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PROGRAM PDPØØ1: GENADD

by

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U.S. Geological Survey
Jiddah, Saudi Arabia

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Program Documentation Manual

Program Number	:	PDPØØ1
Program Name	:	GENADD
Programmer	:	M. A. M. Donzeau
Language	:	FORTRAN IV PLUS
Computer/System	:	PDP-11/45
Date	:	13 February 1978
Institution	:	U. S. Geological Survey/Saudi Arabian Project
Location	:	Jiddah, Saudi Arabia

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* NOTE: This report does not contain pages i, ii, iv, 2, 4, 6, 10, 12, 14 and *
* 18. Pages were mis-numbered--missing pages do not exist. *
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ILLUSTRATIONS

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ABSTRACT

This program is designed to build or to add new items to a general documentation file, which is usable then with program GENDOC (PDPØØ2).

An input file is built with the EDI Utility Program first. Program GENADD reads this input file, and writes the information at the end of the general documentation file.

SOURCE DECK LOCATION AND UPDATE STATUS

The FORTRAN source program GENADD.FTN, the object module GENADD.OBJ, the task image GENADD.TSK are on the system disk of the DGMR PDP-11/45 computer under the UIC [22,342].

No updates have been made to the program at this time.

DESCRIPTION OF COMPUTED QUANTITIES

No quantities are computed by this program.

DESCRIPTION OF THE PROGRAM

This program uses two kinds of files:

The input file is a sequential formatted file built with the EDI Utility Program. Each item of this file is made up of one or two ID records, followed by one or more text records. The limit for the number of text records depends on the kind of device used to store the input file.

The first ID record of any item has a variable length of 132 bytes maximum. It contains the following fields: ID (1 to 20 characters), number of text record, list of keywords (maximum 10 keywords of 1 to 12 characters each). All the fields are separated by a comma, but no commas are at the beginning and at the end of the record. No space character is needed, except if it is a part of the ID or of a keyword.

If the list of keywords cannot be written completely on one ID record, the first ID record is filled until reaching the 132nd character. Then a second ID record will contain the remaining characters.

All the text records have a variable length of 80 bytes maximum. Note that one form feed constitutes one record, and must be counted in the number of text records.

The general documentation file is a sequential unformatted file. Each item of this file is made up of one ID record, followed by one or more text records.

Every ID record has a variable length of 144 bytes maximum, and contains the following fields: ID, number of text records, number of keywords, list of keywords.

Every text record has a fixed length of 80 bytes.

The general program flow-chart is shown in figure 1. The basic tasks in order are:

1) Read one or two records (ID records) of the input file (routine READIC).

2) Write the ID record on the general documentation file and on the printer file (main program).

3) Read text records from the input file, write them on the general documentation file and on the printer file (routine COPTEX).

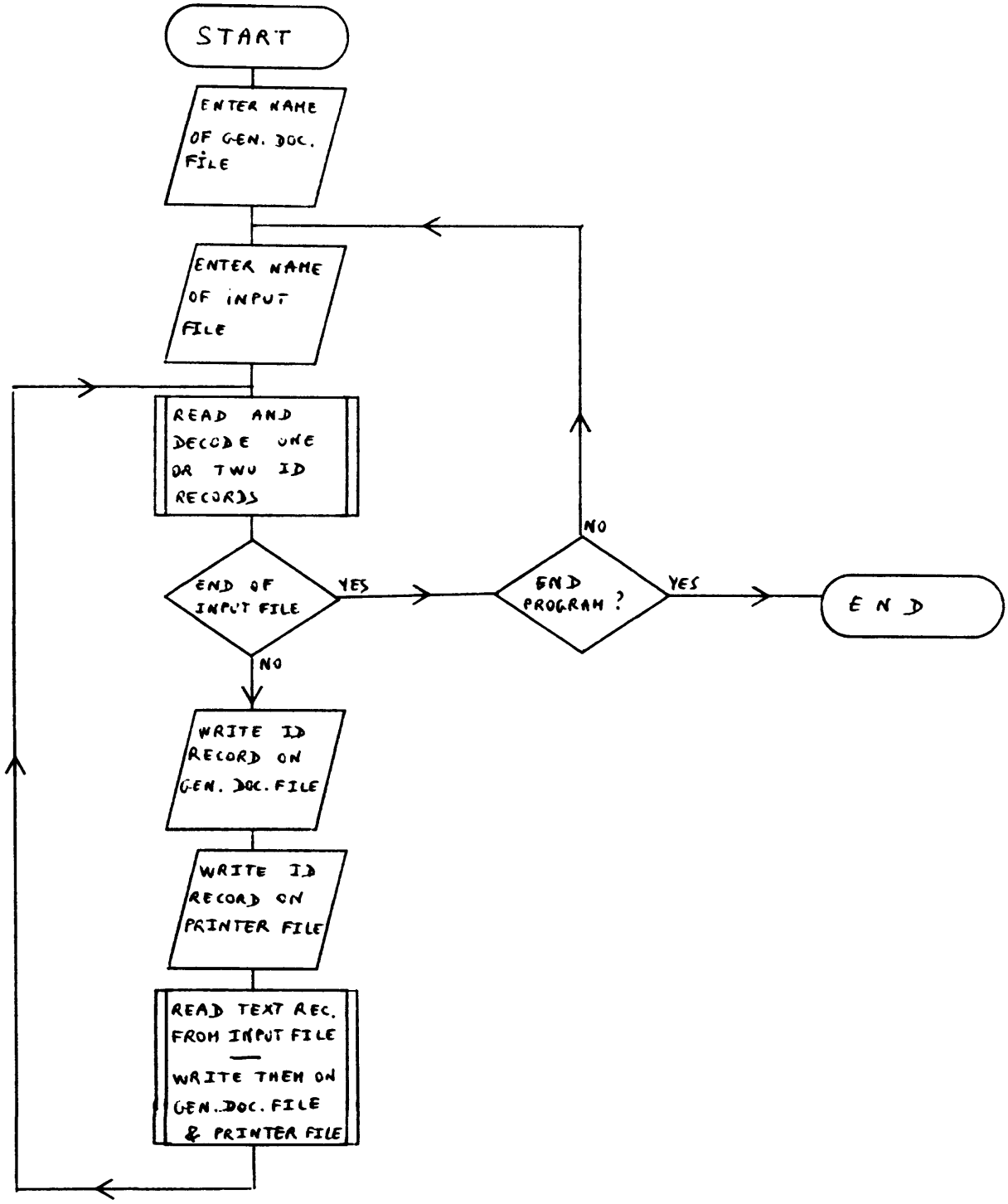

Figure 1.--GENADD program flow chart.

Tasks 1 to 3 are performed as many times as the number of items of the input file. New items stored on several input files can be added to the general documentation file in the same run.

As the general documentation file is used for both read and write, no new version of this file is built during program execution. In order to correct mistakes, a copy of the previous state of the general documentation file should be made before running GENADD. After correction of the input file, GENADD can be run with this copy of the general documentation file.

In order to delete or update items, an input file containing the same items as the general documentation file should be preserved. Delete or update can be performed easily with EDI. Then GENADD could be run to build a new general documentation file.

Control and execution of the program is accomplished interactively through the terminal display. Input is made via the system disk (input file), output is via the line printer and the system disk (general documentation file).

The source program GENADD.FTN requires 9 blocks of disk space in the PDP-11/45, the object module GENADD.OBJ requires 13 blocks, the task image GENADD.TSK 52 blocks.

In the example on page 13, an input file of 4 blocks of disk space generates a general documentation file of 5 blocks of disk space. The execution time with this example is 10 seconds.

PROGRAM OPERATION

Once logged on, enter "RUN GENADD (ESC)"(1) to start execution.

Enter information asked in questions appearing on the terminal display. The main information is:

- file name of general documentation file

- file name of input file

Questions requiring a "YES" and "NO" answer are answered "Y" or "N".

The contents of the input file(s) are written on the printer file GENADD.PNT during program execution. Use the PIP Utility Program to direct the printer file to the line printer.

(1) the symbol (ESC) means ALT mode, or ESC Key.

EXAMPLE

The following shows the contents of the input file and the printer file for a typical run. The execution time was 10 seconds.

CONTENTS OF INPUT FILE

```
GPA;BOX#1/2/3/4/5;01,2,MISC,AIR MAG,AIR RAD,LOC:ALL S.A.
      MISC: STRIP FILM NEG, SINGLE FR; AL AYS, AL LISAN, AL AQIQ, ETC.,  (10
         AREAS SCATTERED ACCROSS SHIELD); USGS, HUNTING; 1962
GPA;BOX#06;01,2,GEOLOGY,ORE DEPOSIT,ALLUVIAL PR.,LOC:25/37D,LOC:25/38C,LOC:I-204
      N. AL AYS - PRELIM RPT ON MINERAL RESOURCES & GEOL, HENRY &LEFEYRE;
         204-2-AYS-3
GPA;BOX#06;02,2,GEOLOGY,GEOCHEMISTRY,ORE DEPOSIT,ALLUVIAL PR.,GROUND RAD,LOC:25/40A,LOC:25/40B,LOC:I-205
      HYLAYFAH/MUSAYNAAH - PRELIM RPT ON MINERAL RESOURCES & GEOL, DELFOUR;
         205-2-MUS-HUL-2
GPA;BOX#06;03,2,AIR MAG,AIR RAD,LOC:24/44C,LOC:24/44D,LOC:I-206
      AIR MAG & AIR RAD SHEET 101 - INTERP, LAMBOLEZ; 1:100,0000; 1968, 68
         JED 46, A1-REG-2-3, AMSC-101
GPA;BOX#06;04,2,AIR MAG,AIR RAD,LOC:23/41A,LOC:23/41B,LOC:I-210
      AIR MAG & AIR RAD SHEET 112 - INTERP, LAMBOLEZ; 1:100,0000; 1969, 69
         JED 22, AMSC-112
GPA;BOX#06;05,2,AIR MAG,AIR RAD,LOC:23/44A,LOC:23/44B,LOC:I-211
      AIR MAG & AIR RAD SHEET 115 - INTERP, MAILLARD; 1:100,0000; 1968, 68
         JED 54, A1-REG-2-2, AMSC-115
GPA;BOX#07;01,2,GEOLOGY,GRAVITY,LOC:28/34C,LOC:28/34D,LOC:I-200
      AL LISAN - GEOL,GRAV INVEST, AGOCS, KAHR; GEOL 1:100,0000; GRAV
         1:10,000; 1962, 200-1-LIS-1
GPA;BOX#07;02,2,GRAVITY,GROUND MAG,ORE DEPOSIT,LOC:25/38C,LOC:I-204
      AL AYS - CHROMITE OCCURRENCES, GEOPHYS INVEST, AKHRAS; GRAV, GROUND
         MAG 1:1,000; 1966, 204-1-AYS-1 (3 COPIES)
GPA;BOX#08;03,2,GROUND MAG,ORE DEPOSIT,LOC:22/39B,LOC:I-210
      METHGAL - IRON DEPOSIT, TECH LTR #34, DAVIS, ALLEN; GROUND MAG; 1965,
         210-3-MTH-1
GPA;BOX#08;04,1,GRAVITY,LOC:22/39C,LOC:I-210
      RABIGH - GRAVITY WORK, ZIDAN; 1:1,000 ; 1965, 210-1-RAB-1
```

CONTENTS OF PRINTER FILE

```
GPA;BOX#1/2/3/4/5;01    2   4      MISC          AIR MAG      AIR RAD      LOC:ALL S.A.
   1          MISC: STRIP FILM NEG, SINGLE FR; AL AYS, AL LISAN, AL AQIQ, ETC.,, (10
   2             AREAS SCATTERED ACCROSS SHIELD); USGS, HUNTING; 1962
GPA;BOX#06;01           2   6      GEOLOGY       ORE DEPOSIT ALLUVIAL PR.LOC:25/37D  LOC:25/38C
                                   LOC:I-204
   1          N, AL AYS - PRELIM RPT ON MINERAL RESOURCES & GEOL, HENRY &LEFEYRE;
   2             204-2-AYS-3
GPA;BOX#06;02           2   8      GEOLOGY       GEOCHEMISTRYORE DEPOSIT ALLUVIAL PR.GROUND RAD
                                   LOC:25/40A  LOC:25/40B  LOC:I-205
   1          HYLAYFAH/MUSAYNAAH - PRELIM RPT ON MINERAL RESOURCES & GEOL, DELFOUR;
   2             205-2-MUS-HUL-2
GPA;BOX#06;03           2   5      AIR MAG       AIR RAD      LOC:24/44C  LOC:24/44D  LOC:I-206

   1          AIR MAG & AIR RAD SHEET 101 - INTERP, LAMBOLEZ; 1:100,0000; 1968, 68
   2             JED 46, A1-REG-2-3, AMSC-101
GPA;BOX#06;04           2   5      AIR MAG       AIR RAD      LOC:23/41A  LOC:23/41B  LOC:I-210

   1          AIR MAG & AIR RAD SHEET 112 - INTERP, LAMBOLEZ; 1:100,0000; 1969, 69
   2             JED 22, AMSC-112
GPA;BOX#06;05           2   5      AIR MAG       AIR RAD      LOC:23/44A  LOC:23/44B  LOC:I-211

   1          AIR MAG & AIR RAD SHEET 115 - INTERP, MAILLARD; 1:100,0000; 1968, 68
   2             JED 54, A1-REG-2-2, AMSC-115
GPA;BOX#07;01           2   5      GEOLOGY       GRAVITY      LOC:28/34C  LOC:28/34D  LOC:I-200

   1          AL LISAN - GEOL,GRAV INVEST, AGOCS, KAHR; GEOL 1:100,0000; GRAV
   2             1:10,000; 1962, 200-1-LIS-1
GPA;BOX#07;02           2   5      GRAVITY       GROUND MAG   ORE DEPOSIT LOC:25/38C  LOC:I-204

   1          AL AYS - CHROMITE OCCURRENCES, GEOPHYS INVEST, AKHRAS; GRAV, GROUND
   2             MAG 1:1,000; 1966, 204-1-AYS-1 (3 COPIES)
GPA;BOX#08;03           2   4      GROUND MAG   ORE DEPOSIT LOC:22/39B  LOC:I-210
   1          METHGAL - IRON DEPOSIT, TECH LTR #34, DAVIS, ALLEN; GROUND MAG; 1965,
   2             210-3-MTH-1
GPA;BOX#08;04           1   3      GRAVITY       LOC:22/39C  LOC:I-210
   1          RABIGH - GRAVITY WORK, ZIDAN; 1:1,000 ; 1965, 210-1-RAB-1
```

SOURCE PROGRAM LISTING

```
FORTRAN IV-PLUS V02-51          12:22:42    20-JUN-78          PAGE 1
GENADD.FTN      /TR:BLOCKS/WR

0001            PROGRAM GENADD
      C         ==============
      C    ADD ITEMS ON GENERAL DOCUMENTATION FILE
      C    USED ROUTINES : READIC,COPTEX,MESS
      C    LIBRARY       : [22,377]GENLBR
      C    M.D. 30-MAY-77  / UPDATE 14-FEB-78
      C
0002            LOGICAL*1 ID,KEYWOR
0003            LOGICAL*1 FILEN1,FILEN2
0004            LOGICAL*2 A
0005            COMMON/UNIT/IOW,ITT,IO1,IO2
0006            COMMON/IDREC1/NKEY,KEYWOR(12,10)
0007            COMMON/IDREC2/NTEX,ID(20)
0008            COMMON/IDREC3/NEND
0009            DIMENSION FILEN1(20),FILEN2(20)
0010            DATA IOW/4/,ITT/5/,IO1/1/,IO2/2/
      C
0011      1000  FORMAT(20A1)
0012      1001  FORMAT(A2)
0013      2000  FORMAT(' THIS PROGRAM ADD ITEMS ON GENERAL DOCUMENTATION FILE.'/)
0014      2001  FORMAT(/' *** PRINTER FILE IS ON ''GENADD.PNT''')
0015      2200  FORMAT(1X,20A1,'I4,2(T35,60A1/))
      C
0016            OPEN (UNIT=IOW,TYPE='UNKNOWN',NAME='GENADD.PNT')
0017            WRITE(ITT,2000)
0018            CALL TTINAA ('FILENAME OF GENERAL DOCUMENTATION FILE',38,
           1 FILEN2,20,ITT)
0019            OPEN (UNIT=IO2,TYPE='UNKNOWN',FORM='UNFORMATTED',NAME=FILEN2,
           1ACCESS='APPEND')
      C
0020      1     CALL TTINAA ('FILENAME OF INPUT FILE',22,FILEN1,20,ITT)
0021            OPEN (UNIT=IO1,TYPE='OLD',NAME=FILEN1)
0022      20    CALL READIC
      C         ===========
0023            IF (NEND.EQ.1) GOTO 130
0024            WRITE(IO2,ERR=9000) ID,NTEX,NKEY,
           1((KEYWOR(I,J),I=1,12),J=1,NKEY)
0025            WRITE(IOW,2200) ID,NTEX,NKEY,((KEYWOR(I,J),I=1,12),J=1,NKEY)
0026            CALL COPTEX
      C         ===========
0027            GOTO 20
      C
0028      130   CLOSE(UNIT=IO1)
0029            CALL TTINAA ('WANT TO END PROGRAM (Y OR N)',28,A,2,ITT)
0030            IF (A.EQ.1HN) GOTO 1
      C
0031            CLOSE (UNIT=IO2)
0032            CLOSE (UNIT=IOW)
0033            WRITE(ITT,2001)
0034            STOP '*** END OF PROGRAM ***'
0035      9000  STOP '*** ERROR IN GEN. DOC. FILE ***'
0036            END
```

```
0001              SUBROUTINE READIC
                  C         ****************
                  C
                  C---READ ONE ID RECORD, AND DECODE IT-----------------------------
                  C
0002              LOGICAL*1 ID,KEYWOR,BID
0003              COMMON/UNIT/IOW,ITT,IO1
0004              COMMON/IDREC1/NKEY,KEYWOR(12,10)
0005              COMMON/IDREC2/NTEX,ID(20)
0006              COMMON/IDREC3/NEND
0007              DIMENSION BID(160)
0008              DATA BID/160*1H /
                  C
0009     1000     FORMAT(Q,160A1)
0010     1001     FORMAT(I<L>)
0011     2000     FORMAT(' *** ERROR WHILE READING ID RECORD :')
0012     2001     FORMAT(' *** ERROR WHILE DECODING NO OF TEXT RECORDS',
                 1' IN ID RECORD :')
0013     2002     FORMAT(' *** NO COMMA BETWEEN FIELDS IN ID RECORD :')
0014     2003     FORMAT(1X,80A1)
                  C
0015              NKEY=0
0016              NEND=0
0017              DO 100 J=1,10
0018              DO 100 I=1,12
0019     100      KEYWOR(I,J)=1H
0020              DO 110 J=1,20
0021     110      ID(J)=1H
                  C
0022     1        READ (IO1,1000,END=500,ERR=600) N1,BID
0023              IF (N1.LT.132) GOTO 5
0024              READ (IO1,1000,END=600,ERR=600) N2,
                 1(BID(I),I=133,160)
0025              N1=N1+N2
                  C
0026     5        DO 10 I=1,N1
0027              IF (BID(I).EQ.',') GOTO 20
0028     10       CONTINUE
0029              GOTO 400
0030     20       L=I-1
0031              IF (L.GT.20) L=20
0032              CALL MOVE(BID(1),ID(1),L)
                  C         ************************
                  C
0033              I1=I+1
0034              DO 60 I=I1,N1
0035              IF (BID(I).EQ.',') GOTO 70
0036     60       CONTINUE
0037              GOTO 400
0038     70       L=I-I1
0039              DECODE (L,1001,BID(I1),ERR=700) NTEX
                  C
0040     25       I1=I+1
0041              DO 30 I=I1,N1
0042              IF (BID(I).EQ.',') GOTO 40
0043     30       CONTINUE
```

```
0044                GOTO 50
0045      40        L=I-I1
0046                IF (L.GT.12) L=12
0047                NKEY=NKEY+1
0048                CALL MOVE(BID(I1),KEYWOR(1,NKEY),L)
          C         ----------*----------*----------
0049                IF (NKEY.EQ.10) RETURN
0050                GOTO 25
0051      50        L=N1-I1+1
0052                IF (L.GT.12) L=12
0053                NKEY=NKEY+1
0054                CALL MOVE(BID(I1),KEYWOR(1,NKEY),L)
          C         ----------*----------*----------
0055                RETURN
          C
0056      400       WRITE(ITT,2002)
0057                GOTO 750
          C
0058      500       NEND=1
0059                RETURN
          C
0060      600       WRITE(ITT,2000)
0061                GOTO 750
0062      700       WRITE(ITT,2001)
0063      750       WRITE(ITT,2003) BID
0064                CALL MESS
          C         ---------
0065                END
```

GENADD.FTN /TR:BLOCKS/WR

```
0001              SUBROUTINE COPTEX
                  C     ****************
                  C    COPY TEXT RECORDS FROM IO1 TO IO2
0002              LOGICAL*1 ID,BID
0003              COMMON/UNIT/IOW,ITT,IO1,IO2
0004              COMMON/IDREC2/NTEX,ID(20)
0005              DIMENSION BID(80)
                  C
0006        1000  FORMAT(80A1)
0007        2000  FORMAT(I5,T10,80A1)
0008        2001  FORMAT(' *** ERROR WHILE READING TEXT RECORD :')
0009        2002  FORMAT(' *** END OF INPUT FILE NOT EXPECTED.',
                 2' LAST READ TEXT RECORD :')
0010        2003  FORMAT(1X,80A1)
                  C
0011              DO 10 N=1,NTEX
0012              READ (IO1,1000,END=9100,ERR=9000) BID
0013              WRITE(IO2,ERR=9000) BID
0014              WRITE(IOW,2000) N,BID
0015        10    CONTINUE
0016              RETURN
                  C
0017        9000  WRITE(ITT,2001)
0018              GOTO 9150
0019        9100  WRITE(ITT,2002)
0020        9150  WRITE(ITT,2003) BID
0021              CALL MESS
                  C     *********
0022              END
```

GENADD.FTN /TR:BLOCKS/WR

```
0001                SUBROUTINE MESS
            C       ***************
            C
0002                COMMON/UNIT/IOW,ITT,IO1,IO2
            C
0003        2000  FORMAT(' *** CORRECT THE INPUT FILE.'/' THEN RUN ''GENADD'' ONCE',
                 1' MORE. ***')
            C
0004                WRITE(ITT,2000)
0005                STOP
0006                END
```