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DEPOT MAINTENANCE PLANNING AND PROGRAMMING SYSTEM (DMPPS): VOLU--ETC(U)
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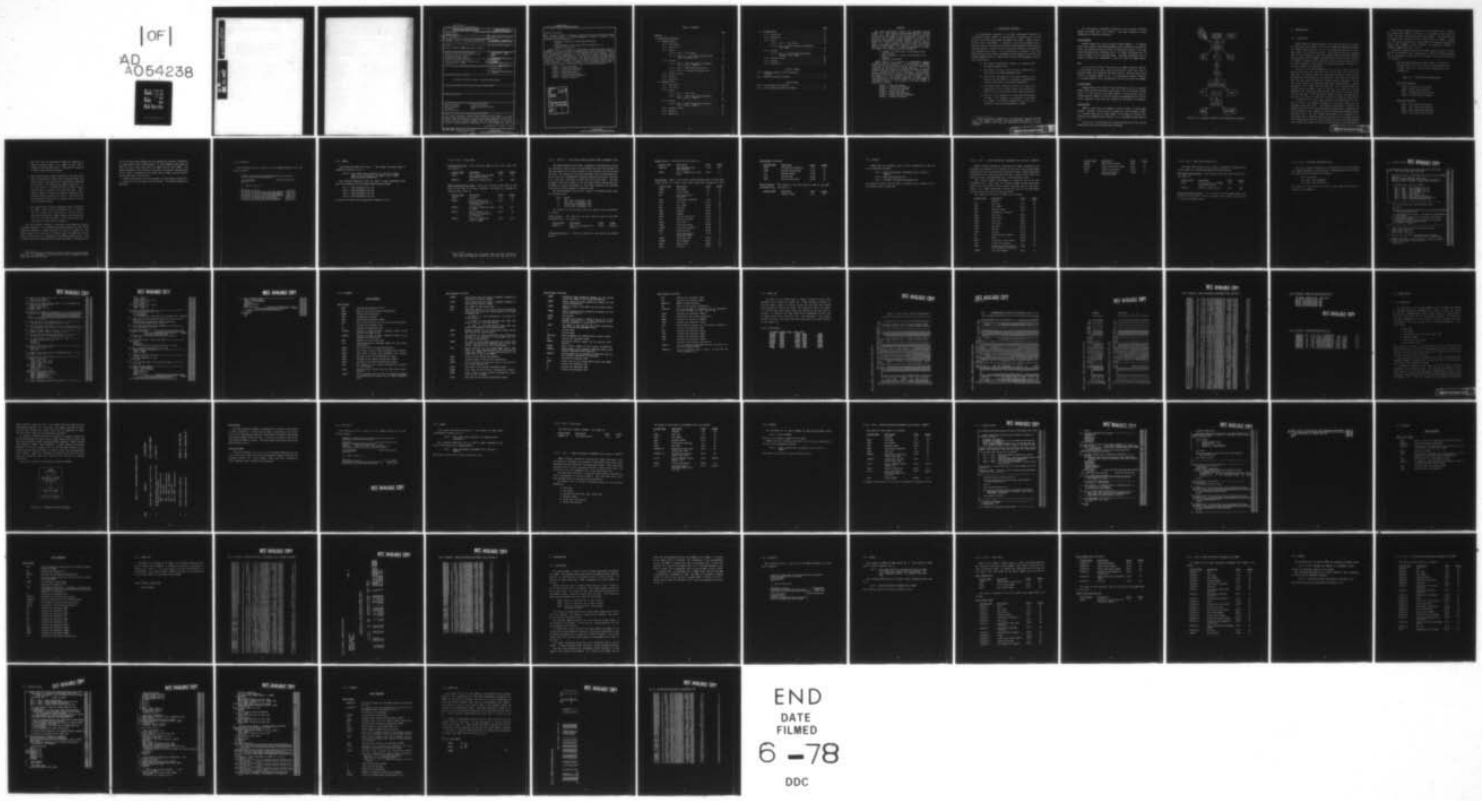

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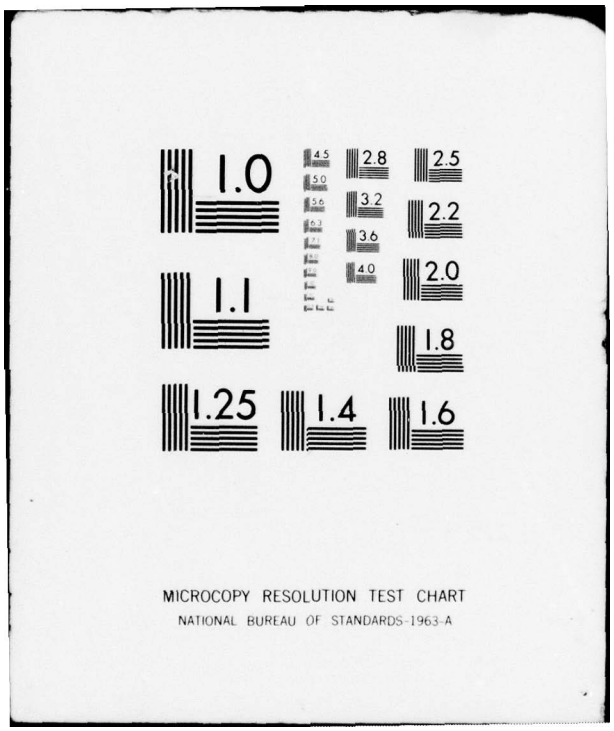
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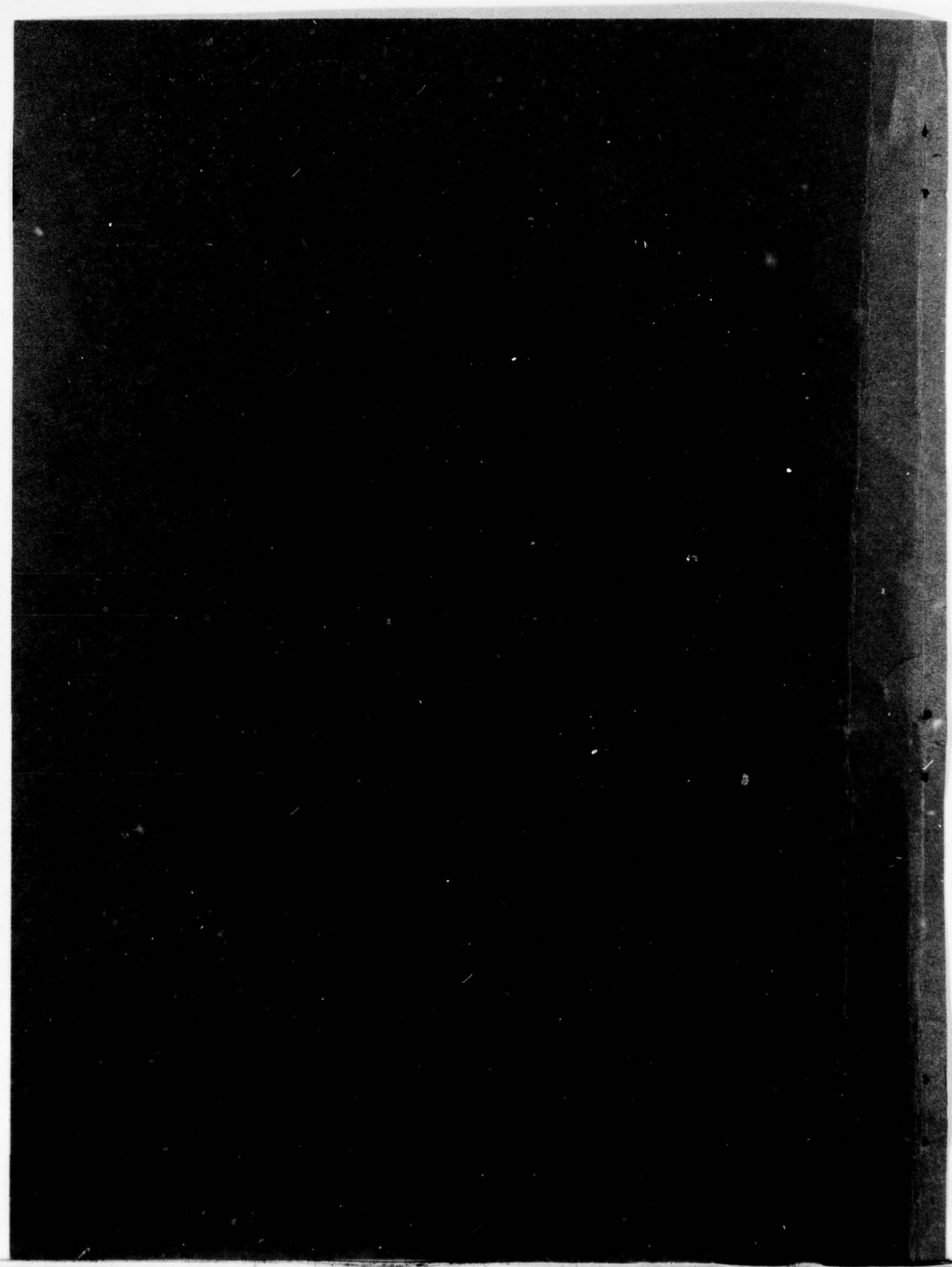

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The Depot Maintenance Planning and Programming System (DMPPS) is a large computer system developed over a period of two and a half years by the David W. Taylor Naval Ship Research and Development Center (DTNSRDC), Code 186 for the Naval Sea Systems Command (NAVSEA), Code 070T. The System was developed to project shipyard resource requirements (i.e., labor mandays and costs as

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well as material costs) by shipyard production shop and by ship work breakdown structure (SWBS). It enables management to assess the impact on the shipyards and ship systems of:

- Changes in depot-level maintenance/alterations policy;
- Major changes in force levels and/or composition; and
- Budgetary constraints.

DMPPS consists of a network of interdependent computer programs written in FORTRAN IV. It was developed at DTNSRDC using the CDC 6000 series computers and was subsequently converted for the IBM 360/370 series computers. It is now installed and operational at the NAVSEA 070 computer terminal (which accesses an IBM 370/168 computer). This document presents the IBM 360/370 version of the DMPPS program modules. The modules have been grouped into six subsystems. Each of Volumes 2-7 of this document describes, in detail, one of these subsystems. An executive summary of the entire DMPPS is presented in Volume 1. The content of the seven volumes is indicated as follows:

Volume 1 - Executive Summary
Volume 2 - Preprocessor Subsystem
Volume 3 - Alterations Subsystem
Volume 4 - Repair Subsystem
Volume 5 - Synthesizer Subsystem
Volume 6 - Report Generator Subsystem
Volume 7 - Feedback Subsystem

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ABSTRACT

The Depot Maintenance Planning and Programming System (DMPPS) is a large computer system developed over a period of two and a half years by the David W. Taylor Naval Ship Research and Development Center (DTNSRDC), Code 186 for the Naval Sea Systems Command (NAVSEA), Code 070T. The System was developed to project shipyard resource requirements (i.e., labor mandays and costs as well as material costs) by shipyard production shop and by ship work breakdown structure (SWBS). It enables management to assess the impact on the shipyards and ship systems of

- Changes in depot-level maintenance/alterations policy
- Major changes in force levels and/or composition
- Budgetary constraints

DMPPS consists of a network of interdependent computer programs written in FORTRAN IV. It was developed at DTNSRDC using the CDC 6000 series computers and was subsequently converted for the IBM 360/370 series computers. It is now installed and operational at the NAVSEA 070 computer terminal (which accesses an IBM 370/168 computer). This document presents the IBM 360/370 version of the DMPPS program modules. The modules have been grouped into six subsystems. Each of Volumes 2-7 of this document describes, in detail, one of these subsystems. An executive summary of the entire DMPPS is presented in Volume 1. The content of the seven volumes is indicated as follows:

Volume 1 - Executive Summary
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Volume 6 - Report Generator Subsystem
Volume 7 - Feedback Subsystem

2. PREPROCESSOR SUBSYSTEM

The Preprocessor Subsystem of the Depot Maintenance Planning and Programming System (DMPPS) is responsible for preparing the initial version of the Depot Maintenance Assignment File (DMAF). DMAF is one of the key files of the DMPPS. It contains a list of all shipwork anticipated for each of the Naval and privately-owned shipyards, broken down by six-month periods. The file covers the five-year period to be reported on (as selected by the user). It is, essentially, an extract of the Long Range Planning System (LRPS) Assignment Files prepared by the Naval Sea Systems Command, Code 071. DMAF differs from the LRPS Assignment Files in the following ways:

- Only "depot maintenance"* shipwork is extracted from the LRPS Assignment Files.
- The format of each of the records of DMAF differs from those of the LRPS Assignment Files.
- Some of the information on the LRPS records is not carried over onto DMAF (i.e., homeport, specialization category, type select, and docking parameters).
- Each DMAF record contains space for the repair and alterations matrix numbers which are required by DMPPS (but not by the Long Range Planning System).
- Some of the information is specified differently on DMAF. For example, the shipyard is specified by a number on the LRPS Assignment File, but is converted to a five-letter designation for DMAF.

---

*"Depot maintenance" shipwork is all depot-level repair/alterations work to be reported to OSD(I&L) under DOD Instruction 4151.15. It includes all shipwork other than new construction, fitting out and post shakedown.

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The Preprocessor Subsystem consists of three programs (PRELIM, ERRCHK, and UPDEP) and a sort routine. The major functions of these components are described as follows:

Program PRELIM

PRELIM creates the initial version of DMAF (DMAF-0). It examines each of the records of the LRPS Assignment Files, discards all records not within the selected five-year period, and determines whether or not each record describes depot maintenance work. All depot maintenance work is placed on DMAF-0 in the required format. Non-depot maintenance work is saved on another file ("NON-DEPOT"), using the format for DMAF records.

Sort

A sort must be made on the version of DMAF created by PRELIM. It sorts DMAF first by ship, then by availability start date, then by sequence number, and finally by semi-annual period. The sort routine must also be run whenever ERRCHK is run. It is described in detail in Section 2.2 (program ERRCHK) and is incorporated into the run set-up for ERRCHK.

Program ERRCHK

ERRCHK examines each record of the sorted DMAF for errors in sequence number and/or percent alterations and prints a list of the errors encountered. It also creates a new DMAF (DMAF-1), which differs from the sorted version of DMAF-0 in that the records are numbered and the "continuation indicator" field has been checked and corrected, if necessary.

Program UPDEP

UPDEP is used within the DMPPS to revise, insert, or delete DMAF records. Although it may be used to update any of the versions of DMAF, it is usually used only to update DMAF-1 on the basis of "errors" discovered by the ERRCHK program (Section 2.2) or the MATCH program (Section 3.1).

Figure 2.0-1 illustrates the interrelationships of the various programs and files of the Preprocessor Subsystem.

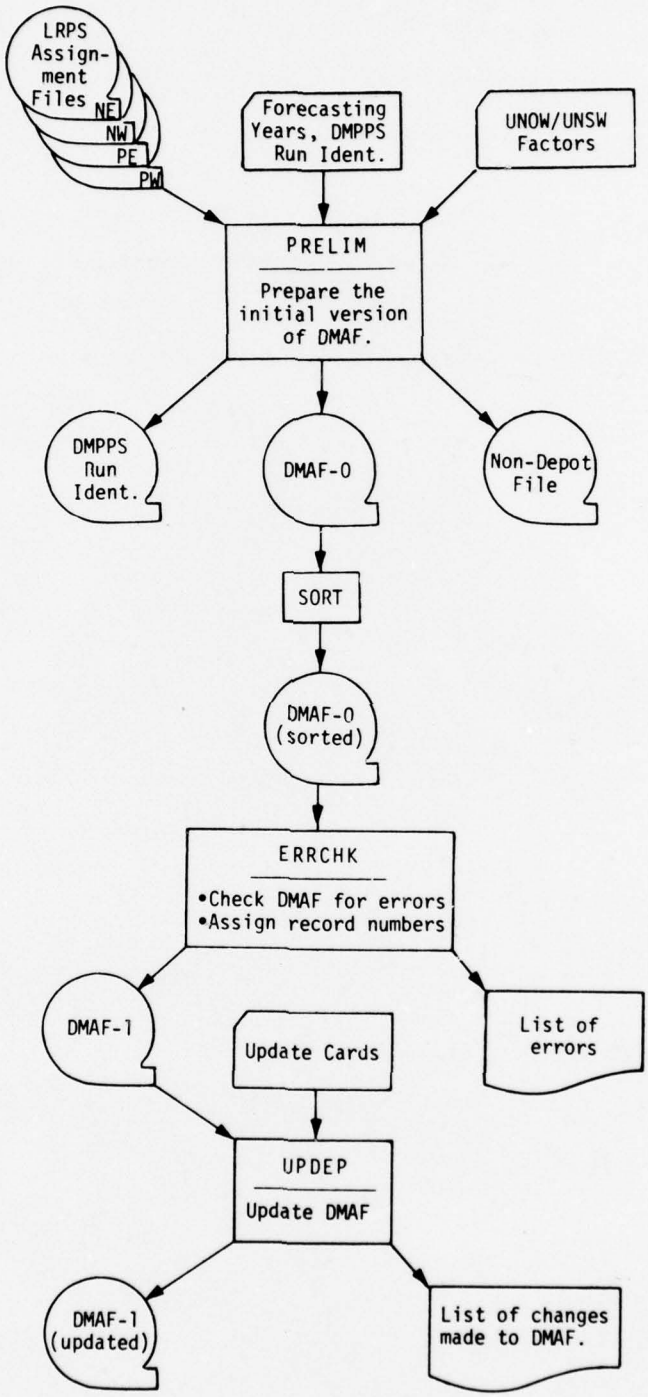

Figure 2.0-1 - Schematic Diagram of the Preprocessor Subsystem

2.1 PROGRAM PRELIM

2.1.1 DESCRIPTION

PRELIM reads the LRPS Assignment Files, extracts pertinent information from them, and creates a new file, the Depot Maintenance Assignment File (DMAF), which contains a list of all shipwork scheduled for a five-year period (the forecasting period). DMAF contains only that shipwork which is to be reported on under the automated Depot Maintenance Planning and Programming System (DMPPS) established by the Office of the Secretary of Defense (Installation and Logistics) through DOD Instruction 4151.15. Any other shipwork, termed herein "non-depot maintenance" shipwork, is placed on another file, "Non-Depot".

There are four LRPS Assignment Files, one for each of the four sectors--Navy East (NE), Navy West (NW), Private East (PE), and Private West (PW). The sectors denote the ownership and coastal location of the shipyard where the shipwork is to be performed. The first four records on each file are header records which contain general information such as file identification and shipyard number/name cross-reference. PRELIM generates a file, "DMAF Run Identification", which contains DMPPS run identification information (input by the user on a card) and the LRPS Assignment File identifications extracted from each of the four sector files of the LRPS. This information enables the user to determine, at any time, the version of LRPS that was used to create the current DMAF.

In addition to the four header records, each LRPS sector file contains a list of all shipwork scheduled for the next 10 years for the shipyards within the sector. The shipwork is described in terms of the mandays required for the various scheduled availabilities. Availabilities are identified by ship, availability start and end dates, sequence number, and type of work. The total manday requirements for an availability are broken down into the amounts required during each of the six-month periods (of a fiscal year) within which the availability falls. The LRPS Assignment Files contain one record for each six-month period of each availability.

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Each record on DMAF corresponds to one of the LRPS records. However, any records which describe a portion of an availability not within the (input) five-year forecasting period are discarded. Also discarded are any records with a ship type field of "UDOC", "FL", or "DDSN". In addition, the sector designation on records describing shipwork scheduled for Newport News ("SNEWS"), Groton ("SGROT"), or Pascagoula ("SPASC") is changed by PRELIM from "PE", to "NE".

Pertinent information from all other LRPS records is placed on either DMAF or the Non-Depot File, as appropriate. Some of the LRPS parameters must be converted to a different form for DMAF. This entails the following processing:

- The yard number specified on LRPS records is converted to the appropriate four or five-letter yard designation used on DMAF. Table 2.1-1 lists the Navy shipyards and their designations.

TABLE 2.1-1 - NAVAL SHIPYARD DESIGNATIONS

East Coast Shipyards

CHASN - Charleston Naval Shipyard
NORVA - Norfolk Naval Shipyard
PHILA - Philadelphia Naval Shipyard
PTSMH - Portsmouth Naval Shipyard

West Coast Shipyards

LBECH - Long Beach Naval Shipyard
MARE - Mare Island Naval Shipyard
PEARL - Pearl Harbor Naval Shipyard
PUGET - Puget Sound Naval Shipyard

- The start and end availability dates are specified on LRPS as relative dates (i.e., number of days since 1 October of the LRPS base year*). They must be converted to their Gregorian date equivalent.

- The six-month period number specified on the LRPS record must be converted to fiscal year and period within the fiscal year for the portion of an availability described by the record. The LRPS period numbers range from 1 to 20, with period 1 representing the six-month period starting with 1 October of the LRPS base year. DMAF, however, employs a different scheme for designating the six-month period covered by the record. The fiscal year and six-month period (first or second) within the fiscal year are stored on DMAF.

- The continuation indicator designation must be modified for DMAF. LRPS uses the characters "(C)" to indicate that the record is not the first on the file for a particular availability. DMAF, however, uses an asterisk ("*") for the same purpose. Both files denote the availability's first record by blank(s).

The final function of PRELIM is to divide all Navy UNOS work (Unscheduled/Other Shipwork) into its UNSW (Unscheduled Shipwork) and UNOW (Other Shipwork) components. PRELIM performs this task by reading, for each Naval shipyard, the fractions to be used to split the UNOS work and the number of the matrix to be assigned to the UNSW and UNOW portions. When an LRPS record with a ship type field containing "UNOS" is encountered for

---

*The LRPS base year is found on the fourth record of the LRPS Assignment File. It represents the first year for which a schedule of availabilities exists on the file.

one of the Navy yards, PRELIM uses the appropriate fractions to determine the UNOW mandays and the UNSW mandays. It then generates two records on DMAF--one with a ship type field of "UNOW" and one with "UNSW". The computed mandays for the category are placed on the record, the applicable matrix number is assigned as the repair matrix number, and the percent alterations field is set to zero.

PRELIM consists only of a main program (no subroutines or functions). It performs all of the tasks so far described. No printed messages are generated.

2.1.2 RUN SET-UP

The following set-up is used to run the PRELIM program on the IBM 360/370 computer:

```
//NVSPREL2 JOB (XXXXXXXXXX,XXXXX),USER,CLASS=C,TIME=(,15),MSGLEVEL=1
//JOBLIB DD DSN=NVS01.DEPOT.LIB,DISP=SHR

// EXEC PGM=PRELIM2                                (EXECUTE PROGRAM PRELIM2)
//GO.FT05F001 DD *
  ┌──────────────────────────────────────────────────────────────────────┐
  │                                                                      │
  │    PRELIM card inputs (unit 5)                                       │
  │                                                                      │
  └──────────────────────────────────────────────────────────────────────┘
//GO.FT06F001 DD SYSOUT=A                                        (NOT USED)
//GO.FT01F001 DD DSN=WDPC.A010054.A9967.NEOUT,DISP=SHR          (INPUT FILE)
//GO.FT02F001 DD DSN=WDPC.A010054.A9967.NWOUT,DISP=SHR          (INPUT FILE)
//GO.FT03F001 DD DSN=WDPC.A010054.A9967.PEOUT,DISP=SHR          (INPUT FILE)
//GO.FT04F001 DD DSN=WDPC.A010054.A9967.PWOUT,DISP=SHR          (INPUT FILE)
//GO.FT07F001 DD DSN=NVS01.DMAF0.DATA,DISP=SHR                 (OUTPUT FILE)
//GO.FT08F001 DD DSN=NVS01.DMAF.RUNID.DATA,DISP=SHR            (OUTPUT FILE)
//GO.FT09F001 DD DSN=NVS01.NONDEPOT.DATA,DISP=SHR              (OUTPUT FILE)
```

2.1.3 INPUTS

Card inputs are made using unit 5. The format for these cards is presented in Section 2.1.3.1.

Unit 5 - Card inputs which specify (1) the first fiscal year to be included on the DMAF, and (2) UNOW/ UNSW processing information.

The following additional units are used to input information from disk files created by the Long Range Planning System (LRPS):

Unit 1 - LRPS Assignment File, NE

Unit 2 - LRPS Assignment File, NW

Unit 3 - LRPS Assignment File, PE

Unit 4 - LRPS Assignment File, PW

The format for these files is described in Section 2.1.3.2.

2.1.3.1 Unit 5 - Card Inputs

Forecast Period Card. This card must appear as the first input card. Its format is:

Variable Name	Description	Field	Format
IFYST	First fiscal year of depot maintenance forecast	1-2	I2
RUNID(10)	DMPPS run identification	4-43	10A4

UNOS Processing Control Cards. There must be exactly eight cards of this type, one for each of the Naval shipyards. The format for the UNOS processing control cards is:

Variable Name	Description	Field	Format
YARD(I)	Shipyard	1-5	A5
MUNSW(I)	Matrix number* to be assigned to UNSW work in this shipyard	10-13	I4
FUNSW(I)	Fraction of UNOS work which is UNSW**	19-24	F6.4
MUNOW(I)	Matrix number* to be assigned to UNOW work in this shipyard	28-31	I4
FUNOW(I)	Fraction of UNOS work which is UNOW**	38-43	F6.4

*The matrix numbers must be between 2800 and 3000 (inclusive).
**The fractions FUNSW and FUNOW for each yard must sum to 1.0.

2.1.3.2 Units 1-4 - Long Range Planning System (LRPS) Assignment Files

The LRPS Assignment Files contain schedules of availabilities of shipyard resources, type of work to be performed, and start and end dates of each availability for all Naval vessels for the "current" and nine succeeding years. The shipyards in the LRPS Assignment Files are subdivided into sectors which are represented by shipyard ownership and coastal locations (i.e., Navy East, Navy West, Private East and Private West). The LRPS Assignment Files are created by the Long Range Planning System which was developed to provide assistance in long range scheduling and workload projections for Naval shipwork in domestic yards.

The LRPS Assignment Files must be input to the PRELIM program using the following units:

Unit	Sector
1.	Navy East Assignment File
2.	Navy West Assignment File
3.	Private East Assignment File
4.	Private West Assignment File

The formats for each of these files are identical and are described as follows:

Header Record 1. This record is the first record on each of the LRPS Assignment Files. Its format is:

Variable Name	Description	Field	Format
YDNMF(10)	Names of the shipyards on the file	21-80	10(A5,1X)

Header Records 2 and 3. These two records are not used by the PRELIM program.

Header Record 4. The format for this record is:

Variable Name	Description	Field	Format
LRPSID(6)	LRPS Assignment File identification	5-28	6A4
IFSTYR	First calendar year of the file	29-30	I2

Ship Records. There is one record of the following format for each semi-annual period of a fiscal year within which each availability falls:

Variable Name	Description	Field	Format
IYDNO	Yard number	1-2	I2
IPDNO	Period number	3-4	I2
DKID	Dock availability assignment	5-7	A3
CONT	Continuation indicator	8-10	A3
ISHIP	Ship type	11-14	A4
HULL	Hull number	16-19	A4
HMPT	Home port	20-24	A5
IDKDY	Dockdays	25-27	I3
IMNDY	Mandays	28-34	I7
ISTRT	Relative start date	35-38	I4
IEND	Relative end date	39-42	I4
IDKCLS	Dock class	43-44	I2
IDKPD	Period ship docks	45-46	I2
IUDKPD	Period ship undocks	47-48	I2
SPEC	Specialization	49-52	A4
ICRV	Labor distribution histogram number	53-54	I2
ITOTDY	Total dock days	55-58	I4
ITOTMN	Total mandays	59-65	I7
AVAIL	Type of work	66-68	A3
IPRIO	Priority	69-70	I2

Ship Records (Continued)

Variable Name	Description	Field	Format
ISRES	Docking start restraint	71-73	I3
IERES	Docking end restraint	74-76	I3
ISEQ	Sequence number	77-80	I4
ILAP	Days overlap	81-85	I5
IPCTA	Percent alterations	87-89	I3

Trailer Records. This record is the last record on each of the LRPS Assignment Files. Its format is:

Variable Name	Description	Field	Format
	Contains "9999"	1-4	I4

2.1.4 OUTPUTS

PRELIM uses the following units to store information on disk for use by subsequent programs:

Unit 7 - Depot Maintenance Assignment File, Version 0 (DMAF-0)

Unit 8 - DMAF Identification File

Unit 9 - Non-Depot Maintenance Assignment File

The formats for these files are given in Sections 2.1.4.1 through 2.1.4.3. No hardcopy output is generated.

2.1.4.1 Unit 7 - Depot Maintenance Assignment File, Version 0 (DMAF-0)

DMAF-0 contains information describing all depot maintenance ship availabilities scheduled for yard-work at both Navy and privately-owned shipyards during the selected five-fiscal-year period. Depot maintenance availabilities are those availabilities with a type of work other than Fitting Out (FO), Post Shakedown (PS), or New Construction (NC).

Each record of DMAF-0 corresponds to a record on one of the LRPS Assignment Files. Thus, there is a record on DMAF for each semi-annual period that an availability falls within, providing that (a) the availability is a "depot maintenance" availability, and (b) the semi-annual period is within the 5-year forecasting period.

The format for each record of DMAF-0 is as follows:

Variable Name	Description	Field	Format
Y	Shipyard	1-5	A5
ISHIP	Ship type	6-9	A4
IHULL	Hull number	10-13	I4
ISEQ	Sequence number	14-17	I4
CONT	Continuation indicator	18	I1
AVAIL	Type work	19-21	A3
ISTMO	Start month	22-23	I2
ISTDY	Start day	24-25	I2
ISTYR	Start year	26-27	I2
IEDMO	End month	28-29	I2
IEDDY	End day	30-31	I2
IEDYR	End year	32-33	I2
SPEC	Specialization category	34-36	A3
SEC	Sector	37-38	A2
NOWYR	Fiscal year (this record)	39-40	I2
IPER	Period (this record)	41	I1
IMNDY	Production shop productive (PSP) mandays (this period)	42-48	I7
ITOTMN	Total PSP mandays	49-55	I7

Variable Name	Description	Field	Format
MATNOR	Repair matrix number	56-59	I4
MATNOA	Alterations matrix number	60-63	I4
IPCTA	Percent alterations	64-66	I3
ICRV	Labor distribution histogram number	67-68	I2

2.1.4.2 Unit 8 - DMAF Identification File

The DMAF Identification File contains information identifying the current DMPPS run, and LRPS Assignment File identification.

DMAF Identification Record. This record is the first record on the file. Its format is:

Variable Name	Description	Field	Format
IFYST	First fiscal year of DMPPS forecasting period	1-2	I2
RUNID(10)	DMPPS run identification	4-43	10A4

LRPS Identification Records. Four records of the following format form records 2-5 of the file. Each is an extract of the fourth record of one of the LRPS Assignment Files.

2.1.4.3 Unit 9 - Non-Depot Maintenance File

This file contains information on ship-availabilities not considered to be "depot maintenance" availabilities. Availabilities with the following types of work fall within this category:

FO - Fitting Out

PS or PSA - Post Shakedown

NC or RNC - New Construction

The format for each record on the file is the same as that given in Section 2.1.4.1 (DMAF-0).

2.1.5 PROGRAM LISTING

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```
C*****PROGRAM PRELIM2(INPUT,OUTPUT,TAPE5=INPUT,TAPE6=OUTPUT,TAPE1,      ****  10
C****.     TAPE2,TAPE3,TAPE4,TAPE7,TAPE8,TAPE9)                         ****  20
C                                                                       PREL  30
C                                                                       PREL  40
C      THIS PROGRAM EXTRACTS A PRELIMINARY DMAF FROM THE LRPS ASSIGNMENT PREL  50
C      FILE.                                                            PREL  60
C      PROGRAMMED BY JAY MANDELBAUM  AUGUST 1975                        PREL  70
C      PART OF THE CODING WAS TAKEN FROM A PROGRAM BY DAN ALLEN         PREL  80
C      REVISED BY LINDA L. LAMATRICE, DTNSRDC, CODE 186 (DEC 1976)      PREL  90
C                                                                       PREL 100
C                                                                       PREL 110
C      THE FOLLOWING UNITS ARE USED BY PRELIM:                          PREL 120
C                                                                       PREL 130
C         UNIT 1 - INPUT  - LRPS ASSIGNMENT FILE, NE                    PREL 140
C         UNIT 2 - INPUT  - LRPS ASSIGNMENT FILE, NW                    PREL 150
C         UNIT 3 - INPUT  - LRPS ASSIGNMENT FILE, PE                    PREL 160
C         UNIT 4 - INPUT  - LRPS ASSIGNMENT FILE, PW                    PREL 170
C         UNIT 5 - INPUT  - CARD INPUTS                                 PREL 180
C         UNIT 6 - OUTPUT - NOT USED BY PRELIM                          PREL 190
C         UNIT 7 - OUTPUT - DMAF, VERSION 0 (UNSORTED)                  PREL 200
C         UNIT 8 - OUTPUT - DMAF IDENTIFICATION RECORDS FILE            PREL 210
C         UNIT 9 - OUTPUT - NON-DEPOT MAINTENANCE FILE                  PREL 220
C                                                                       PREL 230
C-----------------------------------------------------------------      PREL 240
C                                                                       PREL 250
      REAL*8 YARD,OBLANK,Y,HMPT,SGROT,SNEWS,SPASC,YDNME                 **** 260
C                                                                       PREL 270
      REAL MAP,NC                                                       PREL 280
C                                                                       PREL 290
      DIMENSION YARD(8),RUNID(10),LPPSID(6),SECTOR(4),MUNSW(8),MUNOW(8),PREL 300
     .    FUNSW(8),FUNOW(8),YDNME(10)                                   PREL 310
C                                                                       PREL 320
      DATA SECTOR/2HNE,2HNW,2HPE,2HPW/,  SGROT/5HSGROT/,SNEWS/5HSNEWS/, PREL 330
     .    SPASC/5HSPASC/                                                PREL 340
      DATA UNOS/4HUNOS/, UNSW/4HUNSW/, UNOW/4HUNOW/, UDOC/4HUDOK/,      PREL 350
     .    FL/2HFL/, DDSN/4HDDSN/                                        PREL 360
      DATA MAP/3HMAP/, FO/2HFO/, PS/2HPS/, PSA/3HPSA/, RNC/3HRNC/,      PREL 370
     .    NC/2HNC/, OS/2HOS/, SW/2HSW/, OW/2HOW/                        PREL 380
      DATA ASTR/4H****/, BLANK/1H /                                     PREL 390
C                                                                       PREL 400
C-----------------------------------------------------------------      PREL 410
C                                                                       PREL 420
C     READ FIRST FISCAL YEAR OF DEPOT MAINTENANCE FORECAST              PREL 430
      READ (5,100)  IFYST,RUNID                                         PREL 440
  100 FORMAT (I2,1X,10A4)                                               PREL 450
      WRITE (6,100)  IFYST,RUNID                                        PREL 460
C                                                                       PREL 470
C-----READ FOR EACH NAVY YARD - UNSW AND UNOW MATRIX NUMBERS            PREL 480
C                           - FRACTION OF UNOS FOR UNSW AND UNOW        PREL 490
      DO 110   I1 = 1,8                                                 PREL 500
  110 READ (5,120)  YARD(I1),MUNSW(I1),FUNSW(I1),MUNOW(I1),FUNOW(I1)    PREL 510
  120 FORMAT (A5,4X,I4,6X,F6.4,4X,I4,6X,F6.4)                           PREL 520
      IFYEND = IFYST + 4                                                PREL 530
      DO 400 J=1,4                                                      PREL 540
C                                                                       PREL 550
```

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```
C-----READ LIST OF YARDS ON LRPS FILE. ----------                    PREL 560
      READ (J,130)  YDNME                                            PREL 570
  130 FORMAT(T21,10(A5,1X)//)                                        PREL 580
C                                                                    PREL 590
C-----READ FIRST CALENDAR YEAR AND IDENT. OF LRPS ASSIGNMENT FILE.   PREL 600
      READ (J,150)  LRPSID,IFSTYR                                    PREL 610
  150 FORMAT (4X,6A4,I2)                                             PREL 620
      WRITE (8,160)  LRPSID                                          PREL 630
  160 FORMAT (6A4)                                                   PREL 640
C                                                                    PREL 650
C-----READ LRPS ASSIGNMENT FILE RECORD----------                     PREL 660
  170 READ(J,200)  IYDNO,IPDNO,DKID,CONT,SHIP,IHULL,HMPT,IDKDY,IMNDY,PREL 670
     A             ISTRT,IEND,IDKCLS,IDKPD,IUDKPD,SPEC,ICRV,ITOTDY,PREL 680
     B             ITOTMN,AVAIL,IPRIO,ISRES,IERES,ISEQ,ILAP,IPCTA  PREL 690
  200 FORMAT(2I2,2A3,A4,1X,I4,A5,I3,I7,2I4,3I2,A4,I2,I4,I7,A3,I2,2I3,PREL 700
     A       I4,I5,1X,I3)                                            PREL 710
C                                                                    PREL 720
C-----TEST FOR END OF LRPS ASSIGNMENT FILE----------                 PREL 730
      IF(IYDNO .EQ. 99 .AND. IPDNO .EQ. 99) GO TO 400                PREL 740
C                                                                    PREL 750
C-----TEST FOR INVALID SHIP TYPES----------                          PREL 760
      IF (SHIP.EQ.UDOC .OR. SHIP.EQ.FL .OR. SHIP.EQ.DDSN) GO TO 170  PREL 770
C                                                                    PREL 780
C-----CALCULATE FISCAL YEAR----------                                PREL 790
      NOWYR = IFSTYR + (IPDNO - MOD(IPDNO - 1,2))/2 + 1              PREL 800
C                                                                    PREL 810
C-----TEST IF SHIP WITHIN FISCAL YEAR LIMITS----------               PREL 820
      IF (NOWYR.LT.IFYST .OR. NOWYR.GT.IFYEND)  GO TO 170            PREL 830
C                                                                    PREL 840
C-----IF TYPE OF WORK IS MAP, SET PERCENT ALT TO ZERO. ----------    PREL 850
      IF (AVAIL.NE.MAP)  GO TO 210                                   PREL 860
      IPCTA=0                                                        PREL 870
      MATNOA=1500                                                    PREL 880
C                                                                    PREL 890
C-----TEST FOR AVAILABILITY OVERLAP----------                        PREL 900
  210 IF(ILAP .LT. 0) GO TO 220                                      PREL 910
      IEND = IEND + ILAP                                             PREL 920
      GO TO 230                                                      PREL 930
C                                                                    PREL 940
C-----CORRECT START AND END DATES FOR OVERLAPPING WORK ----------    PREL 950
  220 ISTRT = ISTRT + ILAP                                           PREL 960
C                                                                    PREL 970
C-----CALCULATE START AND END DATES----------                        PREL 980
  230 IEND = IEND + 180                                              PREL 990
      ISTRT = ISTRT + 180                                            PREL1000
      IEDYR = IEND / 360 + IFSTYR                                    PREL1010
      IF(ISTRT .GE. 0) GO TO 250                                     PREL1020
      ISTYR = IFSTYR                                                 PREL1030
  240 ISTRT = ISTRT + 360                                            PREL1040
      ISTYR = ISTYR - 1                                              PREL1050
      IF(ISTRT .LT. 0) GO TO 240                                     PREL1060
      GO TO 260                                                      PREL1070
  250 ISTYR = ISTRT / 360 + IFSTYR                                   PREL1080
  260 IEDMO = MOD(IEND,360) / 30 + 1                                 PREL1090
      ISTMO = MOD(ISTRT,360) / 30 + 1                                PREL1100
      IEDDY = MOD(IEND,30) + 1                                       PREL1110
      ISTDY = MOD(ISTRT,30) + 1                                      PREL1120
      IPER = MOD(IPDNO - 1,2) + 1                                    PREL1130
C                                                                    PREL1140
C-----INSERT PROVISION FOR NEW FISCAL YEARS----------                PREL1150
```

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```
      ISTMO = ISTMO + 3                                                  PREL1160
      IEDMO = IEDMO + 3                                                  PREL1170
      IF (ISTMO.LE.12)  GO TO 270                                        PREL1180
      ISTMO = ISTMO - 12                                                 PREL1190
      ISTYR = ISTYR + 1                                                  PREL1200
  270 IF (IEDMO.LE.12)  GO TO 280                                        PREL1210
      IEDMO = IEDMO - 12                                                 PREL1220
      IEDYR = IEDYR + 1                                                  PREL1230
C                                                                        PREL1240
C-----SET UP CONTINUATION FIELD-----------------------------------       PREL1250
  280 IF(CONT .NE. BLANK) CONT = ASTR                                    PREL1260
      SEC = SECTOR(J)                                                    PREL1270
      Y = YDNME(IYDNO)                                                   PREL1280
      IF (Y.EQ.SNEWS .OR.  Y.EQ.SGROT .OR. Y.EQ.SPASC) SEC = SECTOR(3)   PREL1290
C                                                                        PREL1300
C-----WRITE NON DEPOT MAINTENANCE AVAILABILITIES ON UNIT 9--------       PREL1310
      IUNIT = 7                                                          PREL1320
      IF (AVAIL.EQ.FO.OR.AVAIL.EQ.PS.OR.AVAIL.EQ.PSA.OR.                 PREL1330
     A AVAIL.EQ.RNC.OR.AVAIL.EQ.NC)  IUNIT = 9                           PREL1340
C                                                                        PREL1350
C-----SPLIT UNOS INTO UNOW AND UNSW COMPONENTS - GO TO 156--------       PREL1360
      IF (SHIP.EQ.UNOS)  GO TO 320                                       PREL1370
C                                                                        PREL1380
C-----WRITE DMAF RECORD-------------------------------------------       PREL1390
  300 WRITE (IUNIT,310)          Y,SHIP,IHULL,ISEQ,CONT,AVAIL,ISTMO,     PREL1400
     A              ISTDY,ISTYR,IEDMO,IEDDY,IEDYR,SPEC,SEC       ,NOMYR,  PREL1410
     .              IPER,IMNDY,ITOTMN,IPCTA,ICRV                        PREL1420
  310 FORMAT(A5,A4,2I4,A1,A3,6I2,A3,A2,I2,I1,2I7,8X,I3,I2)               PREL1430
      GO TO 170                                                          PREL1440
C                                                                        PREL1450
C-----IF PRIVATE SECTOR - DO NOT SPLIT UNOS-----------------------       PREL1460
  320 AVAIL=OS                                                           PREL1470
      IPCTA = 0                                                          PREL1480
      MATNOA=1500                                                        PREL1490
      IF (SEC.EQ.SECTOR(3).OR.SEC.EQ.SECTOR(4))  GO TO 300               PREL1500
C                                                                        PREL1510
C-----SET ALT MATRIX NUMBER, PERCENT ALT TO ZERO                         PREL1520
C-----ALSO STORE VALUE OF MANDAYS---------------------------------       PREL1530
      ITEMP1 = IMNDY                                                     PREL1540
      ITEMP2 = ITOTMN                                                    PREL1550
C                                                                        PREL1560
C-----DETERMINE YARD FOR THIS UNOS--------------------------------       PREL1570
      DO 350    I1 = 1,8                                                 PREL1580
      IF (Y.EQ.YARD(I1)) GO TO 360                                       PREL1590
  350 CONTINUE                                                           PREL1600
C                                                                        PREL1610
C-----IF NOT AN INPUT YARD - DO NOT SPLIT THE UNOS----------------       PREL1620
      GO TO 300                                                          PREL1630
C                                                                        PREL1640
C-----WRITE UNSW DMAF RECORD--------------------------------------       PREL1650
  360 IMNDY = ITEMP1*FUNSW(I1)                                           PREL1660
      ITOTMN = ITEMP2*FUNSW(I1)                                          PREL1670
      SHIP = UNSW                                                        PREL1680
      MATNOR = MUNSW(I1)                                                 PREL1690
      AVAIL=SW                                                           PREL1700
      WRITE (IUNIT,370)          Y,SHIP,IHULL,ISEQ,CONT,AVAIL,ISTMO,     PREL1710
     A              ISTDY,ISTYR,IEDMO,IEDDY,IEDYR,SPEC,SEC       ,NOMYR,  PREL1720
     .   IPER,IMNDY,ITOTMN,MATNOR,MATNOA,IPCTA,ICRV                      PREL1730
  370 FORMAT(A5,A4,2I4,A1,A3,6I2,A3,A2,I2,I1,2I7,2I4,I3,I2)              PREL1740
C                                                                        PREL1750
```

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```
C-----WRITE UNOW DMAF RECORD-----------------------------------------      PREL1760
      IMNDY = ITEMP1*FUNOW(I1)                                            PREL1770
      ITOTMN = ITEMP2*FUNOW(I1)                                           PREL1780
      SHIP=UNOW                                                           PREL1790
      MATNOR = MUNOW(I1)                                                  PREL1800
      AVAIL=OW                                                            PREL1810
      WRITE (IUNIT,370)          Y,SHIP,IHULL,ISEQ,CONT,AVAIL,ISTMO,      PREL1820
     A              ISTDY,ISTYR,IEDMO,IEDDY,IEDYR,SPEC,SEC       ,NOWYR,  PREL1830
     .    IPER,IMNDY,ITOTMN,MATNOR,MATNOA,IPCTA,ICRV                     PREL1840
      GO TO 170                                                           PREL1850
  400 CONTINUE                                                            PREL1860
      STOP                                                                PREL1870
      END                                                                 PREL1880
```

2.1.6 GLOSSARY

LOCAL VARIABLES

Main Program

ASTR	Contains the characters "****".
AVAIL	Type of work for the current availability.
BLANK	Contains one blank space.
CONT	Continuation indicator.
DDSN	Contains the characters "DDSN".
DKID	Dock identification for the current availability.
FL	Contains the characters "FL".
FO	Contains the characters "FO".
FUNOW(8)	Fraction of UNOS for UNOW. Subscript refers to the shipyard (see YARD array).
FUNSW(8)	Fraction of UNOS for UNSW. Subscript refers to the shipyard (see YARD array).
HMPT	Homeport for the current ship.
ICRV	Labor distribution histogram number for the current availability.
IDKCLS	Dock class for the current availability.
IDKDY	Dock days (current LRPS Assignment File record).
IDKPD	Dock period (current LRPS Assignment File record).
IEDDY	End date of the current availability (day).
IEDMO	End date of the current availability (month).
IEDYR	End date of the current availability (year).
IEND	End "date" of the current availability relative to 1 Oct IFSTYR.
IERES	End restraint on dock time for the current availability.
IFSTYR	First calendar year for which a complete schedule of availabilities exists on the LRPS Assignment File.

Main Program (continued)

IFYFND	Last fiscal year for which a complete schedule of availabilities exists on DMAF.
IFYST	First fiscal year for which a complete schedule of availabilities exists on DMAF.
IHULL	Hull number of the current ship.
ILAP	Indicates whether or not the current availability falls entirely within the 10-year period of the LRPS Assignment File. If ILAP = 0, the availability is within the 10-year period. If ILAP > 0, the availability ends ILAP days after the end of the 10-year period. If ILAP < 0, the availability starts ILAP days before the beginning of the 10-year period.
IMNDY	Mandays required for work during the 6-month period described by the current record.
IPCTA	The percent of total production shop productive mandays to be expended on alterations work for the current availability.
IPDNO	The number of the 6-month period of the current LRPS record. The periods are numbered from 1 to 20, with period 1 beginning on Oct 1st of year IFSTYR.
IPER	Period indicator for the current DMAF record. IPER equals "1" if the record pertains to the first half of fiscal year NOWYR, "2" if the record pertains to the second half of fiscal year NOWYR.
IPRIO	Priority of the current availability.
ISEQ	Sequence number of the current availability.
ISRES	Start restraint (in days) on time in dry dock for the current availability.
ISTDY	Start date of the current availability (day).
ISTMO	Start date of the current availability (month).
ISTRT	Start "date" of the current availability, relative to 1 Oct of IFSTYR.
ISTYR	Start date of the current availability (year).

Main Program (continued)

ITEMP1	Production shop productive mandays for the current period (see IPER) of the current availability.
ITEMP2	Total production shop productive mandays for the current availability.
ITOTDY	Number of days in dry-dock for the current availability.
ITOTMN	Total production shop productive mandays for the current availability.
IUDKPD	Dock period.
IUNIT	Variable unit number. IUNIT is set to "7" if the current availability is a depot maintenance availability; otherwise, it is set to "9".
IYDNO	The number of the yard for the current availability (read from the LRPS Assignment File).
I1	DO-loop index.
J	DO-loop index.
LRPSID(6)	LRPS Assignment File identification (current sector).
MAP	Contains the characters "MAP".
MATNOA	Alterations matrix number for the current availability.
MATNOR	Repair matrix number for the current availability.
MUNOW(8)	Matrix number to be assigned to UNOW work done by the shipyard indicated by the subscript.
MUNSW(8)	Matrix number to be assigned to UNSW work done by the shipyard indicated by the subscript.
NC	Contains the characters "NC".
NOWYR	Fiscal year of the current DMAF record (see IPER).
OS	Contains the characters "OS".
OW	Contains the characters "OW".
PS	Contains the characters "PS".

Main Program (continued)

PSA	Contains the characters "PSA".
RNC	Contains the characters "RNC".
RUNID(10)	DMPPS run identification.
SEC	Sector of the current availability.
SECTOR(4)	Array containing the following sets of characters: (1) "PW", (2) "NW", (3) "NE", and (4) "PE".
SGROT	Contains the characters "SGROT".
SHIP	Ship type of the current availability.
SNEWS	Contains the characters "SNEWS".
SPASC	Contains the characters "SPASC".
SPEC	Specialization category for the current availability.
SW	Contains the characters "SW".
UDOC	Contains the characters "UDOC".
UNOS	Contains the characters "UNOS".
UNOW	Contains the characters "UNOW".
UNSW	Contains the characters "UNSW".
Y	Shipyard of the current availability.
YARD(8)	List of shipyards whose UNOS work is to be split into two parts--UNOW and UNSW.
YDNME(10)	List of shipyards within a sector, as read from the LPPS Assignment File.

2.1.7 SAMPLE RUN

The sample run of PRELIM used, as inputs, extracts of actual LRPS Assignment Files created by NAVSEA 071. These extracts contained the required header records, the trailer record, and only those ship records which pertained to CGN 9-CV 62 ships. The input cards used in the sample run indicate that fiscal years 78-82 were selected as the five years of interest. In addition, the input cards give the UNOW/UNSW fractions used by NAVSEA during their full-scale runs. The remainder of this section presents listings of the input cards and input/output files used by PRELIM for the sample run.

Unit 5 - Card Inputs

```
78 DMPPS SAMPLE RUN - FEB 1977
NORVA    2951    .7693    2901    .2307
CHASN    2952    .4964    2902    .5036
PTSMH    2953    .1973    2903    .8027
PHILA    2954    .5030    2904    .4970
LBECH    2955    .6067    2905    .3933
PUGET    2956    .3258    2906    .6742
MARE     2957    .3662    2907    .6338
PEARL    2958    .7487    2908    .2513
```

Unit 1 (Input) - LRPS Assignment File (Navy Fast)

```
 0 1                PTSMH SGROT PHILA SNEWS NORVA CHASN SPASC LOFYN LOFYO
 0 2                78-I  78-II 79-I  79-II 80-I  80-II 81-I  81-II 82-I  82-II
 0 3                83-I  83-II 84-I  84-II 85-I  85-II 86-I  86-II 87-I  87-II
 0 4NE-J4 110476OFFICIAL JSE77 NAVAL SHIPYARDS EAST COAST
 4 1G01   CGN    39D 05  20      0  34   9546 1 1AAN  1  20      0FO  5  3 35   2    0
 4 3G01   CGN    40D 05  20   5000 395 45446 3 3AAN  1  20   6000FO  5  3 33   2    0
 4 5G01   CGN    41D 05  11    618 886 94546 5 6AAN  1  20   5000FO  5  3 29   2    0
 4 6G01(C)CGN    41D 05   9   4381 886 94546 5 6AAN  1  20   5000FO  5  3 29   2    0
 5 1G08   CV     62NORVA100 140469  50 378 5 1 1CVA 23 100 346352RO  4  3178  40    0  41
 5 2G08(C)CV     62NORVA  0 199596  50 378 5 1 1CVA 23 100 346352RO  4  3178  40    0  41
 5 2---   CGN    37NORVA  0  20400 260 321462121AAN  1   0  20400RA  3  0  0   4    0  39
 5 2G03   CGN    39NORVA 15  31554 265 38446 2 2AAN  1  15  35000PS  5  3 85   3    0
 5 3G08(C)CV     62NORVA  0   6286  50 378 5 1 1CVA 23 100 346352RO  4  3178  40    0  41
 5 3G03(C)CGN    39NORVA  0   3445 265 38446 2 2AAN  1  15  35000PS  5  3 85   3    0
 5 4G08   CV     60MAYPT 80 194944 559 780 5 4 4CVA 23  80 240000RO  4  3100  60    0  47
 5 4G04   CGN    40NORVA 15  30588 645 76546 4 4AAN  1  15  45000PS  5  3 86   3    0
 5 4---   CGN    38NORVA  0  11955 662 721462121AAN  1   0  12000RA  3  0  0   4    0  32
 5 4---   CV     62NORVA  0  23389 690 775 52121CVA 17   0  69170RA  4  0  0  41    0  42
 5 5G08(C)CV     60MAYPT  0  45055 559 780 5 4 4CVA 23  80 240000RO  4  3100  60    0  47
 5 5G04(C)CGN    40NORVA  0  14411 645 76546 4 4AAN  1  15  45000PS  5  3 86   3    0
 5 5---(C)CGN    38NORVA  0     44 662 721462121AAN  1   0  12000RA  3  0  0   4    0  32
 5 5---(C)CV     62NORVA  0  39780 690 775 52121CVA 17   0  69170RA  4  0  0  41    0  42
 5 6---   CV     59NORVA  0  60000 9321018 52121CVA 17   0  60000RA  4  0  0  42    0  43
 5 7G03   CGN    41NORVA 15 450001154124946 7 7AAN  1  15  45000PS  5  3 69   3    0
 5 7G04   CGN    37NORVA 24 6836911711594467 8AAN 13  80 278000RO  4  3279  10    0  14
 5 8G04(C)CGN    37NORVA 56 1618211711594467 8AAN 13  80 278000RO  4  3279  10    0  14
 5 9G04(C)CGN    37NORVA  0 4780811711594467 8AAN 13  80 278000RO  4  3279  10    0  14
 5 9---   CV     59NORVA  0 6000014401530 52121CVA 17   0  60000RA  4  0  0  43    0  44
 510G03   CGN    38NORVA 80 6980817102131461010AAN 13  80 278000RO  4  3278  10    0   9
 511G03(C)CGN    38NORVA  0 16182017102131461010AAN 13  80 278000RO  4  3278  10    0   9
 512G03(C)CGN    38NORVA  0 4637117102131461010AAN 13  80 278000RO  4  3278  10    0   9
 512G08   CV     59NORVA100 20648019802340 51212CVA 22 100 396000RO  4  3200  50    0  40
 513G08(C)CV     59NORVA  0 1839811980234 0 51212CVA 22 100 396000RO  4  3200  50    0  40
 513---   CGN    41NORVA  0  8000216022046212 1AAN  1   0   8000RA  3  0  0   4    0  10
 514G08(C)CV     59NORVA  0   53719802340 51212CVA 22 100 396000RO  4  3200  50    0  40
 515G04   CGN    40CHASN 80  8314526122372461515AAN 13  80 279000RO  4  3226  10    0  30
 516G04(C)CGN    40CHASN  0 1720332612297246151 5AAN 13  80 279000RO  4  3226  10    0  30
 517G04(C)CGN    40CHASN  0 2392026122372461515AAN 13  80 279000RO  4  3226  10    0  40
 517---   CV     59NORVA  0 6000028802370 52121CVA  1   0  60000RA  4  0  0  51    0
 610---   CGN    40CHASN  0 1200016501710462121AAN  1   0  12000RA  3  0  0   4    0 100
9999
```

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Unit 2 (Input) - LRPS Assignment File (Navy West)

```
0 1                LBECH MARE  PUGET PEARL POFYN POFYO
0 2                78-I  78-II 79-I  79-II 80-I  80-II 81-I  81-II 82-I  82-II
0 3                83-I  83-II 84-I  84-II 85-I  85-II 86-I  86-II 87-I  87-II
0 4NW-D8 122076OFFICIAL USE77 NAVAL SHIPYARDS WEST COAST
1 1---   CV     43ALAM   0 124004  59 418102121CVA 24   0 342067RO  4  0  0  40    0  17
1 2---(C)CV     43ALAM   0 199985  59 418102121CVA 24   0 342067RO  4  0  0  40    0  17
1 3---(C)CV     43ALAM   0  18076  59 418102121CVA 24   0 342067RO  4  0  0  40    0  17
1 7G01   CV     41ALAM  90 1790971091145110 7 7CVA  1  90 396045RO  4  0100  40    0
1 8G01(C)CV     41ALAM   0 2154721091145110 7 7CVA  1  90 396045RO  4  0100  40    0
1 9G01(C)CV     41ALAM   0  14741091145110 7 7CVA  1  90 396045RO  4  0100  40    0
213---   CGN     9SD     0 25J0022642324302121AAN  1   0  25000RA  4  0  0  31    0
3 1---   CV     61SD     0 111006    0 134 52121CVA 24   0 443300RO  4  0  0  50 -226  38
3 3---   CV     41ALAM   0  40000 399 460102121CVA 17   0  40000RA  4  0  0  36    0  48
3 3---   CGN    25LBECH  0  30000 464 524502121AAN  1   0  30000RA  3  0  0  24    0  20
3 3---   CGN    36LBECH  0  43925 464 555462121AAN  1   0  47204RA  3  0  0   4    0  24
3 3---   CGN    35SD     0  12000 464 524452121AAN  1   0  12000RA  3  0  0  11    0 100
3 4---(C)CGN    36LBECH  0   3278 464 555462121AAN  1   0  47204RA  3  0  0   4    0  24
3 4G02   CGN     9LBECH177  82471 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
3 4---   CGN    39SD     0  12000 644 704462121AAN  1   0  12000RA  3  0  0   4    0 100
3 5G02(C)CGN     9LBECH 23 163508 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
3 6G02(C)CGN     9LBECH  0 164152 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
3 6G04   CGN    36LBECH 80 116368 913133346 6 6AAN  9  80 278550RO  4 3247  10    0  14
3 7G02(C)CGN     9LBECH  0 163582 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
3 7G04(C)CGN    36LBECH  0 144621 913133346 6 6AAN  9  80 278550RO  4 3247  10    0  14
3 8G02(C)CGN     9LBECH  0 123009 540162030 4 5AAN  9 200 739000C   4 3800  30    0  14
3 8G04(C)CGN    36LBECH  0  17560 913133346 6 6AAN  9  80 278550RO  4 3247  10    0  14
3 8G01   CGN    35SD    80 757601320174045 8 8AAN 19  80 298507RO  4 3246          0  14
3 9G02(C)CGN     9LBECH  0  42207 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
3 9G01(C)CGN    35SD     0 1652331320174045 8 8AAN 19  80 298507RO  4 3246          0  14
310G02(C)CGN     9LBECH  0     68 540162030 4 5AAN  9 200 739000C   4 3800  30    0   0
310G01(C)CGN    35SD     0 575131320174045 8 8AAN 19  80 298507RO  4 3246          0  14
310G02   CGN    25LBECH 80 7576016802100501010AAN 19  80 298507RO  4 3323  30    0  14
311G02(C)CGN    25LBECH  0 16523316802100501010AAN 19  80 298507RO  4 3323  30    0  14
311G05   CV     61SD   100 1450761844217 4 51111CVA  1 100 396045RO  4 3100  60    0  40
312G02(C)CGN    25LBECH  0 5751316802100501010AAN 19  80 298507RO  4 3323  30    0  30
312G05(C)CV     61SD     0 2489571844217 4 51111CVA  1 100 396045RO  4 3100  60    0  40
313G05(C)CV     61SD     0  201018442174 51111CVA  1 100 396045RO  4 3100  60    0  40
313---   CGN    36LBECH  0 2500022222280462121AAN  1   0  25000RA  3  0  0  11    0
314G05   CGN    39SD    48 6277224022822461415AAN 10  80 278550RO  4 3200  10    0  30
315G05(C)CGN    39SD    32 1488682402282246141 5AAN 10  80 278550RO  4 3200  10    0  30
315---   CGN    35SD     0 2495426402700452121AAN  1   0  25000RA  3  0  0  21    0
316G05(C)CGN    39SD     0 6690824022822461415AAN 10  80 278550RO  4 3200  10    0  30
316---(C)CGN    35SD     0    4526402700452121AAN  1   0  25000RA  3  0  0  21    0
317G02   CGN     9LBECH 73 4123129843239301718AAN  4  80 200000RF  4 3135  40  165  30
317---   CGN    25LBECH  0 2467930003060462121AAN 17   0  25000RA  4  0  0  31    0
318G02(C)CGN     9LBECH  7 9765329843239301718AAN  4  80 200000RF  4 3135  40  165  30
318---(C)CGN    25LBECH  0   32030003060462121AAN 17   0  25000RA  4  0  0  31    0
9999
```

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Unit 3 (Input) - LRPS Assignment File (Private Fast)

```
 0 1                D 01  D 03  D 04  D 05  D 06  D 08  D 09  LUNCY LOFYP
 0 2                78-I  78-II 79-I  79-II 80-I  80-II 81-I  81-II 82-I  82-II
 0 3                83-I  83-II 84-I  84-II 85-I  85-II 86-I  86-II 87-I  87-II
 0 4PE-02 100976OFFICIAL USE77 NAVAL DISTRICTS     EAST COAST
 5 1---   CV     60MAYPT  0  86977  95 182 52121CVA 17   0  89360RA  4  0  0  53     0  40
 5 2---(C)CV     60MAYPT  0   2382  95 182 52121CVA 17   0  89360RA  4  0  0  53     0  40
 5 3---   CV     59NORVA  0  73258 392 478 52121CVA 17   0  73258RA  4  0  0  41     0  39
 510---   CV     60MAYPT  0  5948417101800 52121CVA 17   0  60000RA  4  0  0  61     0  42
 511---(C)CV     60MAYPT  0    51517101800 52121CVA 17   0  60000RA  4  0  0  61     0  42
 515---   CV     60MAYPT  0  6000025202609 52121CVA 17   0  60000RA  4  0  0  62     0
 517---   CV     60MAYPT  0  5992529713060 52121CVA  1   0  60000RA  4  0  0  63     0
 518---(C)CV     60MAYPT  0    7429713060 52121CVA  1   0  60000RA  4  0  0  63     0
9999
```

Unit 4 (Input) - LRPS Assignment File (Private West)

```
 0 1                D 11  D 12  D 13  D 14  SWPAC NWPAC PUNCY POFYP
 0 2                78-I  78-II 79-I  79-II 80-I  80-II 81-I  81-II 82-I  82-II
 0 3                83-I  83-II 84-I  84-II 85-I  85-II 86-I  86-II 87-I  87-II
 0 4PM-02 100776OFFICIAL USE77 NAVAL DISTRICTS     WEST COAST
 1 5---   CV     61SD     0  44312 840 930 52121CVA  1   0  60000RA  4  3  0  51     0  42
 1 6---(C)CV     61SD     0  15687 840 930 52121CVA  1   0  60000RA  4  3  0  51     0  42
 1 7---   CV     62SD     0  5992511711260 52121CVA  1   0  60000RA  4  0  0  42     0  41
 1 8---(C)CV     62SD     0    7411711260 52121CVA  1   0  60000RA  4  0  0  42     0  41
 1 8---   CV     61SD     0  1473114101500 52121CVA  1   0  60000RA  4  3  0  52     0  46
 1 9---(C)CV     61SD     0  4526814101500 52121CVA  1   0  60000RA  4  3  0  52     0  46
 110---   CV     62SD     0  6000016501740 52121CVA  1   0  60000RA  4  0  0  43     0  41
 115---   CV     61SD     0  5626226242714 52121CVA  1   0  60000RA  4  3  0  61     0
 116---(C)CV     61SD     0   373726242714 52121CVA  1   0  60000RA  4  3  0  61     0
 117---   CV     62SD     0  6000028942984 52121CVA  1   0  60000RA  4  0  0  44     0
 2 5---   CV     43ALAM   0   2036 879100010212 1CVA 17   0  10000RA  5  0  0  41     0   0
 2 6---(C)CV     43ALAM   0   7903 879100010212 1CVA 17   0  10000RA  5  0  0  41     0   0
 215---   CV     41ALAM   0  2013268028001021 21CVA 17   0  10000RA  5  0  0  41     0
 216---(C)CV     41ALAM   0  7986268028001021 21CVA 17   0  10000RA  5  0  0  41     0
 6 2---   CV     41ALAM   0  40000 279 3401021 21CVA 17   0  40000RA  4  0  0  35     0  49
 611---   CV     41YOKO   0  2999918002159102121CVA  2   0  60000RA  4  3  0  41     0
 612---(C)CV     41YOKO   0  3000018002159102121CVA  2   0  60000RA  4  3  0  41     0
 613---   CV     41YOKO   0  2399921602519102121CVA  2   0  60000RA  4  3  0  42     0
 614---(C)CV     41YOKO   0  3000021602519102121CVA  2   0  60000RA  4  3  0  42     0
 615---   CV     41YOKO   0  2399925202879102121CVA  2   0  60000RA  4  3  0  43     0
 616---(C)CV     41YOKO   0  3000025202879102121CVA  2   0  60000RA  4  3  0  43     0
 617---   CV     41YOKO   0  2399928803239102121CVA  2   0  60000RA  4  3  0  44     0
 618---(C)CV     41YOKO   0  3000028803239102121CVA  2   0  60000RA  4  3  0  44     0
9999
```

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Unit 7 (Output) - Depot Maintenance Assignment File, Version 0

```
NORVACV     62   40 RO 112177101978CVANE781 140469 346352          4123
NORVACV     62   40*RO 112177101978CVANE782 199596 346352          4123
NORVACGN    37    4 RA  62178 82278AANNE782  20400  20400         39 1
NORVACV     62   40*RO 112177101978CVANE791   6286 346352          4123
NORVACV     60   60 RO  4207912 179CVANE792 194944 240000          4723
NORVACGN    38    4 RA   8 37910 279AANNE792  11955  12000         32 1
NORVACV     62   41 RA   9 179112679CVANE792  29389  69170         4217
NORVACV     60   60*RO  4207912 179CVANE801  45055 240000          4723
NORVACGN    38    4*RA   8 37910 279AANNE801     44  12000         32 1
NORVACV     62   41*RA   9 179112679CVANE801  39780  69170         4217
NORVACV     59   42 RA   5 380  72980CVANE802  60000  60000         4317
NORVACGN    37   10 RO   1 281  3 582AANNE811  68369 278000         1413
NORVACGN    37   10*RO   1 281  3 582AANNE812 161821 278000         1413
NORVACGN    37   10*RO   1 281  3 582AANNE821  47808 278000         1413
NORVACV     59   43 RA  10 181  1 182CVANE821  60000  60000         4417
NORVACGN    38   10 RO   7 182  9 283AANNE822  69808 278000          913
CHASNCGN    40    4 RA   5 182  7 182AANNE822  12000  12000       100 1
LBECHCV     43   40 RO 113077112978CVANW781 124004 342067          1724
LBECHCV     43   40*RO 113077112978CVANW782 199985 342067          1724
LBECHCV     43   40*RO 113077112978CVANW791  18076 342067          1724
LBECHCV     41   40 RO 101280101281CVANW811 179097 396045           0 1
LBECHCV     41   40*RO 101280101281CVANW812 215472 396045           0 1
LBECHCV     41   40*RO 101280101281CVANW821   1474 396045           0 1
PUGETCV     61   50 RO  21577 21578CVANW781 111606 443300          3824
PUGETCV     41   36 RA 111078 11179CVANW791  40000  40000         4817
PUGETCGN    25   24 RA  11579 31579AANNW791  30000  30000         20 1
PUGETCGN    36    4 RA  11579 41679AANNW791  43925  47204         24 1
PUGETCGN    35   11 RA  11579 31579AANNW791  12000  12000       100 1
PUGETCGN    36    4*RA  11579 41679AANNW792   3278  47204         24 1
PUGETCGN     9   30 C    4 179  4 182AANNW792  82471 739000           0 9
PUGETCGN    39    4 RA  71579 91579AANNW792  12000  12000       100 1
PUGETCGN     9   30*C    4 179  4 182AANNW801 163508 739000           0 9
PUGETCGN     9   30*C    4 179  4 182AANNW802 164152 739000           0 9
PUGETCGN    36   10 RO  41480 61481AANNW802 116368 278550          14 9
PUGETCGN     9   30*C    4 179  4 182AANNW811 163582 739000           0 9
PUGETCGN    36   10*RO  41480 61481AANNW811 144621 278550          14 9
PUGETCGN     9   30*C    4 179  4 182AANNW812 123009 739000          14 9
PUGETCGN    36   10*RO  41480 61481AANNW812  17560 278550          14 9
PUGETCGN    35    0 RO   6 181  8 182AANNW812  75760 298507         1419
PUGETCGN     9   30*C    4 179  4 182AANNW821  42207 739000           0 9
PUGETCGN    35    0*RO   6 181  8 182AANNW821 165233 298507         1419
PUGETCGN     9   30*C    4 179  4 182AANNW822     68 739000           0 9
PUGETCGN    35    0*RO   6 181  8 182AANNW822  57513 298507         1419
PUGETCGN    25   30 RO   6 182  8 183AANNW822  75760 298507         1419
D 06 CV     60   53 RA   1 678  4 378CVAPE781  86977  89360         4017
D 06 CV     60   53*RA   1 678  4 378CVAPE782   2382  89360         4017
D 06 CV     59   41 RA  11 378 12979CVAPE791  73258  73258         3917
D 06 CV     60   61 RA   7 18210 182CVAPE822  59484  60000         4217
D 11 CV     61   51 RA   2 180  5 180CVAPW801  44312  60000         42 1
D 11 CV     61   51*RA   2 180  5 180CVAPW802  15687  60000         42 1
D 11 CV     62   42 RA   1 281  4 181CVAPW811  59925  60000         41 1
D 11 CV     62   42*RA   1 281  4 181CVAPW812     74  60000         41 1
D 11 CV     61   52 RA   9 18112 181CVAPW812  14731  60000         46 1
D 11 CV     61   52*RA   9 18112 181CVAPW821  45268  60000         46 1
D 11 CV     62   43 RA   5 182  8 182CVAPW822  60000  60000         41 1
D 12 CV     43   41 RA  31080 71180CVAPW801   2096  10000           017
D 12 CV     43   41*RA  31080 71180CVAPW802   7903  10000           017
NWPACCV     41   35 RA  71078 91178CVAPW782  40000  40000         4917
```

Unit 8 (Output) - DMAF Run Identification File

```
78 DMPPS SAMPLE RUN - FEB 1977
NE-D4 1104760FFICIAL USE
NW-D8 1220760FFICIAL USE
PE-D2 1009760FFICIAL USE
PW-D2 1007760FFICIAL USE
```

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Unit 9 (Output) - Non-Depot Maintenance File

```
SNEWSCGN   39   2 FO 11 577 1 678AANPE781      0      0        0 1
SNEWSCGN   40   2 FO 11 678 1 579AANPE791   6000   6000        0 1
SNEWSCGN   41   2 FO  31780 51680AANPE801    618   5000        0 1
SNEWSCGN   41   2*FO 31780 51680AANPE802   4381   5000        0 1
NORVACGN   39   3 PS 626781025 78AANNE782  31554  35000        0 1
NORVACGN   39   3*PS 626781025 78AANNE791   3445  35000        0 1
NORVACGN   40   3 PS 716791116 79AANNE792  30588  45000        0 1
NORVACGN   40   3*PS 716791116 79AANNE801  14411  45000        0 1
NORVACGN   41   3 PS 121580 32081AANNE811  45000  45000        0 1
```

2.2 PROGRAM ERRCHK

2.2.1 DESCRIPTION

The functions of the program ERRCHK are to re-number the records of the Depot Maintenance Assignment File (DMAF), to scan the records for errors in sequence number and/or percent alterations, and to determine the correct value for the continuation indicator. The DMAF which is input to ERRCHK is a sorted version of the file created by the program PRELIM. The sort is made on the following parameters, in the order listed:

- Ship type
- Hull number
- Availability start date (year, month, day)
- Sequence number
- Fiscal year (this record)
- Period (this record)

Each parameter is sorted in ascending order. This sort assures that all records describing a particular ship-availability will be adjacent on the file and that other records describing availabilities for the same ship will be chronologically ordered.

After the sort, the record numbers are no longer in ascending order. Therefore, ERRCHK re-numbers them, starting with one ("1") and incrementing by one for each subsequent record.

In addition, ERRCHK sets the value of the continuation indicator according to the following logic: The continuation indicator for the first record of a given ship-availability on DMAF should contain a blank. Subsequent records describing the same ship-availability should contain an asterisk ("*"). Since all records for any particular availability

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appear together (after the sort), the program need only check the distinguishing parameters (i.e., ship type, hull number, availability dates, and type work) between the current record and its predecessor to determine the correct value for the continuation indicator.

In addition, ERRCHK examines the values for sequence number and percent alterations for each record on DMAF except those with the ship type field containing "UNOS" (Unscheduled/Other Shipwork), "UNSW" (Unscheduled Shipwork), "UNOW" (Other Shipwork), or "MAP" (Military Assistance Program). If an error is found in any of the other DMAF records, an error flag is set and subroutine ERROR is called to print out the appropriate error message. Table 2.2-1 presents the possible values for the error flag, the conditions under which they are set, and the error message printed out.

Figure 2.2-1 presents the hierarchical diagram of ERRCHK.

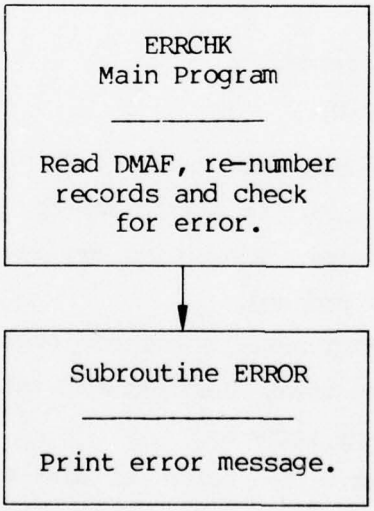

Figure 2.2-1 - ERRCHK Hierarchical Diagram

TABLE 2.2-1 - ERROR MESSAGES GENERATED BY ERRCHK

Flag	Condition	Printed Message
1	Sequence number is zero, negative, or blank.	INVALID SEQUENCE NUMBER
2	Percent alterations is zero and type of work is not one of the following: "NRT" - Naval Reserve Training "C" - Conversion "RA" - Restricted Availability "PS" or "PSA" - Post Shakedown "FO" - Fitting Out "NC" or "RNC" - New Construction	NO PERCENT ALT.
3	Percent alterations is negative.	PERCENT ALT. LESS THAN ZERO
4	Percent alterations exceeds 100.	PERCENT ALT. GREATER THAN 100

Main Program

The main program of ERRCHK is responsible for reading in the records of DMAF, assigning a revised record number, determining the correct value of the continuation indicator, and checking the percent alterations and sequence number fields for error. If an error is found, a flag is set and subroutine ERROR is called. The main program also writes the revised DMAF records on unit 2.

Subroutine ERROR

Subroutine ERROR prints out an error message (depending on the value of the error flag) and certain key parameters needed to identify the erroneous record (i.e., record number, ship, type work, availability dates, sequence number, and percent alterations).

2.2.2 RUN SET-UP

The following set-up is used to run the ERRCHK program on the IBM 360/370 computer:

```
//NVSERCHK JOB (XXXXXXXXXX,XXXXX),USER,CLASS=C,TIME=(,10),MSGLEVEL=1
//JOBLIB DD DSN=NVS01.DEPOT.LIB,DISP=SHR

// EXEC SDA                                    (SORT DMAF ONTO BACKUP FILE)
//SORTIN DD DSN=NVS01.DMAF0.DATA,DISP=SHR
//SORTOUT      DD DSN=NVS01.DMAF.BACKUP.DATA,DISP=SHR
//SYSIN DD *      SORT BY SHIP, HULL, START DATE, SEQ NO, FY
 SORT FIELDS=(6,8,A,26,2,A,22,4,A,14,4,A,39,3,A),FORMAT=CH

// EXEC PGM=ERRCHK                                (EXECUTE PROGRAM ERRCHK)
//GO.FT05F001 DD *
   ┌──────────────────────────────────────────────────────────────┐
   │                                                              │
   │    ERRCHK card inputs (unit 5)                               │
   │                                                              │
   └──────────────────────────────────────────────────────────────┘
//GO.FT06F001 DD SYSOUT=A                                (LIST OF ERRORS)
//GO.FT01F001 DD DSN=NVS01.DMAF.BACKUP.DATA,DISP=SHR       (INPUT FILE)
//GO.FT02F001 DD DSN=NVS01.DMAF1.DATA,DISP=SHR            (OUTPUT FILE)
```

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2.2.3 INPUTS

Card inputs are made using unit 5. The format for these cards is presented in Section 2.2.3.1.

Unit 5 - Card input which provides run identification information

The following additional unit is used to input information from a disk file created by the program PRELIM:

Unit 1 - Depot Maintenance Assignment File, Version 0 (DMAF-0)

The format for this file is given in Section 2.2.3.2.

2.2.3.1 Unit 5 - Card Input

Only one card is input to ERRCHK. Its format is:

Variable Name	Description	Field	Format
COMMNT(1-4)	Run identification	1-16	4A4

2.2.3.2 Unit 1 - Depot Maintenance Assignment File, Version 0 (DMAF-0)

DMAF-0 contains information describing all depot maintenance ship-availabilities scheduled for yard-work at both Navy and privately owned shipyards during the selected five-fiscal-year period. Depot maintenance availabilities are those availabilities with a type of work other than Fitting Out (FO), Post Shakedown (PS), or New Construction (NC).

Each semi-annual period of a fiscal year within which an availability falls, corresponds to a record on DMAF-0. Note that there may be more than one DMAF record for any particular availability.

The DMAF-0 file is sorted in ascending order by the following parameters:

- Ship type
- Hull number
- Availability start date (year, month, day)
- Sequence number
- Fiscal year (this record)
- Period (this record)

The format of each record in the DMAF-0 file is as follows:

Variable Name	Description	Field	Format
Y	Shipyard	1-5	A5
ISHIP	Ship type	6-9	A4
IHULL	Hull number	10-13	I4
ISEQ	Sequence number	14-17	I4
CONT	Continuation indicator	18	A1
AVAIL	Type work	19-21	A3
ISDATE(1-3)	Availability start date (month, day, year)	22-27	3I2
IEDATE(1-3)	Availability end date (month, day, year)	28-33	3I2
A(1-8)	Sector, mandays, matrix numbers, etc.	34-63	7A4,A2
IPCTA	Percent alterations	64-66	I3
B(1-3)	Labor distribution histogram number, sort key, etc.	67-76	2A4,A2

2.2.4 OUTPUTS

The following unit is used by ERRCHK for generating hardcopy output:

Unit 6 - Error messages

Section 2.2.7 presents a sample of this output.

ERRCHK uses the following additional unit to store information on disk for use by subsequent programs:

Unit 2 - Depot Maintenance Assignment File, Version 1 (DMAF-1)

The format for this file is given in Section 2.2.4.1.

2.2.4.1 Unit 2 - Depot Maintenance Assignment File, Version 1 (DMAF-1)

The format for each record is as follows:

Variable Name	Description	Field	Format
Y	Shipyard	1-5	A5
ISHIP	Ship type	6-9	A4
IHULL	Hull number	10-13	I4
ISEQ	Sequence number	14-17	I4
CONT	Continuation indicator	18	A1
AVAIL	Type work	19-21	A3
IDATE(1)	Availability start date (month, day, year)	22-27	I6
IDATE(2)	Availability end date (month, day, year)	28-33	I6
A(1-8)	Sector, mandays, matrix number, etc.	34-63	7A4,A2
IPCTA	Percent alterations	64-66	I3
B(1-3)	Labor distribution histogram number, sort key, etc.	67-76	2A4,A2
IREC	Record number	85-90	I6

A general description of this file is presented in Section 2.2.3.2.

2.2.5 PROGRAM LISTING

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```
C*****PROGRAM ERRCHK(INPUT,OUTPUT,TAPE5=INPUT,TAPE6=OUTPUT,TAPE1,TAPE2) ****  10
C                                                                       ERRC  20
C                                                                       ERRC  30
C     ERRCHK (ERROR CHECK) READS EACH DMAF RECORD AND PERFORMS THE      ERRC  40
C FOLLOWING FUNCTIONS:                                                  ERRC  50
C                                                                       ERRC  60
C    -RE-NUMBERS THE RECORDS.                                           ERRC  70
C    -DETERMINES THE PROPER VALUE OF THE CONTINUATION INDICATOR AND     ERRC  80
C     RESETS IT, IF NECESSARY.                                          ERRC  90
C    -CHECKS SEQUENCE NUMBER AND PERCENT ALT. FOR NON-UNOS WORK AND     ERRC 100
C     CALLS SUBROUTINE ERROR TO PRINT A MESSAGE IF AN ERROR IS FOUND.   ERRC 110
C                                                                       ERRC 120
C ERRCHK ASSUMES THAT THE DMAF IS SORTED FIRST BY SHIP TYPE, THEN HULL  ERRC 130
C NUMBER, THEN AVAILABILITY START DATE AND FINALLY BY FY AND PERIOD.    ERRC 140
C                                                                       ERRC 150
C THE FOLLOWING UNITS ARE USED BY THE PROGRAM:                          ERRC 160
C                                                                       ERRC 170
C     UNIT 1 - INPUT  - DEPOT MAINTENANCE ASSIGNMENT FILE (DMAF),       ERRC 180
C                       VERSION 0                                       ERRC 190
C     UNIT 2 - OUTPUT - DMAF, VERSION 1 (WITH REVISED RECORD NUMBERS ANDERRC 200
C                       CORRECTED CONTINUATION INDICATORS)              ERRC 210
C     UNIT 5 - INPUT  - CARD INPUT GIVING RUN IDENT.                    ERRC 220
C     UNIT 6 - OUTPUT - LIST OF ERRORS ENCOUNTERED IN SEQUENCE NUMBER   ERRC 230
C                       OR PERCENT ALT.                                 ERRC 240
C                                                                       ERRC 250
C PROGRAMMED BY JAY MANDELBAUM, NAVAL SEA SYSTEMS COMMAND (CODE 0711),  ERRC 260
C AUGUST 1975.                                                          ERRC 270
C                                                                       ERRC 280
C REVISED BY LINDA L. LAMATRICE, NAVAL SHIP RESEARCH AND DEVELOPMENT    ERRC 290
C CENTER (CODE 186), JULY 1976.                                         ERRC 300
C                                                                       ERRC 310
C-----------------------------------------------------------------      ERRC 320
C                                                                       ERRC 330
      DIMENSION IDATE(2),IDATEP(2),A(8),B(3)                            ERRC 340
C                                                                       ERRC 350
      COMMON /MSSG/COMMNT(4),ISHIP,IHULL,ISEQ, AVAIL,ISDATE(3),         ERRC 360
          IEDATE(3),IREC,IPCTA                                          ERRC 370
C                                                                       ERRC 380
      REAL*8 Y                                                          **** 390
C                                                                       ERRC 400
      REAL ISHIP,ISHIPP,NC,MAP,NRT                                      ERRC 410
C                                                                       ERRC 420
      DATA NC/3HNC /,FO/2HFO/, PS/2HPS/, PSA/3HPSA/, RNC/3HRNC/,        ERRC 430
     .     UNSW/4HUNSW/, UNOW/4HUNOW/, MAP/3HMAP/, C/1HC/, RA/2HRA/,    ERRC 440
     .     UNOS/4HUNOS/, NRT/3HNRT/                                     ERRC 450
C                                                                       ERRC 460
      DATA BLANK/1H /,AST/1H*/                                          ERRC 470
C                                                                       ERRC 480
C -----------------------------------------------------------------     ERRC 490
C                                                                       ERRC 500
C READ HEADING INFORMATION.  ------------------------------------       ERRC 510
      READ (5,90)  COMMNT                                               ERRC 520
   90 FORMAT (4A4)                                                      ERRC 530
C                                                                       ERRC 540
C-----INITIALIZE AND INCREMENT RECORD NUMBER.  ---------------------    ERRC 550
```

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```
      IREC=0                                                                ERRC 560
C                                                                           ERRC 570
C-----INITIALIZE PREVIOUS SHIP VARIABLES.  ----------------------           ERRC 580
      ISHIPP=BLANK                                                          ERRC 590
      IHULLP=0                                                              ERRC 600
      AVAILP=BLANK                                                          ERRC 610
      IDATEP(1)=0                                                           ERRC 620
      IDATEP(2)=0                                                           ERRC 630
  100 IREC=IREC+1                                                           ERRC 640
C                                                                           ERRC 650
C-----READ RECORD AND WRITE IT WITH RECORD NUMBER-----------------          ERRC 660
C*****READ (1,105)           Y,ISHIP,IHULL,ISEQ,CONT,AVAIL,IDATE,ISDATE,  **** 670
      READ (1,105,END=200)   Y,ISHIP,IHULL,ISEQ,CONT,AVAIL,IDATE,ISDATE,  **** 680
     .    IEDATE,A,IPCTA,B                                                 ERRC 690
  105 FORMAT (A5,A4,2I4,A1,A3,2I6,T22,6I2,7A4,A2,I3,2A4,A2)                 ERRC 700
C*****IF (EOF(1).NE.0.0)  GO TO 200                                         **** 710
C                                                                           ERRC 720
C-----DETERMINE PROPER VALUE OF CONTINUATION INDICATOR------------          ERRC 730
      CONT=AST                                                              ERRC 740
      IF (ISHIP.EQ.ISHIPP .AND. IHULL.EQ.IHULLP .AND. IDATE(1).EQ.          ERRC 750
     .    IDATEP(1) .AND. IDATE(2).EQ.IDATEP(2) .AND. AVAIL.EQ.AVAILP)      ERRC 760
     .    GO TO 110                                                        ERRC 770
      CONT=BLANK                                                            ERRC 780
      ISHIPP=ISHIP                                                          ERRC 790
      IHULLP=IHULL                                                          ERRC 800
      IDATEP(1)=IDATE(1)                                                    ERRC 810
      IDATEP(2)=IDATE(2)                                                    ERRC 820
      AVAILP=AVAIL                                                          ERRC 830
  110 WRITE (2,120)          Y,ISHIP,IHULL,ISEQ,CONT,AVAIL,IDATE,A,IPCTA,  ERRC 840
     .    B,IREC                                                           ERRC 850
  120 FORMAT (A5,A4,2I4,A1,A3,2I6,         7A4,A2,I3,2A4,A2,T85,I6)       ERRC 860
C                                                                           ERRC 870
C-----DO NOT ERROR CHECK UNOS WORK--------------------------------          ERRC 880
      IF (ISHIP.EQ.UNOW.OR.ISHIP.EQ.UNSW.OR.ISHIP.EQ.UNOS.OR.               ERRC 890
     A  ISHIP.EQ.MAP)  GO TO 100                                            ERRC 900
C                                                                           ERRC 910
C-----FLAG INVALID UNSEQUENCED WORK-------------------------------          ERRC 920
      IF (ISEQ.LE.0)  CALL ERROR(1)                                         ERRC 930
C                                                                           ERRC 940
C-----WRITE ERROR IF ALT PERCENT NEGATIVE OR LARGER THAN 100------          ERRC 950
      IF (IPCTA.LT.0)  CALL ERROR(3)                                        ERRC 960
      IF (IPCTA.GT.100)  CALL ERROR(4)                                      ERRC 970
C                                                                           ERRC 980
C-----GO TO 1 IF ALT PERCENT MAY BE ZERO--------------------------          ERRC 990
      IF (AVAIL.EQ.NRT .OR.  AVAIL.EQ.C .OR. AVAIL.EQ.RA .OR.               ERRC1000
     .    AVAIL.EQ.NC .OR. AVAIL.EQ.FO .OR. AVAIL.EQ.PS .OR.               ERRC1010
     B    AVAIL.EQ.PSA .OR. AVAIL.EQ.RNC)  GO TO 100                       ERRC1020
C                                                                           ERRC1030
C-----FLAG ZERO PERCENT ALT---------------------------------------          ERRC1040
      IF (IPCTA.EQ.0)  CALL ERROR(2)                                        ERRC1050
      GO TO 100                                                             ERRC1060
C                                                                           ERRC1070
  200 STOP                                                                  ERRC1080
      END                                                                   ERRC1090
```

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```
      SUBROUTINE ERROR(IFLAG)                                                ERRO  10
C                                                                            ERRO  20
C     SUBROUTINE ERROR PRINTS A MESSAGE FOR EACH DMAF RECORD WITH AN         ERRO  30
C ERROR IN SEQUENCE NUMBER OR PERCENT ALT.  THE MESSAGE PRINTED DEPENDS      ERRO  40
C ON THE VALUE OF IFLAG:                                                     ERRO  50
C                                                                            ERRO  60
C     IFLAG  MESSAGE                                                         ERRO  70
C     -----  -------                                                         ERRO  80
C       1    INVALID SEQUENCE NUMBER                                        ERRO  90
C       2    NO PERCENT ALT.                                                ERRO 100
C       3    PERCENT ALT. LESS THAN ZERO                                    ERRO 110
C       4    PERCENT ALT. GREATER THAN 100                                  ERRO 120
C                                                                            ERRO 130
C                                                                            ERRO 140
      REAL ISHIP                                                             ERRO 150
C                                                                            ERRO 160
      COMMON /MSSG/COMMNT(4),ISHIP,IHULL,ISEQ, AVAIL,ISDATE(3),              ERRO 170
     .    IEDATE(3),IREC,IPCTA                                               ERRO 180
C                                                                            ERRO 190
      DATA IPAGE/0/,LINE/60/                                                 ERRO 200
C                                                                            ERRO 210
C--------------------------------------------------------------------        ERRO 220
C                                                                            ERRO 230
C                                                                            ERRO 240
C BEGIN NEW PAGE IF LINE COUNT EXCEEDS 55.  ----------------------           ERRO 250
      IF (LINE.LE.55)  GO TO 110                                             ERRO 260
      IPAGE=IPAGE+1                                                          ERRO 270
      WRITE (6,100)  IPAGE,COMMNT                                            ERRO 280
  100 FORMAT (1H1/5X,15HREPORT DM-60-01,50X,4HPAGE,I3/5X,4A4/                ERRO 290
     .    5X,15HPROGRAM: ERRCHK////                                          ERRO 300
     .    19X,38HPERCENT ALT. AND SEQUENCE NUMBER CHECK/19X,38(1H-)///       ERRO 310
     .    13X,54H S H I P    TM   SEQ   AVAILABILITY DATES  (ALT  ERROR/ERRO 320
     .    13X,54H---------   ---  ---   ------------------  ----  -----/ERRO 330
     .    )                                                                  ERRO 340
      LINE=14                                                                ERRO 350
C                                                                            ERRO 360
C WRITE APPROPRIATE ERROR MESSAGE.  ------------------------------           ERRO 370
  110 LINE=LINE+1                                                            ERRO 380
      GO TO (120,140,160,180),  IFLAG                                        ERRO 390
C                                                                            ERRO 400
C-----IFLAG=1------------------------------------------------------          ERRO 410
  120 WRITE (6,130)  IREC,ISHIP,IHULL, AVAIL,ISEQ,ISDATE,IEDATE,IPCTA       ERRO 420
  130 FORMAT (3X,I6,1H.,3X,A4,I5,3X,A3,I5,I4,2(1H/,I2),2H -,I3,2(1H/,I2)ERRO 430
     .,   I5,3X,23HINVALID SEQUENCE NUMBER)                                 ERRO 440
      RETURN                                                                 ERRO 450
C                                                                            ERRO 460
C-----IFLAG=2------------------------------------------------------          ERRO 470
  140 WRITE (6,150)  IREC,ISHIP,IHULL, AVAIL,ISEQ,ISDATE,IEDATE,IPCTA       ERRO 480
  150 FORMAT (3X,I6,1H.,3X,A4,I5,3X,A3,I5,I4,2(1H/,I2),2H -,I3,2(1H/,I2)ERRO 490
     .,   I5,3X,15HNO PERCENT ALT.)                                         ERRO 500
      RETURN                                                                 ERRO 510
C                                                                            ERRO 520
C-----IFLAG=3------------------------------------------------------          ERRO 530
  160 WRITE (6,170)  IREC,ISHIP,IHULL, AVAIL,ISEQ,ISDATE,IEDATE,IPCTA       ERRO 540
  170 FORMAT (3X,I6,1H.,3X,A4,I5,3X,A3,I5,I4,2(1H/,I2),2H -,I3,2(1H/,I2)ERRO 550
     .,   I5,3X,27HPERCENT ALT. LESS THAN ZERO)                             ERRO 560
      RETURN                                                                 ERRO 570
C                                                                            ERRO 580
C-----IFLAG=4------------------------------------------------------          ERRO 590
```

```
180 WRITE (6,190)  IREC,ISHIP,IHULL, AVAIL,ISEQ,ISDATE,IEDATE,IPCTA    ERRO 600
190 FORMAT (3X,I6,1H.,3X,A4,I5,3X,A3,I5,I4,2(1H/,I2),2H -,I3,2(1H/,I2)ERRO 610
   .,   I5,3X,29HPERCENT ALT. GREATER THAN 100)                        ERRO 620
    RETURN                                                            ERRO 630
    END                                                               ERRO 640
```

2.2.6 GLOSSARY

COMMON VARIABLES

Common Block /MSSG/

AVAIL	Type of work for a particular ship-availability.
COMMNT(4)	Run identification information.
IEDATE(3)	Availability end date where the subscript refers to (1) month, (2) day, and (3) year.
IHULL	Ship's hull number.
IPCTA	The percent of production shop productive (PSP) mandays for alterations (for an availability).
IREC	Record number of current DMAF-1 record.
ISDATE(3)	Availability start date where the subscript refers to (1) month, (2) day, and (3) year.
ISEQ	Sequence number of an availability.
ISHIP	Ship type for an availability.

LOCAL VARIABLES

Main Program

A(8)	An array used to read and write a block of information from DMAF.
AST	Contains the character "*".
AVAILP	Type work for the previous availability.
B(3)	An array used to read and write a block of information from DMAF.
BLANK	A one-character blank space.
C	Contains the character "C".
CONT	Continuation indicator. Contains a blank for the first DMAF record for a ship-availability; contains an asterisk ("*") otherwise.
FO	Contains the characters "FO".
IDATE(2)	Availability start date and end date.
IDATEP(2)	Previous availability's start and end dates.
IHULLP	Hull number of the previous availability.
ISHIPP	Ship type of the previous availability.
MAP	Contains the characters "MAP".
NC	Contains the characters "NC".
NRT	Contains the characters "NRT".
PS	Contains the characters "PS".
PSA	Contains the characters "PSA".
RA	Contains the characters "RA".
RNC	Contains the characters "RNC".
UNOS	Contains the characters "UNOS".
UNOW	Contains the characters "UNOW".
UNSW	Contains the characters "UNSW".
Y	Shipyard for the current availability.

2.2.7 SAMPLE RUN

The DMAF-0 file created by the sample run of PRELIM formed the basis for the sample run of ERRCHK. A listing of this file is presented in Section 2.1.7 (unit 7). It is the input to the sort routine which precedes ERRCHK. The sorted version of DMAF-0 is listed in this section as are the other inputs to, and outputs from, ERRCHK.

Unit 5 (Input) - Input Cards

```
03/77-SAMPLE
```

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Unit 1 (Input) - Depot Maintenance Assignment File, Version 0 (Sorted)

```
PUGETCGN     9   30 C    4 179 4 182AANNW792   82471 739000          0 9
PUGETCGN     9   30*C    4 179 4 182AANNW801  163508 739000          0 9
PUGETCGN     9   30*C    4 179 4 182AANNW812  164152 739000          0 9
PUGETCGN     9   30*C    4 179 4 182AANNW811  163582 739000          0 9
PUGETCGN     9   30*C    4 179 4 182AANNW812  123009 739000         14 9
PUGETCGN     9   30*C    4 179 4 182AANNW821   42207 739000          0 9
PUGETCGN     9   30*C    4 179 4 182AANNW822      68 739000          0 9
PUGETCGN    25   24 RA  11579 31579AANNW791   30000  30000         20 1
PUGETCGN    25   30 RO   6 182 8 183AANNW822  75760 298507         1419
PUGETCGN    35   11 RA  11579 31579AANNW791   12000  12000        100 1
PUGETCGN    35    C RO   6 181 8 182AANNW812  75760 298507         1419
PUGETCGN    35    C*RO   6 181 8 182AANNW821 165233 298507         1419
PUGETCGN    35    C*RO   6 181 8 182AANNW822  57513 298507         1419
PUGETCGN    36    4 RA  11579 41679AANNW791   43925  47204         24 1
PUGETCGN    36    4*RA  11579 41679AANNW792    3278  47204         24 1
PUGETCGN    36   10 RO  41480 61481AANNW812  116368 278550         14 9
PUGETCGN    36   10*RO  41480 61481AANNW811  144621 278550         14 9
PUGETCGN    36   10*RO  41480 61481AANNW812   17560 278550         14 9
NORVACGN    37    4 RA  62178 82278AANNE782   20400  20400         39 1
NORVACGN    37   10 RO   1 281 3 582AANNE811  68369 278000         1413
NORVACGN    37   10*RO   1 281 3 582AANNE812 161821 278000         1413
NORVACGN    37   10*RO   1 281 3 582AANNE821  47808 278000         1413
NORVACGN    38    4 RA   8 37910 279AANNE792  11955  12000         32 1
NORVACGN    38    4*RA   8 37910 279AANNE801     44  12000         32 1
NORVACGN    38   10 RO   7 182 9 283AANNE822  69808 278000          913
PUGETCGN    39    4 RA  71579 91579AANNW792   12000  12000        100 1
CHASNCGN    40    4 RA   5 182 7 182AANNE822  12000  12000        100 1
NWPACCV     41   35 RA  71078 91178CVAPW782   40000  40000         4917
PUGETCV     41   36 RA 111078 111790VANW791   40000  40000         4817
LBECHCV     41   40 RO 1012801012810VANW811  179097 396045          0 1
LBECHCV     41   40*RO 1012801012810VANW812  215472 396045          0 1
LBECHCV     41   40*RO 1012801012810VANW821    1474 396045          0 1
LBECHCV     43   40 RO 1130771129780VANW781  124004 342067         1724
LBECHCV     43   40*RO 1130771129780VANW782  199985 342067         1724
LBECHCV     43   40*RO 1130771129780VANW791   18076 342067         1724
D 12 CV     43   41 RA   31080 711800VAPW801   2096  10000          017
D 12 CV     43   41*RA   31080 711800VAPW802   7903  10000          017
D 06 CV     59   41 RA 11 378 12979CVAPE791   73258  73258         3917
NORVACV     59   42 RA   5 380 729800VANE802  60000  60000         4317
NORVACV     59   43 RA 10 181 1 182CVANE821   60000  60000         4417
D 06 CV     60   53 RA   1 678 4 378CVAPE781  86977  89360         4017
D 06 CV     60   53*RA   1 678 4 378CVAPE782   2382  89360         4017
NORVACV     60   60 RO  4207912 179CVANE792  194944 240000         4723
NORVACV     60   60*RO  4207912 179CVANE801   45055 240000         4723
D 06 CV     60   61 RA   7 18210 182CVAPE822  59484  60000         4217
PUGETCV     61   50 RO  21577 21578CVANW781  111606 443300         3824
D 11 CV     61   51 RA   2 180 5 180CVAPW801  44312  60000         42 1
D 11 CV     61   51*RA   2 180 5 180CVAPW802  15687  60000         42 1
D 11 CV     61   52 RA   9 18112 181CVAPW812  14731  60000         46 1
D 11 CV     61   52*RA   9 18112 181CVAPW821  45268  60000         46 1
NORVACV     62   40 RO 1121771019780VANE781  140469 346352         4123
NORVACV     62   40*RO 1121771019780VANE782  199596 346352         4123
NORVACV     62   40*RO 1121771019780VANE791    6286 346352         4123
NORVACV     62   41 RA   9 17911267 9CVANE792  29389  69170         4217
NORVACV     62   41*RA   9 17911267 9CVANE801  39780  69170         4217
D 11 CV     62   42 RA   1 281 4 181CVAPW811  59925  60000         41 1
D 11 CV     62   42*RA   1 281 4 181CVAPW812     74  60000         41 1
D 11 CV     62   43 RA   5 182 8 182CVAPW822  60000  60000         41 1
```

Unit 6 (Output) - ERRCHK Printed Output

REPORT DM-60-01 PAGE 1
03/77-SAMPLE
PROGRAM: ERRCHK

PERCENT ALT. AND SEQUENCE NUMBER CHECK

	SHIP		TW	SEQ	AVAILABILITY DATES	(ALT	ERROR
11.	CGN	35	RO	0	6/ 1/81 - 8/ 1/82	14	INVALID SEQUENCE NUMBER
12.	CGN	35	RO	0	6/ 1/81 - 8/ 1/82	14	INVALID SEQUENCE NUMBER
13.	CGN	35	RO	0	6/ 1/81 - 8/ 1/82	14	INVALID SEQUENCE NUMBER
30.	CV	41	RO	40	10/12/80 - 10/12/81	0	NO PERCENT ALT.
31.	CV	41	RO	40	10/12/80 - 10/12/81	0	NO PERCENT ALT.
32.	CV	41	RO	40	10/12/80 - 10/12/81	0	NO PERCENT ALT.

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Unit 2 (Output) - Depot Maintenance Assignment File, Version 1

PUGETCGN	9	30 C	40179	40182AANNW792	82471	739000	0 9		1
PUGETCGN	9	30*C	40179	40182AANNW801	163508	739000	0 9		2
PUGETCGN	9	30*C	40179	40182AANNW802	164152	739000	0 9		3
PUGETCGN	9	30*C	40179	40182AANNW811	163582	739000	0 9		4
PUGETCGN	9	30*C	40179	40182AANNW812	123009	739000	14 9		5
PUGETCGN	9	30*C	40179	40182AANNW821	42207	739000	0 9		6
PUGETCGN	9	30*C	40179	40182AANNW822	68	739000	0 9		7
PUGETCGN	25	24 RA	11579	31579AANNW791	30000	30000	20 1		8
PUGETCGN	25	30 RO	60182	80183AANNW822	75760	298507	1419		9
PUGETCGN	35	11 RA	11579	31579AANNW791	12000	12000	100 1		10
PUGETCGN	35	0 RO	60181	80182AANNW812	75760	298507	1419		11
PUGETCGN	35	0*RO	60181	80182AANNW821	165233	298507	1419		12
PUGETCGN	35	0*RO	60181	80182AANNW822	57513	298507	1419		13
PUGETCGN	36	4 RA	11579	41679AANNW791	43925	47204	24 1		14
PUGETCGN	36	4*RA	11579	41679AANNW792	3278	47204	24 1		15
PUGETCGN	36	10 RO	41480	61481AANNW802	116368	278550	14 9		16
PUGETCGN	36	10*RO	41480	61481AANNW811	144621	278550	14 9		17
PUGETCGN	36	10*RO	41480	61481AANNW812	17560	278550	14 9		18
NORVACGN	37	4 RA	62178	82278AANNE782	20400	20400	39 :		19
NORVACGN	37	10 RO	10281	30582AANNE811	68369	278000	1413		20
NORVACGN	37	10*RO	10281	30582AANNE812	161821	278000	1413		21
NORVACGN	37	10*RO	10281	30582AANNE821	47808	278000	1413		22
NORVACGN	38	4 RA	80379100279AANNE792		11955	12000	32 1		23
NORVACGN	38	4*RA	80379100279AANNE801		44	12000	32 1		24
NORVACGN	38	10 RO	70182	90283AANNE822	69808	278000	913		25
PUGETCGN	39	4 RA	71579	91579AANNW792	12000	12000	100 1		26
CHASNCGN	40	4 RA	50182	70182AANNE822	12000	12000	100 1		27
NWPACCV	41	35 RA	71078	91178CVAPW782	40000	40000	4917		28
PUGETCV	41	36 RA	111078	11179CVANW791	40000	40000	4817		29
LBECHCV	41	40 RO	101260101281CVANW811		179097	396045	0 1		30
LBECHCV	41	40*RO	101260101281CVANW812		215472	396045	0 1		31
LBECHCV	41	40*RO	101260101281CVANW821		1474	396045	0 1		32
LBECHCV	43	40 RO	113077112978CVANW781		124004	342067	1724		33
LBECHCV	43	40*RO	113077112978CVANW782		199985	342067	1724		34
LBECHCV	43	40*RO	113077112978CVANW791		18076	342067	1724		35
D 12 CV	43	41 RA	31080	71180CVAPW801	2096	10000	017		36
D 12 CV	43	41*RA	31080	71180CVAPW802	7903	10000	017		37
D 06 CV	59	41 RA	110378	12979CVAPE791	73258	73258	3917		38
NORVACV	59	42 RA	50380	72980CVANE802	60000	60000	4317		39
NORVACV	59	43 RA	100181	10182CVANE821	60000	60000	4417		40
D 06 CV	60	53 RA	10678	40378CVAPE781	86977	89360	4017		41
D 06 CV	60	53*RA	10678	40378CVAPE782	2382	89360	4017		42
NORVACV	60	60 RO	420791201 79CVANE792		194944	240000	4723		43
NORVACV	60	60*RO	420791201 79CVANE801		45055	240000	4723		44
D 06 CV	60	61 RA	701821001 82CVAPE822		59484	60000	4217		45
PUGETCV	61	50 RO	21577	21578CVANW781	111606	443300	3824		46
D 11 CV	61	51 RA	20180	50180CVAPW801	44312	60000	42 1		47
D 11 CV	61	51*RA	20180	50180CVAPW802	15687	60000	42 1		48
D 11 CV	61	52 RA	901811201 81CVAPW812		14731	60000	46 1		49
D 11 CV	61	52*RA	901811201 81CVAPW821		45268	60000	46 1		50
NORVACV	62	40 RO	112177101978CVANE781		140469	346352	4123		51
NORVACV	62	40*RO	112177101978CVANE782		199596	346352	4123		52
NORVACV	62	40*RO	112177101978CVANE791		6286	346352	4123		53
NORVACV	62	41 RA	90179112679CVANE792		29389	69170	4217		54
NORVACV	62	41*RA	90179112679CVANE801		39780	69170	4217		55
D 11 CV	62	42 RA	10281	40181CVAPW811	59925	60000	41 1		56
D 11 CV	62	42*RA	10281	40181CVAPW812	74	60000	41 1		57
D 11 CV	62	43 RA	50182	80182CVAPW822	60000	60000	41 1		58

2.3 PROGRAM UPDEP

2.3.1 DESCRIPTION

The program UPDEP is used to alter the Depot Maintenance Assignment File (DMAF). The updating process may consist of adding records, deleting records, or replacing one or more data items or entire records. In addition to these operations, UPDEP resequences the record numbers on the file.

Update cards are used to specify which record is to be revised as well as which fields are to be changed. Each update command consists of two or more cards: an instruction card, and a data card containing the replacement values. Deletions require only one card. The instruction names and the commands that they signify are as follows:

*NSRT - used for inserting one or more records

*DELT - used for deleting one or more records

*REPL - used for replacing one or more values or an entire record

The insertion command requires the record number after which records are to be inserted. Any number of records may be inserted. The terminator is the next instruction card.

The deletion command requires the first and last record number of the sequence to be deleted. In the case of a single deletion, the last record number may be omitted.

To replace one or more values or an entire record, the number of the record that is being changed is required. The replace command may be used to replace the same value or values in a series of records. It will then require the first and last record number of the sequence on the instruction card.

All update instruction cards must be in ascending order by record number. A replace command cannot reference a record previously deleted.

The data card containing the replacement values consists of a card image of the record to be updated. If a field on the update card is

blank, the corresponding field on the new DMAF is not changed. If a field on the update card is non-blank, the information in the corresponding field of the DMAF is replaced with that on the update card. If the first character of a field on the update card is a "$" and the remainder of the field is blank, the corresponding field on the new DMAF is blank filled.

An update deck is terminated with a "99999" card, and the new DMAF is automatically resequenced by ones. The DMAF to be changed or updated resides on unit 8, and the new or updated DMAF is written on unit 9. Update control cards are assigned to unit 5 and error messages are written on unit 6.

2.3.2 RUN SET-UP

The following set-up is used to run the UPDEP program on the IBM 360/370 computer:

```
//NVSUPDEP JOB (XXXXXXXXXX,XXXXX),USER,CLASS=C,TIME=(,20),MSGLEVEL=1
//JOBLIB DD DSN=NVS01.DEPOT.LIB,DISP=SHR
// EXEC PGM=UPDEP
//GO.FT05F001 DD *
  ┌──────────────────────────────────────────┐
  │                                          │
  │    UPDEP card inputs (unit 5)            │
  │                                          │
  └──────────────────────────────────────────┘
//GO.FT06F001 DD SYSOUT=A                                  (ERROR MESSAGES)
//GO.FT08F001 DD DSN=NVS01.DMAF1.DATA,DISP=SHR               (INPUT FILE)
//GO.FT09F001 DD DSN=NVS01.DMAF.BACKUP.DATA,DISP=SHR       (OUTPUT FILE)

// EXEC PGM=IEBGENER                                (COPY DMAF FROM BACKUP)
//SYSIN DD DUMMY
//SYSPRINT DD SYSOUT=A
//SYSUT1 DD DSN=NVS01.DMAF.BACKUP.DATA,DISP=SHR
//SYSUT2 DD DSN=NVS01.DMAF1.DATA,DISP=SHR
```

2.3.3 INPUTS

Card inputs to UPDEP are made using unit 5. The format for these cards is given in Section 2.3.3.1.

Unit 5 - Card inputs which (1) determine the type of change to be made and identify the record number, (2) give replacement values, (3) terminate the input data.

The following additional unit is used to input information from a disk file:

Unit 8 - Depot Maintenance Assignment File (DMAF)

The format for this file is given in Section 2.3.3.2.

2.3.3.1 Unit 5 - Card Inputs

There are two types of update cards: a type A card which describes the instruction and gives record numbers, and a type B card which contains replacement data. An Update Deck Terminator card follows the last type B card. The format for the type A update card is as follows:

Type A Update Card

Variable Name	Description	Field	Format
IDENT	Identification instruction	1-5	A5
IREC1	First record number	10-13	I4
IREC2	Last record number	14-17	I4

The format for second of the pair of cards in the update deck is as follows:

Type B Update Card

Variable Name	Description	Field	Format
UFIELD(1)	Yard	1-5	A5
UFIELD(2)	Ship type	6-9	A4
UFIELD(3)	Hull number	10-13	A4
UFIELD(4)	Sequence Number	14-17	A4
UFIELD(5)	Continuation indicator	18	A1
UFIELD(6)	Type work	19-21	A3
UFIELD(7)	Availability start date (mo/dy/yr)	22-27	A6
UFIELD(8)	Availability end date (mo/dy/yr)	28-33	A6
UFIELD(9)	Specialization category	34-36	A3
UFIELD(10)	Sector	37-38	A2
UFIELD(11)	Fiscal year (this record)	39-40	A2
UFIELD(12)	Period (this year)	41	A1
UFIELD(13)	PSP mandays this period	42-48	A7

Type B Update Card (Continued)

Variable Name	Description	Field	Format
UFIELD(14)	Total PSP mandays	49-55	A7
UFIELD(15)	Repair matrix number	56-59	A4
UFIELD(16)	Alterations matrix number	60-63	A4
UFIELD(17)	Percent of PSP mandays for alterations	64-66	A3
UFIELD(18)	Labor distribution histogram number	67-68	A2
UFIELD(19)	Sort key	74-76	A3

The format for the terminator card (the last card of the update deck) is as follows:

Update Deck Terminator Card

Variable Name	Description	Field	Format
ISTOP	Terminator (Must contain the characters "99999".)	1-5	A5

2.3.3.2 Unit 8 - Depot Maintenance Assignment File (DMAF)

The format for the Depot Maintenance Assignment File (DMAF) is as follows:

Variable Name	Description	Field	Format
DFIELD(1)	Yard	1-5	A5
DFIELD(2)	Ship type	6-9	A4
DFIELD(3)	Hull number	10-13	A4
DFIELD(4)	Sequence Number	14-17	A4
DFIELD(5)	Continuation indicator	18	A1
DFIELD(6)	Type work	19-21	A3
DFIELD(7)	Availability start date (mo/dy/yr)	22-27	A6
DFIELD(8)	Availability end date (mo/dy/yr)	28-33	A6
DFIELD(9)	Specialization category	34-36	A3
DFIELD(10)	Sector	37-38	A2
DFIELD(11)	Fiscal year (this record)	39-40	A2
DFIELD(12)	Period (this year)	41	A1
DFIELD(13)	PSP mandays this period	42-48	A7
DFIELD(14)	Total PSP mandays	49-55	A7
DFIELD(15)	Repair matrix number	56-59	A4
DFIELD(16)	Alterations matrix number	60-63	A4
DFIELD(17)	Percent of PSP mandays for alterations	64-66	A3
DFIELD(18)	Labor distribution histogram number	67-68	A2
DFIELD(19)	Sort key	74-76	A3
IRECOR	Record number	85-90	I6

2.3.4 OUTPUTS

The following unit is used by UPDEP for generating hardcopy output:

Unit 6 - Error messages and summary of replacement record

Section 2.3.7 presents a sample of this output.

The following additional unit is used by UPDEP to store information on disk for use by subsequent programs:

Unit 9 - The Revised Depot Maintenance Assignment File

The format for this file is described in Section 2.3.4.1.

2.3.4.1 Unit 9 - Revised Depot Maintenance Assignment File (DMAF)

The format for each record is as follows:

Variable Name	Description	Field	Format
DFIELD(1)	Yard	1-5	A5
DFIELD(2)	Ship type	6-9	A4
DFIELD(3)	Hull number	10-13	A4
DFIELD(4)	Sequence Number	14-17	A4
DFIELD(5)	Continuation indicator	18	A1
DFIELD(6)	Type work	19-21	A3
DFIELD(7)	Availability start date (mo/dy/yr)	22-27	A6
DFIELD(8)	Availability end date (mo/dy/yr)	28-33	A6
DFIELD(9)	Specialization category	34-36	A3
DFIELD(10)	Sector	37-38	A2
DFIELD(11)	Fiscal year (this record)	39-40	A2
DFIELD(12)	Period (this year)	41	A1
DFIELD(13)	PSP mandays this period	42-48	A7
DFIELD(14)	Total PSP mandays	49-55	A7
DFIELD(15)	Repair matrix number	56-59	A4
DFIELD(16)	Alterations matrix number	60-63	A4
DFIELD(17)	Percent of PSP mandays for alterations	64-66	A3
DFIELD(18)	Labor distribution histogram number	67-68	A2
DFIELD(19)	Sort key	74-76	A3
IREC	Resequenced record number	85-90	A6

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2.3.5 PROGRAM LISTING

```
C*****PROGRAM UPDEP(INPUT,OUTPUT,TAPE5=INPUT,TAPE6=OUTPUT,TAPE8,TAPE9)  **** 10
C       PROGRAM UPDEP IS A REVISION OF ONE WRITTEN BY DAN ALLEN         UPDP 20
C         ITS PURPOSE IS TO INSERT, DELETE OR REPLACE VALUES OR RECORDS UPDP 30
C             ON THE DMAF FILE                                          UPDP 40
C       REVISED SEPT 1975          BY JEAN ST LAURENT                   UPDP 50
C                                                                       UPDP 60
C       UNIT 5 - INPUT - UPDATE CONTROL CARDS                           UPDP 70
C       UNIT 6 - OUTPUT - ERROR MESSAGES ARE WRITTEN ON THIS UNIT       UPDP 80
C       UNIT 8 - INPUT - OLD DMAF RESIDES ON THIS UNIT                  UPDP 90
C       UNIT 9 - OUTPUT - UPDATED DMAF IS WRITTEN ON THIS UNIT          UPDP 100
C                                                                       UPDP 110
C       EACH INSERT, DELETE AND REPLACE COMMAND CONSISTS OF TWO         UPDP 120
C         OR MORE CARDS                                                 UPDP 130
C       AN INSTRUCTION CARD - *NSRT, *DELT, *REPL WITH IDENTIFYING      UPDP 140
C         RECORD NUMBER    AND A CARD IMAGE OF THE RECORD CONTAINING    UPDP 150
C             ONLY THE REPLACEMENT VALUE OR VALUES                      UPDP 160
C       IF THE 1ST CHARACTER OF A FIELD ON THE UPDATE CARD IS A $ SIGN,  UPDP 170
C         THE CORRESPONDING FIELD ON THE DMAF IS BLANK FILLED           UPDP 180
C       THERE SHOULD BE ONE CARD FOR EACH ALTERED RECORD                UPDP 190
C                                                                       UPDP 200
C       TO INSERT A RECORD OR RECORDS - USE  *NSRT AND THE RECORD NUMBER UPDP 210
C         AFTER WHICH RECORDS ARE TO BE INSERTED                        UPDP 220
C       TO DELETE A RECORD - USE *DELT WITH 1ST AND LAST RECORD NUMBER  UPDP 230
C         OF THE SEQUENCE TO BE DELETED                                 UPDP 240
C       TO REPLACE A RECORD - USE  *REPL AND THE RECORD NUMBER THAT     UPDP 250
C         IT IS REPLACING                                               UPDP 260
C       AUTOMATIC RESEQUENCING IS DONE ON THE NEW DMAF                  UPDP 270
C                                                                       UPDP 280
C       ALL UPDATE CONTROL CARDS MUST BE IN ASCENDING ORDER IN RECORD NO.UPDP 290
C                                                                       UPDP 300
C       THIS UPDATE DECK TERMINATES WITH A 99999 CARD                   UPDP 310
C                                                                       UPDP 320
C*****INTEGER UFIELD(19), DFIELD(19), FSTCHR(19)                        **** 330
      DIMENSION UFIELD(19), DFIELD(19), FSTCHR(19)                      **** 340
      REAL*8 ISIGN,IBLANK,INS,IDEL,IREP,ISTOP,DFIELD, UFIELD, FSTCHR    **** 350
      REAL*8 IDENT                                                      **** 360
      DATA ISIGN /1H$/, IBLANK/1H /, INS /5H*NSRT/, IDEL/5H*DELT/,      UPDP 370
     1  IREP/5H*REPL/, ISTOP/5H99999/                                    UPDP 380
C                                                                       UPDP 390
C       INITIAL CONDITIONS                                              UPDP 400
      IREC = 0                                                          UPDP 410
      DO 2 I = 1,19                                                     UPDP 420
C*****UFIELD(I) = 0                                                     **** 430
C*****FSTCHR(I) = 0                                                     **** 440
C*****DFIELD(I) = 0                                                     **** 450
      UFIELD(I) = 0.0                                                   **** 460
      FSTCHR = 0.0                                                      **** 470
      DFIELD(I) = 0.0                                                   **** 480
    2 CONTINUE                                                          UPDP 490
C                                                                       UPDP 500
C       WRITE HEADING                                                   UPDP 510
      WRITE(6,1010)                                                     UPDP 520
C                                                                       UPDP 530
C       READ UPDATE CARDS                                               UPDP 540
    5 READ(5,1000) IDENT, IREC1, IREC2                                  UPDP 550
```

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```
C       CHECK FOR LAST CARD                                                    UPDP 560
        IF(IDENT.EQ.ISTOP) GO TO 85                                            UPDP 570
        IF(IDENT.EQ.INS) GO TO 15                                              UPDP 580
        IF(IDENT .EQ.IDEL) GO TO 20                                            UPDP 590
        IF(IDENT.EQ.IREP) GO TO 25                                             UPDP 600
        GO TO 80                                                               UPDP 610
   15 J = 1                                                                    UPDP 620
        GO TO 30                                                               UPDP 630
   20 J = 2                                                                    UPDP 640
        GO TO 28                                                               UPDP 650
   25 J = 3                                                                    UPDP 660
   28 NREC = (IREC2 - IREC1) + 1                                               UPDP 670
        IF(IREC2.EQ.0) NREC = 1                                                UPDP 680
        IF(NREC.LE.0) GO TO 110                                                UPDP 690
        IF(J.EQ.2) GO TO 35                                                    UPDP 700
C                                                                              UPDP 710
C       READ UPDATE INFORMATION                                                UPDP 720
   30 READ(5,1001) (UFIELD(I),I=1,19), (FSTCHR(N),N=1,19)                      UPDP 730
C       READ OLD DMAF                                                          UPDP 740
C**35 READ(8,1002) (DFIELD(I),I=1,19), IRECOR                                  **** 750
   35 READ(8,1002,END=90) (DFIELD(I),I=1,19),  IRECOR                          **** 760
C       CHECK FOR EOF                                                          UPDP 770
C*****IF (EOF(8) .NE. 0) GO TO 90                                              **** 780
        IF(IRECOR - IREC1) 75,40,80                                            UPDP 790
C                                                                              UPDP 800
   40 GO TO (45, 55, 65), J                                                    UPDP 810
C                                                                              UPDP 820
C       INSERT NEW RECORDS  (J=1)                                              UPDP 830
   45 IREC = IREC + 1                                                          UPDP 840
        WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                 UPDP 850
   48 DO 50 I = 1, 19                                                          UPDP 860
        IF(UFIELD(I) .EQ. IBLANK) GO TO 50                                     UPDP 870
        DFIELD(I) = UFIELD(I)                                                  UPDP 880
        IF(FSTCHR(I) .EQ. ISIGN) DFIELD(I) = IBLANK                            UPDP 890
   50 CONTINUE                                                                 UPDP 900
        IREC = IREC + 1                                                        UPDP 910
        WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                 UPDP 920
        WRITE(6,1007) (DFIELD(I),I=1,19), IREC                                 UPDP 930
        READ(5,1001) (UFIELD(I),I=1,19),(FSTCHR(N),N=1,19)                     UPDP 940
        IF(UFIELD(1).EQ.ISTOP) GO TO 85                                        UPDP 950
        IF(UFIELD(1).EQ.INS .OR. UFIELD(1).EQ.IDEL .OR. UFIELD(1).EQ.IREP)UPDP 960
     1    GO TO 52                                                            UPDP 970
        GO TO 48                                                               UPDP 980
   52 BACKSPACE 5                                                              JPDP 990
        GO TO 5                                                                UPDP1000
C                                                                              UPDP1010
C       DELETE RECORDS BY READING AND THROWING AWAY   (J=2)                    UPDP1020
   55 IF(NREC.EQ.1) GO TO 5                                                    UPDP1030
        DO 60 K = 2, NREC                                                      UPDP1040
C*****READ(8,1002) (DFIELD(I),I=1,19), IRECOR                                  ****1050
        READ(8,1002,END=90) (DFIELD(I),I=1,19), IRECOR                         ****1060
C*****IF(EOF(8).NE.0) GO TO 90                                                 ****1070
   60 CONTINUE                                                                 UPDP1080
        GO TO 5                                                                UPDP1090
C                                                                              UPDP1100
C          REPLACE VALUES OR ENTIRE RECORDS       (J=3)                       UPDP1110
   65 DO  72 L = 1,NREC                                                        UPDP1120
        WRITE(6,1008) (DFIELD(I),I=1,19), IRECOR                               UPDP1130
        DO 70 I=1,19                                                           UPDP1140
        IF(UFIELD(I) .EQ. IBLANK) GO TO 70                                     UPDP1150
```

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```
      DFIELD(I) = UFIELD(I)                                                 UPDP1160
C      IF  $  IN FIELD, BLANK FILL                                          UPDP1170
      IF(FSTCHR(I) .EQ. ISIGN) DFIELD(I) = IBLANK                           UPDP1180
   70 CONTINUE                                                              UPDP1190
      IREC = IREC + 1                                                       UPDP1200
      WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                UPDP1210
      WRITE(6,1009) (DFIELD(I),I=1,19), IRECOR, IREC                        UPDP1220
      IF(L.EQ.NREC) GO TO 5                                                 UPDP1230
C*****READ(8,1002) (DFIELD(I),I=1,19), IRECOR                               ****1240
      READ(8,1002,END=90) (DFIELD(I),I=1,19),  IRECOR                       ****1250
C      CHECK FOR EOF                                                        UPDP1260
C*****IF (EOF(8) .NE. 0) GO TO 90                                           ****1270
   72 CONTINUE                                                              UPDP1280
      GO TO 5                                                               UPDP1290
C      COPY OLD DMAF TO NEW FILE UNCHANGED                                  UPDP1300
   75 IREC = IREC + 1                                                       UPDP1310
      WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                UPDP1320
      GO TO 35                                                              UPDP1330
C      ERROR PRINTOUT                                                       UPDP1340
   80 WRITE(6,1003) (UFIELD(I),I=1,19), IREC1                               UPDP1350
      IREC = IREC + 1                                                       UPDP1360
      WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                UPDP1370
      GO TO 5                                                               UPDP1380
C                                                                           UPDP1390
C      TERMINAL CARD OF UPDATES -  REMAINING RECORDS ARE COPIED             UPDP1400
C**85 READ(8,1002) (DFIELD(I),I=1,19), IRECOR                               ****1410
C*****IF(EOF(8) .NE. 0) GO TO 100                                           ****1420
   85 READ(8,1002,END=100) (DFIELD(I),I=1,19), IRECOR                       ****1430
      IREC = IREC + 1                                                       UPDP1440
      WRITE(9,1002) (DFIELD(I),I=1,19), IREC                                UPDP1450
      GO TO 85                                                              UPDP1460
  110 WRITE(6,1006) IREC1, IREC2                                            UPDP1470
      GO TO 5                                                               UPDP1480
   90 WRITE(6,1004)                                                         UPDP1490
  100 CONTINUE                                                              UPDP1500
      STOP                                                                  UPDP1510
 1000 FORMAT(A5,4X,?I4)                                                     UPDP1520
 1001 FORMAT(A5,A4,2A4,A1,A3,2A6,A3,A2,A2,A1,2A7,2A4,A3,A2,5X,A3,4X,        UPDP1530
     1  T1,A1,T6,A1,T10,A1,T14,A1,T18,A1, T19,A1, T22,A1,T28,A1, T34,A1,UPDP1540
     2  T37,A1,T39,A1, T41,A1,T42,A1,T49,A1,T56,A1, T60,A1,T64,A1,T67,    UPDP1550
     3  A1,T74,A1)                                                         UPDP1560
 1002 FORMAT(A5,A4,2A4,A1,A3,2A6,A3,A2,A2,A1,2A7,2A4,A3,A2,5X,A3,8X,I6)    UPDP1570
 1003 FORMAT(1X,41H*** UPDATE ERROR - RECORD NOT IN FILE ***/ ,             UPDP1580
     1       A5,A4,2A4,A1,A3,2A6,A3,A2,A2,A1,2A7,2A4,A3,A2,5X,A3,8X,I6)    UPDP1590
 1004 FORMAT(1X,54H*** UPDATE ERROR - EOF ENCOUNTERED ON OLD DATA SET **UPDP1600
     1*)                                                                    UPDP1610
 1006 FORMAT(1X, 16HINPUT CARD ERROR, 2X, 8HREC 1 = , I4, 2X,              UPDP1620
     1  8HREC 2 = , I4)                                                    UPDP1630
 1007 FORMAT(1H , 5X, A5, 2X, A4, 1X, 2(A4,2X), A1, A3, 2(2X,A6), 2X,      UPDP1640
     1  A3, 2(2X,A2),       2X, A1, 2(2X,A7), 2(2X,A4), 2X, A3, 2X, A2,   UPDP1650
     2  2X, A3, 10X, I6, 2X, 1HI )                                         UPDP1660
 1008 FORMAT(1H , 5X, A5, 2X, A4, 1X, 2(A4,2X), A1, A3, 2(2X,A6), 2X,      UPDP1670
     1  A3, 2(2X,A2),       2X, A1, 2(2X,A7), 2(2X,A4), 2X, A3, 2X, A2,   UPDP1680
     2  2X, A3, 2X, I6, 11X, 1HD )                                         UPDP1690
 1009 FORMAT(1H , 5X, A5, 2X, A4, 1X, 2(A4,2X), A1, A3, 2(2X,A6), 2X,      UPDP1700
     1  A3, 2(2X,A2),       2X, A1, 2(2X,A7), 2(2X,A4), 2X, A3, 2X, A2,   UPDP1710
     2  2X, A3, 2X, I6, 2X, I6, 2X, 1HI )                                  UPDP1720
 1010 FORMAT(1H1, 47X, 38HSUMMARY OF REPLACEMENT RECORDS ON DMAF, //        UPDP1730
     1  114X, 3HOLD, 6X, 3HNEW /, 112X, 6HREC NO , 3X, 6HREC NO )          UPDP1740
      END                                                                   UPDP1750
```

2.3.6 GLOSSARY

LOCAL VARIABLES

Main Program

DFIELD(19)	An array of data for one DMAF record; see Section 2.3.3.2.
FSTCHR(19)	An array of the first character of each field of the update record; see Section 2.3.3.1.
I	An index for I/O statements.
IBLANK	A one-character blank space.
IDEL	Variable which contains the characters "DELT".
IDENT	Variable used to test for type of update instruction.
INS	Variable which contains the characters "NSRT".
IREC	Record number of the revised DMAF file.
IRECOR	Record number on DMAF prior to revision.
IREC1	First record number read from an update instruction card; indicates record at which update begins.
IREC2	Second record number read from an update instruction card; indicates last record of the sequence to be altered.
IREP	Variable which contains the characters "REPL".
ISIGN	Variable which contains the character "$" which designates replacing the field with blanks.
ISTOP	Variable which contains the characters "99999".
J	Flag set to determine the type of update instruction: Flag set to "1" if inserting new records. Flag set to "2" if deleting records. Flag set to "3" if replacing values or entire records.
K	Index for deleting records.
L	Index used for DO-loop.
N	Index for I/O statements.
NREC	Number of sequential records to be updated.
UFIELD	An array of update data; see Section 2.3.3.1.

2.3.7 SAMPLE RUN

Card inputs (unit 5) for the sample run requested that the sequence number of all availabilities on the Depot Maintenance Assignment File (DMAF) for the CGN 35 be changed from 0 to 20. This was accomplished by using the replace command, *RFPL, and the corresponding record numbers. For records 11 thru 13, the correct value of the sequence number was punched in the appropriate fields. The other alteration to DMAF was to change the values for percent alterations for all availabilities on the CV 41. Inputs requested substituting the value "21" on records 30 thru 32.

A summary of replacement records (unit 6) shows records that were deleted, noted by the letter "D," and replacement or inserted records, noted by the letter "I". When records were simply inserted, the file was resequenced by ones; therefore the old and new record numbers differed.

The output of program UPDEP consists of a Revised Depot Maintenance Assignment File (DMAF) and is written on unit 9.

Unit 5 - Card Inputs

```
*REPL       11  13
                20
*REPL       30  32
                                                    21
99999
```

Unit 6 - Summary of Replacement Records

SUMMARY OF REPLACEMENT RECORDS ON DMAF

														OLD REC NO	NEW REC NO	
PUGET	CGN	35	0	RO	60181	80182	AAN	NW	81	2	75760	298507	14 19	11		D
PUGET	CGN	35	20	RO	60181	80182	AAN	NW	81	2	75760	298507	14 19	11	11	I
PUGET	CGN	35	0	*RO	60181	80182	AAN	NW	82	1	165233	298507	14 19	12		D
PUGET	CGN	35	20	*RO	60181	80182	AAN	NW	82	1	165233	298507	14 19	12	12	I
PUGET	CGN	35	0	*RO	60181	80182	AAN	NW	82	2	57513	298507	14 19	13		D
PUGET	CGN	35	20	*RO	60181	80182	AAN	NW	82	2	57513	298507	14 19	13	13	I
LBECH	CV	41	40	RO	101280	101281	CVA	NW	81	1	179097	396045	0 1	30		D
LBECH	CV	41	40	RO	101280	101281	CVA	NW	81	1	179097	396045	21 1	30	30	I
LBECH	CV	41	40	*RO	101280	101281	CVA	NW	81	2	215472	396045	0 1	31		D
LBECH	CV	41	40	*RO	101280	101281	CVA	NW	81	2	215472	396045	21 1	31	31	I
LBECH	CV	41	40	*RO	101280	101281	CVA	NW	82	1	1474	396045	0 1	32		D
LBECH	CV	41	40	*RO	101280	101281	CVA	NW	82	1	1474	396045	21 1	32	32	I

LAST RECORD NUMBER IS 58

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Unit 9 - Revised Depot Maintenance Assignment File

PUGETCGN	9	30 C	40179	40182AANNW792	82471	739000	0	9	1
PUGETCGN	9	30*C	40179	40182AANNW801	163508	739000	0	9	2
PUGETCGN	9	30*C	40179	40182AANNW802	164152	739000	0	9	3
PUGETCGN	9	30*C	40179	40182AANNW811	163582	739000	0	9	4
PUGETCGN	9	30*C	40179	40182AANNW812	123009	739000	14	9	5
PUGETCGN	9	30*C	40179	40182AANNW821	42207	739000	0	9	6
PUGETCGN	9	30*C	40179	40182AANNW822	68	739000	0	9	7
PUGETCGN	25	24 RA	11579	31579AANNW791	30000	30000	20	1	8
PUGETCGN	25	30 RO	60182	80183AANNW822	75760	298507	1419		9
PUGETCGN	35	11 RA	11579	31579AANNW791	12000	12000	100	1	10
PUGETCGN	35	0 RO	60181	80182AANNW812	75760	298507	1419		11
PUGETCGN	35	0*RO	60181	80182AANNW821	165233	298507	1419		12
PUGETCGN	35	0*RO	60181	80182AANNW822	57513	298507	1419		13
PUGETCGN	36	4 RA	11579	41679AANNW791	43925	47204	24	1	14
PUGETCGN	36	4*RA	11579	41679AANNW792	3278	47204	24	1	15
PUGETCGN	36	10 RO	41480	61481AANNW802	116368	278550	14	9	16
PUGETCGN	36	10*RO	41480	61481AANNW811	144621	278550	14	9	17
PUGETCGN	36	10*RO	41480	61481AANNW812	17560	278550	14	9	18
NORVACGN	37	4 RA	62178	82278AANNE782	20400	20400	39		19
NORVACGN	37	10 RO	10281	30582AANNE811	68369	278000	1413		20
NORVACGN	37	10*RO	10281	30582AANNE812	161821	278000	1413		21
NORVACGN	37	10*RO	10281	30582AANNE821	47808	278000	1413		22
NORVACGN	38	4 RA	803791	00279AANNE792	11955	12000	32	1	23
NORVACGN	38	4*RA	803791	00279AANNE801	44	12000	32	1	24
NORVACGN	38	10 RO	70182	90283AANNE822	69808	278000	913		25
PUGETCGN	39	4 RA	71579	91579AANNW792	12000	12000	100	1	26
CHASNCGN	40	4 RA	50182	70182AANNE822	12000	12000	100	1	27
NWPACCV	41	35 RA	71078	91178CVAPW782	40000	40000	4917		28
PUGETCV	41	36 RA	111078	11179CVANW791	40000	40000	4817		29
LBECHCV	41	40 RO	1012801	01281CVANW811	179097	396045	0	1	30
LBECHCV	41	40*RO	1012801	01281CVANW812	215472	396045	0	1	31
LBECHCV	41	40*RO	1012801	01281CVANW821	1474	396045	0	1	32
LBECHCV	43	40 RO	1130771	12978CVANW781	124004	342067	1724		33
LBECHCV	43	40*RO	1130771	12978CVANW782	199985	342067	1724		34
LBECHCV	43	40*RO	1130771	12978CVANW791	18076	342067	1724		35
D 12 CV	43	41 RA	31080	71180CVAPW801	2096	10000	017		36
D 12 CV	43	41*RA	31080	71180CVAPW802	7903	10000	017		37
D 06 CV	59	41 RA	110378	12979CVAPE791	73258	73258	3917		38
NORVACV	59	42 RA	50380	72980CVANE802	60000	60000	4317		39
NORVACV	59	43 RA	100181	10182CVANE821	60000	60000	4417		40
D 06 CV	60	53 RA	10678	40378CVAPE781	86977	89360	4017		41
D 06 CV	60	53*RA	10678	40378CVAPE782	2382	89360	4017		42
NORVACV	60	60 RO	4207912	0179CVANE792	194944	240000	4723		43
NORVACV	60	60*RO	4207912	0179CVANE801	45055	240000	4723		44
D 06 CV	60	61 RA	7018210	0182CVAPE822	59484	60000	4217		45
PUGETCV	61	50 RO	21577	21578CVANW781	111606	443300	3824		46
D 11 CV	61	51 RA	20180	50180CVAPW801	44312	60000	42	1	47
D 11 CV	61	51*RA	20180	50180CVAPW802	15687	60000	42	1	48
D 11 CV	61	52 RA	9018112	0181CVAPW812	14731	60000	46	1	49
D 11 CV	61	52*RA	9018112	0181CVAPW821	45268	60000	46	1	50
NORVACV	62	40 RO	1121771	01978CVANE781	140469	346352	4123		51
NORVACV	62	40*RO	1121771	01978CVANE782	199596	346352	4123		52
NORVACV	62	40*RO	1121771	01978CVANE791	6286	346352	4123		53
NORVACV	62	41 RA	9017911	2679CVANE792	29389	69170	4217		54
NORVACV	62	41*RA	9017911	2679CVANE801	39780	69170	4217		55
D 11 CV	62	42 RA	10281	40181CVAPW811	59925	60000	41	1	56
D 11 CV	62	42*RA	10281	40181CVAPW812	74	60000	41	1	57
D 11 CV	62	43 RA	50182	80182CVAPW822	60000	60000	41	1	58