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
# Table of Contents

## Chapter I: General

1. Purpose .......................................................... 1
2. Applicability .................................................... 1
3. Definitions ...................................................... 1

## Chapter II: Responsibilities

201. Documentation Maintenance ................................... 2
202. Training .......................................................... 2
203. Program Utilization ............................................ 2

## Chapter III: System Description

301. Univac 1108 Computer System .................................. 3
302. PDP Computer Systems .......................................... 3
303. Marshall Interactive Planning System (MIPS) ............ 4
304. PACTS System .................................................. 4

## Chapter IV: System Operation

401. PACTS Data Base Module (PACTDB) ......................... 10
402. PACTS Scheduler Module (PACTS) .......................... 10
403. PACTS Timeline Editor Module (PACTED) ................. 11
404. PACTS Report Generator Module (PACTRG) ............. 12

## Chapter V: PACTS Operating Procedures

501. Univac 1108 Logon/Logoff Procedures ...................... 13
502. MIPS Commands ................................................ 14
503. PACTS Commands .............................................. 14
504. PDP Commands ................................................ 15
# PAYLOAD CREW TRAINING SCHEDULER (PACTS) USER'S MANUAL

## APPENDIX

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>DEFINITIONS</td>
<td>16</td>
</tr>
<tr>
<td>B</td>
<td>PACTDB MODULE BLOCK DIAGRAM AND COMPUTER CONFIGURATION</td>
<td>18</td>
</tr>
<tr>
<td>C</td>
<td>PACTDB TUTORIAL DISPLAYS</td>
<td>22</td>
</tr>
<tr>
<td>D</td>
<td>PACTS MODULE BLOCK DIAGRAM AND COMPUTER CONFIGURATION</td>
<td>29</td>
</tr>
<tr>
<td>E</td>
<td>PACTS TUTORIAL DISPLAYS</td>
<td>33</td>
</tr>
<tr>
<td>F</td>
<td>PACTED MODULE BLOCK DIAGRAM AND COMPUTER CONFIGURATION</td>
<td>38</td>
</tr>
<tr>
<td>G</td>
<td>PACTED TUTORIAL DISPLAYS</td>
<td>42</td>
</tr>
<tr>
<td>H</td>
<td>PACTRG MODULE BLOCK DIAGRAM AND COMPUTER CONFIGURATION</td>
<td>49</td>
</tr>
<tr>
<td>I</td>
<td>PACTRG TUTORIAL DISPLAYS</td>
<td>51</td>
</tr>
<tr>
<td>J</td>
<td>UNIVAC 1108 LOGON/LOGOFF PROCEDURES</td>
<td>58</td>
</tr>
<tr>
<td>K</td>
<td>MIPS COMMANDS</td>
<td>62</td>
</tr>
<tr>
<td>L</td>
<td>PDP COMMANDS AND UNIVAC 1108 PACT 36 AND UPFIT COMMANDS</td>
<td>66</td>
</tr>
<tr>
<td>M</td>
<td>PROGRAM LISTING</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.

303 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.

304 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.
EDIT DATA BASE

SETUP PACTS INPUT DATA

EDIT CONTROL DATA
EDIT FIXED ORDER LIST
LOAD RESOURCE & TRAVEL
COST/TIME DATA
LOAD YAE MODELS

GENERATE TRIAL SCHEDULES AND SELECT BEST

REVIEW SUMMARY OF BEST SCHEDULE

DOES SCHEDULE MEET ACCEPTANCE CRITERIA?

WRITE OUTPUT FILES TO REPORT GENERATOR

ANALYZE OUTPUT REPORTS

IS SCHEDULE ACCEPTABLE?

TRANSFERS SCHEDULE TO IGDS

MAKE SCHEDULE MODIFICATIONS ON IGDS

EDIT PACTS OUTPUT

ANALYZE OUTPUT REPORTS

IS SCHEDULE ACCEPTABLE?

PLOT SCHEDULE

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 provisos 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.
PACTS REPORT GENERATOR MODULE (PACTRG)

Payload Crew Training Report Generator (PACTRG) uses the PACT data base 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 \( Y_{\text{MIN}} = Y_{\text{MAX}} + 1000 \) and \( Y_{\text{MAX}} = Y_{\text{MAX}} + 7650 \).
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 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 @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 @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.

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 proceeded by the word MIPS>, (e.g., MIPS> RUN PACTDB).

MIPS will first ask the user for the ORGANIZATION NO. /PROJECT ID/TERRNIAL 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)

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 0 on the main menu which returns the control of computer operations to MIPS.

504 PDP COMMANDS

PDP LOGON Procedures (Refer to Appendix 1.)

The user enters the following commands from a terminal:

```
>HEL [100, 1] / SAIL
>RUN DP:MIPS
```

PDP LOGOFF Procedures (Refer to Appendix 1.)

The user enters the following command from a terminal:

```
MIPS > STOP
>BYE
```

PDP Programs (Refer to Appendix 1.)

The user may run the following programs from a terminal:

```
PEP  PDP 11/70 MIPS
MIPS > RUN PEP
MIPS > GO
PDP  PDP 11/45
MCR > INS [15, 2] PDP
MCR > FIX PDP
MCR > RUN PDP ($)  
```

""
MCR > UNF PDFP
MCR > REM PDFP

DECRYPTER 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
DEFINITIONS
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
DATA BASE FORMAT

ID CODE DESCRIPTION
LOCATION RESOURCES
DURATION EQUIPMENT
PRIORITY DELAY
CREWMEN AVAILABILITY WINDOWS
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
Main Menu page.

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.

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 (@@@@a) 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.

Main Menu, Option 2, 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. 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.

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.

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.

Tutorial instructions for editing the selected TAE group. When the return key is hit, the page will turn.
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.
<table>
<thead>
<tr>
<th>Page No.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>C19</td>
<td>The user can add and delete work locations. Commands are the same as page C5.</td>
</tr>
<tr>
<td>C20</td>
<td>Travel Menu, Option 3 has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C21</td>
<td>The user must specify a location, e.g., LA. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C22</td>
<td>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.</td>
</tr>
<tr>
<td>C23</td>
<td>Travel Menu, Option 4 has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C24</td>
<td>The user must specify a location, e.g., LA. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C25</td>
<td>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.</td>
</tr>
<tr>
<td>C26</td>
<td>Travel Menu, Option 0 has been selected. When the return key is hit, the main menu page will return.</td>
</tr>
<tr>
<td>C27</td>
<td>Main Menu, Option 5 has been selected by the user. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>C28</td>
<td>The user must specify a mission if different from the current mission shown.</td>
</tr>
<tr>
<td>C29</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 HOST3(2X0) UP
DTK051
ENTER USERID/PASSWORD:
>FACTS/HCC

DESTROY USERID/PASSWORD ENTRY
UNIVAC 1100 OPERATING SYSTEM LEV. AL36R23HOST1(RSI)

RUN NUMBER 12

LAST RUN AT: 070280 083555
DATE: 070280 TIME: 083933
>OMIPS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 06/25/79 05:41:52
TOTAL SUP TIME = 19.35 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 MPS0936451P0F8.
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS>RUN PACTDB
MIPS>GO
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (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 TDV COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATABASE
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>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>0B0000
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 UNLID
EDIT OLD
EDIT OLD AFTER OLD
EDIT OLD
EDIT OLD

36
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
0 or O - Omit all data for this item
R - Redraw entire screen
S - Return to preceding 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 crewman, 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: Science, Hardware, &amp; Procedures</th>
<th>TAE ID: SH0001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Code: 3SF</td>
<td>Availability Windows</td>
<td></td>
</tr>
<tr>
<td>Duration (HRS): 120</td>
<td>3/1/78 to 12/1/78</td>
<td>P</td>
</tr>
<tr>
<td>Priority (H,M,L): H</td>
<td>To</td>
<td>P</td>
</tr>
<tr>
<td>Equipment: FLTHDU</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Payload Criteria: ALL</td>
<td>TO</td>
<td>TO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Activity Element (TAE) Number</th>
<th>Description: DDS Interface TNG(1)</th>
<th>TAE ID: DDS1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Code: 4BF</td>
<td>Availability Windows</td>
<td></td>
</tr>
<tr>
<td>Duration (HRS): 18</td>
<td>2/1/80 to 5/1/80</td>
<td>P</td>
</tr>
<tr>
<td>Priority (H,M,L): H</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Equipment: NETS</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Payload Criteria: ALL</td>
<td>TO</td>
<td>TO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Activity Element (TAE) Number</th>
<th>Description: DDS Interface TNG(2)</th>
<th>TAE ID: DDS2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Code: 4BF</td>
<td>Availability Windows</td>
<td></td>
</tr>
<tr>
<td>Duration (HRS): 18</td>
<td>3/1/80 to 5/30/80</td>
<td>P</td>
</tr>
<tr>
<td>Priority (H,M,L): H</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Equipment: NETS</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Payload Criteria: ALL</td>
<td>TO</td>
<td>TO</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Activity Element (TAE) Number</th>
<th>Description: DDS Refresher Training</th>
<th>TAE ID: DDS3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Code: 4BF</td>
<td>Availability Windows</td>
<td></td>
</tr>
<tr>
<td>Duration (HRS): 14</td>
<td>7/1/80 to 12/2/80</td>
<td>TO</td>
</tr>
<tr>
<td>Priority (H,M,L): H</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Equipment: NETS</td>
<td>To</td>
<td>TO</td>
</tr>
<tr>
<td>Payload Criteria: ALL</td>
<td>TO</td>
<td>TO</td>
</tr>
</tbody>
</table>
PAYLOAD CREW TRAINING SCHEDULER DATA BASE (PACTDB)

08/24/78 10:19:01

MIPS

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 TDY COST FOR WORK LOCATIONS
6 = EDIT LIST OF RESOURCES
7 = LIST PACTS INPUT DATA BASE
8 = LIST PACTS OUTPUT DATA BASE

MIPS>3

DO YOU WISH TO CHANGE MISSION ID

MIPS>NO

40
SPECIFY FILE NAME OF PACTS DATA BASE FILE
CURRENTLY
MIPS>TRAINING
MDF TRAINING LAST WRITE 03/29/78 11:38:12 24% OF USABLE SPACE
WHAT IS WRITE KEY FOR FILE TRAINING
MIPS>000000
SPECIFY GROUP OF TAE'S TO BE EDITED - CURRENTLY 1NS005
ENTER RETURN TO RETURN TO MAIN MENU
MIPS>
INSTRUCTIONS FOR EDITING A GROUP OF TAEs

Locate crosshairs on value to be changed, enter control character and return key.

- Enter new value overstriking old value
- Enter new value at bottom of screen
- (If crosshair(s) are not visible they may be off screen - turn TAEs labels on and press return key)

The following control characters are valid, others will be ignored:

E - Enter new value overstriking old value
O or O - Omit all data for this item
R - Redraw entire screen
S - Return to preceding menu
1, 2, 3, 4 - 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 chevron, 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>TAE ID</th>
<th>Availability Windows</th>
<th>Payload Crewman</th>
<th>Equipment</th>
<th>Resources</th>
<th>Status</th>
<th>Duration (Hrs)</th>
<th>Delay (DY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Science, Hardware, &amp; Procedures</td>
<td>SHLP</td>
<td>3/1/79 TO 12/1/79</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
</tr>
<tr>
<td>2</td>
<td>DDS Interface TNG(1)</td>
<td>DDS1</td>
<td>2/1/80 TO 6/1/80</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
</tr>
<tr>
<td>3</td>
<td>DDS Interface TNG(2)</td>
<td>DDS2</td>
<td>3/1/80 TO 5/30/80</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
</tr>
<tr>
<td>4</td>
<td>DDS Refresher Training</td>
<td>DDS3</td>
<td>7/1/80 TO 12/3/80</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
<td>TO</td>
</tr>
</tbody>
</table>
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>1
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
LIST OF WORK LOCATIONS

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

KSC  ARUS
MIC  SF
ROSC
CANADA
PHILLY
JAPAN
POZZ
PARIS
MUNICH
FRANK
LONDON
ORLEAN
TOULON
BREHEN
LINING
MIPS
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
<table>
<thead>
<tr>
<th>Location</th>
<th>Cost</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>612</td>
<td>2</td>
</tr>
<tr>
<td>Boston</td>
<td>230</td>
<td>1</td>
</tr>
<tr>
<td>JSC</td>
<td>138</td>
<td>0</td>
</tr>
<tr>
<td>LA</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KSC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rich</td>
<td>123</td>
<td>1</td>
</tr>
<tr>
<td>NRI</td>
<td>170</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>201</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>612</td>
<td>1</td>
</tr>
<tr>
<td>Paris</td>
<td>612</td>
<td>1</td>
</tr>
<tr>
<td>Munich</td>
<td>612</td>
<td>1</td>
</tr>
<tr>
<td>Frank</td>
<td>612</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>612</td>
<td>1</td>
</tr>
<tr>
<td>Orleans</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Toulou</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brene</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lindau</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aarhus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SF</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>Location</td>
<td>Cost DOLLARS</td>
<td>Time DAYS</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Europe</td>
<td>612</td>
<td>2</td>
</tr>
<tr>
<td>Boston</td>
<td>230</td>
<td>1</td>
</tr>
<tr>
<td>JSC</td>
<td>133</td>
<td>1</td>
</tr>
<tr>
<td>NICU</td>
<td>123</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>201</td>
<td>1</td>
</tr>
<tr>
<td>Phil</td>
<td>215</td>
<td>1</td>
</tr>
<tr>
<td>Japan</td>
<td>250</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>Frankfurt</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>Lubeck</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Arhus</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
MIPS

08/24/78 10:05:28

0 = TERMINATE
1 = SPECIFY FACTS 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 LIST OF RESOURCES
7 = LIST FACTS INPUT DATA BASE
8 = 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
<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>75</td>
</tr>
<tr>
<td>SF</td>
<td>40</td>
</tr>
<tr>
<td>PORZ</td>
<td>60</td>
</tr>
<tr>
<td>PARIS</td>
<td>60</td>
</tr>
<tr>
<td>MUNICH</td>
<td>60</td>
</tr>
<tr>
<td>FRANCE</td>
<td>60</td>
</tr>
<tr>
<td>LONDON</td>
<td>60</td>
</tr>
<tr>
<td>ORLEANS</td>
<td>60</td>
</tr>
<tr>
<td>TOULOUSE</td>
<td>60</td>
</tr>
<tr>
<td>BREMEN</td>
<td>60</td>
</tr>
<tr>
<td>LINZ</td>
<td>60</td>
</tr>
<tr>
<td>ARHUS</td>
<td>60</td>
</tr>
<tr>
<td>JSC</td>
<td>36</td>
</tr>
<tr>
<td>LA</td>
<td>48</td>
</tr>
<tr>
<td>EUROPE</td>
<td>60</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>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 PACT DATA BASE COMPLETE
READ/COPY - THIS INPUT WILL NOT BE INTERPRETED

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 TOY COST FOR WORK LOCATIONS
7 - EDIT LIST OF RESOURCES
8 - LIST PACTS INPUT DATA BASE
MIPS>0
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*PSF8.
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 (MILLISECONDS)
DS>STOP: MIPS
>FIN

RUNID: ELPACT ACCT: 1HEL12493200 PROJECT: JACKIEBIN207
STOP: MIPS
TIME; SUPS: 00:01:47.014 CBSUPPS: 030037005
CPU: 00:00:11.721 I/O: 00:00:35.024
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, 8C, OR BCD. ALL GASG CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY.
EXAMPLE: GASG,T FILENAME,T,REELNR CHANGE TO GASG,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

EDIT DATA BASE

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 THE MODELS

EDIT CONTROL DATA

NUMBER OF SCHEDULES TO ATTEMPT RANDOM NUMBER SEED

CURRENT EVALUATION PRIORITIES ARE AS FOLLOWS
- NUMBER OF TAE'S SCHEDULED
- AVERAGE NUMBER OF TAE'S/SCHEDULE
- SCHEDULE COST
- INPUT CHANGES, IF DESIRED
- ENTER 8 TO DISCARD
CREATE A PERMANENT MIPS FILE

CREATE/EDIT THE DATA BASE (PACTOB)

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
<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 0, 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>
</tbody>
</table>
E17  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

E18  Setup Menu, Option 5, has been selected by the user. (Not available).

E19  Setup Menu, Option 6, has been selected by the user.

E20  The user may specify that mission data be loaded from a PACTDB file, e.g., TRAINING.

E21  Setup Menu, Option 7, has been selected by the user.

E22  The user must specify the mission, e.g., SL1.

E23  The user may insert, delete, or assign locations to the Payload Specialists, e.g., INSERT PS7, DELETE PS7, PS7 = KOKO.

E24  Setup Menu, Option 8, has been selected by the user.

E25  The user may insert or delete TAE groups, e.g., INSERT HS7, INSERT IIS8 AFTER MENU, DELETE HS7, DELETE IIS8.

E26  Setup Menu, Option 9, has been selected by the user.

E27  The user may insert or delete TAE groups into the fixed order scheduling list, e.g., insert INS001.

E28  Setup Menu, Option 10, has been selected by the user.

E29  The PACTDB file containing the TAE models must be specified, e.g., TRAINING.

E30  Setup Menu, Option 0, has been selected.

E31  Main Menu, Option 4, is now ready and has been selected. Note: Options 5 and 6 are still unavailable.

E32  PACT is generating schedule.
Main Menu, Option 5, has been selected by the user. 
Note: Options 5 and 6 are ready.

PACTS prints out the schedule summary.

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 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.

PACTRG 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

DTK051
ENTER USERID/PASSWORD:
>PACTS/HCC

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

RUN NUMBER 12

LAST RUN AT: 070280 083555
DATE: 070280 TIME: 083933
>QMIPS.L
PAYLOAD CREW SCHEDULER

1. TERMINATE
2. CREATE A PERMANENT MIPS FILE
3. TRANSFER TO DATA BASE EDITOR (PACTDB)
4. SETUP/EDIT INPUT DATA
5. DISPLAY SUMMARY OF BEST SCHEDULE
6. TRANSFER TO REPORT GENERATOR (PACTRG)
7. SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 4, 5, AND 6 ARE NOT AVAILABLE IN MIPS.
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>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 MNEUMONIC FOR WORD 1
MIPS>A
SPECIFY MNEUMONIC FOR WORD 2
MIPS>B
SPECIFY MNEUMONIC 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>120
SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS>OUTPUT FILE FOR SL1
PAYLOAD CREW SCHEDULER

0 - TERMINATE
1 - CREATE A PERMANENT MIP5 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 (PACTR5)
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 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
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. TRANSFER TO REPORT GENERATOR (PACTRG)
7. TRANSFER TO REPORT GENERATOR (PACTRG)
8. SAVE DATA FROM THIS CASE FOR FUTURE USE

OPTIONS 4, 5 AND 6 ARE NOT AVAILABLE
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 - 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
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
### TOUR DEFINITIONS

The following commands are valid:

- Insert Tour ID
- Delete Tour ID
- Tour ID = Starting Date Ending Date
- Redraw

<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>4/9/79</td>
<td>7/20/79</td>
</tr>
<tr>
<td>ESA3</td>
<td>10/1/79</td>
<td>12/22/79</td>
</tr>
<tr>
<td>ESA4</td>
<td>1/10/80</td>
<td>2/2/80</td>
</tr>
<tr>
<td>ESA5</td>
<td>6/2/80</td>
<td>6/27/80</td>
</tr>
<tr>
<td>US1</td>
<td>1/3/79</td>
<td>3/31/79</td>
</tr>
<tr>
<td>US2</td>
<td>8/6/79</td>
<td>9/28/79</td>
</tr>
<tr>
<td>US3</td>
<td>1/2/80</td>
<td>1/9/80</td>
</tr>
<tr>
<td>US5</td>
<td>6/30/80</td>
<td>12/5/80</td>
</tr>
<tr>
<td>OR1</td>
<td>7/3/78</td>
<td>7/7/78</td>
</tr>
<tr>
<td>OR2</td>
<td>8/3/78</td>
<td>8/14/78</td>
</tr>
<tr>
<td>JAP1</td>
<td>4/2/79</td>
<td>4/6/79</td>
</tr>
</tbody>
</table>
MIPS26

10 - LOAD THE MODELS
9 - EDIT FIXED ORDER LIST
8 - EDIT LIST OF THE GROUPS
7 - EDIT LIST OF PAYLOAD SPECIFICATIONS
6 - EDIT MISSION LIST
5 - EDIT WORK DAY DURATIONS
4 - EDIT TOUR DEFINITIONS
3 - EDIT CONTROL DATA
2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
1 - LOAD DATA FROM PREVIOUS CASE
0 - RETURN TO MAIN CONTROL
CURRENT MISSIONS ARE:
ENTER NEW MISSION LIST, IF DESIRED
MIPS>SLI
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>
</tbody>
</table>

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>8
10 - LOAD THE MODELS
 9 - EDIT FIXED ORDER LIST
 8 - EDIT LIST OF THE GROUPS
 7 - EDIT LIST OF PAYLOAD SPECIFICATIONS
 6 - EDIT MISSION LIST
 5 - EDIT WORK DAY DURATIONS
 4 - EDIT TOUR DEFINITIONS
 3 - EDIT CONTROL DATA
 2 - LOAD RESOURCE AND TRAVEL COST/TIME DATA
 1 - LOAD DATA FROM PREVIOUS CASE
 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 MISSION LIST
6 = EDIT LIST OF PAYLOAD SPECIALISTS
7 = EDIT LIST OF THE GROUPS
8 = EDIT FIXED ORDER LIST
9 = LOAD TAE MODELS
10 = MIPS>10
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 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
### Schedule: 86041 Missions: SL1

<table>
<thead>
<tr>
<th>Group</th>
<th>Task</th>
<th>Scheduled</th>
<th>Failed</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>PHASE</td>
<td>7</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>SLSYS1</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>SLSYS2</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>SLSYS3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

### Cost: 138367.50
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>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> D

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> D
PAYLOAD CREW SCHEDULER

BEST SCHEDULE SEED - 86041   COST - $ 138,367.50

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
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 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>8
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>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 (MILLISECOM
DS) STOP: MIPS
> OFIN

RUNID: ELPACT   ACCT: 1MEL12493200   PROJECT: JACKIEBINZ07
STOP: MIPS
TIME; SUPS: 00:01:47.014  CBSUPS: 030037005
CPU: 00:00:11.721  I/O: 00:00:35.924
CC/ER: 00:00:59.388  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 BG9. ALL GASG CARDS THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY.
EXAMPLE: @ASG,T FILENAME,T:REELMR CHANGE TO @ASG,T FILENAME,UBS:REELMR

TERMINAL INACTIVE
> QUITERM
APPENDIX F

PACKED MODULE BLOCK DIAGRAM
AND COMPUTER CONFIGURATION
PACTED MODULE BLOCK DIAGRAM

- Usage Information
- 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
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>
G11 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.

G12 Main Menu Page, Option 5, has been selected by the user. When the return key is hit, the page will turn.

G13 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.

G14 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.

G15 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.

G16 Main Menu Page, Option 6 has been selected by the user. When the return key is hit, the page will turn.

G17 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.

G18 Main Menu Page, Option 7, has been selected by the user. When the return key is hit, the terminal will transfer to PACTDB.

G19 Main Menu Page of PACTDB is on the screen. The user may exercise all options as described in Appendix C or select option Ø to return to the PACTED. When the return key is hit, the terminal will return to PACTED.

G20 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. AL36R2BHOST1(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 = .65 MIM
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 (PARTED)
MAIN MENU

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

MIOPS>1

134
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
SPECIFY STARTING TIME OF FIRST DISPLAY
USE MM/DD/YY FORMAT
CURRENTLY : 8/1/78
MIPS>
<table>
<thead>
<tr>
<th>GROUP</th>
<th>NUM</th>
<th>ID</th>
<th>LOCATION</th>
<th>DATE</th>
<th>ON TIME</th>
<th>OFF TIME</th>
<th>CREDENTIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIENT</td>
<td>1</td>
<td>N3EOU</td>
<td>RSFC</td>
<td>2/7/79</td>
<td>8</td>
<td>2/7/79</td>
<td>12</td>
</tr>
<tr>
<td>ORIENT</td>
<td>2</td>
<td>T3G0V</td>
<td>RSFC</td>
<td>2/7/79</td>
<td>12</td>
<td>2/7/79</td>
<td>4</td>
</tr>
<tr>
<td>ORIENT</td>
<td>3</td>
<td>S3704</td>
<td>RSFC</td>
<td>2/8/79</td>
<td>8</td>
<td>2/8/79</td>
<td>12</td>
</tr>
<tr>
<td>ORIENT</td>
<td>4</td>
<td>SHDOU</td>
<td>RSFC</td>
<td>2/8/79</td>
<td>12</td>
<td>2/8/79</td>
<td>4</td>
</tr>
<tr>
<td>ORIENT</td>
<td>5</td>
<td>P32COU</td>
<td>RSFC</td>
<td>2/9/79</td>
<td>8</td>
<td>2/9/79</td>
<td>10</td>
</tr>
<tr>
<td>ORIENT</td>
<td>6</td>
<td>P3I21</td>
<td>RSFC</td>
<td>2/9/79</td>
<td>10</td>
<td>2/9/79</td>
<td>12</td>
</tr>
<tr>
<td>ORIENT</td>
<td>7</td>
<td>P3G0U</td>
<td>RSFC</td>
<td>2/9/79</td>
<td>12</td>
<td>2/9/79</td>
<td>4</td>
</tr>
<tr>
<td>ORIENT</td>
<td>8</td>
<td>B350U</td>
<td>RSFC</td>
<td>3/10/79</td>
<td>8</td>
<td>3/10/79</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>LA</td>
<td></td>
<td>8/12/79</td>
<td>8</td>
<td>8/14/79</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>S3T03</td>
<td></td>
<td>8/12/79</td>
<td>8</td>
<td>8/14/79</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>J3C</td>
<td></td>
<td>8/12/79</td>
<td>8</td>
<td>8/14/79</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>J3C</td>
<td></td>
<td>8/12/79</td>
<td>8</td>
<td>8/14/79</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>EURO</td>
<td></td>
<td>2/13/78</td>
<td>8</td>
<td>2/15/78</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>EURO</td>
<td></td>
<td>2/13/78</td>
<td>8</td>
<td>2/15/78</td>
<td>4</td>
</tr>
<tr>
<td>MORE</td>
<td>0</td>
<td>EURO</td>
<td></td>
<td>2/13/78</td>
<td>8</td>
<td>2/15/78</td>
<td>4</td>
</tr>
<tr>
<td>EPIAM</td>
<td>1</td>
<td>P32V</td>
<td>PORZ</td>
<td>10/2/78</td>
<td>8</td>
<td>10/5/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/3/78</td>
<td>8</td>
<td>10/5/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>2</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/10/78</td>
<td>8</td>
<td>10/12/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/11/78</td>
<td>8</td>
<td>10/13/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/12/78</td>
<td>8</td>
<td>10/14/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/13/78</td>
<td>8</td>
<td>10/15/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/14/78</td>
<td>8</td>
<td>10/16/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/15/78</td>
<td>8</td>
<td>10/17/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/16/78</td>
<td>8</td>
<td>10/18/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/17/78</td>
<td>8</td>
<td>10/19/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/20/78</td>
<td>8</td>
<td>10/22/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/21/78</td>
<td>8</td>
<td>10/23/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/22/78</td>
<td>8</td>
<td>10/24/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/23/78</td>
<td>8</td>
<td>10/25/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/24/78</td>
<td>8</td>
<td>10/26/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/25/78</td>
<td>8</td>
<td>10/27/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/26/78</td>
<td>8</td>
<td>10/28/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/27/78</td>
<td>8</td>
<td>10/29/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/28/78</td>
<td>8</td>
<td>10/30/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/29/78</td>
<td>8</td>
<td>10/31/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/30/78</td>
<td>8</td>
<td>10/32/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>10/31/78</td>
<td>8</td>
<td>10/33/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/2/78</td>
<td>8</td>
<td>11/4/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/3/78</td>
<td>8</td>
<td>11/5/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/4/78</td>
<td>8</td>
<td>11/6/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/5/78</td>
<td>8</td>
<td>11/7/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/6/78</td>
<td>8</td>
<td>11/8/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/7/78</td>
<td>8</td>
<td>11/9/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/8/78</td>
<td>8</td>
<td>11/10/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/9/78</td>
<td>8</td>
<td>11/11/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/10/78</td>
<td>8</td>
<td>11/12/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/11/78</td>
<td>8</td>
<td>11/13/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/12/78</td>
<td>8</td>
<td>11/14/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/13/78</td>
<td>8</td>
<td>11/15/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/14/78</td>
<td>8</td>
<td>11/16/78</td>
<td>4</td>
</tr>
<tr>
<td>1ES015</td>
<td>1</td>
<td>S3T03</td>
<td>PORZ</td>
<td>11/15/78</td>
<td>8</td>
<td>11/17/78</td>
<td>4</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 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 )
<table>
<thead>
<tr>
<th>GROUP</th>
<th>TIME</th>
<th>LOCATION</th>
<th>ON TIME</th>
<th>OFF TIME</th>
<th>COLUMN</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUNNEL</td>
<td>TO: REFC</td>
<td>FROM: LA</td>
<td>8/3/78</td>
<td>5:30</td>
<td>8/10/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>1</td>
<td>NIEUW</td>
<td>8/1/78</td>
<td>8:00</td>
<td>8/10/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>2</td>
<td>THEOD</td>
<td>8/1/78</td>
<td>12:00</td>
<td>8/10/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>3</td>
<td>SLOU</td>
<td>8/2/78</td>
<td>8:00</td>
<td>8/2/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>4</td>
<td>GROU</td>
<td>8/2/78</td>
<td>12:00</td>
<td>8/2/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>5</td>
<td>PLOSCOU</td>
<td>8/3/78</td>
<td>6:00</td>
<td>8/3/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>6</td>
<td>PLECHOU</td>
<td>8/3/78</td>
<td>12:00</td>
<td>8/3/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>7</td>
<td>RPLOU</td>
<td>8/3/78</td>
<td>6:00</td>
<td>8/3/78</td>
</tr>
<tr>
<td>CRÉDIT</td>
<td>8</td>
<td>BEGOU</td>
<td>8/7/78</td>
<td>4:00</td>
<td>8/10/78</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO: LA</td>
<td>FROM: REFC</td>
<td>8/11/78</td>
<td>4:00</td>
<td>8/11/78</td>
</tr>
<tr>
<td>NAPLIE</td>
<td>0</td>
<td>LA</td>
<td>8/12/78</td>
<td>3:00</td>
<td>8/25/78</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO: PORZ</td>
<td>FROM: LA</td>
<td>8/16/78</td>
<td>3:00</td>
<td>10/10/78</td>
</tr>
<tr>
<td>EPLASIS</td>
<td>1</td>
<td>PORZ</td>
<td>10/2/78</td>
<td>3:00</td>
<td>10/5/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>SAPIS</td>
<td>10/2/78</td>
<td>3:00</td>
<td>10/5/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>2</td>
<td>SAPIS</td>
<td>10/2/78</td>
<td>3:00</td>
<td>10/5/78</td>
</tr>
<tr>
<td>ESPOO</td>
<td>1</td>
<td>PORZ</td>
<td>10/11/78</td>
<td>3:00</td>
<td>10/11/78</td>
</tr>
<tr>
<td>ESPISO</td>
<td>1</td>
<td>PORZ</td>
<td>10/12/78</td>
<td>3:00</td>
<td>10/12/78</td>
</tr>
<tr>
<td>ESPISO</td>
<td>1</td>
<td>PORZ</td>
<td>10/13/78</td>
<td>3:00</td>
<td>10/13/78</td>
</tr>
<tr>
<td>ESPISO</td>
<td>1</td>
<td>PORZ</td>
<td>10/14/78</td>
<td>3:00</td>
<td>10/14/78</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO: PARIS</td>
<td>FROM: PORZ</td>
<td>10/18/78</td>
<td>3:00</td>
<td>10/18/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>PARIS</td>
<td>10/19/78</td>
<td>3:00</td>
<td>10/19/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>PARIS</td>
<td>10/19/78</td>
<td>12:00</td>
<td>10/19/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>PARIS</td>
<td>10/20/78</td>
<td>3:00</td>
<td>10/20/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>PARIS</td>
<td>10/20/78</td>
<td>12:00</td>
<td>10/20/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>PARIS</td>
<td>10/20/78</td>
<td>3:00</td>
<td>10/20/78</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO: MUNICH</td>
<td>FROM: PARIS</td>
<td>10/23/78</td>
<td>3:00</td>
<td>10/29/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>MUNICH</td>
<td>10/23/78</td>
<td>3:00</td>
<td>11/2/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>MUNICH</td>
<td>11/2/78</td>
<td>3:00</td>
<td>11/2/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>MUNICH</td>
<td>11/6/78</td>
<td>3:00</td>
<td>11/6/78</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>TO: FRANCE</td>
<td>FROM: MUNICH</td>
<td>11/11/78</td>
<td>3:00</td>
<td>11/11/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>FRANCE</td>
<td>11/12/78</td>
<td>3:00</td>
<td>11/12/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>FRANCE</td>
<td>11/12/78</td>
<td>3:00</td>
<td>11/12/78</td>
</tr>
<tr>
<td>EPLEIS</td>
<td>1</td>
<td>FRANCE</td>
<td>11/12/78</td>
<td>3:00</td>
<td>11/12/78</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(MEN) 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 EDITOR (PACTED)

MAIN MENU

1 = TERMINATE
2 = DISPLAY USAGE INFORMATION
3 = DISPLAY/EDIT COMPOSITE TIMELINE
4 = DISPLAY/EDIT EVENT TIMELINE
5 = DELETE CREW FROM TIMELINE
6 = DELETE CREW FROM DATA BASE MODULE (PACTDB)
7 = WRITE NEW TIMELINE FILES
8 = TRANSFER TO PACT REPORT GENERATOR (PACRG)

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>XXXXXXXX

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

MAIN MENU

1 = TERMINATE
2 = DISPLAY/EDIT COMPOSITE TIMELINE
3 = DELETE/EDIT EVENT TIMELINE AND POST-PROCESS TRAVEL
4 = DISPLAY/EDIT CREW TIMELINE
5 = DELETE CREW FROM PACT DB
6 = WRITE NEW TIMELINE FILES
7 = TRANSFER TO PACT REPORT GENERATOR (PACTRGN)

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 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
>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, 8C, OR 8C9. ALL CARD TYPE THAT NOW USE 'T'
EQUIPMENT TYPES SHOULD BE CHANGED TO UBS IMMEDIATELY.
EXAMPLE: OASG,T FILENAME,T,REELMR CHANGE TO OASG,T FILENAME,UBS,REGULAR

#TERMINAL INACTIVE
>QUIT
APPENDIX H

PACTRG MODULE BLOCK DIAGRAM
AND COMPUTER CONFIGURATION
PACTRG MODULE BLOCK DIAGRAM

INPUT REQUIRED:
FILES
TIME FRAME
MISSIONS
CREW IDS

**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>
<tr>
<td>Page No.</td>
<td>Explanation</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>I29</td>
<td>User must specify legend, e.g., PACTLD. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I30</td>
<td>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.</td>
</tr>
<tr>
<td>I31</td>
<td>Composite Crewman Unscheduled Time. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I32</td>
<td>Display Menu, Option 7, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I33</td>
<td>User must supply start and end time if different from those shown or if none shown. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I34</td>
<td>Unscheduled time. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I35</td>
<td>Display Menu, Option 8, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I36</td>
<td>User must specify start and end times if different from those shown or if none shown. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I37</td>
<td>Composite Travel Schedule. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I38</td>
<td>Display Menu, Option 9, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I39</td>
<td>User must specify legend, e.g., PACTLD. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I40</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>I41</td>
<td>Composite Timeline for Locations. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>I42</td>
<td>Display Menu, Option 10, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>Page No.</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>143</td>
<td>User must specify legend, e.g., PACTLD. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>144</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>145</td>
<td>User must specify mission. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>146</td>
<td>Composite Resource Timeline. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>147</td>
<td>Display Menu, Option 11, has been selected by the user. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>148</td>
<td>User must specify start and end times. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>149</td>
<td>User must specify crewman for display. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>150</td>
<td>Crewman Schedule PSI. When return key is hit, page will turn.</td>
</tr>
<tr>
<td>151</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>152</td>
<td>User must specify legend, e.g., PACTLD. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>153</td>
<td>User must specify start time and delta time. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>154</td>
<td>User must specify crewman for display. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>155</td>
<td>User must specify the mission. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>156</td>
<td>Location Timeline for PSI. When the return key is hit, the page will turn.</td>
</tr>
<tr>
<td>157</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>158</td>
<td>User must specify start and end time. When the return key is hit, the page will turn.</td>
</tr>
</tbody>
</table>
Page No. | Explanation
---|---
159 | User must specify crewman for display. When the return key is hit, the page will turn.
160 | Unscheduled Time for PS1. When the return key is hit, the page will turn.
161 | Display Menu, Option 14, has been selected by the user. When the return key is hit, the page will turn.
162 | User must specify PACTS Name-Directed File. When the return key is hit, the page will turn.
163 | Display Menu, Option 15, has been selected by user. When the return key is hit, the page will turn.
164 | User must specify PACTS List-Directed File. When the return key is hit, the page will turn.
165 | Display Menu, Option 16, has been selected by the user. When the return key is hit, the page will turn.
166 | User must specify PACTS ON/OFF File. When the return key is hit, the page will turn.
167 | Display Menu, Option 6, has been selected by the user. When the return key is hit, the page will turn.
168 | 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.
169 | 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.
170 | Print Option Menu, Option 1, has been selected by the user. When the return key is hit, the page will turn.
171 | User must specify start and end times. When the return key is hit, the page will turn.
172 | 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 SL.1 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*F8.
INSERT COMMANDS : (INSERT HELP FOR TUTORING)
MIPS>RUN PACTRG
MIPS>GO
PACTRG MAIN MENU

06/21/79  14:05:01

- 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>
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

1 PLOTS CAN BE DISPLAYED ONLY ON TEXTRONIX

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

1 AT THE END OF EACH DISPLAY THE USER SHOULD

1 ENTER A BLANK IMAGE TO CONTINUE DISPLAYS

1 ENTER 'NEXT' TO STOP THIS DISPLAY OPTION AND CONTINUE TO NEXT SELECTED OPTION

1 ENTER 'STOP' TO STOP ALL DISPLAYS AND RETURN TO LAST DISPLAY

1 ENTER 'TIME' TO RETURN TO TIME QUESTION FOR DISPLAY

1 ENTER 'MISSION' TO RETURN AND INPUT NEW MISSION(S)

1 ENTER 'CREW' TO RETURN AND INPUT NEW CREW

1 ENTER 'LEGEND' TO RETURN AND INPUT NEW LEGEND

1 ENTER 'HELP' TO DISPLAY TUTORING

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

1 'STOP' AND 'RETURN' IS EFFECTIVE AT ANY TIME

READ/COPY - THIS INPUT WILL NOT BE INTERPRETED
PACTRG MAIN MENU

06/21/79  14:05:57

MIPS

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>2
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

**% 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
15 - INPUT LIST-DIRECTED FILE CURRENTLY
16 - INPUT ON/OFF FILE CURRENTLY

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 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
ENTER START TIME AND END TIME FOR TABLES
ENTER ALL FOR COMPLETE DATA
USE MM/DD/YYYY FORMAT
CURRENTLY START = 7/1/78
END = 12/3/80

MIPS
<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</td>
<td>FROM: EUROPE TO: MSFC</td>
<td>8/6/79</td>
<td>8/6/79</td>
</tr>
<tr>
<td>PS3</td>
<td>PS4</td>
<td>TRAVEL</td>
<td>FROM: LA TO: MSFC</td>
<td>8/6/79</td>
<td>8/6/79</td>
</tr>
<tr>
<td>PS3</td>
<td>PS4</td>
<td>TRAVEL</td>
<td>FROM: BOSTON TO: MSFC</td>
<td>8/6/79</td>
<td>8/6/79</td>
</tr>
<tr>
<td>PS2</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: JSC TO: MSFC</td>
<td>8/6/79</td>
<td>8/6/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT MILEOU EAST ATLAS OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT TNTEO ALPINE OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT SLOW SL ENGINEERING OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT SHOU SHUTTLE OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT PLICHO PL SCIENCE OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT PLEXO PL INTER OVERVIEW</td>
<td>MSFC</td>
<td>8/7/79</td>
<td>8/7/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT MIHOU MISSION PLANNING OVERVIEW</td>
<td>MSFC</td>
<td>8/10/79</td>
<td>8/10/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>ORIENT RASSO ROCKET OVERVIEW</td>
<td>MSFC</td>
<td>8/10/79</td>
<td>8/10/79</td>
</tr>
<tr>
<td>PS1</td>
<td>PS2</td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: LA</td>
<td>8/11/79</td>
<td>8/11/79</td>
</tr>
<tr>
<td>PS2</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: BOSTON</td>
<td>8/11/79</td>
<td>8/11/79</td>
</tr>
<tr>
<td>PS2</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: EUROPE</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: EUROPE</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: JSC</td>
<td>8/11/79</td>
<td>8/11/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: MSFC TO: JSC</td>
<td>8/11/79</td>
<td>8/11/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>TRAVEL</td>
<td>FROM: JSC TO: JSC</td>
<td>8/11/79</td>
<td>8/11/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>HOMINO</td>
<td>LA</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>HOMINO</td>
<td>BOSTON</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>HOMINO</td>
<td>JSC</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>HOMINO</td>
<td>JSC</td>
<td>8/12/79</td>
<td>8/12/79</td>
</tr>
<tr>
<td>PS3</td>
<td></td>
<td>HOMINO</td>
<td>JSC</td>
<td>8/12/79</td>
<td>8/12/79</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 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>2
<table>
<thead>
<tr>
<th>GROUP</th>
<th>FROM</th>
<th>TO</th>
<th>DESCRIPTION</th>
<th>START TIME</th>
<th>END TIME</th>
<th>T WORK (U DAYS)</th>
<th>T COST ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRAVEL</td>
<td>EUROPE</td>
<td>RSFC</td>
<td></td>
<td>8/5/79</td>
<td>8/6/79</td>
<td>1500.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>LA</td>
<td>RSFC</td>
<td></td>
<td>8/6/79</td>
<td>8/6/79</td>
<td>1730.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>BOSTON</td>
<td>RSFC</td>
<td></td>
<td>8/6/79</td>
<td>8/6/79</td>
<td>1840.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>JSC</td>
<td>RSFC</td>
<td></td>
<td>8/6/79</td>
<td>8/6/79</td>
<td>2002.00</td>
<td></td>
</tr>
<tr>
<td>ORIENT</td>
<td>MIECU</td>
<td>RSFC</td>
<td>NASA/ESA OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>1.50</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>TMGOU</td>
<td>RSFC</td>
<td>TRAINING OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>2.00</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>SLOW</td>
<td>RSFC</td>
<td>SL OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>2.50</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>NHOU</td>
<td>RSFC</td>
<td>SHUTTLE OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>3.00</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLSCOU</td>
<td>RSFC</td>
<td>PL SCIENCE OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>3.25</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLLEXOU</td>
<td>RSFC</td>
<td>PL INTEG OVERVIEW</td>
<td>8/7/79</td>
<td>8/7/79</td>
<td>3.50</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>MGPOU</td>
<td>RSFC</td>
<td>MISSION PLANNING OVERVIEW</td>
<td>8/7/79</td>
<td>8/8/79</td>
<td>4.00</td>
<td>2002.00</td>
</tr>
<tr>
<td>ORIENT</td>
<td>HSSOU</td>
<td>RSFC</td>
<td>DBS OVERVIEW</td>
<td>2/10/78</td>
<td>2/10/78</td>
<td>5.00</td>
<td>2002.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>LA</td>
<td></td>
<td>8/11/79</td>
<td>8/11/79</td>
<td>2172.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>BOSTON</td>
<td></td>
<td>8/11/79</td>
<td>8/11/79</td>
<td>2282.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>EUROPE</td>
<td></td>
<td>8/11/79</td>
<td>8/12/79</td>
<td>2992.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>EUROPE</td>
<td></td>
<td>8/11/79</td>
<td>8/12/79</td>
<td>3332.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>EUROPE</td>
<td></td>
<td>8/11/79</td>
<td>8/12/79</td>
<td>3548.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>JSC</td>
<td></td>
<td>8/11/79</td>
<td>8/11/79</td>
<td>3883.00</td>
<td></td>
</tr>
<tr>
<td>TRAVEL</td>
<td>RSFC</td>
<td>JSC</td>
<td></td>
<td>8/11/79</td>
<td>8/11/79</td>
<td>4001.00</td>
<td></td>
</tr>
<tr>
<td>PACTLD</td>
<td>LA</td>
<td></td>
<td></td>
<td>8/12/79</td>
<td>8/12/79</td>
<td>55.00</td>
<td>454.00</td>
</tr>
<tr>
<td>PACTLD</td>
<td>BOSTON</td>
<td></td>
<td></td>
<td>8/12/79</td>
<td>8/12/79</td>
<td>35.00</td>
<td>340.00</td>
</tr>
<tr>
<td>PACTLD</td>
<td>JSC</td>
<td></td>
<td></td>
<td>8/12/79</td>
<td>8/12/79</td>
<td>17.50</td>
<td>154.00</td>
</tr>
</tbody>
</table>
SELECT DISPLAY OPTION(S) DESIRED

0 - RETURN TO MAIN MENU
1 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
2 - TABULATE COMPOSITE SCHEDULE FOR ALL THE GROUPS
3 - PLOT BAR GRAPH OF SUMMARY FOR ALL THE GROUPS
4 - PLOT BAR GRAPH OF SUMMARY FOR ALL CREWEN
5 - TABULATE UNSCHEDULED TIME FOR ALL CREWEN
6 - PLOT UNSCHEDULED TIME FOR ALL CREWEN
7 - TABULATE TRAVEL SCHEDULE
8 - PLOT TRAVEL SCHEDULE
9 - PLOT RESOURCE UTILIZATION FOR A CREWEN
10 - PLOT RESOURCE UTILIZATION FOR AN INDIVIDUAL CREWEN
11 - TABULATE SCHEDULE FOR A CREWEN
12 - PLOT LOCATION TIMELINE FOR A CREWEN
13 - TABULATE UNSCHEDULED TIME AND LOCATIONS FOR A CREWEN
14 - INPUT NAME-DIRECTED FILE
15 - INPUT LIST-DIRECTED FILE
16 - INPUT O/M-OFF FILE
17 - TRAINING
18 - PACTLD
19 - CURRENTLY
20 - CURRENTLY
21 - CURRENTLY
22 - CURRENTLY
23 - CURRENTLY
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM 7/1/78
DELTA TIME IN WEEKS 4
16 - INPUT ON/OFF FILE
15 - INPUT LIST-DIRECTED FILE CURRENTLY
14 - INPUT NAME-DIRECTED FILE CURRENTLY
13 - TABULATE UMSCHEDULED TIME AND LOCATIONS FOR A CREWMAN
12 - PLOT LOCATION TIMELINE FOR A CREWMAN
11 - TABULATE SCHEDULE FOR A CREWMAN
10 - PLOT RESOURCE UTILIZATION TIMELINE
 9 - PLOT TIMELINE OF LOCATIONS
 8 - TABULATE TRAVEL SCHEDULE
 7 - TABULATE UMSCHEDULED TIME FOR ALL CREWMEN
 6 - PLOT UMSCHEDULED TIME FOR ALL CREWMEN
 5 - PLOT BAR GRAPH OF SCHEDULED OPPORTUNITIES FOR ALL GROUPS
 4 - TABULATE SCHEDULE SUMMARY FOR ALL GROUPS
 3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL THE GROUPS
 2 - TABULATE COMPOSITE SCHEDULE WITH COST AND DURATION
 1 - TABULATE COMPOSITE SCHEDULE

*** SUMMARY ***

0 - RETURN TO MAIN MENU

SELECT DISPLAY OPTION(S) DESIRED
<table>
<thead>
<tr>
<th>GROUP</th>
<th>GROUP TIME BEGIN</th>
<th>GROUP TIME END</th>
<th>DURATION</th>
<th>GROUP</th>
<th>GROUP TIME BEGIN</th>
<th>GROUP TIME END</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF5584</td>
<td>657.00</td>
<td>961.00</td>
<td>7.50</td>
<td>PCCC</td>
<td>813.37</td>
<td>929.37</td>
<td>4.00</td>
</tr>
<tr>
<td>IF5532</td>
<td>362.60</td>
<td>954.00</td>
<td>15.40</td>
<td>BM10L</td>
<td>736.00</td>
<td>739.30</td>
<td>3.30</td>
</tr>
<tr>
<td>IF5533</td>
<td>362.00</td>
<td>1018.00</td>
<td>17.00</td>
<td>BM10U</td>
<td>526.00</td>
<td>694.12</td>
<td>1.62</td>
</tr>
<tr>
<td>IF5534</td>
<td>768.60</td>
<td>983.30</td>
<td>1.15</td>
<td>BRA151</td>
<td>506.12</td>
<td>947.37</td>
<td>4.25</td>
</tr>
<tr>
<td>IF5595</td>
<td>429.00</td>
<td>546.00</td>
<td>5.60</td>
<td>BRA152</td>
<td>947.60</td>
<td>947.62</td>
<td>0.00</td>
</tr>
<tr>
<td>IF5596</td>
<td>132.00</td>
<td>254.30</td>
<td>2.50</td>
<td>BRA153</td>
<td>940.50</td>
<td>940.25</td>
<td>0.25</td>
</tr>
<tr>
<td>IF5593</td>
<td>523.00</td>
<td>521.50</td>
<td>0.50</td>
<td>MB211</td>
<td>829.62</td>
<td>821.62</td>
<td>1.00</td>
</tr>
<tr>
<td>IF5591</td>
<td>377.00</td>
<td>507.30</td>
<td>5.60</td>
<td>MB212</td>
<td>921.52</td>
<td>923.77</td>
<td>2.25</td>
</tr>
<tr>
<td>IF5592</td>
<td>376.00</td>
<td>706.30</td>
<td>14.00</td>
<td>MB311</td>
<td>923.77</td>
<td>977.50</td>
<td>4.75</td>
</tr>
<tr>
<td>IF5510</td>
<td>291.00</td>
<td>430.00</td>
<td>4.60</td>
<td>SLS101</td>
<td>314.00</td>
<td>1014.50</td>
<td>6.12</td>
</tr>
<tr>
<td>IF5519</td>
<td>425.00</td>
<td>1639.00</td>
<td>16.00</td>
<td>SLS102</td>
<td>590.62</td>
<td>934.12</td>
<td>5.50</td>
</tr>
<tr>
<td>IF5520</td>
<td>323.00</td>
<td>1862.07</td>
<td>5.37</td>
<td>SLS103</td>
<td>590.62</td>
<td>944.00</td>
<td>3.37</td>
</tr>
<tr>
<td>IF5544</td>
<td>256.50</td>
<td>1063.00</td>
<td>15.00</td>
<td>SLS100</td>
<td>725.50</td>
<td>842.50</td>
<td>10.00</td>
</tr>
<tr>
<td>IF5503</td>
<td>252.50</td>
<td>975.90</td>
<td>2.05</td>
<td>PFLAN00</td>
<td>614.50</td>
<td>1021.90</td>
<td>5.00</td>
</tr>
<tr>
<td>IF5514</td>
<td>252.50</td>
<td>961.90</td>
<td>1.00</td>
<td>LSI100</td>
<td>973.00</td>
<td>958.30</td>
<td>14.70</td>
</tr>
<tr>
<td>IF5515</td>
<td>251.50</td>
<td>251.50</td>
<td>1.00</td>
<td>LSI101</td>
<td>958.30</td>
<td>958.30</td>
<td>0.00</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 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
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
     *** 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 PACFLD
16 - INPUT ON/OFF FILE CURRENTLY PACTOF

MIPS>6
INPUT LEGEND

Desired for Display (up to 36 Characters)

Currently: PactDPACTOF

NIPS
06/22/70 10:54:10

DELTA TIME IN WEEKS
52

ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM
7/01/78

HIPS
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
     *** 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>?
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>BEGIN</th>
<th>END</th>
<th>DUR (HRS)</th>
<th>PAYLOAD SPECIALISTS</th>
<th>LAST LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/6/79</td>
<td>2/6/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/6/79</td>
<td>2/7/79</td>
<td>24.628</td>
<td>P54</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/7/79</td>
<td>2/7/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/7/79</td>
<td>2/7/79</td>
<td>24.628</td>
<td>P53</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/7/79</td>
<td>2/8/79</td>
<td>24.628</td>
<td>P55</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/8/79</td>
<td>2/8/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/8/79</td>
<td>2/8/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/8/79</td>
<td>2/8/79</td>
<td>24.628</td>
<td>P54</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/8/79</td>
<td>2/8/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/9/79</td>
<td>2/9/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/9/79</td>
<td>2/9/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/9/79</td>
<td>2/9/79</td>
<td>24.628</td>
<td>P54</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/9/79</td>
<td>2/9/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P53</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P55</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P54</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P53</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/10/79</td>
<td>2/10/79</td>
<td>24.628</td>
<td>P55</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P51</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P53</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P55</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P54</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P53</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P52</td>
<td>SHEK</td>
</tr>
<tr>
<td>2/12/79</td>
<td>2/12/79</td>
<td>24.628</td>
<td>P55</td>
<td>SHEK</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>8
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 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
     *** 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>9
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY: START TIME IN MM/DD/YY FORM
DELTA TIME IN WEEKS
52
NIPS>
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

*** 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 PACTOFF

MIPS>10
ENTER START TIME AND DELTA TIME OF EACH PLOT
CURRENTLY:  START TIME IN MM/DD/YY FORMAT
7/01/78
DELTA TIME IN WEEKS
52
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></td>
<td>FROM: LA</td>
<td>TO: MSFC</td>
<td>8/2/79</td>
<td>8/2/79</td>
<td></td>
</tr>
<tr>
<td>ORIENT</td>
<td>HALEU</td>
<td>MSFC</td>
<td>RMB/SEM OVERVIEW</td>
<td>8/2/79</td>
<td>8/2/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>TINROV</td>
<td>MSFC</td>
<td>TRAINING OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>SLOW</td>
<td>MSFC</td>
<td>SL OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>BSHU</td>
<td>MSFC</td>
<td>SHUTTLE OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLSROV</td>
<td>MSFC</td>
<td>PL SCIENCE OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>PLEKOV</td>
<td>MSFC</td>
<td>PL INTG OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>RPOU</td>
<td>MSFC</td>
<td>MISSION PLANNING OVERVIEW</td>
<td>8/4/79</td>
<td>8/4/79</td>
<td>1.50</td>
</tr>
<tr>
<td>ORIENT</td>
<td>SBSROV</td>
<td>MSFC</td>
<td>BBS OVERVIEW</td>
<td>8/10/79</td>
<td>8/10/79</td>
<td>4.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td></td>
<td>FROM: MSFC</td>
<td>TO: LA</td>
<td>8/11/79</td>
<td>8/11/79</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
<td>LA</td>
<td></td>
<td>8/12/79</td>
<td>8/12/79</td>
<td>4.00</td>
</tr>
<tr>
<td>L20010</td>
<td>SBISCS</td>
<td>PORZ</td>
<td>SA DISCIPLINE PHASE 2</td>
<td>10/6/79</td>
<td>10/6/79</td>
<td>5.00</td>
</tr>
<tr>
<td>L20010</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/6/79</td>
<td>10/6/79</td>
<td>5.00</td>
</tr>
<tr>
<td>L20010</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/6/79</td>
<td>10/6/79</td>
<td>5.00</td>
</tr>
<tr>
<td>L20010</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/6/79</td>
<td>10/6/79</td>
<td>5.00</td>
</tr>
<tr>
<td>L20010</td>
<td>1</td>
<td>PORZ</td>
<td>PHASE 2</td>
<td>10/6/79</td>
<td>10/6/79</td>
<td>5.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td></td>
<td>FROM: PORZ</td>
<td>TO: PARIS</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>L20014</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>L20014</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>L20014</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>L20014</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>L20014</td>
<td>1</td>
<td>PARIS</td>
<td>PHASE 2</td>
<td>10/12/79</td>
<td>10/12/79</td>
<td>10.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td></td>
<td>FROM: PARIS</td>
<td>TO: MUNICH</td>
<td>10/20/79</td>
<td>10/20/79</td>
<td>14.00</td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>10/20/79</td>
<td>10/20/79</td>
<td>14.00</td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>10/20/79</td>
<td>10/20/79</td>
<td>14.00</td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>MUNICH</td>
<td>PHASE 2</td>
<td>10/20/79</td>
<td>10/20/79</td>
<td>14.00</td>
</tr>
<tr>
<td>TRAVEL</td>
<td></td>
<td>FROM: MUNICH</td>
<td>TO: FRANK</td>
<td>11/21/79</td>
<td>11/21/79</td>
<td></td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>FRANK</td>
<td>PHASE 2</td>
<td>11/21/79</td>
<td>11/21/79</td>
<td></td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>FRANK</td>
<td>PHASE 2</td>
<td>11/21/79</td>
<td>11/21/79</td>
<td></td>
</tr>
<tr>
<td>L20024</td>
<td>1</td>
<td>FRANK</td>
<td>PHASE 2</td>
<td>11/21/79</td>
<td>11/21/79</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 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 : PACTLPACTOF
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
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 SUMMARY III

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>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>
SPECIFY CREWMAN FOR DISPLAY
ENTER 'ALL' FOR ALL CREWMAN OF FILE
PS1
PS2
PS3
PS4
PS5
PS6
PS7
IPS>ALL
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>14
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
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
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 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
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*PSF$.
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: 00:16:59.368  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, BC, OR BCS. 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,USB,REELNR
---------------------------------------------------------------------
TERMINAL INACTIVE
>OSTER
APPENDIX J

UNIVAC 1108 LOGON/LOGOFF PROCEDURES
PORT 25/26 SIGNON - HOST1(2X0) UP HOST2(2X0) UP
DTEL051
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
GLOBAL 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 MPS100629P@FS.
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 (MILLISECONDS)
DS)STOP: MIPS
>OFIN

RUNID: ELPACT ACCT: 1HEL12493200 PROJECT: JACKIEBIN027
STOP: MIPS
TIME: 00:01:47.014 CDSUFS: 030837005
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 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,REELMR CHANGE TO QASG,T FILENAME,UBS,REELMR

>OSTERN

>OSTERN
APPENDIX K

MIPS COMMANDS
PORT 25/26 SIGNON - HOST1(2X0) UP HOST2(2X0) UP

ENTER USERID/PASSWORD:
XPACTS/HCC

*DESTR0Y USERID/PASSWORD ENTRY
*UNIVAC 1100 OPERATING SYSTEM LEV. AL36R2BHOST1(RSI)*
******************************************************************************************

RUN NUMBER  11

LAST RUN AT: 070280 071857
DATE: 070280 TIME: 083554
>CMIPS,L

248
OFF-LINE FILE MAINTENANCE PROCESSOR LAST RUN AT 03/31/78 09:13:14
ENTER ORGANIZATION NO./PROJECT ID/TERRIAL SITE ID

RIPS\E110\PACTS\DTK051
TOTAL CPU TIME = 1.78 MIN
SELECT KEY PRINT FILE OPTION:
1 - WRITE PRINT FILE ON PAPER
2 - WRITE PRINT FILE ON FICHE

A PRINT FILE HAS BEEN ESTABLISHED NAMED RIPS100111IPSF5.

INSERT COMMANDS 1 (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 MPS100629IPS.
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
> IFM

RUNID: ELPACT   ACCT: 1HEL12493200   PROJECT: JACKIEBIM207
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 NOTE YOU WILL GET ANY TYPE SERVO THAT HAPPENS TO BE
AVAILABLE, EX: U34, U30, 8C, OR 8CB. ALL GASG CARDS THAT NOW USE 'T'
equipment types should be changed to UBS IMMEDIATELY.
EXAMPLE: @ASG,T FILENAME,T,REELMR CHANGE TO @ASG,T FILENAME,UBS,REELMR

SEQUENTIAL INACTIVES
> @STERM
APPENDIX L

PDP COMMANDS AND

UNIVAC 1108

PACT36 AND UPFIT

COMMANDS
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
1108 HOST 1 MIPS PACT36

PORT 25/23 SIGNON - HOST1(2X0) UP HOST2(2X0) UP

ENTER USERID/PASSWORD:
>ELPACT6/HGC

DELETE USERID/PASSWORD ENTRY
SUNIUC 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
>CHARMS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 08/21/79 11:12:21
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
TOTAL SUP TIME = 2.22 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: MPS110657*PSF$.
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: 306 TOTAL SUPS: 14876 (MILLISECOND)
DS> STOP: MIPS
@FIN

RUNID: ELPACT  ACCT: 1HEL12493200  PROJECT: JACKIEBIN207
STOP: MIPS
TIME:  SUPS: 00:02:25.096  CBSUPPS: 037602476
CPU: 00:00:09.829  I/O: 00:00:50.740
CC/ER: 00:01:24.527  WAIT: 00:07:04.067
IMAGES READ: 38  PAGES: 17

DEMAND TERMINAL USER GUIDE UPDATED 08/17/79
TECHNICAL BULLETIN LAST UPDATED AUGUST 27, 1979 (TECH BULLETIN 52)

*TERMINAL INACTIVE*
> @TERM
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
>QMIPS,L
MIPS INITIALIZATION IS IN PROGRESS
OFF-LINE MAINTENANCE PROCESSOR LAST RUN AT 07/17/80 04:07:47
TOTAL SUF 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>3
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>N0

EUNT   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 MEMONICS WHICH REPRESENT ALPHANUMERIC DATA
SEPARATE MEMONICS 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
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> FILNAM/FP=FILNAM
@ 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:C100,1JT04141707.APF
INSERT COMMANDS
MIPS>GET
THE ENTRANCE 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:E100,13T04141837.APF
INER: COMMANDS
MIPS>ST PACT36
DP:E100, 23PACT36 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>
PDP 11/70 MIPS GET PACT36

HEL [100,13]/SAIL
RSX-11M DL22 MULTI-USER SYSTEM

GOOD AFTERNOON
31-AUG-79 14:07 LOGGED ON TERMINAL TT14:

- ALL TAPE cartridges MUST BE BUILT WITH THE /FP SWITCH OPTION.
- EXAPT LE! TRY: FILNAM/FP=FILNAM
- THIS WILL PREVENT FULSE FLOATING POINT ERRORS.

<<<<<< THERE IS A MEMO POSTED IN THE TERMINAL ROOMS
CONCERNING THE LINE PRINTER AND SPOOLING TO THE PRINTER. PLEASE READ IT.>>>>>>>

!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!! KEEP YOUR FILES PURGED!
!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

-------- NOTICE NOTICE -----------------------------

- Beginning the first week in Sept., PREVENTIVE MAINTENANCE for the 4014 terminals
- and hardcopy units will be performed on a regularly scheduled day of the month.
- A sign will be posted in each room with a terminal (or terminals) showing the
day and time allotted for the terminals in that room. During this time periods,
- A & S maintenance personnel have priority on the terminals in that room. Please
- cooperate with them during these times.

     Harrell Phillips

-------- SPECIAL NOTICE -----------------------------

- A NEW 300 MEGABYTE DISK DRIVE IS NOW ONLINE. IT'S DEVICE NAME IS DP2:
- PLEASE TRANSFER SOME OF YOUR FILES FROM DB0: TO DP2: SINCE DB0: IS CRITICALLY
- LOW ON FREE SPACE. CONTACT ME TO GET YOUR UIC SET UP ON DP2:

     Harrell Phillips

-----------------------------
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]T14111316.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 PERIOD3650 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
>
HAVE A GOOD MORNING
31-AUG-79 11:15 TT14: LOGGED OFF
>
>SET /UIC=[100,11]
>MOU 9K0: /UIC:
>MIPS

PPPI7/70 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 M:\[100,17]TOP095342.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 - DKO:
2 - DK1:
3 - SYO:
4 - DPO:
MIPS>1

344 DATA RECORDS HAVE BEEN STORED ON DKO:\[100, 11]77777,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
MOU 9K0:
>
*** DKO: -- Dismount Complete
SET /UIC=[1,13]
>
INITIALIZATION ERROR - LARGE THERMINTX ASSUMED
MODIPS INTERFACE WILL BE PERFORMED

<<< MODULE INITIATED >>>
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> PACT346
SELECT DEVICE FOR STORING OUTPUT:
   1 - DKO:
   2 - DKI:
   3 - SYO:
   4 - DPO:
MIPS> 1
344 DATA RECORDS HAVE BEEN STORED ON DKO:E100, 1117777.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 EXIT

*** DKO: -- MOUNT COMPLETE
SET /JIC=E1:11

263
PDP 11/45 PDFP

MCR> LOA DK
MCR> MOU DK: /OVR
MOUNT-**VOLUME INFORMATION**
   DEVICE =DK0
   CLASS =FILE II
   LABEL =JSEL15
   UIC =II, 11
   ACCESS =CRWED,RWED,RWED,RWED
   CHARAC =[ ]

MCR> INS [15,2] PDFP
MCR> FIX PDFP
MCR> RUN PDFP$
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>DK:C100,1117777,1AT
WAS THIS FILE LOADED FROM TAPE? (YES OR NO)
>NO
ENTER DESIGN FILE NAME
>[15,2] 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:
 FILLACP -- DK0; ** DISMOUNT COMPLETE **
MCR> UNL DK
MCR>
INS PDPF
MCR>FIX PDPF
MCR>RUN PDPF$.
ENTER FILE NAME FROM PEP, ENTER STOP TO TERMINATE
>85581.DAT
ENTER DESIGN FILE NAME
>115,2JTEST.DGN
ENTER CELL LIBRARY FILE NAME
>115,2JTRAINING.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
PDPF -- 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> 350
   SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS> 36 WORD IDF FOR TRANSFER TO PDP VIA COMM.LNK
   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-LOA DK
MCR-MOU DK: /OUR
MOUNT***VOLUME INFORMATION**

DEVICE =DK0
CLASS =FILE 11
LABEL =J6EL15
UTC =EI,13
ACCESS =[RWE, RWE, RWE, RWE]
HARAC =E3

MCR>PIP
PIP-DK:/**]/I

DIRECTORY DK0:C15,23
6-SEP-79 09139

TOTAL OF 0, BLOCKS IN 0, FILES

DIRECTORY DK0:C100,13
6-SEP-79 09139

G6041.DATE1 122, 30-AUG-79 12:47
G6041.DATE2 122, 30-AUG-79 12:59
17777.DATE1 116, 04-SEP-79 10:11
17777.DATE2 116, 04-SEP-79 10:22
17777.DATE3 116, 04-SEP-79 10:34

TOTAL OF 592, BLOCKS IN 5, FILES

DIRECTORY DK0:C100,23
6-SEP-79 09139

PEP.FTN22 2, 14-AUG-79 07:17
PEP.OLI21 2, 14-AUG-79 07:18
DKCOPY.CMD11 1, 30-JUL-79 15:46
PEFSLT.CMD16 1, 30-JUL-79 15:47
PEPFAP.CMD12 1, 30-JUL-79 15:48
PEP.OBJ11 3, 14-AUG-79 07:18
PEP.CMD26 1, 14-AUG-79 07:18
PEP.TSK14 95, C 14-AUG-79 07:18
GETFIL.OBJ11 9, 14-AUG-79 07:18
GETFIL.FTN15 6, 14-AUG-79 07:18
OUTPUT.OBJ12 8, 14-AUG-79 07:18
OUTPUT.FTN20 7, 14-AUG-79 07:18

TOTAL OF 136, BLOCKS IN 12, FILES

DIRECTORY DK0:C12,123
6-SEP-79 09140

SCANA.FTN4 1, 24-JUL-79 10:44
MOVCHR.FTN4 1, 24-JUL-79 10:44
PACKL.FTN4 1, 24-JUL-79 10:44
SETCRD.FTN17 2, 24-JUL-79 10:44
PDFP.FTN145 11, 24-JUL-79 10:44
BEANA.OBJ1 2, 24-JUL-79 10:44
PACKL.OBJ1 2, 24-JUL-79 10:44
MOVCHR.OBJ1 1, 24-JUL-79 10:44
PDFP.CMD27 1, 15-AUG-79 12:51
SETCRD.OBJ13 1, 24-JUL-79 10:44
PDFP.OBJ43 14, 24-JUL-79 10:44
PEP.PIN.TSK1 31, C 24-JUL-79 10:44
PDFP.TSK1 64, C 24-JUL-79 10:44
PDFP.FAP12 1, 15-AUG-79 12:51

TOTAL OF 133, BLOCKS IN 14, FILES

MCR>PIE2

MCR>DNO DK:
FlATACP -- DK0: ** DISMOUNT COMPLETE **
MCR>UNL DK.
MCR>
INSTALL MIPS TASK ON PDP 11/70 USING DEC WRITER

>SET /UIC=[100,1]
08:43:42 LOGIN USER
> @MIPSTASKS
>INS DP: [100,1]MIPS
>INS DP: [100,1]MIPS/TASK=...MIP
>INS DP: [100,1]LINK
>INS DP: [100,1]JJOAP
>INS DP: [100,1]JOBMP
>INS DP: [100,1]JEEP
>INS DP: [100,1]JUPF1T
> @ <EOF>
>SET /UIC=[1,1]
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:

\[
\begin{align*}
\text{DDD} &= \text{Disk device and unit} \\
\text{GGG} &= \text{User group number} \\
\text{UUU} &= \text{User number within group}
\end{align*}
\]

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).

\[
\begin{align*}
\text{Design file name} &= \text{DP0:[15, 2] PACTS.DGN} \\
&= \text{DDD:GGG, UUU} defdefdefdefdefdee: VUU
\end{align*}
\]

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
DWDUSMORGAMS THE FILE TO BE MAINTAINED - DAY? 
MIPS>305
   SPECIFY A 66 CHARACTER DESCRIPTION OF THE FILE
MIPS>OUTPUT FILE OF FOR SL1
APPENDIX M

PROGRAM LISTINGS
PAYLOAD CREW TRAINING DATA BASE

**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 PACTS.

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, LIST OF GROUPS, LIST OF PAYLOAD SPECIALISTS AND THE PAYLOAD BASE LOCATION, LIST OF SPECIFICATIONS' AND THE COST FOR WORK LOCATION. SPECIALL PROVISIONS ARE INCLUDED TO INITIALIZE AN EMPTY DATA BASE. THE MODULE INCLUDES AN OPTION TO PRINT OR THE ALTERNATE PRINT FILE THE ENTIRE 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 MATRIX FORM ON THE ALTERNATE PRINT FILE.

PACTAM IS AVAILABLE AT ANY SITE AND AT ANY TIME. THE ONLY OPTION WHICH IS RESTRICTED IS THE DETAILED REPORT AND THE DATA WHICH REQUIRES A HIGH TURNOVER.

RESPONSIBLE ENGINEERS: DAVID SHIPGRA 433-4375

END

**UPDATE**

**PACTEI**

**PACTEI ENGINEERING INFORMATION**

**UPDATE**

**PACTPI**

**PACTPI PROGRAMMING INFORMATION**

PACTPI PERFORMS DATA INPUT AND EDITING OF A PACT DATA BASE FILE TO BE USED IN MODULE PACTS. 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 AND FROM A LOCATION, DETAILED GROUP AND THE PAYLOAD BASE LOCATION, DETAILED REPORT AND THE DATA WHICH REQUIRES A HIGH TURNOVER.

RESPONSIBLE ENGINEERS: DAVID SHIPGRA 433-4375

END
DATA FILE. THE PROGRAM INCLUDES AN OPTION TO PRINT ON THE ALTERNATE PRINT FILE. THE PRINT DATA CAN BE FOR A SPLIT-LINK 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:

how is a block diagram? each block is F/S responsible for a specified function. the user controls the sequence of execution.

- Edit TDY
- Edit List of Resources
- Select File
- Print Lat/Lon Data Base for a Mission
- On Alternate Print File
- Travel Data Control
- List/Edit Initial Locations
- List/Edit Travel Cost/Time Data From a Location
- List/Edit Detailed Group and Tag Data
- List/Edit Work Locations
- List/Edit Travel Cost/Time Data To a Location

B. COMPMACH CONFIGURATION
LANGUAGE: FORTRAN
CPU REQUIREMENT: 97.451 K

278
AND THIS INITIAL LOCATION EDITING

GROUP - PRINTS LIST OF GROUPS ON ALTERNATE PRINT FILE
FILELOC - PRINTS LIST OF INITIAL LOCATIONS ON ALTERNATE PRINT FILE
PPAYSP - PRINTS PAYROLL SPECIALIST ON ALTERNATE PRINT FILE
PREPA - PRINTS PAYROLL SPECIALIST ON ALTERNATE PRINT FILE
PRINT - DISPLAYS DELTAED GROUP AND THE DATA ON ALTERNATE PRINT FILE
PIOU - PRINTS COST FOR WORK LOCATIONS ON ALTERNATE PRINT FILE
PUKLOC - PRINTS LIST OF WORK LOCATIONS ON ALTERNATE PRINT FILE
HOOT - ENTERPRISES COMMANDS USED WITH CURSORS UP IN GROUP AND THE DELTAED EDITING
SAVE - UPDATES GROUP AND THE DELTAED DATA ON FILE
SLFIL - SELECT PATH DATA FILE
SLSD - SELECT A GROUP ID
SLLOC - SELECT LOCATION INITIAL ON WORK
SLIS - SELECT LOCATION ID
SLSS - LIST EDIT DELTAED FOR WORK LOCATIONS
TOKHIN - DESTINATION FOR WORK LOCATIONS
TUSLO - DISPLAY OF INSTRUCTIONS FOR DETAILED GROUP AND TAP EDITING

C. CREATION OF A BOLLENT ENTITY

D. CREATION OF A BOLLENT ENTITY

FILE OF FILE A NULL DIRECTED FILE
FILE ATTRIBUTES ARE DATA FILE IN ALPHA-QUANTIC FORM
THE FOLLOWING REPRESENTS THE ATTRIBUTES OF THE

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

ATTRIBUTE = DATA

1. MISSION LIST = LIST OF MISSIONS (93 WORDS)
2. MISSION ID. = LIST OF MISSIONS PER MISSION (900 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 (10 WORDS)

4. GROUP ID. / TAE NO. / TAE = DESCRIPTION OF TAE (6 WORDS)
   LOCATION CODE (1 WORD)
   U.S. (2 WORDS)
   TOTAL OF:
   TAE ID. (1 WORD)
   DURATION (1 WORD)
   RESOURCES (5 WORDS)
   PRIORITY (1 WORD)
   EQUIPMENT (5 WORDS)
   PAYLOAD CREW (10 WORDS)
   AVAILABILITY WINDOWS (94 WORDS)
   IN THE FORM MM/DD/YY TO MM/DD/YY
   (94 WINDOWS 2 WORDS PER WINDOW)

5. LOCATION/INITIAL = LIST OF INITIAL LOCATIONS (2 WORDS)
6. LOCATION/WORK = LIST OF WORK LOCATIONS (10 WORDS)
7. LOCATION ID. / FROM = LOCATION ID. OF PROPERTY LOCATION (2 WORDS)
8. MISSION ID. / PAYLOAD CREW = CREWMEMBER LOCATION (20 WORDS TOTAL)
9. WORK LOCATION ID. / TO = WORK LOCATION + TO COST (120 WORDS TOTAL)

THE ATTRIBUTES IN PARENTHESES INDICATE VALUES WHICH
WILL CHANGE SUCH AS THOSE PAYLOAD SEVERAL MISSION ID.'S
AND ONE MUST BE USED AS AN ATTRIBUTE IN PLACE OF THE
ENTRY IN THE PARENTHESES. HOWEVER, SUCH ATTRIBUTES AS
MISSION/INITIAL ARE HARD-WIRED AND ARE NOT CHANGED.

END

UPDATE

PATHID FACTOR USER'S INFORMATION

RESTRICTIONS:
1. DETAIL GROUP ON THE DATA CAN ONLY
2. ENTER ON A # EACH ELECTRONIC

OUTPUT
1. CAN SPECIFY OPTION TO PRINT COMPLETE

281
INPUT : DATA IN FILE FOR A SPECIFIED MISSION.
SAMPLE RUN : ALL TUTORIAL USING STANDARD INPUT IMAGE
PAYLOAD CAFU TRAINING SCHEDULER DATABASE ( PACTUM )
1 - TERMINATE
2 - SPECIFY PAYLOAD BASE FILE
3 - EDIT LIST OF THE GROUPS
4 - LIST DETAILED TRAINING ACTIVITY ELEMENT (FAIL) DATA
5 - LIST TRAVEL COST AND TRAVEL TIME DATA
6 - EDIT PAYLOAD SPECIALIST DATA
7 - LISTuning FOR WORK LOCATION
8 - LIST PAYLOAD BASE

NPS>

IF 1 IS SELECTED, USER IS RETURNED TO MAIN SELECTIVE.

IF 1 IS SELECTED, USER CAN EDIT LIST OF SPECIES FOR SPECIFIED MISSION USING THE FOLLOWING COMMANDS:

***************
INSERT NEW
INSERT NEW AFTER OLD
DELETE OLD
REPLAY
***************
*INSERT NEW ADD NEW VALUE AT THE END OF THE LIST.
*INSERT NEW AFTER OLD* ADDS NEW VALUE AFTER OLD IN
*DELETE OLD* DELETES THE OLD ITEM FROM THE LIST
*REPLAY* REPLAYS THE SCREEN WITH THE NEW LIST
*DELETE OLD* DELETES YOU TO LAST PLAIN
NOTE: THIS OPTION HAS A SPECIAL COMMAND
***************
LIST OLD
***************
WHICH ALLOWS THE USER TO GO FROM THE LIST
OF SPECIES DIRECTLY TO THE DETAILS GROUP
AND THE REPLAY TO EDIT THAT DATA AND THEN
RETURN TO DISPLAY OF LIST OF SPECIES

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

***************
INSTRUCTIONS FOR EDITING A GROUP OF DATA
LOCATION PROPERED ON VALUE TO BE CHANGED. ENTER CONTROL CHARACTER
AND RETURN KEY.
IF CUESHIFT) ARE NOT VISIBLE THEY MAY BE OFF SCREEN - TURN TIP
WHEELS AND/or PUSH RETURN KEY.
THE FOLLOWING CONTROL CHARACTERS ARE VALIUE OTHERS WILL BE IGNORED
L - ENTER NEW VALUE OVERWRITING OLD VALUE
O OR 1 - OMIT ALL DATA ON THIS ITEM
M - KILL THE DATABASE
S - RETURN TO THE LEADING MENU
X - RETURN TO THE LEADING MENU
A - ADD OR INSERT ANOTHER ITEM TO THIS GROUP
B - DELETE A FAL ( QUESTION AGAIN TAE WILL BE ASKED )
H - WILL REPLAY FAL EPAS
I - NEXT GROUP IS DISPLAYED
NOTE: WHEN EDITING MAJOR GROUP, DATABASE ON COWNAY THE ENTIRE
STRING MUST BE SEPARATED BY SPACES
WHEN LISTING A DATE IN THE MONTH, DAY AND YEAR MUST
BE ENTERED IN PADDY.)

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

IF 4 IS SELECTED, THE USER SEES THE FOLLOWING MENU:
TRAVEL COST AND TRAVEL TIME DATA
1 = EDIT LIST OF INITIAL LOCATIONS
2 = EDIT LIST OF WORK LOCATIONS
3 = EDIT TRAVEL COST/TIME DATA FOR A PARTICULAR LOCATION
4 = EDIT TRAVEL COST/TIME DATA FROM A PARTICULAR LOCATION

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 2 OF THE
MAIN MENU

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

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

EDIT INITIAL DATAS TO RETURN
EDIT VAI VALUS TO COST TIME

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

OLD = COST TIME: PUT AS THE COST AND TIME VALUES FOR
OLD IN THE DATA FILE. IF ONLY ONE VALUE IS SUPPLIED
IT IS TAKEN AS THE COST VALUE AND TIME DATA IS NOT
REQUIRED.

IF 5 IS SELECTED, USER CAN EDIT TRAVEL COST/TIME DATA FOR A PARTİCULAR LOCATION USING THE
COMMANDS ABOVE.

IF 5 IS SELECTED, USER CAN EDIT THE PAYLOAD SPECIALIST LIST
AND HIS INITIAL LOCATION USING THE SAME
COMMANDS AS OPTION 2 PLUS:

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

OLD = INITIAL LOCATION

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

WHICH ALLOWS THE USER TO INPUT THE
INITIAL LOCATION FOR AN ALREADY
EXISTING PAYLOAD SPECIALIST

IF 6 IS SELECTED, THE USER CAN EDIT THE TOTAL COST FOR WORK
LOCATIONS USING THE FOLLOWING COMMANDS:
LOCATION = COST
ALL = COST PRINTALL
ALL = COST WILL SET THE TOTAL COST FOR ALL
WORK LOCATIONS TO THE VALUE OF COST

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

IF 8 IS SELECTED, THE USER RECEIVES A COMPLETE ALTERNATE PRINT
LIST OF HIS SPECIFIED FILE AND SESSION. 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 3 MINUTES WILL CLOCK TIME AT A
DEMAND SITE.
THE PACTS SCHEDULING MODULE (PACTS) IS DESIGNED TO INTERACT WITH THE FILE STORED IN THE ACTIVITY LEVEL DATA FILE (ACT-L). THE ACTIVITY LEVEL DATA FILE IS UTILIZED TO SELECT ACTIVITIES, UTILIZING A LIST-SELECTED SELECTION PROCESS. PACTS USES A FAMILY OF SCHEDULES AND SELECTS THE ACTIVITY WITH THE LOWEST ACTIVITY LEVEL DATA FILE. THE NUMBER OF ACTIVITIES SCHEDULED DEPENDS UPON THE ACTIVITY LEVEL DATA FILE. AFTER SELECTION, THE ACTIVITIES ARE SCHEDULED AT THE EARLIEST OPPORTUNITY TIME. ACTIVITY LEVEL DATA FILE LIMITATIONS ARE MET.

PACTS ACCEPTS INPUT FROM THE USER TO CREATE THE ACTIVITY LEVEL DATA FILE. THE MODULE WHICH CAN BE ACCESSED FROM PACTS ARE THE ACTIVITY LEVEL DATA FILE, SCHEDULE CONTROL AND MISSION LEVEL DATA FILE.

PACTS MAY BE RUN AT ANY TIME OR IN BATCH MODE.

RESPONSIBLE ENGINEER: DAVID SHIPMAN

PACTS ENGINEERING INFORMATION

DOES NOT APPLY TO THIS MODULE

PACTS PROGRAMMING INFORMATION

THE PACTS SCHEDULING MODULE (PACTS) IS DESIGNED TO INTERACT WITH THE ACTIVITY LEVEL DATA FILE AND THE DATA STORED IN THE ACTIVITY LEVEL DATA FILE. THE DATA STORED IN THE ACTIVITY LEVEL DATA FILE ARE THE NUMBER AND THE ACTIVITY LEVEL DATA FILE.

A. PROGRAM BLOCK DIAGRAM

BELOW IS A SIMPLIFIED BLOCK DIAGRAM SHOWING THE RELATIONSHIPS BETWEEN THE DATASTORED IN THE ACTIVITY LEVEL DATA FILE.

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

- TERMINATE
- CREATE A PERMANENT ACTIVITY LEVEL DATA FILE
- TRANSFER TO DATA STORED IN THE ACTIVITY LEVEL DATA FILE
- SELECT ACTIVITY LEVEL DATA FILE
- SELECT ACTIVITY LEVEL DATA FILE
- DISPLAY SUMMARY OF ACTIVITY LEVEL DATA FILE
- SELECT ACTIVITY LEVEL DATA FILE
- TRANSFER TO DATA STORED IN THE ACTIVITY LEVEL DATA FILE
- SAVE DATA STORED IN THE ACTIVITY LEVEL DATA FILE

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

- EXIT FROM MAIN CONTROL
- LOAD DATA STORED IN THE ACTIVITY LEVEL DATA FILE
- LOAD ACTIVITY LEVEL DATA FILE
- EXIT FROM MAIN CONTROL
- EXIT FROM MAIN CONTROL

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

285
- 5 - FULL WORK DAY DURATIONS
- 6 - FULL MISSION LIST
- 7 - EDIT LIST OF PAYLOAD SPECIALISTS
- 8 - EDIT LIST OF T/L GROUPS
- 9 - EDIT FLIGHT ORDER LIST
- 10 - LOAD T/L MODELS

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

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

********** SPECIFY PRINT AND FILE OPTIONS **********
- DEFAULT PRINT OPTION = 1
- 1 = NO PRINT OUT
- 2 = PRINT ON TIMES ONLY
- 3 = PRINT ALL TIMES
- DEFAULT FILE OPTION = 1
- 1 = WRITE LOT FILE
- 2 = WRITE ON/OFF FILE
- 3 = WRITE BOTH

********** COMPUTER CONFIGURATION **********

LANGUAGE : FORTRAN
CORE REQUIREMENT : 16K
INPUT FILES : NAME-DIRECTED FILE CONTAINS MISSION DEPENDENT DATA AND T/L MODELS
OUTPUT FILES : LIST-DIRECTED FILE CONTAINS SCHEDULE TIMES, RESOURCES, AND TRAVEL COST/TIME DATA.
ON/OFF FILE CONTAINS CREW ACTIVITIES

*** SCHEDULING ROUTINES/ FUNCTIONS ***
HEART - MAIN DRIVER FOR COMPUTING OPERATIONS
CHECK - DETERMINES WHEN A T/L CAN BE SCHEDULED
CUTDATE - CHECKS FREE AND UNRESERVED AVAILABILITY
CUTDAY - CHECKS TRAVEL TIME
CHECK - T/L CAN BE SCHEDULED A T/L
CHECK - T/L CAN BE SCHEDULED FOR ANY EVENT
DATE - T/L CAN BE SCHEDULED FOR ANY EVENT, AND CHECKS FOR A HOLIDAY
DATA - EVALUATES SCHEDULE FOR R/T/EV AND CONTROL INFORMATION
FIXED - SELECTS THE NEXT T/L CAN BE SCHEDULED FOR ATTEMPTED SCHEDULING
FIX2Z - INITIALIZES TIME FROM FIXED ORDER ARRAYS
PC - MAIN DRIVER TO GENERATE FLIGHT SCHEDULES AND SELECT THE T/L
SCHF - SCHEDULES FIXED ORDER ARRAYS
SCHR - SCHEDULES RANDOM ORDER ARRAYS
SCHT - CALCULATES TOTAL COST OF A SCHEDULE
SOLID - SELECTS A T/L FOR A GIVEN LOCATION FOR SCHEDULING
SILENT - RANDOMLY SELECTS THE NEXT T/L FOR ATTEMPTED SCHEDULING
TRAVEL - SELECTS THE T/L CAN BE SCHEDULED FROM A GIVEN LOCATION
TRAVEL - FINDS THE TRAVEL COST FROM ONE LOCATION TO ANOTHER

***** INTERFACE ROUTINES *****
MAIN - MAIN CONTROL FOR THE MODULE
LOAD - READS INPUT DATA
BLOCK-DATA - INITIALIZE CONTROL BLOCKS
EXPOS - ENTERS START AND STOP TIMES FOR TRAVEL AND CHECK

286
CONVENT - CONVERSION DEFINITIONS TO CALENDAR DAYS
DRU - DRU initial definitions
DRW - DRW initial definitions
EDIT - EDIT FILE
EDIT S2 - EDIT MISSION LIST AND LOAD MISSION DATA
EDIT P5 - EDIT PAYLOAD SPECIALIST LIST AND THEIR INITIAL LOCATIONS
EDIT P6 - EDIT PAYLOAD SPECIALIST LIST AND THEIR INITIAL LOCATIONS
EDIT P7 - EDIT TO OR DEFINITIONS
EDIT PL - EDIT TRAINING
Errors - PRINT MESSAGE IF A ERROR HAS OCCURRED DURING SCHEDULING
EVR - RECOVERS 'SHOULD-DO' CRM USED AND RESOLVE USES FOR AN EVENT
FOOC - INITIALIZE FIXED ORDER GROUP DATA AND CHECK IF FIXED ORDER GROUP IS IN GROUP LIST
GETS1 - FLD AND TRANSFER THE EVENT FROM THE EVENT TIMELINE WHICH ADVANCES A SPECIFIED TIME
GETS1 - GET THE FIRST EVENT FROM THE EVENT TIMELINE
GETS1 - GET THE NEXT EVENT FROM THE EVENT TIMELINE
INPUT C - DISPLAY AND SELECT IMMEDIATELY SUB-MESSAGES
INPUT T - LOAD TRAVEL AND STAND ON TRAVEL FILE
LDWR - PRINT TIMELINE BACKUP AND WRITE LIST-DIRECTED FILE
LOAD C - LOAD INPUT DATA FROM A PREVIOUS CASE
LOAD T - LOAD TRAVEL AND RESOURCE DATA
DOFF - WRITE DOFF FILE
REST - RESTORE MODULE STATUS
RLD - RELOAD THE LAST SCHEDULE
SAVE - SAVE MODULE STATUS
SAVE - SAVE INPUT DATA FROM THIS CASE
SETUP - EDIT NO. OF SCHEDULES TO ATTEMPT, RANDOM N. SEED AND EVALUATION PRIORITIES
SUB W - SUPPORT AVOIDANCE WINDOWS FROM AVAILABILITY
FILES - DISPLAY SUMMARY OF TASKS SCHEDULED
TRAVEL - DETERMINE TIMELINE AND CALCULATE TRAVEL
TMYCH - INSERT TRAVEL INTO TEMPORARY FILE
WRITE? - SAVE COMMON BLOCKS
BLANK - RESTORE COMMON BLOCKS
WRITAV - WRITE TRAVEL RECORDS TO TEMPORARY FILES
WRITEM - WRITE THE RECORDS TO TEMPORARY FILES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th><strong>TIMELINE I/O SUPPORTING FUNCTIONS</strong>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUFF - FIND BUFFER CONTAINS A DESIGNED TIME INTERVAL OR BUFFER AVAILABLE FOR SPLITTING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLOU - WRITE OUT COMPLETE MESSAGES INTO THE TIMELINE AND CLOSE TIMELINE FILE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPY - COPIES THE FIXED ORDER SCHEDULE INTO A TIMELINE FILE FOR RANDOM ORDER SCHEDULING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DETS - RETRIEVE AN EVENT FROM THE TIMELINE WHICH IMMEDIATELY PRECEDES A SPECIFIED TIME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GETS - RETRIEVE THE NEXT EVENT FROM THE TIMELINE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INSECT - INSERTS A NEW EVENT INTO TIMELINE FILE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURF - SEARCH TO INSERT A NEW EVENT IN THE INDEX FOR A SPECIFIED TIME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KREP - BINARY SEARCH TO LOCATE AN EVENT JUST PRECEDES A SPECIFIED TIME. IF EQUAL TIMES ARE FOUND IT SELECTS THE LAST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRE - BINARY SEARCH TO INSERT AN EVENT JUST PRECEDES A SPECIFIED TIME. IF EQUAL TIMES ARE FOUND IT SELECTS THE LAST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPEN - OPEN AN EVENT TIMELINE FILE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>READ - READ IN A FILE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

287
C. CREATION OF AN ELEMENT

SEG CREATE** (INTERACT)
  IN CREATE
  SEG LDF-DICT** (CREATE)
  IN LDF-DICT
  IN DONE
  SEG START-STOP** (INTERACT)
  IN INITIAL
  SEG START** (START-STOP)
  IN INITIAL
  SEG STOP** (START-STOP)
  IN INITIAL
  SEG INITIALIZE** (INTERACT)
  IN INITIALIZE
  SEG CONTROL** (INITIALIZE)
  IN LOAD
  SEG MODELS** (INITIALIZE)
  IN INITIALIZE
  SEG DISPLAY** (INTERACT)
  IN DISPLAY
  SEG TABULATION** (DISPLAY)
  IN TABL
  SEG FILES** (DISPLAY)
  IN LOAD
  SEG INPUT** (FILES)
  IN LOAD
  SEG UNDF** (FILES)
  IN UNDF
  SEG PROCESS** (MAIN)
  IN CHECK-INSERT-HEART
  SEG FIELD** (SUCCESS)
  IN SCH-FIELD
  SEG RANDOM** (PROCESS)
  IN HOST-CAHEL-SCH-CELL-ALL

D. INPUT FILE STRUCTURE

TYPE OF FILE: NAME DIRECTED FILE
ALL ATTIBUITS AND DATA ARE IN ALPHANUMERIC FORM
THE FOLLOWING DEFINES THE ATTRIBUTES OF THE
INPUT FILE AND THE RETURNED DATA IN THE FORM:
ATTRIBUT = DATA

1. MISSION LIST = LIST OF MISSIONS (12 WORDS)

2. (MISSION ID) = LIST OF GROUPS FOR MISSION (20 WORDS)

3. (GROUP ID) = NUMBER OF TAKES (11 WORD)

************
  EFFECTIVE DATE (12 WORDS)
**TOTAL OF**

In the form MM/DD/YY

**63 WORDS**

DESCRIPTION (12 WORDS)

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

AVAILABILITY WINDOWS (49 WORDS)

In the form MM/DD/YY to MM/DD/YY

(MISSION ID.) (11 WORDS)

**GROUP ID.1/1/TAKE NO.1/TAKE = DESCRIPTION OF TAKE (6 WORDS)**

LOCATION CODE (1 WORD)

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

DELAY (MIN AND MAX ) ( 9 WORDS )

**TOTAL OF**

TALE ID. (11 WORD)

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

DURATION (1 WORD)

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

RESOURCES (15 WORDS)

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

PRIORITY (1 WORD)

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

EQUIPMENT (5 WORDS)

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

PAYLOAD CREWMEN (11 WORDS)

AVAILABILITY WINDOWS (79 WORDS)

In the form MM/DD/YY to MM/DD/YY

(A WINDOWS, 2 WORDS PER WINDOW)

5. LOCATION/INITIAL = LIST OF INITIAL LOCATIONS (33 WORDS)

6. LOCATION/WORK = LIST OF WORK LOCATIONS (63 WORDS)

7. LOCATION ID./FROM = LOCATION + COST + TIME (97 WORDS)

8. MISSION ID./PAYECE = CREWED/HOME LOCATION (79 WORDS TOTAL)

9. MISSION LOCATION ID./TO = WORK LOCATION + COST (177 WORDS TOTAL)

The attributes in parentheses indicate values which will change, such as there may be several mission ID.'s and one may list an attribute in place of the entity in parentheses; however, such attributes as mission/list and work/whence are not act changed.

**F. CHEM TRAINING TIMELINE FILE DESCRIPTION**

*PATS OUTPUT FILE (LIST-DIRECTED)*

**TITLE RECORDS**

LINE 1 ( # SCHEDULE ID. : X:TA )

NEXT SCHEDULE ID.

LINE 2 ( # TYPH & # RESOURCES )

LINE 3 ( # RESOURCES )

LINE 4 ( # TOTAL COST )

LINE 5 ( # MISSIONS )

LINE 6 ( # TYPH )

LINE 7 ( TYPH )

LINE 8 ( TYPH )

LINE 9 ( TYPH )

**DATA RECORDS**

**WORD**

**PHONETIC**

**RECORD**

**AVAIL TIME ( DAY COUNT )**

1. DATE

2. DATE

3. DATE

4. DATE

ORIGINAL PAGE IS

POOR QUALITY

289
PACTS INSERTS INFORMATION

THE PACTS MODULE HAS FOUR PRINCIPAL PARTS WHOSE RELATIONSHIP IS SHOWN BELOW.
1. DISPLAY/TMP INPUT DATA
2. GENERATE TRIAL SCHEDULES AND SELECT BEST
3. DISPLAY SUMMARY OF BEST SCHEDULE
4. TABLE SCHEDULE AND WRITE OUTPUT FILE
5. TRANSFER TO IMPORT SCANNER
6. SAVE DATA FROM THIS CASE FOR FUTURE USE

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

**INPUT MENU (OPTION 1 OF MAIN MENU)**
1. RETURN TO MAIN CONTROL
2. LOAD DATA FROM PREVIOUS CASE
3. EDIT CONTROL DATA
4. EDIT CONTROL 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

**NOTE:**
OPTIONS 1, 2, AND 3 MUST BE EXECUTED BEFORE TRIAL SCHEDULES CAN BE GENERATED FROM MENU. WHENEVER DATA IS LOADED, SHOWN IN THE EDIT OPTIONS. OPTION 3 DISPLAYS A SUB-MENU CONTROL MENU.

BY SELECTING OPTION 3 IN THE INPUT MENU THE CONTROL MENU IS DISPLAYED IN THE FORM OF TWO SMALL MENUS

**CONTROL MENU ***

**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 ***

**DEFAULT PRINT OPTION**
1. PRINT ON TIMES ONLY
2. PRINT ALL TIMES

**DEFAULT FILE OPTION**
0. NO FILE
1. WRITE TO FILE
2. WRITE TO OUTPUT FILE
3. WRITE AND OUTPUT FILE

**FINAL PAGE IN QUALITY**
NOTE:
Both values are entered on one line separated by blanks.
THE PAYLOAD CREW TIMELINE EDITOR IS AN INTERACTIVE MODULE WHICH DISPLAYS AND EDITS THE TIMELINE PRODUCED BY THE SCHEDULING MODULE (PACTS). THIS MODULE USES THE LIST-DIRECTED AND NAME-DIRECTED FILES FROM PACTS TO CREATE A SCRATCH FILE FOR EDITING. THEN WRITE AN UPDATED LIST-DIRECTED AND NAME-DIRECTED FILES. TRAVEL ANALYSIS IS CALCULATED ONLY IF THE OPTION TO CODE THE EVENT TIMELINE IS USED EXECUTED. DATA WHICH MAY BE DISPLAYED OR EDITED ARE THE CREW TIMELINE, THE EVENT TIMELINE, AND THE COMPOSITE TIMELINE. ALSO OPTIONS ARE AVAILABLE TO DELETE A GROUP FROM THE TIMELINE, DELETE A CREW FROM THE TIMELINE, AND TO WRITE NEW TIMELINE FILES. OPTIONS ARE AVAILABLE TO TRANSFER TO EITHER THE REPORT GENERATOR (PACTS) OR THE DATA BASE EDITOR (PACTS). THE EDITING OF THE CREW EVENT TIMELINES REQUIRES A TERMINAL TERMINAL OTHERWISE PACTED IS AVAILABLE AT ANY TERMINAL OR IN PRINT MODE.

RESPONSIBLE ENGINEER: DAVID SHIPMAN 442-4735

PACTED ENGINEERING INFORMATION

DOES NOT APPLY TO THIS MODULE

PACTED PROGRAMMING INFORMATION

THE TIMELINE EDITING MODULE (PACTED) INTERACTS WITH THE REPORT GENERATOR (PACTS) AND THE DATA BASE EDITOR (PACTS) BY SETTING THE VALUE OF "MIX: IN THE MMS NAME-DIRECTED FILE "YPS-11T", A NAME-DIRECTED FILE WHICH IS GENERATED BY PACTS IN THE REQUIRED FOR INPUT. THIS FILE IS Read AND DATA IS LOADED INTO A MMS FILE FOR EDITING. THE MODULE SAVES ITS COMMON BLOCKS FOR USE WHEN RETURNING FROM PACTS AND PACTED.

A. PROGRAM FLOW DIAGRAM

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

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

- 7 - TERMINATE
- 1 - DISPLAY CREW LISTING  >>>>>>>>>>>>>>>>
- 2 - DISPLAY COMPLETE COMPOSITE TIMELINE  >>>>>>>>>>>>>>>>
- 3 - DISPLAY CREW EVENT TIMELINE AND POST-
- 4 - PROCESS TRAVEL  >>>>>>>>>>>>>>>>
- 5 - DELETE CREW FROM TIMELINE  >>>>>>>>>>>>>>>>
- 6 - DELETE CREW FROM TIMELINE  >>>>>>>>>>>>>>>>
- 7 - TRANSFER TO PACT DATA BASE MODULE (PACTS)  >>>>>>>>>>>>>>>>
- 8 - WRITE NEW TIMELINE FILES  >>>>>>>>>>>>>>>>
- 9 - TRANSFER TO PACT REPORT GENERATOR (PACTS)  >>>>>>>>>>>>>>>>

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

EDITING INSTRUCTIONS

- LOCATE CROSSHAIRS ON VALUE TO BE EDITED
- ENTER COMPARE CHARACTER AND PRESS RETURN KEY
- CROSSHAIRS ARE NOT VISIBLE THEY MAY BE
- SEEK SCREEN TURNS THING WHEELS AND OR
- PRESS RETURN KEY

EDITING COMMANDS ARE LISTED BELOW
- E - ENTER NEW VALUE OVERWRITING OLD VALUE
- N - ENTER NEW VALUE IN EMPTY AREA OF SCREEN
- A - AND SPACE IN A VALUE TO A GROUP
- MULTIPLE QUESTIONS WILL BE ASKED

FINAL PAGE IS 293
POSITION OF THE CROSSHAI!NS FOR TIMELINE
DISPLAYS (NOT USED FOR TRAVEL RECORDS)

LOCTAV - CALCULATES THE LOCATION AND ROAD SIZE BASED ON THE
POSITION OF THE CROSSTAIRS FOR TIMELINE
DISPLAYS (USED FOR TRAVEL RECORDS)

MAIN - MAIN CONTROL FOR PROGRAM AND PAIN READ DISPLAY

ONUMRT - UNTES ON/OFF SCRATCH FILE

OAKOFF - UNTES ON/OFF FILE FOR OUTPUT

OPTION - PAYS ITS FIRST COMMANDS AT TOP OF PAGE OF TIMELINE
DISPLAYS

PREADA - DISPLAYS MESSAGE ON SCREEN AND AVOIDS CARRIAGE
RETURN

PRINT - PRINTS TIMELINE RECORDS ON ALTERNATE PRINT FILE.

PROID - READS UP TO 10 INPUTS FROM INTERACTIVE
TERMINALS TO ADD TABLES TO A GROUP

PROPT - READS AND INTERPRETS EDITING COMMANDS

READ - READS A RECORD FROM THE SCRATCH FILE

READS - READS RECORDS FROM THE SCRATCH FILE BY GROUP CHAIN

READP - RESTORES COMMON BLOCKS UPON RE-ENTRY TO THE MODULE

SAVE - SAVES COMMON BLOCKS UPON EXIT FROM THE MODULE

SLDRT - READS START AND STOP TIMES FOR CREW WHEN Option

SLDEE - REQUESTS NAME-DIRECTED AND LIST-DIRECTED FILE NAMES
FOR DATA INPUT

SLPYL - REQUESTS USER TO SPECIFY CREW FOR CREW TIMELINE

STDATE - REQUESTS USER TO INPUT STARTING DATE FOR DISPLAY

TO - TURNS ON FOR JULIAN DAY FORMATTING

TRAVCT - OBTAINS TRAVEL COST AND TIME FROM ONE LOCATION
TO ANOTHER

TRAVEL - CALCULATES TRAVEL POST-PROCESSING FOR OPTION 3 OF
THE MAIN MENU

UPDATE - CONVERTS SUGARION ON AND DD/TIME TO A DECIMAL

NBRNE

WRTAV - WRITES TRAVEL RECORDS ON SCRATCH FILE AND PRINTS
A MESSAGE FOR TRAVEL VIOLATION ON ALTERNATE
PRINT FILE

WRTFL - WRITES LIST-DIRECTED FILE FOR TIMELINE STATUS AND
O/N/OFF FILE IF SELECTED ON OUTPUT FILE OPTIONS

C. CREATION OF ABSOLUTE ELEMENT

OAPIL CD=MAP+FD=50

LIB RG=LIB SY=PS

SEG MAIN

IN MAIN=BLOCK DATA=CCN=ADDOUT

SEG INIIEV=(:MAIN)

IN SLTTL=LOADDD=TO

SEG ENCOMM=(:MAIN)

IN ENCOM=OGCM

SEG EOPY=(:MAIN)

IN EOPY-TEST

SEG DISPLAY=(:EDEVE)

IN MNVE

SEG TRAVL=(:EDEVE)

SEG LOAD=(:KLHRL=KRTAV+TRAVCT

SEG DELE=(:MAIN)

IN DELE

SEG FODUM=(:MAIN)

IN FODUM+SLPY+OSCN

SEG DFLRT=(:MAIN)

IN DFLRT+SLDRT

SEG WRTFL=(:MAIN)

IN WRTFL+PRINTOPT=KRT+LDHP+LPP

295
D. NAME-DIRECTED INPUT FILE STRUCTURE

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

ATTRIBUTE = DATA

MISSION/LIST = LIST OF MISSIONS (72 WORDS)
(MISSION ID.) = LIST OF GROUPS PER MISSION (250 WORDS)
(GROUP ID.) = NUMBER OF TAE'S (12 WORDS)
(TAE ID.) = NAME OF TAE (10 WORDS)
RELATIVE DATE (7 WORDS)
DESCRIPTION (12 WORDS)
AVOIDANCE WINCEK (30 WORDS)
IN THE FORM: DAY/MON/TY TO MM/DD/YY
(TOTAL OF 63 WORDS RETURNED)

(GROUP ID.)/(TAE ID.)/TAE = DESCRIPTION OF TAE (10 WORDS)
LOCATION CODE (1 WORD)
DELAY (MINIMUM AND MAXIMUM)
(TOTAL OF 32 WORDS)
(TAE ID.)/(TAE ID.)/TAE = LOCATION TO COST/TIME (72 WORDS)
(MISSION ID.)/(TAE ID.)/PAYFRA = CREATURE. SAME LOCATION (250 WORDS TOTAL)

LOCATION ID.)(TAE ID.)/TAE = WORK LOCATION / TOY COST (120 WORDS TOTAL)

THE ATTRIBUTES IN PARENTHESES INDICATE VALUES WHICH WILL CHANGE SUCH AS THE NAME SEVERAL MISSION IDS AND ONE MUST BE USED AS AN ATTACH VEHICLE ID IN THE PARENTHESES, HOWEVER, SUCH ATTRIBUTES AS MISSION/LIST ARE HAND WDED AND ARE NOT USER CHANGED.

E. CREW TRAINING TIMELINE FILE DESCRIPTION

PACKED OUTPUT FILE (LIST-DIRECTED)

THE TITLE RECORDS ARE UNDER THE FOLLOWING FORMATS

LINE 1 (FILE NAME) = "TIMELINE"
LINE 2 (TOTAL SCHEDULE ID) = "1"
LINE 3 (TOTAL SCHEDULE ID) = "1"
LINE 4 (TOTAL SCHEDULE ID) = "1"
LINE 5 (TOTAL SCHEDULE ID) = "1"
LINE 6 (TOTAL SCHEDULE ID) = "1"
LINE 7 (TOTAL SCHEDULE ID) = "1"

THE DATA RECORDS ARE UNDER THE FOLLOWING FORMATS

LINE 1 (TOTAL SCHEDULE ID) = "1"
LINE 2 (TOTAL SCHEDULE ID) = "1"
LINE 3 (TOTAL SCHEDULE ID) = "1"
LINE 4 (TOTAL SCHEDULE ID) = "1"
LINE 5 (TOTAL SCHEDULE ID) = "1"
LINE 6 (TOTAL SCHEDULE ID) = "1"

THE DATA RECORDS ARE UNER THE FOLLOWING FORMATS

LINE 1 (TOTAL SCHEDULE ID) = "1"
LINE 2 (TOTAL SCHEDULE ID) = "1"
LINE 3 (TOTAL SCHEDULE ID) = "1"
LINE 4 (TOTAL SCHEDULE ID) = "1"
LINE 5 (TOTAL SCHEDULE ID) = "1"
LINE 6 (TOTAL SCHEDULE ID) = "1"

THE DATA RECORDS ARE UNDER THE FOLLOWING FORMATS

LINE 1 (TOTAL SCHEDULE ID) = "1"
LINE 2 (TOTAL SCHEDULE ID) = "1"
LINE 3 (TOTAL SCHEDULE ID) = "1"
LINE 4 (TOTAL SCHEDULE ID) = "1"
LINE 5 (TOTAL SCHEDULE ID) = "1"
LINE 6 (TOTAL SCHEDULE ID) = "1"

THE DATA RECORDS ARE UNDER THE FOLLOWING FORMATS

LINE 1 (TOTAL SCHEDULE ID) = "1"
LINE 2 (TOTAL SCHEDULE ID) = "1"
LINE 3 (TOTAL SCHEDULE ID) = "1"
LINE 4 (TOTAL SCHEDULE ID) = "1"
LINE 5 (TOTAL SCHEDULE ID) = "1"
LINE 6 (TOTAL SCHEDULE ID) = "1"
A UTC TIME (DAY COUNT)
DATE
DATE
DEBUT
DURATION (WORK COUNT)
GROUP ID / TRAVEL FROM
TAX NUMBER / COST / 3.3
LOCATION CODE / LOCATION FROM / LOC
CREW ID
CREW ID
CREW ID
CREW ID
CREW ID
CREW ID
CREW ID
CREW ID
RESOURCES
RESOURCES
RESOURCES
RESOURCES

* denotes floating point data

THE DURATIONS GIVEN IN WORDS 7 AND 9 WILL REPRESENT
ON TIMES IF POSITIVE AND OFF TIMES IF NEGATIVE.
WORDS 10 THROUGH 99 WILL REPRESENT THE DATE, TIME, AND
DIFFERENT VALUE. IF WORD 7 RETURNS A GROUP ID THEN
WORDS 7 THROUGH 99 WILL BE THE FIRST RECORD ON PHASE.
UNLESS DESCRIPTION. IF 9 RETURNS THE WORD TRAVEL THEN
US THE RECORD DESCRIPTION OF WORDS 7-9. IF 6 RETURNS
THE WORD HOURS THEN USE THE THIRD DESCRIPTION OF WORDS
7-9. THAT IS, IF 6 = ID, THEN 7 = TRAVEL + 7 = COST. IF 6 = HOURS THEN 7 = 7.0

PACKED USER'S INFORMATION

THE PACKED MODULE HAS A MAIN MENU FOR PROGRAM CONTROL: A
SUB-MENU FOR OUTPUT AND A LIST OF EDITING COMMANDS WHICH APPLY TO THE
TIMELINE EDIT OPTIONS FROM THE MAIN MENU. THE FOLLOWING IS A BRIEF
SUMMARY OF THEIR INTERACTION.

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

MAIN MENU

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

NOTE:
TRAVEL IS NOT INSERTED EXCEPT BY OPTION 3 (EVENT
TIMELINE) IF 0 AND 5 THE USER MUST ALLOW FOR THIS.
TOTAL TRAVEL COST IS CALCULATED BEFORE NEW FILES
ARE WRITTEN.

NOTE:
OPTION 8 DISPLAYS A SUB-MENU (DETAIL MENU). 
OPTIONS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 AND 12 DO NOT DISPLAY THESE IF IT
HAS BEEN DONE BEFORE.
EDITING INSTRUCTIONS

(OPTIONS 1 - 9, Y AT MAIN MENU)

E - ENTER NEW VALUE OVERWRITING OLD VALUE
Y - ENTER NEW VALUE IN BLANK AREA AT SCREEN
A - ALL SPECIFIED TFS TO A GROUP
(MULTIPLE QUESTIONS WILL BE ASKED)
D - DELETE SPECIFIED TFS (EVENT)
R - RELOAD SCREEN
T - SPECIFY TIME POINT FOR NEXT PAGE
C - CONTINUE BEGINNING WITH NEXT TIME POINT
F - BEGIN PROCESSING ANOTHER EVENT
H - REDISPLAY THIS TUTORING (HELP)

NOTE:
THE N OPTION APPLIES ONLY TO THE CREW TIMELINE
PACTRS ABSTRACT

THE PAYLOAD CREW TRAINING REPORT GENERATOR (PACTRS) USES THE PACT DATA BASE 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 TAES GROUPS, UNSCHEDULED TIME FOR ALL CREW, A SCHEDULE FOR AN INDIVIDUAL CREW, AND UNSCHEDULED TIME AND LOCATIONS FOR AN INDIVIDUAL CREW. 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 TAES GROUPS, SCHEDULING OPPORTUNITIES FOR ALL CREW, A TIMELINE OF LOCATIONS, A RESOURCE UTILIZATION TIMELINE, AND A LOCATION TIMELINE FOR AN INDIVIDUAL CREW. THE PLOTS CAN BE DISPLAYED ONLY AT A 19-INCH GRAPHICS TERMINAL.

PACTRS 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 ECII 473-6795

PACTRS ENGINEERING INFORMATION

DOES NOT APPLY TO THIS MODULE

PACTRS 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 THE OPTIONS.

A - PROGRAM BLOCK DIAGRAM

BELOW IS A SIMPLIFIED BLOCK DIAGRAM WHICH SHOWS THE CAPABILITIES OF THE MODULE

******************************************************************************
  PACTRS MAIN MENU
  0 - TERMINATE
  1 - DISPLAY USAGE INFORMATION (HELP)
  2 - DISPLAY PLOTS ON TEKTRONIX AND TABLES ON TEKTRONIX AND PRINT FILE
  3 - DISPLAY PLOTS 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 TAES GROUPS
  6 - PRINT TRAVEL SCHEDULE
  7 - PRINT SCHEDULE FOR A CREW
  8 - PRINT UNSCHEDULED TIME FOR ALL CREW
  9 - PRINT UNSCHEDULED TIME AND LOCATIONS FOR A CREW

FINAL PAGE IS
OF POOR QUALITY
DIST - DISPLAYS PLOT OF BAR GRAPH OF SCHEDULING OPPORTUNITIES FOR ALL TAE GROUPS
DISO - DISPLAYS PLOT OF UNSCHEDULED TIME FOR ALL CREWEN
DISP - DISPLAYS TANGENT OF UNSCHEDULED TIME FOR ALL CREWEN
DISQ - DISPLAYS COMPOSITE TRAVEL SCHEDULE FOR LOCATIONS
DISR - DISPLAYS PLOT OF TIMELINE FOR LOCATIONS
DISS - DISPLAYS PLOT OF RESOURCE UTILIZATION
DIST - DISPLAYS SCHEDULE FOR AN INDIVIDUAL CREWEN
DISU - DISPLAYS PLOT OF LOCATION TIMELINE FOR AN INDIVIDUAL CREWEN
DISV - DISPLAYS TANGENT OF UNSCHEDULED TIME AND LOCATIONS FOR A CREWEN
FILEL - REQUESTS LIST-DIRECTED FILE NAME FROM USER; CHECKS IF FILE IS READY
FILEM - 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 GROUP DATA INTO CORE FROM A-D FILE
LCHART - DISPLAYS BAR CHART OF SCHEDULE FOR ALL TAE GROUPS
LESDEN - REQUESTS LEGEND TO BE USEC WITH DISPLAYS
LOADCR - LOADS CREW DATA FROM ON/OFF FILE
LOADGR - LOA'S GROUP LIST FROM N-D FILE INTO CORE
LOADMN - LOADS CREW AND INITIAL LOCATIONS FROM N-D FILE INTO CORE
LOADLN - LOADS LIST OF NAME AND WORK LOCATIONS FROM N-D FILE INTO CORE
LOADPY - LOADS CREW ID'S FROM N-D FILE INTO CORE
LOADRS - LOADS RESOURCE DATA FROM N-D FILE INTO CORE
LOADT - LOADS THE DATA INTO CORE FROM N-D FILE
LOADTY - LOADS TOY DATA INTO CORE FROM N-D FILE
MAIN - MAIN PROGRAM CONTROL
MENU - MAIN DRIVER FOR TEXTRONIX DISPLAY OPTIONS
OCHART - DISPLAYS PLOT OF UNSCHEDULED TIME FOR ALL CREWEN
PHENU - MAIN DRIVER FOR PRINT OPTIONS
PRINT - PRINTS ALL TALES FROM PRINT MENU
PRIJ - PRINTS COMPOSITE SCHEDULE ON PRINT FILE
PRTK - PRINTS COMPOSITE SCHEDULE WITH COST AND DIAMETER ON PRINT FILE
PRTM - PRINTS SCHEDULE SUMMARY FOR ALL TAE GROUPS
PRIP - PRINTS UNSCHEDULED TIME FOR ALL CREWEN ON PRINT FILE
PRTD - PRINTS TRAVEL SCHEDULE ON PRINT FILE
PRIT - PRINTS SCHEDULE FOR AN INDIVIDUAL CREWEN
PRIV  - PRINTS UNRESERVED TIME AND
      LOCATION FOR AN INDIVIDUAL CREW
RCART  - PLOTS TIMELINE FOR LOCATIONS
ROPT  - READS AND INTERPRETS COMMANDS USED
       FOR CONTROL AFTER DISPLAYS
SCART  - PLOTS RESOURCE UTILIZATION
SLOT  - QUERIES USER FOR START AND END TIMES
SDEL  - QUERIES USER FOR START AND DELTA
       TIMES FOR USE IN PLOTS
SLMS  - ASKS USER FOR MISSIONS DESIRED IN
       DISPLAYS
SLPIL  - ASKS USER TO SPECIFY CREWMAN TO USE
        IN DISPLAY
UCHART  - PLOTS LOCATION TIMELINE FOR A
        CREWMAN
UNION  - TAKES THE UNION OF THE GROUP
        AVAILABILITY WINDOWS AND SUBTRACTS
        THE AVOIDANCE WINDOWS FOR PLOT OF
        SCHEDULING OPPORTUNITIES FOR ALL
        GROUPS

C. CREATION OF ABSOLUTE ELEMENT

BPAP:IL RG-HAP:RG-GO
LIL MIP=HILINH*MSFDS

SEG MAIN
IN MAIN/HECK-DATA
SLG A++(MAIN)
IN USAGE=ROPT+MENU

SEG A1H++(A)
IN DISP
SEG A1I++(A)
IN DISK
SEG ALC++(A)
IN DUK
SEG A1M++(A)
IN DISP
SEG A1V++(A)
IN DISK
SEG A1F++(A)
IN DIST
SEG A1G++(A)
IN DISP
SEG A1H++(A)
IN SLKEL/DECOD
IN H2ANT+LEDGEN
SEG A1P++(A2)
IN DISK+CHART
SEG A1Q++(A2)
IN DISK+UNION+CHART
SEG ARC++(A2)
IN DISK+CHART
SEG APD++(A2)
IN DISK+CHART
SEG APE++(A2)
IN DISK+CHART
SEG APE++(A2)
IN DISK+CHART
SEG AFF++(A2)
IN DISK+CHART

SEG 9++(MAIN)
IN PRECUR+POINT
SEG A1R++(D)
IN PRTR
SEG B1D++(B)
IN PRTR
SEG 91C++(D)
IN PRTR

302
**PACTRO USER'S INFORMATION**

The PACTRO 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.

**PACTRO MAIN MENU**

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

**Note:** Options 2 and 3 display submenus

**MULTIPLE SELECTIONS WILL BE PROCESSED FROM THE FOLLOWING MENUS.**

**SELECT DISPLAY OPTIONS DESIRED**

- 0 - RETURN TO MAIN MENU
  
  *** SUMMARY ***
- 1 - TABULATE COMPOSITE SCHEDULE
- 2 - TABULATE COMPLETE SCHEDULE WITH COST AND DURATION
- 3 - PLOT BAR GRAPH OF SCHEDULE FOR ALL GROUPS
- 4 - TABULATE SCHEDULE SUMMARY FOR ALL TAC 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 ***

(Chapter 1, PAGE 1, POOR QUALITY)
**NOTES:**

*Options 1, 2, 7, 9, 11 and 12 ask user to input start and two times for display (must be in month/day/year format).*
*Options 3, 5, 6, 8, 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).*
*Options 1, 5, 10 and 12 ask for mission(s) to use for displays.*
*Options 11 and 13 ask user to specify crew.*
*Options 3, 6, 9, 10 and 17 ask for legend to label plot displays with.*
*In each display if required files have not been attached the user is asked for file name. Also, files may be attached via options 14, 15 and 16.*

---

**SELECT PRINT OPTION(S) DESIRED**

0 - RETURN TO MAIN MENU
1 - PRINT ALL TABLES
   *** SUMMARY ***
2 - PRINT COMPOSITE SCHEDULE
3 - PRINT COMPOSITE SCHEDULE WITH LOST AND DELTA
4 - PRINT SCHEDULE SUMMARY FOR ALL CREW
5 - PRINT SCHEDULE FOR ALL CREW
6 - PRINT TRAVEL SCHEDULE
   *** BY INDIVIDUAL CREWMAN ***
7 - PRINT SCHEDULE FOR A CREWMAN
8 - PRINT UNSCHEDULED TIME FOR A CREWMAN
   *** INPUT - FILE SETUP ***
9 - INPUT NAME - DETECTED FILE CURRENTLY
10 - INPUT LIST - DETECTED FILE CURRENTLY
11 - INPUT ON/OFF FILE CURRENTLY
   ***

---

**NOTES:**

*All options except for file setup ask user to input start and end times (in month/day/year format).*
*Option 9 asks for mission(s) to be used.*
*If required files have not been attached then the selected option will ask for input if required file.
   Names, files may also 6f attached with options 9, 10 and 11.*
APPROVAL

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