

General Disclaimer

One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.



Jsc Lib

CR 151811

LOCKHEED ELECTRONICS COMPANY JUL 10 1978

SYSTEMS AND SERVICES DIVISION

16811 EL CAMINO REAL □ HOUSTON, TEXAS 77058 □ TELEPHONE (AREA CODE 713) 488-0080

Ref: 642-6921
Contract NAS 9-15200
Job Order 73-783-18

TECHNICAL MEMORANDUM

MODIFICATIONS TO THE ACCURACY ASSESSMENT ANALYSIS
ROUTINE MLTCRP TO PRODUCE AN OUTPUT FILE

By

J. G. Carnes

Approved By: *Elmer M. Hsu*
E. M. Hsu, Supervisor
Accuracy Assessment
Section

(NASA-CR-151811) MODIFICATIONS TO THE ACCURACY ASSESSMENT ANALYSIS ROUTINE MLTCRP TO PRODUCE AN OUTPUT FILE (Lockheed Electronics Co.) 77 p HC A05/MF A01 N78-29794
Unclas
CSCCL 09B G3/61 29048



June 1978

LEC-12176

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Technical Memorandum - Modification to the Accuracy Assessment Analysis Routine MLTCRP to Produce an Output File		5. Report Date June 1978	6. Performing Organization Code
		8. Performing Organization Report No. LEC-12176	
7. Author(s) J. G. Carnes		10. Work Unit No.	
9. Performing Organization Name and Address Lockheed Electronics Company, Inc. Systems and Services Division 1830 NASA Road 1 Houston, Texas 77058		11. Contract or Grant No. NAS 9-15200	
		13. Type of Report and Period Covered Technical Memorandum	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Lyndon B. Johnson Space Center Houston, Texas 77058		14. Sponsoring Agency Code	
		15. Supplementary Notes	
16. Abstract This document describes modifications made to the analysis program MLTCRP in the Accuracy Assessment software system to produce a disk output file. The output files produced by this modified program will be used to aggregate data for regions greater than a single segment.			
17. Key Words (Suggested by Author(s)) Accuracy assessment Disk output Aggregation		18. Distribution Statement	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 77	22. Price*

*For sale by the National Technical Information Service, Springfield, Virginia 22161

1. BACKGROUND

MLTCRP is an analysis program in the Accuracy Assessment Software System which is used to analyze DTERM files and AI dot labels in terms of ground truth information for an individual segment. (For information on this program see "As-Built Design Specification for PDP 11/45 Accuracy Assessment System Using Disk Data File," Job Order 71-695, TIRF 77-0048, LEC-11881.) Some of the information produced by this program is of interest for areas greater than a single segment. In order to facilitate the aggregation of this information, MLTCRP was modified to produce a disk output file containing the necessary information for each segment.

2. GENERAL DESCRIPTION

The modifications to MLTCRP which produce the disk output file do not affect the data processing performed by the program. There are some operational restrictions on the program due to the modifications. The program can accept up to three DTERM files for a segment in a run. The order in which the files are processed is not critical for the original program; however, the modified version requires that certain files be in a certain order. For a valid output file to be produced, the following restrictions must be observed:

- a. When type "1" dots are used, there must be two DTERM files for each run: (1) unconditional cluster file (DT2), and (2) machine classification file (DT1). The DTERM files must be entered in this order. If the third file (conditional cluster file-DT3) is used, it must precede the other two files.
- b. When other than type "1" dots are used, only the machine classification file will produce a disk output file. The output file will not contain records 4 and 5.

The output file produced by the program is named MCRPOUT.OUT. It is created in the UIC where the task is located. The output file is an unformatted, sequential access file. The contents of this file are described in appendix A. Records 2, 3, and 6 are two-dimensional arrays. The second subscripts in records 2 and 3 are running indices for the transformations. In record 6, the second subscript is a running index for analyst-labeled dots. In records 4 and 5, if there are no subpixels with a crop code in a class, the crop code is not written to the disk file.

To access the output file, the following statement should be used:

```
OPEN(UNIT=LUN,NAME=FLNM,TYPE='OLD',ACCESS='SEQUENTIAL',  
*   FORM='UNFORMATTED',CARRIAGE CONTROL='NONE',ERR=N)
```

LUN is the logical unit number associated with the file, FLNM is an array containing the file name for the output file with an explicit version number,

and N is a statement number to go to if there is an error in opening the file. The arrays to accept the data should be dimensioned as follows:

```
DIMENSION IREC1(20),IREC2(3,100),IREC3(2,10),IREC4(3000),
*          IREC5(3000),IREC6(3,105)
```

To load the data into the arrays, the following statements can be used:

```
READ(LUN)(IREC1(I),I=1,20)
READ(LUN)((IREC2(I,J),I=1,3),J=1,IREC1(13))
READ(LUN)((IREC3(I,J),I=1,2),J=1,IREC1(14))
IF(IREC1(9).GT.1)GO TO 10
READ(LUN)(IREC4(I),I=1,IREC1(16))
READ(LUN)(IREC5(I),I=1,IREC1(17))
10 READ(LUN)((IREC6(I,J),I=1,3),J=1,IREC1(10))
```

The conditional jump statement is used because for type "2" dots, records 4 and 5 are not created. In record 1, all of the words except word 2 are integers. Word 2 is an alphanumeric variable (A2). Records 2, 4, 5, and 6 are all integers. In record 3, the first word of each pair is alphanumeric (A1 format).

3. DETAILS OF THE MODIFICATIONS

Appendix B is a compiled listing of the routines used in the modified version of MLTCRP. The modifications made to the original program are marked off in blocks on the listings. MLTCRP is overlaid to keep it within the 32K word limit imposed by the PDP 11/45 task builder. The overlay structure is described in figure 1. MPI is the only common block that was changed by the modifications. It was expanded to include the variable DTN, which is the number of the DTERM file. This change in MPI was the only change made in subroutines ZOT, IERR, MTXPT, and PROB. The subroutines AAMCRP, AAMRDD, AAMANL, and PROBPT were modified more extensively. A new subroutine, DISKLD, was developed for the program. The modifications to these subroutines are described below.

3.1 AAMCRP MODIFICATIONS

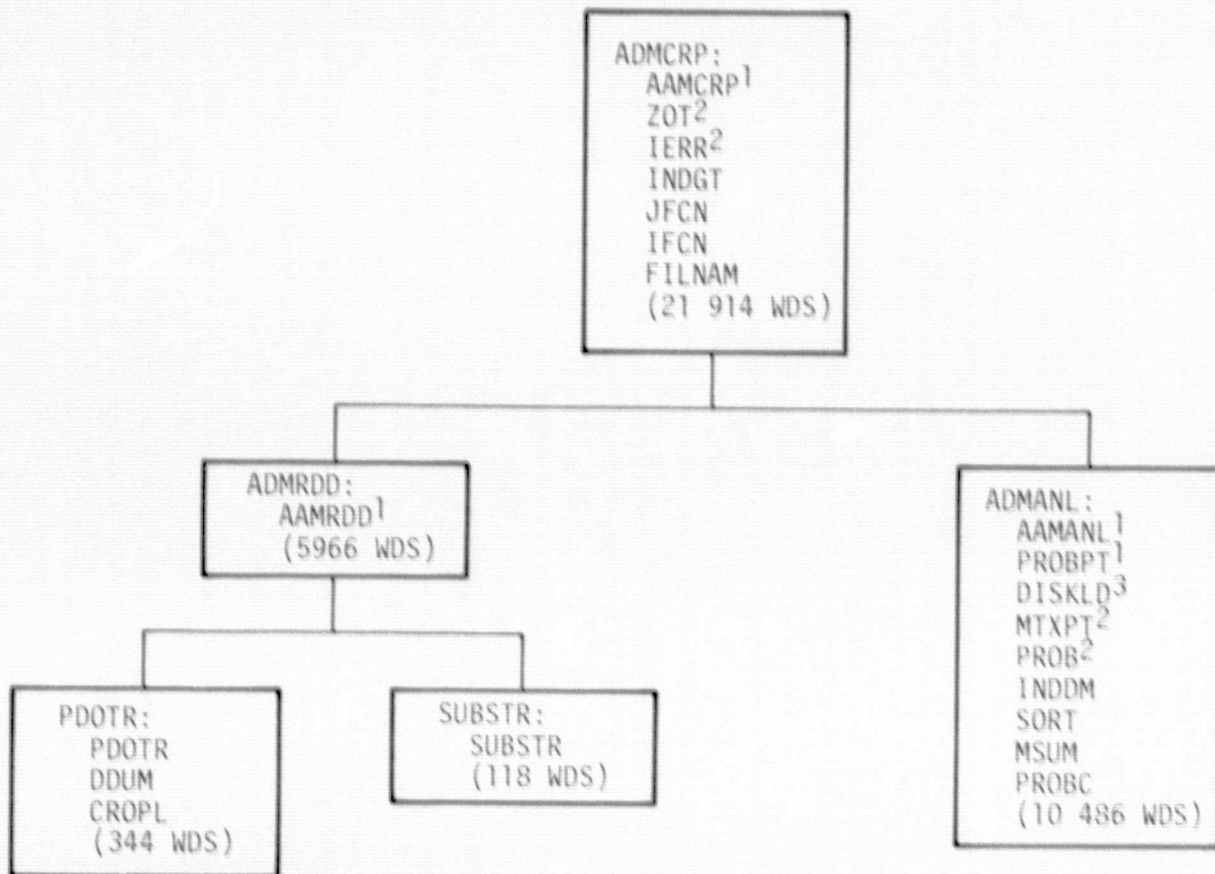
AAMCRP was modified to open the disk output file before the data are processed, and to close the output file when all of the processing is complete.

3.2 AAMRDD MODIFICATIONS

Records 1, 2, and 3 are dimensioned in AAMRDD. The DTERM file number, DTN, is determined from the file name. On the first pass through this subroutine, words 1-10, 13, and 14 of record 1, and all of records 2 and 3 are written to the disk output file.

3.3 AAMANL MODIFICATIONS

All six of the output arrays are dimensioned in AAMANL. For the DTERM conditional file (DT3), nothing is done to the output file in AAMANL. For the DTERM unconditional cluster file (DT2), the data in the disk file are read into IREC1, IREC2, and IREC3. IREC4 is loaded during the first call to PROBPT. IREC1, IREC2, IREC3, and IREC4 are then written to the output file. When AAMANL is processing the DTERM machine classification file (DT1), the data from the disk file are read into IREC1, IREC2, IREC3, and IREC4. IREC5 is loaded during the first call to PROBPT. IREC6 is then loaded and all of the



- ¹ Subroutine was extensively modified
- ² Common statement changed in subroutine
- ³ New subroutine

Figure 1.— Overlay structure for modified version of MLTCRP
(number in parentheses is size for each segment).

records are written to the disk file. At the end of AAMANL, the contents of the disk file are written on the line printer.

3.4 PROBPT MODIFICATIONS

The calling arguments for PROBPT were added to pass an array for loading records 4 and 5, and a counter for the length of the record to the subroutine, DISKLD. PROBPT calls DISKLD for DTERM files DT1 and DT2 when PROBPT is processing the number arrays.

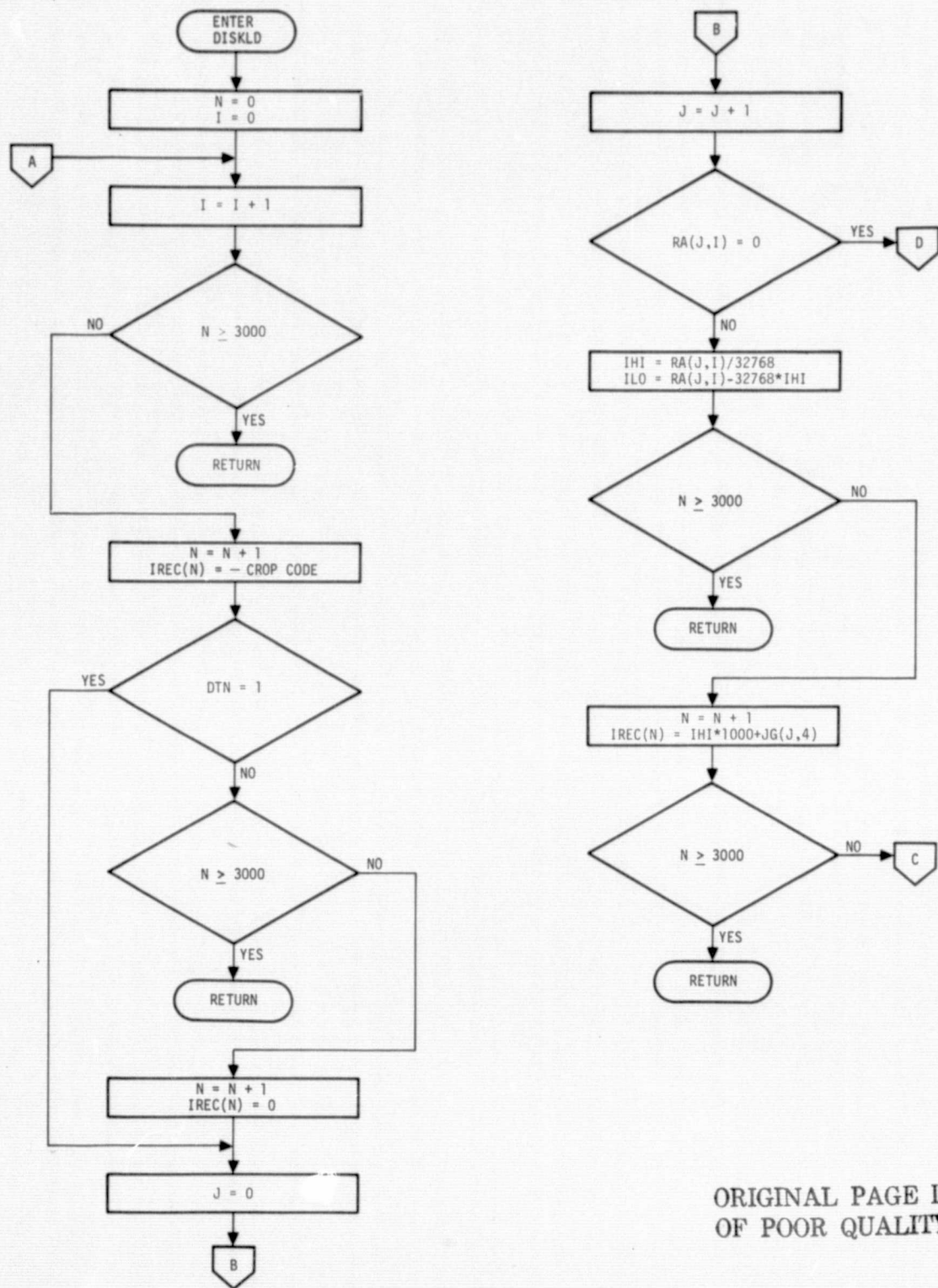
3.5 SUBROUTINE DISKLD

DISKLD is a subroutine which takes the data in RA(I,J) and compresses the data by eliminating zeros. The compressed data are loaded into an output array. The calling arguments for DISKLD are:

- a. Outputs: IREC - array into which the compressed data are loaded
 N - number of words used in array
- b. Input: DTN - DTERM file number

The subroutine requires common blocks MTX and CK.

Figure 2 is a flow chart for this subroutine. The subroutine requires 184 words of storage exclusive of common blocks and the output array.



ORIGINAL PAGE IS
OF POOR QUALITY

Figure 2.— Flow chart for subroutine DISKLD.

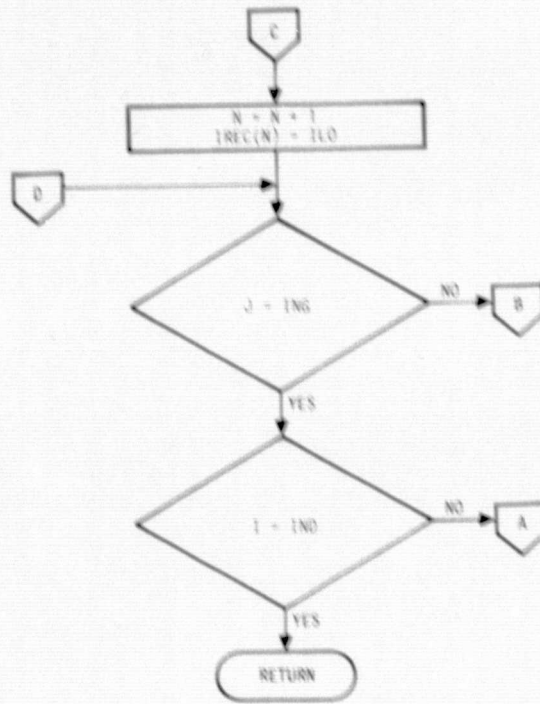


Figure 2.- Concluded.

APPENDIX A
DISK OUTPUT FILE FORMAT FOR MLTCRP

APPENDIX A

DISK OUTPUT FILE FORMAT FOR MLTCRP

Record 1 - General Information

- WD 1 - Segment number
- WD 2 - State
- WD 3 - Processing date
- WD 4 - Acquisition date (1)
- WD 5 - Acquisition date (2)
- WD 6 - Acquisition date (3)
- WD 7 - Acquisition date (4)
- WD 8 - Date for ground truth tape (GTT)
- WD 9 - Dot type
- WD 10 - Number of labeled dots
- WD 11 - Number of cluster codes on DTERM tape
- WD 12 - Number of crop codes on ground truth tape
- WD 13 - Number of crop code transformations
- WD 14 - Number of dot label transformations
- WD 15 - Number of machine codes on ground truth tape
- WD 16 - Number of words in record 4
- WD 17 - Number of words in record 5
- WD 18 - Not used
- WD 19 - Not used
- WD 20 - Not used

Record 2 - Crop Code Transformations

WD (1,N) - Beginning crop code

WD (2,N) - Ending crop code

WD (3,N) - Transformation

Record 3 - Dot Label Transformations

WD (1,N) - Alphanumeric label designation

WD (2,N) - Numeric code

Record 4 - Ground Truth for Unconditional Clusters

WD 1 - First cluster number with sign changed

WD 2 - 1000X (AI label for dot used to label first cluster) + dot number
[to be added later]

WD 3 - 1000X (integer truncation of number of subpixels in first cluster with
crop code, divided by 32 768) + crop code

WD 4 - Remainder of subpixels in first cluster with crop code

[Repeat words 3 and 4 for all crop codes in first cluster, then repeat for
each cluster.]

Record 5 - Ground Truth for Machine Classes

WD 1 - First machine class number with sign changed

WD 2 - 1000X (integer truncation of number of subpixels in first machine class
with crop code, divided by 32 768) + crop code

WD 3 - Remainder of subpixels in first machine class with crop code

[Repeat words 2 and 3 for all crop codes in first machine class, then repeat
for each machine class.]

Record 6 - Ground Truth for Each Labeled Dot

WD (1,N) - 1000X (AI label for dot) + dot number

WD (2,N) - Machine class for dot

WD (3,N) - Crop code for dot on ground truth tape

APPENDIX B

COMPILED LISTING FOR MODIFIED VERSION OF MLTCRP


```
0001 PROGRAM AAMCRP
0002 IMPLICIT INTEGER (A-Z)
0003 DIMENSION GTFIL(7),DTFIL(7),DTFL2(7),DTFL3(7),AIFIL(7)
0004 COMMON /RD/A(11,19),G(11,19),DT(11,19)
COMMON /MPI/MIND,RT,NPRT,TIND,NAID
```

```
0005 COMMON/MPI/MIND,RT,NPRT,TIND,NAID,DTN
```

```
0006 COMMON /CK/JG(256,4),JD(256,4),IAG,IND
0007 COMMON /MTX/RA(50,50)
0008 COMMON /PS/BASS
0009 BYTE T(R),D(O)
0010 CALL TIME(T)
0011 CALL DATE(D)
0012 NRDD = 4
0013 NRDD=5
0014 NPRT=6
0015 WRITE(NPRT,703) D,T
```

```
0016 703 FORMAT(1H1,' JOB INITIATED ON ',9A1,' AT ',8A1,'//,10X,
1'PROGRAM AAMCRP,FTN')
```

```
0017 OPEN(UNIT=NRDD,NAME='MILTCR,DATA',TYPE='OLD',
* ACCESS='SEQUENTIAL',FORM='FORMATTED',CARRIAGE CONTROL='NONE')
```

```
*** READ CONTROL CARD WITH FILE NAMES ***
** AT DOTS * GROUND TRUTH AND MULTIPLE DTRM FILES **
```

```
0018 READ(NRDD,801)AIFIL,GTFIL,DTFIL,DTFL2,DTFL3
0019 801 FORMAT(5(6A2,A1,'X'))
0020 CALL CLUSE(NRDD)
```

```
*** DETERMINE NO. OF LOOPS BY ***
** NO. OF DTRM FILE NAMES **
```

```
0021 NPASS=3
0022 DO 40 I=1,4
0023 IF(DTFL3(I).NE.' ')GO TO 58
0024 40 CONTINUE
0025 NPASS=2
0026 DO 50 I=1,4
0027 IF(DTFL2(I).NE.' ')GO TO 58
0028 50 CONTINUE
0029 NPASS=1
0030 58 CONTINUE
```

```
0031 OPEN(UNIT=7,NAME='MCRPZUT,OUT',TYPE='NEW',ACCESS='SEQUENTIAL',
* FORM='UNFORMATTED',CARRIAGE CONTROL='NONE')
```

ORIGINAL PAGE IS
OF POOR QUALITY

```
0032      DO B02 PASS=1,NPASS
0033      BASS=PASS
0034      CALL AAMRDN
0035      CALL AAMANL
0036      WRITE(NPRT,334)
0037      334 FORMAT('H1')
0038      B02 CONTINUE
```

```
C
C      *
C      CLOSE DISK OUTPUT FILE
0039      CALL CL0SE(7)
C
C      *
```

```
0040      CALL DATE(D)
0041      CALL TIME(T)
0042      WRITE(NPRT,333)
0043      333 FORMAT('///')
0044      WRITE(NPRT,110) D,T
0045      WRITE(NPRT,110) D,T
0046      110 FORMAT(' JOB COMPLETED ON ',9A1,' AT ',8A1)
0047      STOP
0048      END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000670 220	Rk,I,CBA,LCL
2	SPDATA	000034 14	Rk,C,CBA,LCL
3	SIDATA	000370 124	Rk,C,CBA,LCL
4	SVARK	000149 49	Rk,C,CBA,LCL
6	PD	002346 627	Rk,C,ZVR,GBL
7	MPI	000016 7	Rk,C,ZVR,GBL
8	CK	010004 2050	Rk,C,ZVR,GBL
9	MTX	023470 5000	Rk,C,ZVR,GBL
10	PS	000002 1	Rk,C,ZVR,GBL

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
BASS	I*2	10-000000	DYN	I*2	7-000014	I	I*2	4-000136	IND	I*2	8-010002	ING	I*2	8-010000
MIND	I*2	7-000000	NAID	I*2	7-000012	NPASS	I*2	4-000134	NPR1	I*2	7-000006	NRDD	I*2	4-000132
NRDR	I*2	4-000130	PASS	I*2	4-000140	RT	R*4	7-000002	TIND	I*2	7-000070			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	6-000000	000642	209 (11,19)
ATFIL	I*2	4-000070	000016	7 (7)
B	L*1	4-000116	000011	4 (5)
DT	I*2	6-001574	000642	209 (11,19)
DTFIL	I*2	4-000016	000016	7 (7)
DTFL2	I*2	4-000034	000016	7 (7)
DTFL3	I*2	4-000052	000016	7 (7)
G	I*2	6-000642	000642	209 (11,19)
GTFIL	I*2	4-000000	000016	7 (7)
JD	I*2	8-004000	004000	1024 (256,4)
JG	I*2	8-000000	004000	1024 (256,4)
RA	R*4	9-000000	023420	5000 (50,50)
T	L*1	4-000106	000010	4 (8)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
40	**	50	**	98	1-000376	110	3-000124
334	3-000114	703	3-000000	801	3-000100	802	**
						333	3-000120

FUNCTIONS AND SUBROUTINES REFERENCED

AAHANL	AAHROD	CLASP	DATE	ZPENS	TIME

ORIGINAL PAGE IS
OF POOR QUALITY

FORTRAN IV-PLUS V02-51
ADMCRP,FTN /TPIRI 0CKS/NR

86112140

24-APR-78

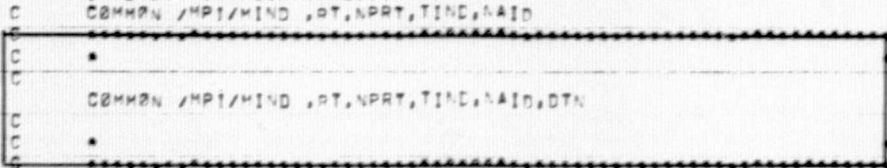
PAGE 4

TOTAL SPACE ALLOCATED = 037470 8092

NO FPP INSTRUCTIONS GENERATED

B-4

```
0001      SUBROUTINE ZRT  
0002      IMPLICIT INTEGER (A=0),(S=Z)  
0003      COMMON /MPI/MIND ,PT,NPRT,TIND,NAID  
0004      COMMON /CK/JG(256,4),JT(256, 4),ING,IND  
0005      COMMON /MTX/RA( 80,50)  
0006      DO 50 I=1,256  
0007      JG(I,1)=I  
0008      JD(I,1)=I  
0009      50 CONTINUE  
0010      ENTRY ZIP  
0011      RT=0.0  
0012      ING=0  
0013      IND=0  
0014      DO 850 I=1,256  
0015      DO 850 J=2,4  
0016      JG(I,J)=0  
0017      JD(I,J)=0  
0018      850 CONTINUE  
0019      DO 851 I=1,50  
0020      DO 851 J=1,50  
0021      RA(I,J)=0.0  
0022      RETURN  
0023      END
```



DS

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDF1	000302 97	R, I, CON, LCL
4	SVARS	000004 2	R, C, CON, LCL
6	MPI	00001A 7	R, C, ZVR, GBL
7	CK	010004 2050	R, C, ZVR, GBL
8	MTX	023420 5000	R, C, ZVR, GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
ZIP		1-000064	ZPT		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000000	IND	I*2	7-010002	ING	I*2	7-010000	J	I*2	4-000002
MIND	I*2	6-000000	NAIN	I*2	6-000012	NPRT	I*2	6-000005	RT	R*4	6-000002	TIN	I*2	6-000010

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	7-004000	004000 7024	(256,4)
JG	I*2	7-000000	004000 7024	(256,4)
RA	R*4	8-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
50	**	850	**	851	**		

TOTAL SPACE ALLOCATED = 033750 7156

B-6

```
0001 SUBROUTINE INDGT(TAPE)
0002   IMPLICIT INTEGER(A-Z)
0003   COMMON /CK/JG(256,4),JD(256,4),ING,IND
0004   KK=JG(TAPE,1)
0005   IF(JG(KK,2).NE.0) RETURN
0006   ING=ING+1
0007   JG(KK,2) = KK
0008   JG(KK,3) =ING
0009   RETURN
0010   END
```

B-7

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000076 31	R,I,CBN,LCL
4	SVARR	000072 1	R,I,CBN,LCL
6	CK	010004 2050	R,I,RVE,BPL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDGT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6-010000	ING	I*2	6-010000	KK	I*2	4-000000	TAPP	I*2	F-000002*			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
J0	I*2	6-004000	004000	1024 (256,4)
J5	I*2	6-005000	004000	1024 (256,4)

TOTAL SPACE ALLLOCATED = 010104 2082

NO FPP INSTRUCTIONS GENERATED

83


```
0001      SUBROUTINE INDDT(TAPE)
0002          IMPLICIT INTEGER(A-Z)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004          KK=JD(TAPE,1)
0005          IF(JD(KK,2).NE.0) RETURN
0006          IND=IND+1
0007          JD(KK,2) = KK
0008          JD(KK,3) = IND
0009          RETURN
0010      END
```

B-9

ORIGINAL PAGE IS
NOT FOR REPRODUCTION
UNLESS INDICATED

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDE1	000076 31	RK,I,CON,LCL
4	SVIRK	000072 1	RK,DVCRK,LCL
6	CK	010004 2090	RK,D,2VR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDDT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6-010002	ING	I*2	6-010004	KK	I*2	4-000000	TAP	I*2	6-000002*			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000 1024	(256,4)
JG	I*2	6-000000	004000 1024	(256,4)

TOTAL SPACE ALLOCATED = 010104 2092

NO FPP INSTRUCTIONS GENERATED

B-10

```
0001 FUNCTION JFCN(X)  
0002 IMPLICIT INTEGER (A-D),(S-Z)  
0003 COMMON /CK/J0(256,4),JD(256,4),IAG,IND  
0004 KD=JD(X,1)  
0005 LD=JD(KD,2)  
0006 JFCN=JD(LD,3)  
0007 RETURN  
0008 END
```

ORIGINAL PAGE IS
OF POOR QUALITY

B-11

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	TCDF1	000066 27	RH,I,CBA,LCL
3	SIPATA	000002 1	RH,C,CBA,LCL
4	EVARS	000074 2	RH,D,CBA,LCL
6	CK	010004 2080	RH,D,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
JFCN	I*2	1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6-010000	ING	I*2	6-010000	KD	I*2	4-000000	LD	I*2	4-000002
									X	I*2	F-000002*

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	1024 (256,4)
JB	I*2	6-000000	004000	1024 (256,4)

TOTAL SPACE ALLOCATED = 010100 2080

NO PFP INSTRUCTIONS GENERATED

B-12

```
0001 FUNCTION IFCN(TV)
0002 IMPLICIT INTEGER (A-Z)
0003 COMMON /CK/JG(256,4),JF(256,4),ING,IND
0004 KG=JG(TV,1)
0005 LG=JG(KG,2)
0006 IFCN=JG(LG,3)
0007 RETURN
0008 END
```

B-13

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCPDE1	000066 27	Rw,I,C0N,LCL
3	SIMATA	000002 1	Rw,D,C0N,LCL
4	SVARS	000004 2	Rw,D,C0N,LCL
6	CK	010004 2080	Rw,D,ZVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IFCN	I*2	1*000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IND	I*2	6*010002	ING	I*2	6*010000	KG	I*2	4*000000	LG	I*2	4*000002	TV	I*2	6*000002*

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6*004000	004000	1024 (256,4)
JG	I*2	6*000000	004000	1024 (256,4)

TOTAL SPACE ALLOCATED = 010100 2080

NO FPP INSTRUCTIONS GENERATED

ORIGINAL PAGE IS
OF POOR QUALITY

```
0001 SUBROUTINE IRR(II,JJ)
      COMMON /MPI/MIND ,RT,NPRT,TINC,NAID
      *
0002 COMMON /MPI/MIND ,RT,NPRT,TINC,NAID,BTN
      *
0003 IF(II.LT.1) WRITE(NPRT,825) II
0004 IF (II.GT.256) WRITE(NPRT,825) II
0005 IF(JJ.LT.1) WRITE(NPRT,826) JJ
0006 IF(JJ.GT.256) WRITE(NPRT,826) JJ
0007 IF(II.LT.1.OR.II.GT.256) STOP
0008 IF(JJ.LT.1.OR.JJ.GT.256) STOP
0009 825 FORMAT(10,10X,'II=',I5)
0010 826 FORMAT(10,10X,'JJ=',I5)
0011 RETURN
0012 END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES	
1	SCZDR1	000300	96	RK,I,CBN,LCL
3	SIMAPA	000030	12	RK,C,CBN,LCL
6	MPI	000022	9	RK,D,ZVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
IERR		1*000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	R*4	6*000016	II	I*2	6*000002*	JJ	I*2	6*000004*	MINI	I*2	6*000000	MAIN	I*2	6*000014
NPRT	I*2	6*000006	RT	R*4	6*000002	TIND	R*4	6*000010						

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
825*	3*000000	826*	3*000014				

TOTAL SPACE ALLOCATED * 000352 177

NO FPP INSTRUCTIONS GENERATED

ADMCRP,0PJ,LP1R1C170,13ADMCRP,FTN

B-16

ORIGINAL PAGE IS
OF POOR QUALITY


```
0001 SUBROUTINE AADRDD  
0002 IMPLICIT INTEGER (I=0), (J=2)  
0003 PARAMETER SIZE=66, MAXDCK=3  
0004 DIMENSION AT(26)  
0005 DIMENSION SITE(SIZE, MAXDCK)  
0006 DIMENSION DTFL1(7), DTFL2(7), FILEDT(13), FILEDT(13)  
0007 DIMENSION DTFL3(7), DTFL4(7), ATFL1(7), ATFL1(13)
```

```
0008 DIMENSION IREC1(20), IREC2(3, 200), IREC3(2, 17)  
0009 COMMON /MP1/WIND, RT, NPRT, TEND, N4ID  
*
```

```
0010 COMMON /MP2/WIND, RT, NPRT, TEND, N4ID  
0011 COMMON /PROTECT/ I91, DTFL1(19), DTFL1(19)  
0012 COMMON /PS/PASS  
0013 COMMON /DS/DSTR(3, 16)  
0014 BYTE RUF1(3060), RUF2(3161)  
0015 BYTE AS  
0016 BYTE CHAR(50)
```

```
0016 BYTE CHAR(16)  
0017 EQUIVALENCE (CHAR(1), DTFL1(3))  
*
```

```
0018 EQUIVALENCE (S1, RUF1(67)), (S2, RUF2(67))  
0019 COMMON /STATUS/W1, W2  
0020 COMMON /CK/JS(256, 4), JS(256, 4), INC, IND  
0021 COMMON /MTX/RA( 90, 50)  
0022 DATA FILEDT(08), '21', '22', '23', 'XX', '24', 'XX', 'XX', 'XX', 'XX',  
* 'XX', 'XX', '0'  
0023 DATA FILEDT(09), '21', '22', '23', 'XX', '24', 'XX', 'XX', 'XX', 'XX',  
* 'XX', 'XX', '0'  
0024 NRDD = 4  
0025 NRDD = 5  
0026 SPREN(UNIT=NRDD, NAME=FILETOP, DAT, TYPE=FILE,  
* ACCESS=SEQUENTIAL, FORM=FORATTED, CARRIAGE CONTROL='VRNE')  
C **** READ CONTROL CARD WITH FILE NAMES ****  
C ** GRUND TRUTH AND DATA FILES **  
0027 READ(NRDD, 704) ATFL1, DTFL1, DTFL2, DTFL3  
0028 704 FORMAT (5I6A2, 2I, 1X)
```

```
0029 LEAD GRUND TRUTH DATE INTO IREC1  
0030 DECIDE(14, 712, CHAR(12)) IREC1(6)  
712 FORMAT(14)  
*
```

```
0031 CALL FILNAM(DTFL1, FILEDT)
```

B-17

```
0032 CALL SUBSTR(FILGT,1,26,FILA1,1,26)
0033 CALL FILNAM(AIF11,FILA1)
0034 WRITE (NPRT,70A) (FILA1(1),I=1,12)
0035 706 F2RMT (1ND,10X)A1 DOTS FILE NAME = ',12(A2))
0036 WRITE(NPRT,710)(FILGT(1),I=1,12)
0037 711 F2RMT (//,10X,'AT FILE NAME = ',12(A2))
0038 IF(PASS.F0,1)GR TO 79
0039 IF(PASS.NE,2)GR TO 78
C
C **** PICK UP SE2ND FILE NAME ****
C
0040 CALL FILNAM(DTFL2,FILDY)
0041 GR TO 99
0042 78 CONTINUE
C
C **** PICK UP 3RD FILE NAME ****
C
0043 CALL FILNAM(DTF13,FILDY)
C
C *
C
C JUMP OVER NEXT CALL FILNAM
0044 GR TO 99
C
C *
C
0045 79 CONTINUE
0046 CALL FILNAM(DTF11,FILDY)
0047 99 CONTINUE
C
C *
C
C DETERMINE DTFM FILE NUMBER FROM NAME
0048 IF(FILDY(12).EQ.'T1') DTF=1
0049 IF(FILDY(12).EQ.'T2') DTF=2
0050 IF(FILDY(12).EQ.'T3') DTF=3
C
C *
C
0051 WRITE (NPRT,711)(FILDY(1), I=1,12)
0052 711 F2RMT (//,10X,'** AT FILE NAME = ',12(A2))
C
C **** OPEN FILES ****
0053 OPEN (UNIT=NRDR,NAME=FILA1,TYPE='2LD',F2RMT='F2RMTTED')
0054 OPEN(UNIT*1,NAME=FILGT,TYPE='2LD',ACCESS='SEQUENTIAL',
C
C * CARRIAGE CONTROL = 'NONE',F2RMT='UNF2RMTTED')
0055 OPEN(UNIT*2,NAME=FILDY,TYPE='2LD',ACCESS='SEQUENTIAL',
C
C * CARRIAGE CONTROL = 'NONE',F2RMT='UNF2RMTTED')
C
0056 D2 1 I=1,26
0057 AT(I)=1
0058 1 CONTINUE
0059 WRITE(NPRT,702)
0060 702 F2RMT(//,10X,'TYPE TO CODE TRANSFORMATION')
0061 WRITE(NPRT,300)
0062 300 F2RMT(//,3X,'TYPE',6X,'CODE')
C
C *****
```

B-18

ORIGINAL PAGE IS
OF POOR QUALITY

0063

```

*
*
*
NCCT = NUMBER OF DXT LABEL TRANSFORMATIONS
*
*
*

```

0064
0065
0066
0067
0068

```

5 CONTINUE
READ(NPDD,101,ERR=027) AS,AN
0066 101 FORMAT(1A1,4X,115)
WRITE(NPRT,102) AS,AN
0067 102 FORMAT(1A,5X,1A1,110)
0068

```

0069
0070
0071

```

*
*
NCCT=NCCT+1
IREC(1,NCCT)=AS
IREC(12,NCCT)=AN
*

```

0072
0073
0074
0075

```

IF(AS.EQ.88) GO TO 6
AT(AS-64)=AN
GO TO 5
4 CONTINUE

```

61-R

0076

```

*
*
IREC(14)=NCCT
*

```

0077
0078
0079
0080
0081
0082
0083
0084
0085
0086

```

D2 7 1#1,11
D2 8 1#1,19
A(1,J)=0
G(1,J)=0
DT(1,J)=0
6 CONTINUE
7 CONTINUE
WRITE(NPRT,701)
0084 701 FORMAT(1#1,10X,'1A1 DXT LABELS')
0085 WRITE(NPRT,301)
0086

```

0087

```

*
*
Z = FLAG FOR PICKING UP DATA FROM FIRST CARD
Z=0
*

```

0088
0089
0090
0091
0092
0093

```

301 FORMAT(1,7X,'LINE',6X,'PIXEL',7X,'TYPE')
NAID=0
9 CONTINUE
READ(NPRT,103,ERR=029) AL,AP,AS,(CHAR(I),I=1,50)
0092 103 FORMAT(10X,112,1X,112,1X,1A1,13X,50A1)
0093 WRITE(NPRT,104) AL,AP,AS,(CHAR(I),I=1,50)

```

```
0094      104 FORMAT(1H ,2110,9X,141,13X,50A1)
C
C
C
0095      IF(NE,0,PR,PASS,NE,1) GO TO 715
0096      DEC0DF(4,712,CHAR(5)) IREC1(3)
0097      DEC0DF(4,712,CHAR(10)) IREC1(4)
0098      DEC0DF(4,712,CHAR(15)) IREC1(5)
0099      DEC0DF(4,712,CHAR(20)) IREC1(6)
0100      DEC0DF(4,712,CHAR(25)) IREC1(7)
0101      DEC0DF(4,712,CHAR(30)) IREC1(8)
0102      DEC0DF(4,714,CHAR(44)) IREC1(9)
0103      714 FORMAT(11)
0104      A1=CHAR(2)
0105      B=CHAR(3)
0106      IREC1(2)=A1+ISHT(R,R)
0107      Z=1
0108      715 CONTINUE
C
C
C
0109      IF(AL.EQ,0) GO TO 70
0110      NAID=NAID+1
0111      ANMAT(AS*64)
0112      IF(A(AL,AP),NE,0) WRITE(NPRT,313) AL,AP
0113      313 FORMAT(///,10X,'DUPLICATE D2T LABEL FOR D2T = ',215,///)
0114      A(AL,AP)*AN
0115      GO TO 9
0116      1 CONTINUE
0117      WRITE(NPRT,502) NAID
0118      502 FORMAT(//,10X,'NO. OF A1 D2TS=',15)
C
C
C
0119      IREC1(10)=NAID
C
C
C
0120      D0 50 I=1,256
0121      JG(1,1)=0
0122      JD(1,1)=0
0123      50 CONTINUE
0124      CALL ZIP
0125      WRITE(NPRT,915)
0126      915 FORMAT(1H0,10X, 'GRUND TRUTH')
0127      WRITE (NPRT,905)
0128      905 FORMAT(//,10X,'CODE TRANSFORMATION',//,8X,'BEGIN',7X,
1'END',7X,'CODE')
C
C
C
0129      NCCT=0
C
C
C
      NCCT = NUMBER OF CRDP CODE TRANSFORMATIONS
C
C
C
```

B-20

ORIGINAL PAGE IS
OF POOR QUALITY

```

0130      121 CONTINUE
0131      READ(NRDD,118) NR,NE,NZ
0132      118 FORMAT(3I5)
0133      WRITE(NPRT,117) NB,NE,NZ
0134      117 FORMAT(1H,3I10)

```

```

C
C
0135      NCCT=NCCT+1
0136      IREC2(1,NCCT)=NB
0137      IREC2(2,NCCT)=NE
0138      IREC2(3,NCCT)=NZ
C
C

```

```

0139      IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.0)) GO TO 129
0140      IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.-1)) GO TO 224
0141      D0 119 N=NR,NE
0142      JG(N,1)=N0
0143      119 CONTINUE
0144      GO TO 121
0145      224 CONTINUE

```

```

C
C
0146      IF(PASS.GT.1) GO TO 716
D
D
0147      717 FORMAT(1H1,'THIS SHOULD ONLY SHOW UP ON THE FIRST PASS',I2)
0148      IREC1(13)=NCCT
0149      WRITE(7) ((IREC1(I,I)=1,20)
0150      JMAX=IREC1(13)
0151      WRITE(7) ((IREC2(I,J),I=1,3),J=1,JMAX)
0152      JMAX=IREC1(14)
0153      WRITE(7) ((IREC3(I,J),I=1,2),J=1,JMAX)
0154      REWIND(7)
0155      716 CONTINUE
C
C

```

```

0155      D0 225 I=1,256
0156      225 JG(I,1)=1
0157      129 CONTINUE
0158      WRITE(NPRT,916)
0159      916 FORMAT(1H0,10X,'DTCM HAP')
0160      WRITE(NPRT,905)
0161      321 CONTINUE
0162      READ(NRDD,118) NR,NE,NZ
0163      WRITE(NPRT,117) NB,NE,NZ
0164      IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.0)) GO TO 329
0165      IF((NB.EQ.0).AND.(NE.EQ.0).AND.(NZ.EQ.-1)) GO TO 424
0166      D0 319 N=NB,NE
0167      JD(N,1)=N0
0168      319 CONTINUE
0169      GO TO 321
0170      424 CONTINUE
0171      D0 325 I=1,256

```

B-21

```

0172      JD(1,1)=1
0173      325 CONTINUE
0174      322      CONTINUE
0175          READ(1) BUF1
0176          READ(2) BUF2
0177          WRITE(NPRT,302) S1,(BUF1(I),I=61,63),S2,(BUF2(I),I=61,63)
0178      302 FORMAT(//,10X,'GT SEG, N0,=',15,5X,'DAY=',15,5X,'M0N=',15,5X,
1'YEAR=',15,//,10X,'DTRM SEG,N0,=',15,5X,'DAY=',15,5X,'M0N=',15,
25X,'YEAR=',15)
0179          WRITE(NPRT,337)
0180      337 FORMAT(//,10X,'THE CONFIGLRATIONS OF THE 209 D0TS',//)
0181      D0 11 L=1:117
0182          L10=M0D(L,10)
0183          READ(2) (BUF2(I),I=1,360)
0184      D0 12 LL=1,3
0185          READ(1) (BUF1(I),I=1,540)
0186      P=72
0187      QS=0
0188      D0 13 S=1,196
0189          S10=M0D(S,10)
0190          X=BUF2(S+72)
0191          IF(X,LE,0) X=X+256
0192          CALL INDDT(X)
0193      D0 14 SS=1,2
0194          ND0T=0
0195          IF((L10.EQ,0).AND.(S10.EQ,0).AND.(LL.EQ,3).AND.(SS.EQ,2)) ND0T=1
0196      P=P+1
0197      TV=BUF1(P)
0198          TV=TV+128
0199          IF((L10.EQ,0.AND.S10.EQ,0) QS=QS+1
0200          IF((L10.EQ,0.AND.S10.EQ,0) D0TR(LL,QS)=JD(TV,1)
0201          IF(TV.EQ,0) G0 T0 14
0202          CALL INDDT(TV)
0203      RT=RT+1.0
0204      II=IFCN(TV)
0205      JJ=JFCN(X)
0206          CALL IERR(II,JJ)
0207      RA(II,JJ)*RA(II,JJ)+1.0
0208          IF(ND0T.NE,1) G0 T0 15
0209          DT(L/10,S/10)=JD(X,1)
0210      15 CONTINUE
0211      14 CONTINUE
0212      13 CONTINUE
0213          IF(L10.EQ,0)          CALL DDUM(L)
0214      12 CONTINUE
0215          IF(L10.EQ,0)          CALL PD0TR
0216      11 CONTINUE
0217      G0 T0 19
0218      927      WRITE (NPRT,928)
0219      928      FORMAT (1H , 20X, 'AS AN N0T READ')
0220      G0 T0 19
0221      929      WRITE (NPRT,930)
0222      930      FORMAT (1H , 20X, 'AL,AP,AS N0T READ')
0223      19 CONTINUE
0224          CALL CL0SE (1)
0225          CALL CL0SE (2)

```

B-22

ORIGINAL PAGE IS
 OF POOR QUALITY

FORTRAN IV PLUS V02-55
ADMROD.FTN /TRIRL8CK5/WP

88113111

24*APR*78

PAGE 7

```
0226      CALL CLSE (NRDR)
0227      1= CONTINUE
0228      CALL CLSE (NRDD)
0229      RETURN
0230      END
```

B-25

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	005412 1413	RW,D,CON,LCL
2	SPDATA	000034 14	RW,D,CON,LCL
3	SIDATA	001552 437	RW,D,CON,LCL
4	SVARS	016510 3748	RW,D,CON,LCL
6	MPI	000016 7	RW,D,ZVR,GBL
7	RD	002346 627	RW,D,ZVR,GBL
8	PS	000002 1	RW,D,ZVR,GBL
9	DD	000344 114	RW,D,ZVR,GBL
10	STATUS	000004 2	RW,D,ZVR,GBL
11	CK	010004 2050	RW,D,ZVR,GBL
12	MTX	023420 5000	RW,D,ZVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
ADMRDD		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
AL	I*2	4-016432	AM	I*2	4-016424	AP	I*2	4-016434	AS	L*1	4-016330	A1	I*2	4-016436
B	I*2	4-016448	DTN	I*2	6-000014	I	I*2	4-016420	IB	I*2	4-016454	II	I*2	4-016504
IND	I*2	11-010002	ING	I*2	11-010000	J	I*2	4-016426	JJ	I*2	4-016506	JMAX	I*2	4-016452
L	I*2	4-016456	LL	I*2	4-016462	L10	I*2	4-016460	MIND	I*2	6-000000	N	I*2	4-016450
NAID	I*2	6-000012	NR	I*2	4-016442	NCCT	I*2	4-016422	NDOT	I*2	4-016500	NE	I*2	4-016444
NO	I*2	4-016446	NPRT	I*2	6-000006	NRDD	I*2	4-016416	NRDP	I*2	4-016414	OS	I*2	4-016466
P	I*2	4-016464	PASS	I*2	6-000000	RT	R*4	6-000002	S	I*2	4-016470	SS	I*2	4-016476
S1	I*2	4-006066	S10	I*2	4-016472	S2	I*2	4-000102	TINH	I*2	6-000010	TV	I*2	4-016502
W1	I*2	10-000000	W2	I*2	10-000002	X	I*2	4-016474	Z	I*2	4-016430			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	7-000000	000642	209 (11,19)
ATFIL	I*2	4-015010	000016	7 (7)
AT	I*2	4-013766	000064	26 (26)
BUF1	L*1	4-005764	005764	1530 (3060)
BUF2	L*1	4-000000	005764	1530 (3060)
CHAR	L*1	4-016331	000062	25 (50)
CHAR1	L*1	4-013754	000006	3 (6)
DMTR	I*2	9-000000	000344	114 (3,38)
DT	I*2	7-001504	000642	209 (11,19)
DTFIL	I*2	4-014652	000016	7 (7)
DTFL2	I*2	4-014754	000016	7 (7)
DTFL3	I*2	4-014772	000016	7 (7)
FILAI	I*2	4-015026	000032	13 (13)

ORIGINAL PAGE IS
OF POOR QUALITY

B-24

FILDT	I*2	4-014722	000032	13	(13)
FILGT	I*2	4-014670	000032	13	(13)
G	I*2	7-000642	000642	209	(11,19)
GTFIL	I*2	4-013750	000016	7	(7)
IPEC1	I*2	4-015060	000050	20	(20)
IPEC2	I*2	4-015130	001130	300	(3,100)
IPEC3	I*2	4-016260	000050	20	(2,10)
JD	I*2	11-004000	004000	1024	(256,4)
JO	I*2	11-000000	004000	1024	(256,4)
RA	R*4	12-000000	123420	5000	(50,50)
SITE	I*2	4-014052	000600	192	(64,3)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
1	**	5	1-000754	6	1-001156	7	**	8	**
9	1-001344	10	1-002342	11	**	12	**	13	**
14	1-005120	15	1-005112	18	**	19	1-005340	50	**
7*	1-000420	79	1-000440	99	1-000456	101'	3-000240	102'	3-000250
103'	3-000344	104'	3-000364	117'	3-000640	118'	3-000634	119	**
121	1-002924	122	1-003416	224	1-003024	225	**	300'	3-000220
301'	3-000310	302'	3-000666	313'	3-000410	319	**	321	1-003464
322	1-003766	325	**	337'	3-001036	424	1-003720	502'	3-000464
701'	3-000264	702'	3-000156	704'	3-000000	706'	3-000020	710'	3-000060
711'	3-000116	712'	3-000014	714'	3-000404	715	1-002900	716	1-003350
905'	3-000540	915'	3-000514	916'	3-000644	927	1-005264	928'	3-001116
929	1-005314	930'	3-001144						

FUNCTIONS AND SUBROUTINES REFERENCED

CLOSE	DDUM	FILNAM	IERR	IFCN	INDDT	INDGT	JFCN	OPENS	PDBTR	SUBSTR	ZIP	SISWFT
-------	------	--------	------	------	-------	-------	------	-------	-------	--------	-----	--------

TOTAL SPACE ALLCATED = 064312 13413

ADMRDD,OBJ,LPI=[170,1]ADMRDD,FTN

B-25

```
0001      SUBROUTINE AAPANI
0002      IMPLICIT INTEGER (A-Z)
0003      COMMON /RD/A(11,19),G(11,19),DT(11,19)
0004      COMMON /MTX/RA( 50,50)
0005      COMMON /CK/JG(256,4),JJD(256, 4),ING,IND
0006      COMMON /MPI/MIND ,RT,NPRT,TIND,NAID
0006      *
0007      *
0006      COMMON /MPI/MIND,RT,NPRT,TIND,NAID,DTN
0007      DIMENSION IREC1(20),IREC2(3,100),IREC3(2,10),IREC4(3000),
0007      IREC5(3000),IREC6(3,105)
0006      *
0006      WRITE(NPRT,776) ING
0009      WRITE(NPRT,775) IND
0010      775 FORMAT(1H0,10X,'IND=',15)
0011      77A FORMAT(1H0,10X,'ING=',15)
0012      *
0012      IF(DTN.EQ.3) GO TO 781
0013      FOR CONDITIONAL CLUSTER FILE (DTN=3) SKIP PROCESSING
0014      READ(7) ((IREC1(I),I=1,20)
0015      JMAX=IREC1(13)
0016      READ(7) ((IREC2(I,J),I=1,3),J=1,JMAX)
0017      JMAX=IREC1(14)
0018      READ(7) ((IREC3(I,J),I=1,2),J=1,JMAX)
0019      IREC1(12)=ING
0020      IF(DTN.EQ.1) GO TO 780
0021      FOR UNCONDITIONAL CLUSTER FILE (DTN=2) ENTER NUMBER OF
0021      CRAP CODES ON GTT AND NUMBER OF CLUSTERS ON DTERM TAPE
0022      IREC1(11)=IND
0023      GO TO 781
0024      FOR CLASS FILE (DTN=1) ENTER NUMBER OF CLASSES AND READ
0025      GT FILE FOR UNCONDITIONAL CLUSTERS
0026      780 IREC1(15)=IND
0027      IF(IREC1(9).NE.1) GO TO 781
0028      IMAX=IREC1(14)
0029      READ(7) ((IREC4(I),I=1,IMAX)
0030      781 REWIND(7)
0031      *
0032      IF(ING.LE.50.AND.IND.LE.50) GO TO 224
0033      PRINT(NPRT,225)
0034      225 FORMAT(1H0,'STOPPING DUE TO MORE THAN 50 CRAP CODES!//')
0035      STOP
0036      224 RCHECK=17.0*196.0*6.0
0037      WRITE(NPRT,231)
0038      231 FORMAT (1H0,10X,'THE WHOLE SCENE')
0039      IF(RT.NE.RCHECK) WRITE(NPRT,223)
0040      223 FORMAT(//,10X,'THE WHOLE SEGMENT WAS NOT GROUND TRUTHED')
0041      WRITE(NPRT,222) RT
0042      222 FORMAT(//,10X,'COMPUTATIONS BASED ON ',F10.2,' SUBPIXELS',//)
```

B-26

ORIGINAL PAGE IS
OF POOR QUALITY

0038 C TIND=1
CALL PRRBPT

0039 C *
C IF(DTN,EQ,2) CALL PRRBPT(IREC4,IREC1(16))
0040 IF(DTN,EQ,3) CALL PRRBPT(IREC4,ACCT)
0041 IF(DTN,EQ,1) CALL PRRBPT(IREC5,IREC1(17))
C *
C

0042 WRITE (NPRT,880)
0043 880 FORMAT (1H1, 10X, 'THE 209 DOTS')
0044 DO 881 I=1,11
0045 WRITE(NPRT,882) (G(I,J), J=1,19)
0046 882 FORMAT (1H0,10X,'GT', 19I5)
0047 WRITE (NPRT,883) (DT(I,J), J=1,19)
0048 883 FORMAT(1H , 10X,'DT',19I5)
0049 WRITE (NPRT,884) (A(I,J),J=1,19)
0050 884 FORMAT (1H , 10X,'AI',19I5)

B-27
0051 C *
C FOR CLASS FILE(DTN=1) LOAD DDT LABELING DATA INTO IREC2
0052 IF(DTN,NE,1) GO TO 881
0053 DO 885 J=1,19
0054 IF(A(I,J),EQ,0) GO TO 885
0055 NCCT=NCCT+1
0056 IREC6(1,NCCT)=A(I,J)*1000+(I-1)*19+J
0057 IREC6(2,NCCT)=DT(I,J)
0058 IREC6(3,NCCT)=G(I,J)
885 CONTINUE
C *
C

0059 881 CONTINUE

0060 C *
C WRITE DATA PNT0 DISK
0061 IF(DTN,EQ,3) GO TO 886
0062 WRITE(7) ((IREC1(I),I=1,20)
0063 WRITE(7) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0064 WRITE(7) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0065 IF(IREC1(9),NE,1) GO TO 887
0066 WRITE(7) (IREC4(I),I=1,IREC1(16))
0067 IF(DTN,EQ,2) GO TO 886
0068 WRITE(7) (IREC5(I),I=1,IREC1(17))
0069 887 WRITE(7) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0069 888 REWIND(7)
C *
C

0070 CALL Z8T
0071 DO 820 I=1,11
0072 DO 820 J=1,19

```
0073 X = DT(I,J)
0074 TV = GET(J)
0075 CALL INDT(TV)
0076 CALL INDT(X)
0077 II=IFCN(TV)
0078 JJ=JFCN(X)
0079 CALL TERR(II,JJ)
0080 RACTI,JJJ = RACTI,JJJ+1.0
0081 820 CONTINUE
0082 RT=209.1
```

C CALL PRBPT

```
0083 CALL PRBPT(IREC4,NCCT)
```

```
0084 CALL EBT
0085 DB 920 I*1.11
0086 DB 920 J*1.19
0087 IF(RACTI,JJ).EQ.01 GO TO 920
0088 X = DT(I,J)
```

```
0089 TV = GET(J)
0090 CALL INDT(TV)
0091 CALL INDT(X)
0092 II=IFCN(TV)
0093 JJ=JFCN(X)
0094 CALL TERR(II,JJ)
0095 RACTI,JJJ = RACTI,JJJ+2.0
```

```
0096 920 CONTINUE
0097 RT=NAID
0098 WRITE(NPRT,921)
0099 921 FORMAT(1H0,1X,17H0 A1 DTTS')
CALL PRBPT
```

```
0100 CALL PRBPT(IREC4,NCCT)
```

```
0101 TIND*2
0102 CALL RTT
0103 DB 930 I*1.11
0104 DB 930 J*1.19
0105 IF(RACTI,JJ).EQ.01 GO TO 930
```

```
0106 X=DT(I,J)
0107 TV=GET(J)
0108 CALL INDT(TV)
0109 CALL INDT(X)
0110 II=IFCN(TV)
0111 JJ=JFCN(X)
0112 RACTI,JJJ=RACTI,JJJ+2.0
0113 930 CONTINUE
0114 RT=NAID
```

B-28

ORIGINAL PAGE IS
OF POOR QUALITY

```
C CALL PR2BPT
C
C
0115 CALL PR2BPT(IREC4,NCCT)
C
C
0116 TIND=3
0117 CALL ZBT
0118 DO 960 I=1,11
0119 DO 960 J=1,19
0120 IF(A(I,J),EQ.0) GO TO 960
0121 X=A(I,J)
0122 TV=G(I,J)
0123 CALL INDGT(TV)
0124 CALL INDDT(X)
0125 II=IFCN(TV)
0126 JJ=JFCN(X)
0127 RA(II,JJ)=RA(II,JJ)+1.0
0128 960 CONTINUE
0129 RT=NAID
```

```
C CALL PR2BPT
C
C
0130 CALL PR2BPT(IREC4,NCCT)
0131 IF(DTN,NE.1) GO TO 7
0132 READ(7) ((IREC1(I),I=1,20)
0133 READ(7) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0134 READ(7) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0135 IF(IREC1(9),NE.1) GO TO 8
0136 READ(7) (IREC4(I),I=1,IREC1(16))
0137 READ(7) (IREC5(I),I=1,IREC1(17))
0138 8 READ(7) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0139 REWIND(7)
0140 PRINT(NPRT,1) (IREC1(I),I=1,20)
0141 1 FORMAT(1H1,14,1X,A2,18I6)
0142 PRINT(NPRT,2)
0143 2 FORMAT(1H0)
0144 PRINT(NPRT,3) ((IREC2(I,J),I=1,3),J=1,IREC1(13))
0145 3 FORMAT(3I6)
0146 PRINT(NPRT,2)
0147 PRINT(NPRT,4) ((IREC3(I,J),I=1,2),J=1,IREC1(14))
0148 4 FORMAT(1H ,A1,14)
0149 PRINT(NPRT,5)
0150 5 FORMAT(1H1)
0151 IF(IREC1(9),NE.1) GO TO 9
0152 PRINT(NPRT,6) (IREC4(I),I=1,IREC1(16))
0153 6 FORMAT(20I6)
0154 PRINT(NPRT,5)
0155 PRINT(NPRT,6) (IREC5(I),I=1,IREC1(17))
0156 PRINT(NPRT,5)
0157 8 PRINT(NPRT,3) ((IREC6(I,J),I=1,3),J=1,IREC1(10))
0158 7 CONTINUE
```

B-29

ORIGINAL PAGE IS
OF POOR QUALITY

F0PTRAN IV-PIUS V02-51
ADMANTL.FTN /TR:RL0CKS/WP

06114122

24*APR*78

PAGE 5

C
C
0159
0160

.....*

RETURN
END

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	005656 1495	Rw,C,CON,LCL
3	SINATA	000516 167	Rw,C,CON,LCL
4	SVARS	032024 6666	Rw,C,CON,LCL
5	STEMPS	000002 1	Rw,C,CON,LCL
6	RD	002346 627	Rw,C,ZVR,GRL
7	MTX	023420 5000	Rw,C,ZVR,GRL
8	CK	010004 2050	Rw,C,ZVR,GRL
9	MP1	000016 7	Rw,C,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
AAMANL		1=000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	9=000014	I	I*2	4=031776	II	I*2	4=032020	IMAX	I*2	4=032004	IND	I*2	8=010002
ING	I*2	8=010000	J	I*2	4=032002	JJ	I*2	4=032022	JMAX	I*2	4=032000	MIND	I*2	9=000000
NAID	I*2	9=000012	NCCT	I*2	4=032012	NPRT	I*2	9=000006	RCHECK	R*4	4=032006	RT	R*4	9=000002
TIND	I*2	9=000010	TV	I*2	4=032016	X	I*2	4=032014						

B-31

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	6=000000	000642 209	(11,19)
DT	I*2	6=001504	000642 209	(11,19)
G	I*2	6=000642	000642 209	(11,19)
IREC1	I*2	4=000000	000050 20	(20)
IREC2	I*2	4=000050	001130 300	(3,100)
IREC3	I*2	4=001200	000050 20	(2,10)
IREC4	I*2	4=001250	013560 3000	(3000)
IREC5	I*2	4=015030	013560 3000	(3000)
IREC6	I*2	4=030610	001166 315	(3,105)
JD	I*2	8=004000	004000 1024	(256,4)
JG	I*2	8=000000	004000 1024	(256,4)
RA	R*4	7=000000	023420 5000	(50,50)

ORIGINAL PAGE IS
 OF POOR QUALITY

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
1'	3=000410	2'	3=000424	3'	3=000438	4'	3=000434	5'	3=000444
6'	3=000450	7	1=005454	8	1=004544	9	1=005536	222'	3=000220
223'	3=000140	224	1=000426	225'	3=000034	230'	3=000112	775'	3=000000

F2RTRAN IV-PLUS V02-31
ADMANL.FTN /TP1RL8CK\$/HR

08114122 24*APR*78

PAGE 7

776*	3-000015	780	1-000436	781	1-000542	820	**	880*	3-000276
881	1-001554	882*	3-000322	883*	3-000336	884*	3-000159	885	1-001539
886	1-002430	887	1-012316	920	1-013146	921*	3-000766	990	1-003462
960	1-003754								

FUNCTIONS AND SUBROUTINES REFERENCED

IERR IFCN INDT INDGT JFCN PR2BPT ZBT

TOTAL SPACE ALLOCATED = 078432 14013


```
C SUBROUTINE PRORPT  
C *  
C  
0001 C SUBROUTINE PRORPT(IREC4,NCCT)  
C *  
C
```

```
0002 C IMPLICIT INTEGER (A=0),(S=Z)  
C COMMON /MPI/MIND ,RT,NPRT,TIND,NAID
```

```
0003 C *  
C COMMON /MPI/MIND ,RT,NPRT,TIND,NAID,DTN  
C *  
C
```

```
0004 C COMMON /CK/JR(256,4),JR(256, 4),ING,IND  
0005 C COMMON /MTX/RA( 50,50)
```

```
0006 C *  
C DIMENSION IREC4(3000)  
C *  
C
```

```
0007 PFLG=0  
0008 IF(PFLG.NE.1) GO TO 261  
0009 WRITE (NPRT,260) ((JD(I,J), J=1,4),I=1,256)  
0010 260 FORMAT(1H , 10X,4I10)  
0011 WRITE (NPRT,260) ((JG(I,J), J=1,4),I=1,256)  
0012 261 CONTINUE  
0013 IF(IND.LE.0) STOP  
0014 CALL INDDM  
0015 IF(PFLG.NE.1) GO TO 262  
0016 WRITE (NPRT,260) ((JD(I,J), J=1,4),I=1,256)  
0017 WRITE (NPRT,260) ((JG(I,J), J=1,4),I=1,256)  
0018 262 CONTINUE  
0019 CALL MSUM  
0020 CALL SORT  
0021 MIND=1  
0022 IF(TIND.EQ.1) WRITE(NPRT,750)  
0023 IF(TIND.EQ.2) WRITE(NPRT,850)  
0024 IF(TIND.EQ.3) WRITE(NPRT,950)  
0025 750 FORMAT(1H1,10X,'THE MATRIX N(G,C)')  
0026 850 FORMAT(1H1,10X,'THE MATRIX N(A,D)')  
0027 950 FORMAT(1H1,10X,'THE MATRIX N(G,A)')
```

```
0028 C *  
C TIND=1 IMPLIES RA(I,J) IS NUMBER COUNT  
C FOR CLASS AND CLUSTER FILES, LOAD OUTPUT ARRAY  
C IF(DTN.LT.3.AND.TIND.EQ.1) CALL DISKLD(IREC4,NCCT,DTN)  
C *  
C
```

B-53

ORIGINAL PAGE IS
OF POOR QUALITY

```
0029 CALL MTXPT
0030 CALL PR0B
0031 MIND=2
0032 IF(TIND,EQ,1) WRITE(NPRT,755)
0033 IF(TIND,EQ,2) WRITE(NPRT,855)
0034 IF(TIND,EQ,3) WRITE(NPRT,955)
0035 755 FORMAT(1H1,10X,'THE MATRIX P(G,D)')
0036 855 FORMAT(1H1,10X,'THE MATRIX P(AI,D)')
0037 955 FORMAT(1H1,10X,'THE MATRIX P(G,AI)')
0038 CALL MTXPT
0039 MIND = 3
0040 IF(TIND,EQ,1) WRITE(NPRT,756)
0041 IF(TIND,EQ,2) WRITE(NPRT,856)
0042 IF(TIND,EQ,3) WRITE(NPRT,956)
0043 756 FORMAT (1H1,10X, 'THE MATRIX P(D/G)')
0044 856 FORMAT (1H1,10X, 'THE MATRIX P(D/AI)')
0045 956 FORMAT(1H1,10X,'THE MATRIX P(AI/G)')
0046 CALL MTXPT
0047 CALL PR0BC
0048 MIND =4
0049 IF(TIND,EQ,1) WRITE(NPRT,757)
0050 IF(TIND,EQ,2) WRITE(NPRT,857)
0051 IF(TIND,EQ,3) WRITE(NPRT,957)
0052 757 FORMAT (1H1,10X, 'THE MATRIX P(G/D)')
0053 857 FORMAT (1H1,10X, 'THE MATRIX P(AI/D)')
0054 957 FORMAT(1H1,10X,'THE MATRIX P(G/AI)')
0055 CALL MTXPT
0056 RETURN
0057 END
```

B-34

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	FCDFP1	001444 402	Rw,I,C0N,LCL
3	SINATA	000514 166	Rw,D,C0N,LCL
4	SVARS	000006 3	Rw,D,C0N,LCL
6	MPI	000016 7	Rw,D,ZVR,GRL
7	CK	010004 2050	Rw,D,ZVR,GRL
8	MTY	023420 5000	Rw,D,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR2PPT		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000002	IND	I*2	7-010002	ING	I*2	7-010000	J	I*2	4-000004
MIND	I*2	6-000000	NAID	I*2	6-000012	NCCY	I*2	6-000004*	NPRT	I*2	6-000006	PFLG	I*2	4-000000
RT	R*4	6-000002	TIND	I*2	6-000010									

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
IREC4	I*2	F-000002*	013540	3000 (3000)
JD	I*2	7-004000	004000	1024 (256,4)
JG	I*2	7-000000	004000	1024 (256,4)
RA	R*4	8-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
260'	3-000000	261	1-000264	262	1-000540	750'	3-000010	755'	3-000124
756'	3-000240	757'	3-000354	850'	3-000040	855'	3-000154	856'	3-000270
857'	3-000404	950'	3-000072	955'	3-000206	956'	3-000320	957'	3-000436

FUNCTIONS AND SUBROUTINES REFERENCED

DISKLD	INDM	MSUM	MTXPT	PR2P	PR2BC	SR2T
--------	------	------	-------	------	-------	------

TOTAL SPACE ALLOCATED = 035630 7628

B-55

ORIGINAL PAGE IS
 OF POOR QUALITY

```
0001      SUBROUTINE INDDM
0002      IMPLICIT INTEGER(A-Z)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004      DP 10 I=1,ING
0005      DP 20 I2=1,256
0006      20  IF (JG(I2,3).EQ.1) GO TO 30
0007      30  CONTINUE
0008      JG(I,4) = JG(I2,2)
0009      10  CONTINUE
0010      DP 10 J=1,IND
0011      DP 20 J2=1,256
0012      21  IF (JD(J2,3).EQ.J) GO TO 31
0013      31  CONTINUE
0014      JD(J,4) =JD(J2,2)
0015      11  CONTINUE
0016      RETURN
0017      END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000314 102	Rw,I,C0N,LCL
4	SVARS	000010 4	Rw,C,C0N,LCL
5	STEMPS	000004 2	Rw,C,C0N,LCL
6	CK	010004 2050	Rw,C,PVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
INDDM		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4-000000	IND	I*2	6-010002	ING	I*2	6-010000	I2	I*2	4-000002	J	I*2	4-000004
J2	I*2	4-000006												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000 1024	(256,4)
JG	I*2	6-000000	004000 1024	(256,4)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**	11	**	20	**	21	**
31	1-000246					30	1-000112

TOTAL SPACE ALLOCATED * 010334 9158

NO FPP INSTRUCTIONS GENERATED

ORIGINAL PAGE IS
 OF POOR QUALITY

```
0001 SUBROUTINE MTXPT
0002 IMPLICIT INTEGER (A=0),(S=Z)
      COMMON /MPI/MIND ,PT,NPRT,TIND,NAID
      *
0003 COMMON /MPI/MIND ,PT,NPRT,TIND,NAID,BTN
      *
0004 COMMON /CK/JG(256,4),JD(256,4),ING,IND
0005 COMMON /MTX/RAT 50,50)
0006 I10=0
0007 MLIM=(IND/10)*10+1
0008 DO 666 LLIM=1,MLIM,10
0009 ULIM=LLIM+9
0010 IF(IND.GE.LLIM.AND.IND.LE.ULIM) LLIM=IND
0011 WRITE(NPRT,751) (JD(JJ,4),JJ=LLIM,ULIM)
0012 751 FORMAT(1H0,10X,10(1X,15,2X))
0013 DO 652 II=1,ING
0014 IF (MIND.GT.2) GO TO 200
0015 IF (MLIM-1.EQ.IND.AND.ULIM.EQ.IND) I10=1
0016 IF (ULIM.EQ.IND) ULIM=ULIM+1
0017 200 CONTINUE
0018 IF (I10.EQ.1) GO TO 400
0019 IF (MIND.EQ.1) WRITE (NPRT,653) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0020 IF (MIND.EQ.2) WRITE (NPRT,253) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0021 IF (MIND.EQ.4) WRITE (NPRT,253) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0022 IF (MIND.EQ.3) WRITE(NPRT,253) JG(II,4),(RA(II,JJ)/RA(II,IND+1),
      * JJ=LLIM,ULIM)
0023 IF (MIND.EQ.1.AND.II.EQ.ING) WRITE(NPRT,356) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0024 IF (MIND.EQ.2.AND.II.EQ.ING) WRITE(NPRT,256) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0025 356 FORMAT(1H0,10X,10F10,0)
0026 256 FORMAT(1H0,10X,10F10,5)
0027 653 FORMAT(1H0, 5X,15,10F10,0)
0028 253 FORMAT(1H0, 5X,15,10F10,5)
0029 GO TO 652
0030 400 CONTINUE
0031 IF (MIND.EQ.1) WRITE (NPRT,643) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0032 IF (MIND.EQ.2) WRITE (NPRT,243) JG(II,4),(RA(II,JJ),JJ=LLIM,ULIM)
0033 IF (MIND.EQ.1.AND.II.EQ.ING) WRITE(NPRT,346) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0034 IF (MIND.EQ.2.AND.II.EQ.ING) WRITE(NPRT,246) (RA(ING+1,JJ),JJ=
      * LLIM,ULIM)
0035 346 FORMAT(1H0,10X,11F10,0)
0036 246 FORMAT(1H0,10X,11F10,5)
0037 643 FORMAT(1H0, 5X,15,11F10,0)
0038 243 FORMAT(1H0, 5X,15,11F10,5)
0039 652 CONTINUE
0040 WRITE (NPRT,100)
0041 100 FORMAT (1H0)
0042 IF (I10.EQ.1) GO TO 500
0043 IF (MLIM-1.EQ.IND.AND.IND.EQ.ULIM) GO TO 500
0044 666 CONTINUE
```

F2RTRAN IV-PIUS V02-51
ADMANL,FTN /TRIPLOCKS/WR

8115172

24-APR-79

PAGE 14

0045 500 CONTINUE
0046 RETURN
0047 END

B-39

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCNDR1	002220	584 R,,I,CBN,LCL
3	TIMATA	001154	44 R,,D,CBN,LCL
4	SVARS	000014	6 R,,I,CBN,LCL
5	STKPS	000004	2 R,,D,CBN,LCL
6	*PI	000016	7 R,,D,ZVF,GRL
7	CK	010004	2050 R,,D,ZVF,GRL
8	*TY	023420	9000 R,,D,ZVF,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
WTXT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DYN	I*2	6-000014	II	I*2	4-000014	IND	I*2	7-010002	ING	I*2	7-010000	110	I*2	4-000000
JJ	I*2	4-000018	LLI*	I*2	4-000004	MIND	I*2	4-000000	MLI*	I*2	4-000002	NAI*	I*2	6-000012
NPRT	I*2	6-000006	RT	R*4	6-000002	TIND	I*2	6-000010	ULI*	I*2	4-000006			

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	7-004000	004000	1024 (256,4)
JG	I*2	7-000000	004000	1024 (256,4)
PA	R*4	8-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100'	3-000150	200	1-000014	243'	3-000134	246'	3-000104	253'	3-000060
256'	3-000032	346'	3-000074	356'	3-000020	400	1-001340	500	1-002214
643'	3-000120	652	1-002072	653'	3-000044	666	**	751'	3-000000

TOTAL SPACE ALLOCATED = 536056 7703


```

0001      SUBROUTINE SORT
0002      IMPLICIT INTEGER (A=0),(S=2)
0003      COMMON /CK/JR(256,4),JD(256, 4),ING,IND
0004      COMMON /MTY/RA( 50,50)
0005      INGM=ING+1
0006      DO 10 I=1,ING
0007      DO 10 II=1,INGM
0008      IF (JR(II,4).LE.JR(II+1,4)) G2 T2 10
0009      JJ = JR(II,4)
0010      JR(II,4) = JR(II+1,4)
0011      JR(II+1,4) = JJ
0012      INDP=IND+1
0013      DO 20 J=1,INDP1
0014      RR = RA (II,J)
0015      RA(II,J) = RA(II+1,J)
0016      RA(II+1,J)=RR
0017      20  CONTINUE
0018      10  CONTINUE
0019      INDM=IND+1
0020      DO 30 J=1,IND
0021      DO 30 JJ=1,INDM
0022      IF (JD(JJ,4).LE.JD(JJ+1,4))G2 T2 30
0023      II=JD(JJ,4)
0024      JD(JJ,4)=JD(JJ+1,4)
0025      JD(JJ+1,4)=II
0026      INGP=ING+1
0027      DO 40 I=1,INGP1
0028      RR=RA(I,JJ)
0029      R-(I,JJ)=RA(I,JJ+1)
0030      RA(I,JJ+1) =RR
0031      40  CONTINUE
0032      30  CONTINUE
0033      RETURN
0034      END
  
```

B-41

ORIGINAL PAGE IS
 OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCPDF1	000564 186	R, I, CON, LCL
4	SVARS	000024 10	R, D, CON, LCL
5	ITEMPS	000010 4	R, D, CON, LCL
6	CK	010004 2050	R, D, ZVR, GRL
7	MTX	023420 5000	R, D, ZVR, GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
SORT		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4-000002	II	I*2	4-000004	IND	I*2	6-010002	INDM1	I*2	4-000020	INDP1	I*2	4-000010
ING	I*2	6-010000	INGHI	I*2	4-000000	INGP1	I*2	4-000022	J	I*2	4-000012	JJ	I*2	4-000006
RR	R*4	4-000014												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	1024 (256,4)
JG	I*2	6-000000	004000	1024 (256,4)
RA	R*4	7-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000244	20	**	30	1-000524	40	**		

TOTAL SPACE ALLOCATED = 034244 7250

B-12

ADMANL.FTN /TRIRL0CKS/KR

```
0001      SUBROUTINE MSUM
0002      IMPLICIT INTEGER (A=0),(S=Z)
0003      COMMON /CK/JG(256,4),JD(256, 4),ING,IND
0004      COMMON /MTX/RA( 50,50)
0005      DO 651 JJ=1,IND
0006      DO 651 II=1,ING
0007      RA(ING+1,JJ)=RA(ING+1,JJ)+RA(II,JJ)
0008 651 CONTINUE
0009      INGP1=ING+1
0010      DO 650 II=1,INGP1
0011      DO 650 JJ=1,IND
0012      RA(II,IND+1)=RA(II,IND+1)+RA(II,JJ)
0013 650 CONTINUE
0014      RETURN
0015      END
```

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDR1	000274 94	RW,I,C0N,LCL
4	EVARS	000006 3	RW,D,C0N,LCL
6	CK	010004 2050	RW,D,ZVR,GRL
7	MTX	023420 5000	RW,D,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
MSUM		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
II	I*2	4-000000	IND	I*2	6-010002	ING	I*2	6-010000	INGP1	I*2	4-000004	JJ	I*2	4-000000

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	7024 (256,4)
JS	I*2	6-000000	004000	7024 (256,4)
RA	R*4	7-000000	023420	5000 (50,50)

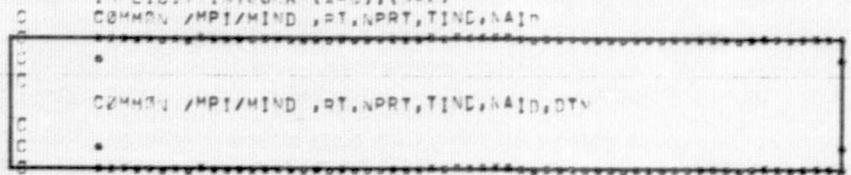
LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
650	**	651	**				

TOTAL SPACE ALLOCATED = 033726 7147

B-44

```
0001      SUBROUTINE PRBR  
0002      IMPLICIT INTEGER (A-D),(F-Z)  
0003      COMMON /MPI/MIND ,RT,NPRT,TINC,NAID  
0004      COMMON /CK/JG(256,4),JD(256, 4),ING,IND  
0005      COMMON /MTX/RA( 50,50)  
0006      INGP1=ING+1  
0007      INDP1=IND+1  
0008      DO 600 I=1,INGP1  
0009      DO 600 J=1,INDP1  
0010      RA(I,J) =RA(I,J)/RT  
0011      600 CONTINUE  
0012      RETURN  
0013      END
```



B-45

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	FCMP1	000154 54	RW,I,CON,LCL
4	ZVARE	000016 4	RW,D,CON,LCL
6	MPI	000016 7	RW,D,ZVR,GBL
7	CK	010004 2050	RW,D,ZVR,GRL
8	MTX	023420 5000	RW,D,ZVR,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR00		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	6-000014	I	I*2	4-000004	IND	I*2	7-010002	INDP1	I*2	4-000002	ING	I*2	7-010000
INGP1	I*2	4-000000	J	I*2	4-000000	MIND	I*2	6-000000	MIND	I*2	6-000012	NPRT	I*2	6-000006
RT	R*4	6-000002	TIND	I*2	6-000010									

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	7-004000	004000 1024	(256,4)
JG	I*2	7-000000	004000 1024	(256,4)
RA	R*4	8-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
600	**								

TOTAL SPACE ALLOCATED = 033626 7115

B-46

ORIGINAL PAGE IS
 OF POOR QUALITY

```
0001      SUBROUTINE PRPBC  
0002      IMPLICIT INTEGER (A-Q), (S-Z)  
0003      COMMON /CK/JR(256,4),JD(256, 4),ING,IND  
0004      COMMON /MTX/RA( 50,50)  
0005      DO 10 J=1,IND  
0006      DO 10 I=1,ING  
0007      RA(I,J) = RA(I, J)/RA(ING+1,J)  
0008 10      CONTINUE  
0009      RETURN  
0010      END
```

B-47

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	BCXDF1	000146 51	RW,I,C0N,LCL
4	FVARR	000004 2	RW,C,C0N,LCL
6	CK	010004 2050	RW,C,ZVF,GRL
7	MTY	023420 5000	RW,C,ZVF,GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PR0BC		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	I*2	4-000000	IND	I*2	6-010000	ING	I*2	6-010000	J	I*2	4-000000			

ARRAYS

B-18

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
JD	I*2	6-004000	004000	1024 (256,4)
JG	I*2	6-000000	004000	1024 (256,4)
RA	R*4	7-000000	023420	5000 (50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**								

TOTAL SPACE ALLCATED = 033576 7103

ORIGINAL PAGE IS
 OF POOR QUALITY

B-19

```

0001      SUBROUTINE DISKLD(IFFC,N,DTN)
          THIS SUBROUTINE TAKES THE DATA IN RA(I,J) AND COMPRESSES
          IT BY ELIMINATING ZEROS AND LOADS THE DATA INTO IREC, THE
          FORM OF THE OUTPUT FILE IS:
          WD 1 = DTERM NUMBER WITH SIGN CHANGED
          WD 2 = CLASSIFIER LABEL FOR CLUSTER (DTN=2)
          WD 3 = BYTE 1 * HIGH ZORDER NUMBER WITH CRDP CODE
          WD 4 = BYTE 2 * CRDP CODE
          WD 4 = LOW ZORDER NUMBER WITH CRDP CODE
          (REPEAT FOR ALL CRDP CODES IN CLUSTER AND THEN GO ON TO
          NEXT CLUSTER)
0002      IMPLICIT INTEGER (A=0), (S=2)
0003      DIMENSION IREC(3000)
0004      COMMON /MTX/RA(50,50)
0005      COMMON /CKZJ/(256,4),JNT(256,4),ING,IND
0006      N=0
0007      DO 20 I=1,IND
          IND = NUMBER OF DTERM CODES
0008      IF(N.GE.3000) RETURN
0009      N=N+1
0010      IREC(N)=JNT(I,4)
0011      IF(DTN.EQ.1) GO TO 10
          LEAVE SPACE FOR CLASSIFIER LABEL IN CLUSTER RUN
0012      IF(N.GE.3000) RETURN
0013      N=N+1
0014      IREC(N)=0
0015      15 CONTINUE
0016      DO 20 J=1,ING
          ING = NUMBER OF GROUND TRUTH CODES
0017      IF(IRA(J,1).EQ.0) GO TO 20
0018      IHI=RA(J,1)/32768.0
0019      ILB=RA(J,1)*32768.0*IHI
0020      IF(N.GE.3000) RETURN
0021      N=N+1
0022      IREC(N)=IHI*1000+JNT(J,4)
0023      IF(N.GE.3000) RETURN
0024      N=N+1
0025      IREC(N)=ILB
0026      20 CONTINUE
0027      RETURN
0028      END
    
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDDF1	000524 170	R, I, C, LCL
2	SPDATA	000004 2	R, D, C, LCL
3	SIDATA	000012 5	R, D, C, LCL
4	SVARS	000010 4	R, D, C, LCL
5	STEMPS	000006 3	R, D, C, LCL
6	MTX	023420 5000	R, D, Z, V, G, L
7	CK	010004 2050	R, D, Z, V, G, L

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DISKLD		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DTN	I*2	F-000006*	I	I*2	4-000000	IHI	I*2	4-000004	IL0	I*2	4-000006	IND	I*2	7-010002
ING	I*2	7-010000	J	I*2	4-000002	N	I*2	F-000004*						

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
IREF	I*2	F-000002*	013560 3000	(3000)
JD	I*2	7-004000	004000 1024	(256,4)
JG	I*2	7-000000	004000 1024	(256,4)
RI	R*4	6-000000	023420 5000	(50,50)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000200	20	1-000460				

TOTAL SPACE ALLLOCATED = 034204 7274

B-50

ORIGINAL PAGE IS
 OF POOR QUALITY

F0RTPAN IV-PLUS V02-51
ADMANL,FTN /TR:01RCKS/WR

0611A110 24-APR-78

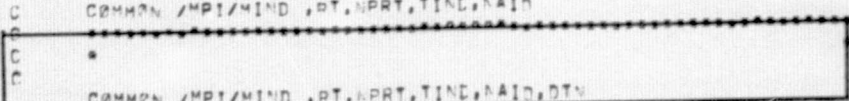
PAGE 26

C
C *
C

ADMANL,OBJ,LP:=[170,1]ADMANL,FTN

B-51

```
0001 SUBROUTINE DRUM(L)  
0002 IMPLICIT INTEGER (A-Z)  
0003 DIMENSION MT(6)  
0004 COMMON /DD/DATR(3,36)  
0005 COMMON /RD/A(11,19),G(11,19),DT(11,19)  
COMMON /MPI/MIND ,PT,MPRT,TIND,NAID
```



```
0006 COMMON /MPI/MIND ,PT,MPRT,TIND,NAID,DTN  
0007 MS=0  
0008 D0 100 SS=1,19  
0009 OS=OS+2  
0010 M=0  
0011 D0 200 LL=1,3  
0012 D0 200 SS=1,2  
0013 M=M+1  
0014 SSS=OS+SS-2  
0015 IF(SSS.GT.36) WRITE(MPRT,300) SSS  
0016 IF(SSS.GT.36) STOP  
0017 300 FORMAT(IH0,10X,'SSR=',15)  
0018 MT(M)=DATR(LL,SSS)  
0019 20* CONTINUE  
0020 CALL CR2PL(CR2P,MT,NC)  
0021 G(L/10,S)=CR2P  
0022 10* CONTINUE  
0023 RETURN  
0024 END
```

B-52

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	FCDF1	000354 118	RW, I, CBN, LCL
3	FIDATA	000076 11	RW, C, CBN, LCL
4	EVARE	000034 14	RW, C, CBN, LCL
6	DD	000344 114	RW, I, ZVR, GRL
7	RD	002346 627	RW, C, ZVR, GRL
8	MPI	000014 6	RW, C, ZVR, GRL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
DDUM		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CRZP	I*2	4-000036	DTN	I*2	8-000012	L	I*2	4-000024	LL	I*2	4-000022
MIND	I*2	8-000000	NAID	I*2	8-000010	NC	I*2	4-000032	NPRY	I*2	8-000014
RT	I*2	8-000002	S	I*2	4-000016	SS	I*2	4-000024	SSS	I*2	4-000026
									TINR	I*2	8-000006

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	I*2	7-000000	000642	209 (11,19)
DPTR	I*2	6-000000	000344	114 (3,38)
DT	I*2	7-001504	000642	209 (11,19)
G	I*2	7-000642	000642	209 (11,19)
MT	I*2	4-000000	000014	6 (6)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100	**	200	**	300	3-000000		

FUNCTIONS AND SUBROUTINES REFERENCED

CRZPL

TOTAL SPACE ALLOCATED = 003364 890

NO FPP INSTRUCTIONS GENERATED

DDUMD,OBJ,LPIC170,13DDUMD,FTN

B55

PDSTR,FTN /TRIPLOCKS/WR

```
0001      SUBROUTINE PDSTR
0002      IMPLICIT INTEGER (A-Z)
0003      COMMON /DD/DMTR(3,38)
0004      NPRT=6
0005      JI=1
0006      D0 200 JJ=1,2
0007      J2=J1+20=1
0008      IF(J2.EQ.40) J2=38
0009      D0 100 I=1,3
0010      WRITE(NPRT,101) (DMTR(I,J),J=1,J2)
0011 101  FORMAT(1H ,10X,20(214,2X))
0012 100  CONTINUE
0013      WRITE(NPRT,102)
0014 102  FORMAT(1H0)
0015      J1=J2+1
0016 200  CONTINUE
0017      WRITE(NPRT,102)
0018      RETURN
0019      END
```

B-54

ORIGINAL PAGE IS
OF POOR QUALITY

PROGRAM SECTIONS

NUMMER	NAME	SIZE	ATTRIBUTES
1	SCDP1	000304 98	Rw,I,C0N,LCL
3	FINATA	000622 9	Rw,C,C0N,LCL
4	SVARS	000014 6	Rw,C,C0N,LCL
6	DD	000344 114	Rw,C,EVR,GBL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
PD0TR		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
I	1*2	4-000010	J	1*2	4-000012	JJ	1*2	4-000004	Ji	1*2	4-000002	J2	1*2	4-000006
NPRT	1*2	4-000000												

B-55

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
DDTR	1*2	5-000000	000344 114	(3,38)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
100	**	101	3-000000	102	3-000016	200	**

TOTAL SPACE ALLOCATED = 000706 227

NO FPP INSTRUCTIONS GENERATED

PD0TR,0BJ,LP1=[170,1]PD0TR,FTN

```
0001 SUPROUTINE FILNAM (INAME,RUTNAM)
0002 IMPLICIT INTEGER (A-F)
0003 PARAMETER SIZE=64,MAXDSK=3
0004 DIMENSION INAME(7),RUTNAM(13),SITE(SIZE,MAXDSK)
0005 DIMENSION HSEGNM(5)
0006 BYTE D(9),T(9)
0007 NPRT=6
C
C *** SUBROUTINE VALIDATES SEGMENT NUMBER AND
C * MOVES FILE NAME FROM INAME TO RUTNAM ****
C * ALL FILE NAMES ARE CHECKED FOR SAME SEGMENT NO. *
C
0008 IF(COUNT.NE.0)GOTO 50
C
C **** READ IN SITE ID TABLE ****
C
0009 OPEN (UNIT=3,NAME='(110,6)HEDREC,SITID',TYPE='D',
*   FORM='UNFORMATTED',ACCESS='SEQUENTIAL',READONLY)
0010 READ (3) ((SITE(J,K), J=1,SIZE),K=1,MAXDSK)
0011 CALL CLOSE (3)
0012 50 CONTINUE
0013 COUNT=COUNT+1
C
C **** PICK UP AT DATA BASE NUMBER FROM TABLE ****
0014 DECIDE (4,706,INAME(1)) SEGNUM
0015 706 FORMAT(14)
0016 DO 60 K=1,MAXDSK
0017   DO 65 J=1,SIZE
0018     IF(SITE(J,K).EQ.SEGNUM)GOTO 69
0019   65 CONTINUE
0020   60 CONTINUE
0021   WRITE (NPRT,707) SEGNUM
0022   707 FORMAT (//,10X,'INVALID GROUP TRUTH SEGMENT NO. = ',14)
0023   GO TO 88
0024   69 CONTINUE
0025     DBNUM=K
0026     IF(DBNUM.NE.1)GO TO 72
0027     RUTNAM(5)='1'
0028     GO TO 76
0029   72 CONTINUE
0030     IF(DBNUM.NE.2)GO TO 74
0031     RUTNAM(5)='2'
0032     GO TO 76
0033   74 CONTINUE
0034     RUTNAM(5)='3'
0035   76 CONTINUE
C
0036 HSEGNM(COUNT)=SEGNUM !STORE SEG NO.
0037 DO 80 I=1,COUNT
0038   IF(HSEGNM(I).NE.SEGNUM)GOTO 85
0039   80 CONTINUE
0040   GO TO 89
0041   85 CONTINUE
C
C *** INVALID SEG NO, ERROR DOES NOT MATCH OTHERS *
0042 WRITE (NPRT,708)HSEGNM(1),COUNT,SEGNUM
0043 708 FORMAT (1H0,'SEGMENT NUMBERS DO NOT MATCH',5X,
*   'SEG GT = ',14,' SEG ',14,' = ',14)
```

ORIGINAL PAGE IS
OF POOR QUALITY

FORTRAN IV-PLUS V02-81
FILNAM,FTN /TRIGLCKMS/HR

08115127 24-APR-78

PAGE 2

```
0044 88 CONTINUE
0045 CALL DATE(D)
0046 CALL TIME (T)
0047 WRITE (NPRT,710)D,T
0048 WRITE (NPRT,710)D,T
0049 STOP
0050 710 FORMAT(1H0,10X,'IJOB ERRORED OFF * ON ',9A1,' AT ',8A1)
0051 89 CONTINUE
0052 CALL SUBSTR (INNAME,1,13,OUTNAM,12,13)
0053 RETURN
0054 END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCDPF1	001136 303	RW,I,C0N,LCL
2	TPNATA	000044 18	RW,D,C0N,LCL
3	SINATA	000366 123	RW,D,C0N,LCL
4	SVARS	000652 213	RW,D,C0N,LCL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
FILNAM		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
C0UNT	I*2	4-000636	DRNUM	I*2	4-000646	I	I*2	4-000650	J	I*2	4-000640
NPRT	I*2	4-000634	SFGNUM	I*2	4-000644				K	I*2	4-000642

B-58

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
D	L*1	4-000612	000011	4 (9)
HSEGNM	I*2	4-000600	000012	5 (5)
INNAME	I*2	F-000002*	000016	7 (7)
0UTNAM	I*2	F-000004*	000032	13 (13)
SITE	I*2	4-000000	000600	192 (64,3)
T	L*1	4-000623	000010	4 (8)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
50	1-000236	60	**	65	**	69	1-000454
74	1-000546	76	1-000566	80	**	85	1-000667
89	1-001076	706	3-000000	707	3-000004	708	3-000666
						710	3-000169

FUNCTIONS AND SUBROUTINES REFERENCED

CLOSE	DATE	OPENS	SUBSTR	TIME

TOTAL SPACE ALLLOCATED = 002442 657

NZ FPP INSTRUCTIONS GENERATED

FILNAM,0RJ,LPI=[170,1]FILNAM,FTN

ORIGINAL PAGE IS
 OF POOR QUALITY

```
0001      SUBROUTINE SUBSTR(A,I,N,B,J,M)
0002      IMPLICIT INTEGER (A-Z)
0003      LOGICAL A(1),B(1)
0004      DATA BLANK/24 /
0005      IS=I
0006      JS=J
0007      L=0
0008      IF(N .EQ. 0) GO TO 20
0009      L=N
0010      IF( L .GT. M ) L=M
0011      DO 10 K=1,L
0012      B(JS)=A(IS)
0013      IS=IS + 1
0014      JS=JS + 1
0015      10  CONTINUE
0016      IF( N .GE. M ) RETURN
0017      20  L=L + 1
0018      DO 30 K=L,M
0019      B(JS)=BLANK
0020      JS=JS+1
0021      30  CONTINUE
0022      RETURN
0023      END
```

1-59

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000312 171	RW,I,C0N,LCL
3	FIDATA	000024 10	RW,D,C0N,LCL
4	SVARS	000012 5	RW,D,C0N,LCL
5	STEMPS	000002 1	RW,D,C0N,LCL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
SUBSTR		1-000000									

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
BLANK	I*2	4-000000	I	I*2	F-000004*	IS	I*2	4-000002	J	I*2	F-000012*
K	I*2	4-000010	L	I*2	4-000006	M	I*2	F-000014*	N	I*2	F-000006*

B-0

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
A	L*I	F-000002* 000001	0	(1)
B	L*I	F-000010* 000001	0	(1)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	**	20	1-000222	30	**		

TOTAL SPACE ALLOCATED = 000352 117

NO FPP INSTRUCTIONS GENERATED

SUBSTR,0RJ,LPI=[170,1]SUBSTR.FTN

ORIGINAL PAGE IS
 OF POOR QUALITY

```
0001 SUBROUTINE CRPPL (CRP,MT,NC)
0002 IMPLICIT INTEGER (A=0),(S=2)
0003 DIMENSION MT(6)
0004 NC=0
0005 DO 10 I=1,6
0006 CC=MT(I)
0007 N=0
0008 DO 20 J=1,6
0009 IF(CC.EQ.MT(J))N=N+1
0010 20 CONTINUE
0011 IF(N.LE.NC) GO TO 30
0012 NCR=N
0013 CRP=CC
0014 IF(NC.GE.3) RETURN
0015 10 CONTINUE
0016 RETURN
0017 END
```

B-61

PROGRAM SECTIONS

NUMBER	NAME	SIZE	ATTRIBUTES
1	SCODE1	000236	79 R,I,CON,LCL
3	FINATA	000012	5 R,I,D,CON,LCL
4	SVARS	000010	4 R,I,D,CON,LCL

ENTRY POINTS

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CR0PL		1-000000												

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS
CC	I*2	4-000002	CR0P	I*2	F-000002*	I	I*2	4-000000	J	I*2	4-000006	N	I*2	4-000004
NC	I*2	F-000006*												

ARRAYS

NAME	TYPE	ADDRESS	SIZE	DIMENSIONS
MT	I*2	F-000004*	000014	6 (6)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
10	1-000212	20	**						

TOTAL SPACE ALLOCATED = 000260 08

NO FPP INSTRUCTIONS GENERATED

CR0PL,0BJ,LP1=[170,1]CR0PL,FTN

B-2

ORIGINAL PAGE IS
OF POOR QUALITY