td>13:46</td>
</tr>
<tr>
<td>1</td>
<td>30-JUL-79</td>
<td>13:47</td>
</tr>
<tr>
<td>1</td>
<td>30-JUL-79</td>
<td>13:48</td>
</tr>
<tr>
<td>1</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
<tr>
<td>1</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
<tr>
<td>9</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
<tr>
<td>6</td>
<td>14-AUG-79</td>
<td>07:16</td>
</tr>
<tr>
<td>8</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
<tr>
<td>7</td>
<td>14-AUG-79</td>
<td>07:18</td>
</tr>
</tbody>
</table>

TOTAL OF 136 BLOCKS IN 12 FILES

DIRECTORY DK0: [12, 123]
6-SEP-79 09:40

<table>
<thead>
<tr>
<th>BLOCKS</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>1</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>2</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>11</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>2</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>1</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>1</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>1</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>31</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>64</td>
<td>24-JUL-79</td>
<td>10:14</td>
</tr>
<tr>
<td>1</td>
<td>15-AUG-79</td>
<td>12:51</td>
</tr>
</tbody>
</table>

TOTAL OF 173 BLOCKS IN 14 FILES

---

PDP> Q

MCR> DISM DK:
FILEACP -- DK0: ** DISMOUNT COMPLETE **
MCR> UNM DK:
MCR>
INSTALL MIPS TASK ON PDP 11/70 USING DEC WRITER

`>SET /UIC=[100,1]`
UNIVAC TO PDP FILE TRANSFER (UPFIT) MODULE

The UNIVAC to PDP file transfer (UPFIT) module provides general MIPS data file transfer on tape between the UNIVAC 1100/80 and PDP 11/70 computers. Files are written using 1600 BPI - 9 track tape drives. UPFIT output tapes must be checked out of the central site tape library by the user for transfer to the PDP. Blank tapes may be checked out of the tape library for use by the PDP UPFIT module. Tapes output by the PDP UPFIT module must be logged into the central site tape library and a reel number obtained by the user prior to using the UNIVAC UPFIT module for PDP to UNIVAC transfer.

I. UNIVAC 1100/80

After entering MIPS in the usual manner perform the following:
1. Ready any files which are to be sent to the PDP 11/70.
2. Create or ready any files which are to receive MIPS data from the PDP 11/70.
3. Enter the commands:
   RUN UPFIT
   GO
4. Respond to queries from UPFIT. The UPFIT menu is:
   Select direction of file transfer
   0 - Terminate Program Execution
   1 - Get MIPS file from PDP tape
   2 - Send MIPS file to PDP on tape
5. UPFIT will provide the user with a reel number for output tapes. It is the user's responsibility to make note of and retain this number for use when checking the tape out of the tape library.

II. PDP 11/70

Tapes must be physically mounted on the PDP 11/70 tape drive by the user. After a tape has been placed on the drive, set the tape density switch to 1600.

NOTE: The tape drive density switch MUST be set to 1600.

The user can now enter MIPS and:
1. Install any files which will be needed.
2. Enter the commands:
   RUN UPFIT
   GO
3. Respond to queries from UPFIT. The UPFIT menu is:
   Select direction of file transfer
   0 - Terminate Program
   1 - Get MIPS file from UNIVAC tape
   2 - Send MIPS file to UNIVAC on tape

For file transfer to the UNIVAC the tape written on the PDP 11/70 must be logged in at central site. The user should obtain the reel number assigned by the tape librarian for use as input to UPFIT.
IGDS is a comprehensive set of interactive software that provides total design control through the graphics station. This control includes the construction, manipulation, maintenance, storage, retrieval, plotting and analysis of geometric designs. IGDS supports the following features.

- Design File Log-on
- Utility Services
- Replace Cells in a Design
- Terminate Design Session
*** DESIGN FILE SPECIFICATION ***

IGDS ALLOWS THE USER TO RECALL AN EXISTING DESIGN FOR ADDITIONAL WORK OR TO CREATE A NEW DESIGN.

TO ACCESS AN EXISTING DESIGN, THE USER IDENTIFICATION CODE (UIC) AND THE DISK DEVICE AND UNIT ASSOCIATED WITH THE DESIGN MUST BE DEFINED AS FOLLOWS:

- **DDD** = DISK DEVICE AND UNIT
- **GGG** = USER GROUP NUMBER
- **UUU** = USER NUMBER WITHIN GROUP

THE OLD LIBRARY ASSOCIATED WITH THE EXISTING DESIGN WILL BECOME THE ACTIVE LIBRARY WHEN THE DESIGN IS RECALLED. TO RECALL AN EXISTING DESIGN, DEFINE ITS DISK FILE NAME (**F**), EXTENSION (**E**), AND VERSION (**V**).

DESIGN FILE NAME: `DP0:[15, 2] PACTS.DGN`

`DDD:GGG,UUUFFFFFFFFF.EEE:UUU`

CREATE A NEW DESIGN @

RETURN TO PRIOR LEVEL @
THE ENTRY OF A $ SIGN WILL ABORT FILE CREATION.
WHAT IS THE NAME OF THE FILE TO BE CREATED?
UP TO 12 CHARACTERS ( A-Z, 0-9, - )
MIPS> PACTOF
SPECIFY THE TYPE OF FILE BY NUMBER
1- NAME-DIRECTED
2- LIST-DIRECTED
3- ON-OFF
MIPS> 3
SPECIFY THE MAXIMUM NUMBER OF RECORDS
MIPS> 10000
SPECIFY A READ KEY IF DESIRED
MIPS> OF
SPECIFY A WRITE KEY IF DESIRED
MIPS> OF
SPECIFY NAME OF PERSON RESPONSIBLE FOR THIS FILE
MIPS> D.L.XH
DWDUSH@ORGAMS THE FILE TO BE MAINTAINED - DAYS?
MIPS> 385
SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS> OUTPUT FILE OF OR SL1
APPENDIX M

PROGRAM LISTINGS
UPDATE PACTAM

PACTAM ABSTRACT

PAYLOAD CREW TRAINING DATA BASE (PACTAM) MODULE PERFORMS DATA INPUT AND EDITING OF A PACT DATA BASE FILE TO BE USED IN MODULE FACTS, DATA WHICH CAN BE INPUT OR EDITED ARE THE LIST OF GROUPS, LIST OF PAYLOAD SPECIALISTS AND THEIR INITIAL LOCATIONS, LIST OF WORK LOCATION, LIST OF INITIAL LOCATIONS, TRAVEL COST AND TRAVEL TIME DATA INPUT WHICH INCLUDES LIST OF PAYLOAD SPECIALISTS THE DATA LIST OF WORK LOCATION, AND THE COST FOR WORK LOCATION. SPECIAL PROVISIONS ARE INCLUDED TO INITIALIZE AN EMPTY DATA FILE. THE MODULE INCLUDES AN OPTION TO PRINT THE ALTERNATE PRINT FILE THE LITE DATA BASE FOR A SPECIFIED MISSION, IN A SIMILAR DISPLAY THAT IS USED FOR INPUTING AND EDITING THE DATA. THE ONLY EXCEPTION IS THAT THE TRAVEL COST/TIME DATA IS DISPLAYED IN MATIX FORM ON THE ALTERNATE PRINT FILE. PACTAM IS AVAILABLE AT ANY SITE AND IN EACH NODE. THE ONLY OPTION WHICH IS RESTRICTED IS THE DETAILED SONY AND THE DATA WHICH REQUIRE A 1/16 INCH TLEXILITY. RESPONSIBLE ENGINEERS: DAVID SHIPLEY L112 493-4725

UPDATE PACTEI

PACTEI ENGINEERING INFORMATION

BLOCK DIAGRAM OF DATA FILE STRUCTURE (TSHE-CREATED). THERE CAN BE AS MANY AS 997 GROUPS PER MISSION, AND 10 TASKS PER GROUP.

***************

MISSION

***************

*******************************

GROUP GROUP GROUP GROUP

*******************************

***************

DATA TASK TASK TASK TASK

***************

UPDATE PACTPI

PACTPI PROGRAMMING INFORMATION

PACTPI PERFORMS DATA INPUT AND EDITING OF A PACT DATA BASE FILE TO BE USED IN MODULE FACTS. DATA WHICH CAN BE INPUT OR EDITED ARE THE LIST OF GROUPS, LIST OF PAYLOAD SPECIALISTS AND THEIR INITIAL LOCATIONS, LIST OF WORK LOCATION, LIST OF INITIAL LOCATIONS, TRAVEL COST AND TRAVEL TIME DATA IN ANDashi A LOCATION UTAILED SHOWING ALL THE DATA IN LIST OF HEADQUARTERS AND KEY LIST FOR WORK LOCATIONS. SPECIAL PROVISIONS ARE INCLUDED TO INITIALIZE AN EMPTY DATA FILE.
DATA FILE. THE PROGRAM INCLUDES AN OPTION TO PRINT ON THE ALTERNATE PRINT FILE. THE PRINT DATA FILE FOR A SPLIT-LEVEL MISSION IN A SIMILAR DISPLAY THAT IS USED FOR INSERTING AND EDITING THE DATA. THE ONLY EXCEPTION IS THAT THE TRAVEL COST/TIME DATA IS DISPLAYED IN MATRIX FORM ON THE ALTERNATE PRINT FILE.

A. PROGRAM BLOCK DIAGRAM
WIL LOW AS A BLOCK DIAGRAM, EACH BLOCK IS TYPICALLY RESPONSIBLE FOR A SPECIFIED FUNCTION. THE USER CONTROLS THE SEQUENCE OF EXECUTION.

- EDIT TOY COST
- EDIT LIST OF RESOURCES
- SELECT FILE
- PRINT LIST OF RESOURCES FOR A MISSION ON ALTERNATE PRINT FILE
- MAIN CONTROL
- LIST/EDIT GROUPS
- LIST/EDIT DETAILED GROUP AND TAG DATA
- LIST/EDIT TRAVEL COST/TIME DATA FROM A LOCATION
- LIST/EDIT TRAVEL COST/TIME DATA TO A LOCATION

B. COMPUTER CONFIGURATION
LANGUAGE: FORTRAN
CPU REQUIREMENT: 27,451 K

278
C. CREATION OF ABSOLUTE ELEMENT

DMP+ILPAC=MAP+ACT-CO

LIPFL1JSPILJSYS*HCS

SEG MAIN
IN MAIN,LOCK,DATA,TMP,RX+ACQUT=INST
SEG T00*,(MAIN)
IN T00,GOUT,CONDFM,SL-TILE
IN HACU,CHASE,ASS,DATA
IN HOLD,THIN,PRINT,+GINT+MPS+IP
SEG A**,(LAC)
IN LAC,OFLO*PAYSC*INRO
IN LISTU
SEG C**,(LAC)
IN EDITE
SEG C2**,+C
IN HACU
SEG C2**,+C
IN HACU+EDIT+LOCAT+EDIT+EDITA
SEG C3**,+C
IN SAV*+OTLAT
SEG H**,LAC
IN F0R+I1+FQ+EDVH,DELLOC,EDIT*,EDIT*,EDITY
SEG E**,LAC
IN EDIT
SEG F**,(LAC)
IN EDITE
SEG H**,(MAIN)
IN LISTM+DATA
SEG I**,(LAC)
IN INITI

D. DATA BASE FILE STRUCTURE

TYPE OF FILE: EPP/ DIRECTED FILE
ALL ATTRIBUTES ARE DATA ARE IN ALPHE-ALPHABETIC FORM
THE FOLLOWING REPRESENTS THE ATTRIBUTES OF THE

280
A-D FILE AND THE RETRIEVED DATA IN THE FORM:

ATTRIBUTE = DATA

1. MISSION/LIST = LIST OF MISSIONS (93 WORDS)

2. MISSION ID, = LIST OF MISSIONS PER MISSION (93 WORDS)

3. GROUP ID, = NUMBER OF TAE'S (1 WORD)

   TYPE OF TAE (1 WORD)

   EFFECTIVE DATE (2 WORDS)

   TOTAL OF

   IN THE FORM MM/DD/YY

   69 WORDS

   DESCRIPTION (45 WORDS)

   AVAILABILITY WINDOWS (49 WORDS)

   IN THE FORM MM/DD/YY TO MM/DD/YY

   (7 Windows+9 Words PER WINDOW)

GROUP ID. (1 WORD)

4. (GROUP ID,)/TAE NO./TAE = DESCRIPTION OF TAE (96 WORDS)

   LOCATION CODE (1 WORD)

   ULLAY (MIN AND MAX) (2 WORDS)

   TOTAL OF

   TAE TAE (1 WORD)

   DURATION (1 WORD)

   RESOURCES (9 WORDS)

   PRIORITY (1 WORD)

   EQUIPMENT (5 WORDS)

   PAYLOAD CREW AS (10 WORDS)

   AVAILABILITY WINDOWS (9 WORDS)

   IN THE FORM MM/DD/YY TO MM/DD/YY

   (A Windows+9 Words PER WINDOW)

5. LOCATION/INITIAL = LIST OF INITIAL LOCATIONS (12 WORDS)

6. LOCATION/WORK = LIST OF WORK LOCATIONS (12 WORDS)

7. LOCATION ID, /FROM = LOCATION ID+COST+TIME (21 WORDS)

8. MISSION ID, /PAYDEC = CREW+LOCATION (90 WORDS TOTAL)

9. WORK LOCATION ID, /TYC = WORK LOCATION + COTY COST (120 WORDS TOTAL)

The attributes in parentheses indicate values which
will change, such as those pay for several mission IDs.
And one must be used as an attribute in place of the
entry in the parentheses, however, such attributes as
mission list are hard-wired and are not changed.

END UPDATE PATH

RESTRICTIONS:
1. DETAILED GROUP AND TAE DATA CAN ONLY
   BE ENTERED ON A 14-70 ELECTRONIC

OUTPUT:
1. CAN SPECIFY OPTION TO PRINT COMPLETE

281
INPUT:
ALL TUTORIAL USING STANDARD INPUT IMAGE
SAMPLE RUN:

PAYLOAD CARGO TRAINING SCHEDULE DATABASE (PACT) ...

1 - TERMINATE
2 - EDIT LIST OF THE GROUPS
3 - EDIT DELTA TRAVEL ACTIVITY ELEMENT (TAE) DATA
4 - LIST TRAVEL COST AND TRAVEL TIME DATA
5 - EDIT PAYLOAD SPECIALIST DATA
6 - EDIT嬰 COST FOR WORK LOCATIONS
7 - EDIT LIST OF PRODUCERS
8 - LIST PARTS INPUT DATA BASE

HELP:

IF 1 IS SELECTED USER IS RETURNED TO MXP EXECEPTITIVE
IF 1 IS SELECTED USER CAN EDIT LIST OF PRODUCERS FOR SPECIFIED
MISSION USING THE FOLLOWING COMMANDS:

***********************
INSERT NEW
INSERT NEW AFTER OLD
DELETE OLD
REVIEW
***********************
INSERT NEW ADOPT NEW VALUE AT THE END OF THE LIST.
INSERT NEW AFTER OLD ADOPT NEW VALUE AFTER OLD IN
THE LIST.
DELETE OLD DELETE THE OLD ITEM FROM THE LIST
AND PAPS THE LIST.
REVIEW REVIEW THE SCREEN WITH THE NEW LIST
DELETE SQLY INTERACHES YOU TO LAST PLAN
NOTE: THIS OPTION HAS A SPECIAL COMMAND

***********************
EDIT OLD
***********************
EDIT OLD INTERACHES YOU TO EDIT THE LIST
OF GROUPS SPECIFIC TO THE EDITED GROUP
AND THE USER TO EDIT THAT DATA AND THEN
RETURN TO DISPLAY OF LIST OF GROUPS

IF 3 IS SELECTED USER CAN EDIT GROUP DATA AND THE DATA FOR
SPECIFIED GROUP USING THE FOLLOWING INSTRUCTIONS

***********************
INSTRUCTIONS FOR EDITING A GROUP OF DATA
LOCATE DATA ITEMS ON VALUE TO BE CHANGED, ENTER CONTROL CHARACTER
AND RETURN KEY
THE FOLLOWING CHARACTERS ARE NOT VISIBLE THEY MAY BE OFF SCREEN - TYPING
WILL NOT CAUSE ANY PERSS RETURN KEY
THE FOLLOWING CONTROL CHARACTERS ARE VALUES OTHERS WILL BE IGNORED
L - ENTER NEW VALUE, OVERWRITING OLD VALUE
O ON LEFT VALUE AT TOP OF SCREEN
P - CLEAR LEFT SCREEN
S - RETURN TO PREVIOUS MENU
1...9 - EDIT DATA ITEMS WITH INDICATED TAE
A - ADD OR INSERT ANOTHER TAE TO THIS GROUP
D - DELETE TAE (QUESTION WHICH TAE WILL BE ASKED)
M - DELIMTATE THIS PAGE
Q - QUESTION WHICH GROUP NEXT WILL BE ASKED
N - NEXT PAGE TO BE DISPLAYED
NOTE: WHEN EDITING A SPECIAL GROUP, IF MXP4 ANY THE ENTIRE

282
STRING MUST BE SEPARATED BY SPACES
WHEN LISTING A DATE THE MONTH, DAY AND YEAR MUST
BE ENTERED IN A MANNER }

****************************************

IF 1 IS SELECTED, USER SEEN THE FOLLOWING MENU:
TRAVEL COST AND TRAVEL TIME DATA
0 - RETURN TO MAIN MENU
1 - EDIT LIST OF INITIAL LOCATIONS
2 - EDIT LIST OF WORK LOCATIONS
3 - EDIT TRAVEL COST/TIME DATA TO A PARTICULAR LOCATION
4 - EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION

RINS

IF 0 IS SELECTED, USER IS RETURNED TO THE MAIN MENU

IF 1 IS SELECTED, USER CAN EDIT INITIAL LOCATION USING
THE SAME COMMANDS AS OPTION 1 OF THE
MAIN MENU

IF 2 IS SELECTED, USER CAN EDIT WORK LOCATIONS USING
THE SAME COMMANDS AS OPTION 1 OF THE
MAIN MENU

IF 3 IS SELECTED, USER CAN EDIT TRAVEL COST/TIME DATA
TO A PARTICULAR LOCATION USING THE
FOLLOWING COMMANDS:

EDIT VLENAS TO RETURN
EDIT VLENAS TO RETURN
EDIT VLENAS TO RETURN

***************
OLD = COST TIME

***************
OLD = COST TIME BUT AS THE COST AND TIME VALUES FOR
OLD IN THE DATA YSE D. ONLY ONE VALUE IS SUPPLIED
IT IS TAKEN AS THE COST VALUE AND TIME DATA IS NOT
PREVIOUS

IF 4 IS SELECTED, USER CAN EDIT TRAVEL COST/TIME DATA
FROM A PARTICULAR LOCATION USING THE
COMMANDS ABOVE.

IF 5 IS SELECTED, USER CAN EDIT THE PAYLOAD SPECIALIST LIST
AND INITIAL LOCATION USING THE SAME
COMMANDS AS OPTION 1 PLUS:

***************
NEW = INITIAL LOCATION

***************
Which allows the user to input the
INITIAL LOCATION FOR A NEW
PAYLOAD SPECIALIST

IF 6 IS SELECTED, USER CAN EDIT THE PAYLOAD SPECIALIST LIST
AND INITIAL LOCATION USING THE FOLLOWING COMMANDS:
LOCATION = COST
ALL = COST

IF 7 IS SELECTED, USER CAN EDIT THE LIST OF RESOURCES USING
THE SAME COMMANDS AS OPTION 2.

IF 8 IS SELECTED, USER RECEIVES A COMPLETE ALTERNATE PRINT
FILE OF HIS SPECIFIED FILE AND PRINTS.
THE FORMAT IS VERY SIMILAR TO EDITING DISPLAYS
EXCEPT TRAVEL COST/TIME DATA IS PRINTED
IN MATRIX FORM. THIS OPTION DOES NOT TAKE

283
MORE THAN 5 MINUTES WILL CLOCK TIME AT A
ORDER SITE.
**PACTS Abstract**

The PACTS (Preliminary Activity Control Tracking System) is designed to schedule, plan, and control activities and tasks. The system is capable of handling multiple activities and tasks simultaneously, utilizing a flexible and efficient scheduling process. PACTS generates a schedule for each activity and task, taking into account the complexity and the number of activities scheduled. After selection, tasks are scheduled at the earliest opportunity, taking into account the constraints and limits.

PACTS accepts input from the user, which is created by the PACTS module, which can be accessed for various purposes. PACTS schedules and mission level data may be input into the terminal or stored and retrieved from a file. Data may be edited to test alternative schedules.

PACTS provides a schedule summary table for display at the terminal and schedule tabulation of the alternate print file. The module also generates a list of activities and an update file. The user may transfer to the edit module to display these files.

PACTS may be run at any terminal or in batch mode.

**Responsibility Engineer:** David Shumaker

**PACTS Engineering Information**

**Does Not Apply to This Module**

**PACTS Programming Information**

The PACTS scheduling module (PACTS) is designed to interact with the file, which contains activity and task data. The PACTS module generates a list of activities and tasks, and the data are used by various functions. The transfer to these modules is effected by setting the values of PACTS in the file. The PACTS module also reads the file produced by the PACTS module and loads the data into a table file. The module saves its control logic for easy use and save state upon re-entry from the other modules. The PACTS scheduler also can edit control and mission level data.

---

**Program Block Diagram:**

Below is a simplified block diagram showing the capabilities of the module.

```
- TERMINATE
- 1 - CREATE A PERMANENT RIPS FILE
- 2 - TRANSFER TO DATA FILE EDIT FILE (PACTS)
- 3 - SETUP EDL INPUT DATA
- 4 - GENERATE TASK SCHEDULE AND SELECT BEST
- 5 - DISPLAY SUMMARY OF BEST SCHEDULE
- 6 - FORMULATE SCHEDULE AND WRITE UPDATE FILE
- 7 - TRANSFER TO SCHEDULE GENERATION (PACTS)
- 8 - SAVE DATA FROM THIS RUN FOR FUTURE USE

- RETURN TO MAIN CONTROL
- 1 - LOAD DATA FROM PREVIOUS RUN
- 2 - LOAD PREVIOUS RUN TASK UPDATE DATA
- 3 - LOAD CURRENT DATA
- 4 - LOAD TASK GENERATION
```

---

285
B. COMPUTER CONFIGURATION

**FORTRAN**

**CORE REQUIREMENT:** 44,277 K

**INPUT FILES:** NAME-DIRECTED FILE CONTAINS MISSION DEPENDENT DATA AND PAYLOAD MODELS

**OUTPUT FILES:** LIST-DIRECTED FILE CONTAINS SCHEDULE TIMES, RESOURCE, AND TRAVEL COST/TIME DATA. ON/OFF FILE CONTAINS CREW ACTIVITIES

***SCHEDULING ROUTINES/FUNCTIONS***

**HEART** - MAIN DRIVER FOR SCHEDULING OPERATIONS

**CHECK** - DETERMINES WHETHER A TALE CAN BE SCHEDULED

**SELECT** - CHECKS CREW AND PAYLOAD AVAILABILITY

**VERIFY** - FINDS ALLOCATION FOR SCHEDULING A TALE

**CANDMW** - RECORDS THE CREW IN USE FOR AN EVENT

**VACANT** - RECORDS VACANT PAYLOADS FOR A TALE OR A CALENDAR DAY

**ON/OFF** - CHECKS FOR A HOLIDAY

**EVAL** - EVALUATE SCHEDULE AND PRINT EVALUATION INFORMATION

**FIXED** - SELECTS THE NEXT FIXED GROUP FOR ATTEMPTED SCHEDULING

**FIX72** - INITIALIZES INTERNAL FIXED GROUP ARRAYS

**FQ** - MAIN DRIVER TO GENERATE RANDOM SCHEDULES AND SELECT THE FIRST

**SNCH** - Schedules FIXED GROUPS

**SNHR** - SCHEDULES RANDOM GROUPS

**SCH** - CALCULATES TOTAL TIMES OF A SCHEDULE

**SCHEDULE** - SELECTS A TAPE OR A TASK LOCATION FOR SCHEDULING

**SELECT** - RANDOMLY SELECTS THE NEXT TAPE FOR ATTEMPTED SCHEDULING

**TRAVEL** - DETERMINES THE TRAVEL COST FOR A TAPE LOCATION

***INTERFACE ROUTINES***

**RAIN** - MAIN CONTROL FOR THE MODULE

**MNS** - ASSIGN TEMPORARY TAPE

**BLOCK-LATA** - INITIALIZATION OF BLOCKS

**TIM** - DETERMINES START AND STOP TIMES FOR TRAVEL AND CHECK
C. CREATION OF AN SOLVE ELEMENT

MAPI: IL PCAMAP-PCAMAP-30
LIG: PROG55-STRKGSF

SEG MAIN=BLOCK:IPPA+CCC:STATE+GOOUT
SEG CREATE+(INTERACT)
  IN CREATE
  SEG IOP-DFC **(CREATE)
  IN LOGIC
  SEG NDF-DFC **(CREATE)
  IN DONE
  SEG START-STOP **(INTERACT)
  IN INITIAL
  SEG START-STOP **(START-STOP)
  IN SET:INIT
  SEG STOP **(START-STOP)
  IN SAVE:INPUT:SAVE
  SEG INITIALIZE **(INTERACT)
  IN INPUT
  SEG CONTROL **(INITIALIZE)
  IN LOAD:LOAD-TRAVEL
  SEG MODELS **(INITIALIZE)
  IN INPUT-TRAVEL:CONVERT
  SEG DISPLAY +(INTERACT)
  IN RL:RELOAD-REST
  SEG TYPATION **(DISPLAY)
  IN TABLES
  SEG PLAY **(DISPLAY)
  IN LDL:LOAD-TRAVEL
  SEG SLL **(FILES)
  IN LDL
  SEG UNF **(FILES)
  IN SCRIPT

SEG PROCESS **(MAIN)
IN CHECK+INSERT+DELETE
SEG FIELD **(REPLACE)
IN SCH-OPEN
SEG RANDOM **(PROCESS)
IN HOSTE-CARDL+SCF-ICLOSE+CALCULATE

D. INPUT FILE STRUCTURE

TYPE OF FILE: HARD DIRECTED FILE
ALL ATTRIBUTES AND DATA ARE IN ALPHA-WHOLIC FORM
THE FOLLOWING REMARKS THE ATTRIBUTES OF THE
V-D FILE AND THE RETURNED DATA IN THE FORM:
ATTRIBUTES: DATA

1. MISSION/LIST: LIST OF MISSIONS (40 WORDS)
2. MISSION ID.: LIST OF GROUPS FOR MISSION (400 WORDS)
3. GROUP ID.: NUMBER OF TAKES (11 WORD)
   TYPE OF TAKES (11 WORD)
   ******************
   EFFECTIVE DATA IN WORDS

288
F. CHEM TRAINING TIMELINE FILE DESCRIPTION

PARTS INVOLVED FILE (LIST DIRECTED)

TITLES RECORDS ARE LIKELY THE FOLLOWING FORMATS
LINE 1 * SCHEDULE OPTIONS... (1) NEXT SCHEDULE TO
LINE 5 * INFORMATION OPTIONS... (11) MESSAGES
LINE 6 * TOTAL COST... (11) RESOURCES
LINE 7 (11) MISSIONS... (11) TASK DEFINITIONS
LINE 8 (11) TASK DEFINITIONS

DATA RECORDS

WORD DESCRIPTION
* ITEM... ACCOUNT... (DAY COUNT)
* DATE... DATE... (MM/DD/YY)
* DATE... DATE... (MM/DD/YY)
On the page, there is a diagram of a flowchart or a series of steps, labeled with numbers and descriptions. The text at the top of the page reads:

**PACTS USERS INFORMATION**

The PACTS module has four principal phases whose relationship is shown below.

```
+-----------------+       +-----------------+
| PAIN            |       | MENU            |
|                 |       |                 |
|                 |   +--+   |                 |
|                 |       |                   |
|                 |       |                   |
|                 |   +--+   |                   |
|                 |       |                   |
|                 |       |                   |
+-----------------+       +-----------------+
                                         |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+   |
                                      |                   |
                                      +-----------------+

```

Each phase is shown below with an accompanying explanation wherever needed. In the main and each sub-menu, only one option may be selected at a time.

- [ ] J - TERMINATE
- [ ] f - CREATE A PERMANENT DATA FILE
- [ ] D - TRANSFER TO DATA FILE EDITOR (PACTS)

290
3. DISPLAY/EDIT INPUT DATA
4. GENERATE TRIAL SCHEDULES AND SELECT BEST
5. DISPLAY SUMMARY OF WHAT SCHEDULED
6. TEMPLATE SCHEDULE AND WRITE OUTPUT FILE
7. TRANSFER TO IMPORTANT SCENARIO
8. SAVE DATA FROM THIS CASE FOR FUTURE USE

NOTE:
OPTIONS 4, 5, AND 6 ARE NOT AVAILABLE UNTIL DATA IS LOADED VIA OPTION 3. 0. THE MAIN MENU AND OPTIONS 1, 2, AND 13 OF THE INPUT MENU. AFTER THIS DATA IS LOADED OPTION 4 IS AVAILABLE BUT 5 AND 6 ARE NOT READY FOR USE UNTIL OPTION 4 IS EXECUTED.

INPUT MENU (OPTION 7 OF MAIN MENU)
1. RETURN TO MAIN MENU
2. LOAD DATA FROM PREVIOUS CASE
3. EDIT CONTROL DATA
4. EDIT TCIR DEFINITIONS
5. EDIT WORK DAY DURATIONS
6. EDIT MISSION LIST
7. EDIT LIST OF PAYLOAD SPECIALISTS
8. EDIT LIST OF TAE GROUPS
9. EDIT FIXED ORDER LISTS
10. LOAD TAE MODELS

NOTE:
OPTIONS 1, 7, 9, AND 10 MUST BE EXECUTED BEFORE TRIAL SCHEDULES CAN BE GENERATED (MAIN MENU). HOWEVER, DATA MAY BE LOADED BY USE OF THE EDIT OPTIONS. OPTION 9 DISPLAYS A SUB-MEANU CONTROL MENU.

BY SELECTING OPTION 7 IN THE INPUT MENU THE CONTROL MENU IS DISPLAYED IN THE FORM OF TWO SMALL MENUS
*** CONTROL MENUS ***

NUMBER OF SCHEDULES TO ATTEMPT:
RANDOM NUMBER SEED:

CURRENT EVALUATION PRIORITIES ARE AS FOLLOWS:
NUMBER OF TAE'S SCHEDULED
AVERAGE NUMBER OF TAE'S/GROUP SCHEDULED
SCHEDULE COST
INPUT CHANGES IF DESIRED
ENTER 0 TO DISCARD

NOTE:
IN BOTH DISPLAYS THE VALUES ARE ENTERED ON ONE LINE SEPARATED BY BLANKS

*** OUTPUT MENU ***

OUTPUT MENU (OPTION 8 OF MAIN MENU)
SELECT PRINT AND FILE OPTIONS.
DEFAULT PRINT OPTION
1 = NO PRINT OUT
2 = PRINT ON TIMES ONLY
3 = PRINT ALL TIMES
DEFAULT FILE OPTION
0 = NO FILE
1 = WRITE TO FILE
2 = WRITE TO KEI
3 = WRITE BOTH

ORIGINAL PAGE IS REALITY
NOTE:

Both values are entered on one line separated by blanks.
THE PAYLOAD CREW TRAINING TIMELINE EDITOR IS AN INTERACTIVE MODULE WHICH DISPLAYS AND EDITS THE TIMELINE PRODUCED BY THE SCHEDULING MODULE (PACTES). THIS MODULE TAKES THE LIST-DIRECTED AND NAME-DIRECTED FILES FROM PACTOL TO CREATE A SCRATCH FILE FOR EDITING. THE PROGRAM UPDATES LIST-DIRECTED AND NAME-DIRECTED FILES, TRAVEL ANALYSIS IS CALCULATED ONLY IF THE OPTION TO CODE THE EVENT TIMELINE IS SET. THE EVENT TIMELINE, THE EVENT TIMELINE, AND THE COMPOSITE TIMELINE ARE OPTIONS AVAILABLE TO DELETE A GROUP FROM THE TIMELINE; DELETE A CREW FROM THE TIMELINE; AND TO WRITE NEW TIMELINE FILES. OPTIONS AVAILABLE TO TRANSFER TO EITHER THE EVENT GENERATOR (PACTE) OR THE NAME-DIRECTED FILE (PACTO). THE EDITING OF THE CREW, EVENT AND COMPOSITE TIMELINES REQUIRES A TERMINAL TERMINAL. OTHERWISE, PACTED IS AVAILABLE AT ANY TERMINAL OR IN BATCH MODE.

RESponsible Engineer: David Shipman E117 453-4719

PACTED ENGINEERING INFORMATION

DOES NOT APPLY TO THIS MODULE

PACTED PROGRAMMING INFORMATION

THE TIMELINE EDITING MODULE (PACTED) INTERACTS WITH THE REPORT GENERATOR (PACTEO) AND THE NAME-DIRECTED FILE (PACTO) BY SETTING THE VALUE OF "DOT" IN THE NAME-DIRECTED FILE "NRO-11", A NAME-DIRECTED FILE WHICH IS GENERATED BY PACTO IS REQUIRED FOR INPUT.

THE FILE IS HELD AND DATA IS LOADED INTO A NAMR FILE FOR EDITING. THE PROGRAM SAVES ITS COMMON BLOCKS FOR USE WHEN RETURNING FROM PACTE AND PACTO.

A. PROGRAM BLOCK DIAGRAM

BELOW IS A SIMPLIFIED BLOCK DIAGRAM SHOWING THE CAPABILITIES OF THE PROGRAM

***************
1. TERMINATE
2. DISPLAY BASIC INFORMATION
3. DISPLAY NAME COMPATIBLE TIMELINE
4. DISPLAY/EDIT EVENT TIMELINE AND POST
5. PROCESS TRAVEL
6. DELETE CREW FROM TIMELINE
7. TRANSFER TO NAME-DIRECTED FILE (PACTO)
8. TRANSFER TO NAME-DIRECTED GENERATOR (PACTE)

****** EDITING INSTRUCTIONS ******

LOCATE CROSSHAIRS ON VALUE TO BE ENTERED
ENTER COMMAND, CHARACTER AND PESS RETURN KEY
CROSSHAIRS ARE NOT VISIBLE THEY MAY BE
ON SCREEN, TYPING THINGS WRITE DOWN OR FROM PRESS RETURN KEY, QUIT

EDITING COMMANDS ARE LISTED BELOW

E - ENTER SET VALUE, OVERWRITING OLD VALUE
H - ENTER SET VALUE IN PLACE, THEN PRESS RETURN (MULTIPLE QUESTIONS WILL BE ASKED)
C - AND SPACE-INS TYPED TO A GROUP

FINAL PAGE IS

293
**Select Print and File Options**

- **Default Print Option**: 1
  - 0: No Print Out
  - 1: Print on Time's Only
  - 2: Print All Times
- **Default File Option**: 3
  - 0: No File
  - 1: Write Log File
  - 2: Write Off-File
  - 3: Write Both

---

**Computer Configuration**

- **Language**: FORTRAN
- **Core Requirement**: 36,454
- **Input Files**: Data-Driven File Containing Mission Dependent Data and the Models, List-Driven File Containing Mission Timeline Status
- **Output Files**: Data-Driven File Containing Mission Timeline Status, ON/OFF File Containing Crew Activities

---

### Subroutine Functions

- **ADD**: Adds specific dates to a group
- **BLOCK DATA**: Initializes common blocks
- **CHECK A**: Checks for crane/pan travel for an event
- **CALS**: Converts Gregorian date to week day on calendar
- **DEAD**: Checks date input for month/day/year format
- **DELETE**: Deletes a particular time from the timeline and group list
- **DELETE**: Deletes a record from the timeline
- **DISPLAY**: Displays complete timeline
- **DISPLAY**: Displays current timeline
- **DISPLAY**: Converts floating point on and off times to a standard date and year
- **DISPLAY**: Displays event timeline
- **DUMP**: Displays event and select print and output file options
- **EDCOM**: Displays event timeline and edit complete timeline
- **EDIT**: Displays event timeline and edit time line
- **EDIT**: Displays event timeline and edit timeline
- **EDIT**: Displays event timeline
- **EDIT**: Displays event timeline and edit timeline
- **HELP**: Displays editing commands for timeline editing
- **INSERT**: Inserts a new record in the file
- **LOAD**: Loads list-directed - file timeline status
- **LOAD**: Loads input file and potato specialist list
- **LOAD**: Loads timeline status and input file data
- **LOREF**: Calculates the location and speed with basic on the
POSITION OF THE CURSOR CROSSHAIRS FOR TIMELINE
DISPLAYS (NOT USED FOR TRAVEL RECORDS)

LOCATV - CALCULATES THE LOCATION AND WORD SIZE BASED ON THE
POSITION OF THE CURSOR CROSSHAIRS FOR TIMELINE
DISPLAYS (USED FOR TRAVEL RECORDS)

MAIN - MAIN CONTROL FOR PROGRAM AND MAIN MENU DISPLAY

ONOFF - WRITES ON/OFF SCRATCH FILE

ONOFFF - WRITES ON/OFF FILE FOR OUTPUT

OPT1 - PRINTS FIRST COMMANDS AT TOP OF PAGE OF TIMELINE

PRINT - DISPLAYS MESSAGE ON SCREEN AND AVOIDS CARRIAGE

PRINTP - PRINTS TIMELINE RECORDS ON ALTERNATE PRINT FILE

PROPF - READS UP TO 15 INPUTS OF INPUT FROM INTERACTIVE

PROPS - READS AND INTERPRETS SETTING COMMANDS

READ - READS A RECORD FROM THE SCRATCH FILE

READ? - RESTORES COMMON BLOCKS UPON RE-ENTRY TO THE MODULE

SAVE - SAVES COMMON BLOCKS UPON EXIT FROM THE MODULE

SLOAT - READS START AND STOP TIMES FOR CREWMAN DEPLOYMENT

SLFILE - REQUESTS NAME-DIRECTED AND LIST-DIRECTED FILE NAMES

FOR DATA INPUT

SLML - REQUESTS USER TO SPECIFY CREW FOR CREW TIMELINE

STDATE - REQUESTS USER TO INPUT STARTING DATE FOR DISPLAY

AND CHECKS FOR MONTH/MONTH/YEAR FORMAT

TO - READS A CREW TRAVELING LIST-DIRECTED FILE AND WRITES

A NFRAN FILE IN TIME ORDER BY ON TIME

TRAVC - REVIEWS TRAVEL COST AND TIME FROM ONE LOCATION

TO ANOTHER

TRAVEL - CALCULATES TRAVEL POST-PROCESSING FOR OPTION 3 OF

THE MAIN KE y

UPDTE - CONVERTS SICROPAN AND ODD TIMES TO A DECIMAL

NUMBER

WRITAV - WRITES TRAVEL RECORDS ON SCRATCH FILE AND PRINTS

A MESSAGE FOR TRAVEL VIOLATION ON ALTERNATE

PRINT FILE

WRFIL - WRITES LIST-DIRECTED FILE FOR TIMELINE STATUS AND

ON/OFF FILE IF SELECTED ON OUTPUT FILE OPTIONS

C. CREATION OF ABSOLUT E LLEMENT

GMAP E=MAP+FD-50

LIG BD=LIB+SYS+PSC+8

SLE MAIN

IN MAIN=BLOCK DATA=CCC=ABOUT

SEG INITIAL, (MAIN)

IN SLFILE=LOAD
tO

SEG ENCOM, (MAIN)

IN ENCOM=OSCM

SEG EOFV, (MAIN)

IN EOFV=TEST

SEG DISPLAY, (EDEV)

IN RVF

SEG TRAVL, (EDEV)

IN LOAD=CLREL=WRITAV+TRAVC

SEG DFLSR, (MAIN)

IN DFLOR

SEG DFLMP, (MAIN)

IN DFLMP=SLML+OSCM

SEG DFLTRI, (MAIN)

IN DFLTRI=SLAOAT

SEG WRTFIL, (MAIN)

IN WRTFIL=PRINT+OPT+LDW+LHP
### D. NML-DIRECTED INPUT FILE STRUCTURE

**TYPE OF FILE**: NML-DIRECTED FILE

**THE FOLLOWING REPRESENTS THE ATTRIBUTES OF THE N-D FILE AND THE RETURNED DATA IN THE FORM**

**ATTRIBUTE = DATA**

<table>
<thead>
<tr>
<th>MISSION/LIST</th>
<th>LIST OF MISSIONS (70 WORDS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MISSION ID.</td>
<td>LIST OF GROUPS PER MISSION (200 WORDS)</td>
</tr>
<tr>
<td>GROUP ID.</td>
<td>NUMBER OF TAE'S (1 WORD)</td>
</tr>
<tr>
<td></td>
<td>TYPE OF TAE (1 WORD)</td>
</tr>
<tr>
<td></td>
<td>EFFECTIVE DATE (4 WORDS)</td>
</tr>
<tr>
<td></td>
<td>DESCRIPTION (13 WORDS)</td>
</tr>
<tr>
<td></td>
<td>AVOIDANCE WINDOWS (48 WORDS)</td>
</tr>
<tr>
<td></td>
<td>IN THE FORM HDDMM/DDYY (8 WORDS)</td>
</tr>
<tr>
<td></td>
<td>(5 WINDOWS, 9 WORDS PER WINDOW)</td>
</tr>
<tr>
<td></td>
<td>TOTAL OF 68 WORDS RETURNED</td>
</tr>
<tr>
<td>GROUP ID. / TOTAL ID. / TAE</td>
<td>DESCRIPTION OF TAE (60 WORDS)</td>
</tr>
<tr>
<td>LOCATION CODE (1 WORD)</td>
<td>DURATION (4 WORDS)</td>
</tr>
<tr>
<td>MESSAGES (6 WORDS)</td>
<td>PRIORITY (1 WORD)</td>
</tr>
<tr>
<td>EQUIPMENT (6 WORDS)</td>
<td>PAYLOAD COLUMNS (150 WORDS)</td>
</tr>
<tr>
<td>AVAILABILITY WINDOWS (24 WORDS)</td>
<td></td>
</tr>
<tr>
<td>IN THE FORM HDDMM/DDYY</td>
<td></td>
</tr>
<tr>
<td>(6 WINDOWS, 9 WORDS PER WINDOW)</td>
<td></td>
</tr>
</tbody>
</table>

**LOCATION/INITIAL** | LIST OF INITIAL LOCATIONS (10 WORDS)

**LOCATION/WORK** | LIST OF WORK LOCATIONS (60 WORDS)

**LOCATION ID. / FROM** | LOCATION TO COST-TIME (120 WORDS)

**MISSION ID. / PAYLOAD** | CREATURE HOME LOCATION (20 WORDS TOTAL)

**WORK LOCATION ID. / TO** | WORK LOCATION + TIME COST (120 WORDS TOTAL)

**THE ATTRIBUTES IN PARENTHESES INDICATE VALUES WHICH WILL CHANGE SUCH THAT THERE MAY BE SEVERAL MISSION IDES AND ONE MUST BE USED AS AN ATTACHMENT IN PLACE OF THE FAIRY IN THE PARENTHESES, HOWEVER, SUCH ATTRIBUTES AS MISSION/LIST ARE HAND WRIED AND ARE NOT USER CHANGED.**

### E. CREW TRAINING TIMELINE FILE DESCRIPTION

**PACED OUTPUT FILE (LIST-DIRECTED)**

**TITLE RECORDS ARE UNDER THE FOLLOWING FORMATS**

| LINE | (A) SCHEDULE ID = "ID"
|------|-------------------|
| LINE 2 | (A) SCHEDULE ID = "ID"
| LINE 3 | (A) RESOURCES = "RESOURCES"
| LINE 4 | (A) RESOURCES = "RESOURCES"
| LINE 5 | (A) TOTAL COST = "TOTAL COST"
| LINE 6 | (A) MISSIONS = "MISSIONS"
| LINE 7 | (A) INDEX = "INDEX"
| LINE 8 | (A) INDEX = "INDEX"
| LINE 9 | (A) INDEX = "INDEX"

**DATA RECORDS**

**WORD** | **ORTHOG DATA**

---

296
**EDITING INSTRUCTIONS**

(OPTIONS 1, 5, 6, 7, 9, 10 OF MAIN MENU)

1. LOCATE CROSSHARES ON VALUE TO BE LOCATED, ENTER COMMAND
   CHARACTER* AND PRESS RETURN KEY.

2. IF CROSSHARES ARE NOT VISIBLE, THEY MAY BE OUT OF SCREEN, TUNN
   THING SCREENS AND/WH PRESS RETURN KEY.)

**EDITING COMMANDS ARE LISTED BELOW**

<table>
<thead>
<tr>
<th>Option</th>
<th>Command Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>ENTER NEW VALUE, OVERWRITING OLD VALUE</td>
</tr>
<tr>
<td>Y</td>
<td>ENTER NEW VALUE IN BLANK AREA ON SCREEN</td>
</tr>
<tr>
<td>A</td>
<td>ALL SPECIFIED TIME(S) TO A GROUP</td>
</tr>
<tr>
<td>D</td>
<td>DELTA SPECIFIED TIME EVENT</td>
</tr>
<tr>
<td>R</td>
<td>RETURN SCREEN</td>
</tr>
<tr>
<td>T</td>
<td>SPECIFY TIME POINT FOR NEXT PAGE</td>
</tr>
<tr>
<td>C</td>
<td>CONTINUE, BEGINNING WITH NEXT TIME POINT</td>
</tr>
<tr>
<td>H</td>
<td>BEGIN PROCESSING ANOTHER CRUFTAN</td>
</tr>
<tr>
<td>H</td>
<td>REDISPLAY THIS TUTORING (HELP)</td>
</tr>
</tbody>
</table>

**NOTE:**

THE "H" OPTION APPLIES ONLY TO THE CHW TIME LINE.
PACTRG ABSTRACT

The Payload Crew Training Report Generator (PACTRG) uses the PACT database file containing training activity element (TAE) descriptions and the output file from the module PACTS containing the crew training schedule to generate specialized tabulations and plots. Tabulations available are: a composite schedule, a composite schedule with cost and duration, a schedule summary for all the TAE groups, unscheduled time for all crewmen, a schedule for an individual crewman, and unscheduled time and locations for an individual crewman. Tabulations on the terminal may be omitted while producing tabulations on the print file. The module includes an option to print on the print file all tabulations for a specified time frame. Bar graph plots available: a schedule for all TAE groups, scheduling opportunities for all crewmen, a timeline of locations, a resource utilization timeline, and a location timeline for an individual crewman. The plots can be displayed only at a 19-inch graphics terminal.

PACTRG is available at any site and in batch mode with the exception of plots which require a 19-inch graphics terminal.

RESPONSIBLE ENGINEER: DAVID SHIPMAN ELT/ 493-4735

PACTRG ENGINEERING INFORMATION

DOES NOT APPLY TO THIS MODULE

PACTRG PROGRAMMING INFORMATION

The PACT report generator generates tables via the Tektronix terminal screen and the high speed printer. Plots are also displayed via the Tektronix terminal. NAME-DIRECTED, LIST-DIRECTED AND ON/OFF files produced by the automatic scheduler (PACT) or the manual scheduler (PACTS) are needed for use of all of the options.

A- PROGRAM BLOCK DIAGRAM

Below is a simplified block diagram which shows the capabilities of the module.

---------------------------------------------

PACTRG MAIN MENU

0 - TERMINATE
1 - DISPLAY USAGE INFORMATION (HELP)
2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
3 - DISPLAY TABLES ON PRINT FILE

---------------------------------------------

SELECT PRINT OPTION(S) DESIRED

0 - RETURN TO MAIN MENU
1 - PRINT ALL TABLES
2 - SUMMARY ***
3 - PRINT COMPOSITE SCHEDULE
4 - PRINT COMPOSITE SCHEDULE WITH COST AND DURATION
5 - PRINT SCHEDULE SUMMARY FOR ALL TAE GROUPS
6 - PRINT TRAVEL SCHEDULE
7 - PRINT SCHEDULE FOR A CREWMAN
8 - PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREWMAN

*** BY INDIVIDUAL CREWMAN ***
DIST - DISPLAYS PLOT OF RAW GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL TAE GROUPS
DISO - DISPLAYS PLOT OF UNSCHEDULED TIME FOR ALL CREWME
DISP - DISPLAYS TABULATION OF UNSCHEDULED TIME FOR ALL CREWME
DISQ - DISPLAYS COMPOSITE TRAVEL SCHEDULE LOCATIONS
DISR - DISPLAYS PLOT OF TIMELINE FOR AN INDIVIDUAL CREWMAN
DISS - DISPLAYS PLOT OF RESOURCE UTILIZATION
DIST - DISPLAYS SCHEDULE FOR AN INDIVIDUAL CREWMAN
DISU - DISPLAYS PLOT OF LOCATION TIMELINE FOR AN INDIVIDUAL CREWMAN
DISV - DISPLAYS TABULATION OF UNSCHEDULED TIME AND LOCATIONS FOR A CREWMA
FILE - REQUESTS LIST-DIRECTED FILE NAME FROM USER. CHECKS IF FILE IS READY AND REQUIRED TYPE (N-D)
FILN - REQUESTS NAME-DIRECTED FILE NAME FROM USER. CHECKS IF FILE IS READY AND REQUIRED TYPE (N-D)
FILEO - REQUESTS ON/OFF FILE NAME FROM USER. CHECKS IF FILE IS READY AND CORRECT TYPE
GRDATA - LOADS CROP DATA INTO CORE FROM A-D FILE
LCHART - DISPLAYS RAW CHART OF SCHEDULE FOR ALL TAE GROUPS
LEDSEN - REQUESTS LEGEND TO BE USE WITH DISPLAYS
LOADCR - LOADS CREW DATA FROM ON/OFF FILE
LOADSR - LOADS GROUP LIST FROM N-D FILE INTO CORE
LOADLN - LOADS CREW AND INITIAL LOCATIONS FROM N-D FILE INTO CORE
LOADPY - LOADS CREW ID'S FROM N-D FILE INTO CORE
LOADS - LOADS RESOURCE DATA FROM N-D FILE INTO CORE
LOADT - LOADS THE DATA INTO CORE FROM N-D FILE
LOADY - LOADS TOY DATA INTO CORE FROM N-D FILE
MAIN - MAIN PROGRAM CONTROL
MENU - MAIN DRIVER FOR TEKTRONIX DISPLAY OPTIONS
OCHART - DISPLAYS PLOT OF UNSCHEDULED TIME FOR ALL CREWME
PHENU - MAIN DRIVER FOR PRINT OPTIONS
PRINT - PRINTS ALL TABLES FROM PRINT MENU
PRJ - PRINTS COMPOSITE SCHEDULE ON PRINT FILE
PRK - PRINTS COMPOSITE SCHEDULE WITH COST AND DURATION ON PRINT FILE
PRM - PRINTS SCHEDULE SUMMARY FOR ALL TAE GROUPS
PRP - PRINTS UNSCHEDULED TIME FOR ALL CREWME ON PRINT FILE
PRQ - PRINTS TRAVEL SCHEDULE ON PRINT FILE
PRRT - PRINTS SCHEDULE FOR AN INDIVIDUAL CREWMAN

301
PRIV - PRINTS UNSCHEDULED TIME AND LOCATIONS FOR AN INDIVIDUAL CREWMAN
RCHART - PLOTS TIMELINE FOR LOCATIONS
ROOPT - READS AND INTERPRETS COMMANDS USED FOR CONTROL AFTER DISPLAYS
SCART - PLOTS RESOURCE UTILIZATION
SLOT - QUERIES USER FOR START AND END TIMES FOR FALLES
SDEL - QUICKS USER FOR START AND DELTA TIMES FOR USE IN PLOTS
SLNIS - ASKS USER FOR MISSIONS DESIRED IN DISPLAYS
SLPFL - ASKS USER TO SPECIFY CREWMAN TO USE IN DISPLAY
UCHART - PLOTS LOCATION TIMELINE FOR A CREWMAN
UNION - TAKES THE UNION OF THE GROUPS

C. CREATION OF ABSOLUTE ELEMENT

BPAPR IL RO-TMAP-RO-GO
LID NIPS*CAP+SYS+RSFC5
SEG MAIN
IN MAIN/LOCAT-DATA
SLG A**MAIN
IN USAGE+ROOPT+MENU
SEG AIA**A(A)
IN DISP
SEG AIA**A(A)
IN DISK
SEG AIC**A(A)
IN DISK
SEG AAL**A(A)
IN DISP
SEG ALE**A(A)
IN DISP
SEG AIF**A(A)
IN DISK
SEG AIL**A(A)
IN DISK
SEG AIA**A(A)
IN DISK
SEG ALE**A(A)
IN DISK
SEG AIC**A(A)
IN DISK
SEG AAF**A(A)
IN DISK
SEG AAL**A(A)
IN DISK

SLG B**MAIN
IN PENUM-PINT
SEG BIA**O(A)
IN PNTJ
SEG B10**O(B)
IN PNTK
SEG BIC**O(D)
IN PNTM

302
The PACER module has three menus. Below is a diagram showing the relationship between the menus:

- Display
- Print
- Menu

Each menu is shown below with an accompanying explanation where needed. In the main menu, only one option may be selected at one time. In both the display and print menus, as many as ten options may be selected at one time.

**Notes:**
- Options 2 and 3 display submenus
- Multiple selections will be processed from the following menus.

**Select display options desired:**

- Return to main menu
- **Summary**
- 1. Tabulate composite schedule
- 2. Tabulate composite schedule with cost and duration
- 3. Plot bar chart of schedule for all groups
- 4. Tabulate schedule summary for all task groups
- 5. Plot bar chart of scheduling opportunities for all groups
- 6. Plot unscheduled time for all crewmen
- 7. Tabulate unscheduled time for all crewmen
- 8. Tabulate travel schedule
- 9. Plot timeline of locations
- 10. Plot resource utilization timeline
- 11. Tabulate schedule for a crewman
- 12. Plot location timeline for a crewman
- 13. Tabulate unscheduled time and locations for a crewman

---

303
<table>
<thead>
<tr>
<th>8</th>
<th>INPUT NAME-DETECTED FILE CURRENTLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>INPUT LIST-DETECTED FILE CURRENTLY</td>
</tr>
<tr>
<td>10</td>
<td>INPUT ON/OFF FILE CURRENTLY</td>
</tr>
</tbody>
</table>

**NOTES:**

1. Options 3, 5, 6, 11 AND 13 ASK USER TO INPUT START AND END TIMES FOR DISPLAY (MUST BE IN MONTH/DAY/YEAR FORMAT).
2. Options 3, 5, 6, 7, 10 AND 12 REQUEST INPUT OF START AND DELTA TIMES TO BE USED IN PLOTS (START IS IN MONTH/DAY/YEAR FORMAT AND DELTA IS IN WEEKS).
3. Options 3, 4, 5, 10 AND 12 ASK FOR MISSION(S) TO USE FOR DISPLAYS.
4. Options 3, 12 AND 13 ASK USER TO SPECIFY CREW.
5. Options 4, 5, 6, 9, 10 AND 12 ASK FOR LEGEND TO LABEL PLOT DISPLAYS WITH.
6. IF EACH DISPLAY IS REQUIRED, FILE NAME AND FILE NAME ARE ASKED FOR FILE NAME. ALSO, Files MAY BE ATTACHED VIA OPTIONS 14, 15 AND 16.

**SELECT PRINT OPTION(S) DESIRED**

<table>
<thead>
<tr>
<th>0</th>
<th>RETURN TO MAIN MENU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PRINT ALL TABLES</td>
</tr>
<tr>
<td>2</td>
<td>PRINT COMPOSITE SCHEDULE</td>
</tr>
<tr>
<td>3</td>
<td>PRINT COMPOSITE SCHEDULE - WITH LOST AND DUPLICATION</td>
</tr>
<tr>
<td>4</td>
<td>PRINT SCHEDULE SUMMARY FOR ALL CREW GROUPS</td>
</tr>
<tr>
<td>5</td>
<td>PRINT UNSCHEDULED TIME FOR ALL CREW GROUPS</td>
</tr>
<tr>
<td>6</td>
<td>PRINT TRAVEL SCHEDULE</td>
</tr>
<tr>
<td>7</td>
<td>PRINT SCHEDULE FOR A CREW</td>
</tr>
<tr>
<td>8</td>
<td>PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREW</td>
</tr>
<tr>
<td>9</td>
<td>INPUT NAME-DETECTED FILE CURRENTLY</td>
</tr>
<tr>
<td>10</td>
<td>INPUT LIST-DETECTED FILE CURRENTLY</td>
</tr>
<tr>
<td>11</td>
<td>INPUT ON/OFF FILE Current</td>
</tr>
</tbody>
</table>

**NOTES:**

1. ALL OPTIONS EXCEPT FOR FILE SETUP ASK USER TO INPUT START AND END TIMES (IN MONTH/DAY FORMAT).
2. Option 3 asks for MISSION(S) TO BE USED.
3. If required, files have not been attached, THEN THE SELECTED OPTION WILL ASK FOR INPUT U- REQUIRED FILE NAME. Files MAY ALSO BE ATTACHED WITH OPTIONS 9, 10 AND 11.
PAYLOAD CREW TRAINING SCHEDULER
(PACTS) USER'S MANUAL

By David L. Shipman

The information in this report has been reviewed for technical content. Review of any information concerning Department of Defense or nuclear energy activities or programs has been made by the MSFC Security Classification Officer. This report, in its entirety, has been determined to be unclassified.

THOMAS P. ISBELL
Director, Systems Analysis and Integration Laboratory