


```

FFFFFFFFF      11      11      AAAAAA
FFFFFFFFF      11      11      AAAAAA
FF             1111    1111    AA      AA
FF             1111    1111    AA      AA
FF             11      11      AA      AA
FF             11      11      AA      AA
FFFFFFFFF      11      11      AA      AA
FFFFFFFFF      11      11      AA      AA
FF             11      11      AAAAAAAAAA
FF             11      11      AAAAAAAAAA
FF             11      11      AA      AA
FF             11      11      AA      AA
FF             111111  111111  AA      AA
FF             111111  111111  AA      AA

```

```

SSSSSSSS  DDDDDDD  LL
SSSSSSSS  DDDDDDD  LL
SS         DD      DD  LL
SS         DD      DD  LL
SS         DD      DD  LL
SS         DD      DD  LL
SSSSSS    DD      DD  LL
SSSSSS    DD      DD  LL
SS        DD      DD  LL
SS        DD      DD  LL
SS        DD      DD  LL
SS        DD      DD  LL
SSSSSSSS  DDDDDDD  LLLLLLLLLL
SSSSSSSS  DDDDDDD  LLLLLLLLLL

```


Version: 'V04-000'

```

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MODIFIED BY:

```

0102   MCN0003      Maria del C. Nasr      15-Oct-1979  15:15
      Add HDR3 of magnetic tape file

```



```

{
{ FILE HEADER DEFINITIONS FOR FILE-11 STRUCTURE LEVEL 1
{
module $FHDFE;

aggregate FHDFE structure prefix FHD$:
  IDOFFSET byte unsigned; /* IDENT AREA OFFSET IN WORDS
  MPOFFSET byte unsigned; /* MAP AREA OFFSET IN WORDS
  FID_OVERLAY union;
    FID word unsigned dimension 2; /* FILE ID
    FID_FIELDS structure;
      FID_NUM word unsigned; /* FILE NUMBER
      FID_SEQ word unsigned; /* FILE SEQUENCE NUMBER
    end FID_FIELDS;
  end FID_OVERLAY;
  STRUCLEV word unsigned; /* FILE STRUCTURE LEVEL
  constant LEVEL1 equals 257 prefix FHD tag $C; /* 401 OCTAL = STRUCTURE LEVEL 1
  FILEOWNER_OVERLAY union;
    FILEOWNER word unsigned; /* FILE OWNER UIC
    FILEOWNER_FIELDS structure;
      UICMEMBER byte unsigned; /* UIC MEMBER NUMBER
      UICGROUP byte unsigned; /* UIC GROUP NUMBER
    end FILEOWNER_FIELDS;
  end FILEOWNER_OVERLAY;
  FILEPROT_OVERLAY union;
    FILEPROT word unsigned; /* FILE PROTECTION
    FILEPROT_BITS structure;
      SYSPRO bitfield length 4; /* SYSTEM PROTECTION
      OWNPRO bitfield length 4; /* OWNER PROTECTION
      GROUPPRO bitfield length 4; /* GROUP PROTECTION
      WORLDPRO bitfield length 4; /* WORLD PROTECTION
    end FILEPROT_BITS;
  end FILEPROT_OVERLAY;
  FILECHAR_OVERLAY union;
    FILECHAR word unsigned; /* FILE CHARACTERISTICS
    FILECHAR_FIELDS structure;
      USERCHAR_OVERLAY union;
        USERCHAR byte unsigned; /* USER CONTROLLED CHARACTERISTICS
        USERCHAR_BITS structure;
          FILL_1 bitfield length 3 fill prefix FHDDEF tag $$; /* RESERVED
          READCHECK bitfield; /* VERIFY ALL READ OPERATIONS
          WRITCHECK bitfield; /* VERIFY ALL WRITE OPERATIONS
          CONTIGB bitfield; /* KEEP FILE AS CONTIGUOUS AS POSSIBLE
          LOCKED bitfield; /* FILE IS DEACCESS LOCKED
          CONTIG bitfield; /* FILE IS CONTIGUOUS
        end USERCHAR_BITS;
      end USERCHAR_OVERLAY;
      SYSCHAR_OVERLAY union;
        SYSCHAR byte unsigned; /* SYSTEM CONTROLLED CHARACTERISTICS
        SYSCHAR_BITS structure;
          FILL_2 bitfield length 6 fill prefix FHDDEF tag $$; /* RESERVED
          BADBLOCK bitfield; /* FILE CONTAINS BAD BLOCKS
          MARKDEL bitfield; /* FILE IS MARKED FOR DELETE
        end SYSCHAR_BITS;
      end SYSCHAR_OVERLAY;
    end FILECHAR_FIELDS;
  end FILECHAR_OVERLAY;
end FILECHAR_FIELDS;

```



```

end FILECHAR_OVERLAY;
RECATTR word unsigned dimension 16;          /* FILE RECORD ATTRIBUTES
constant "LENGTH" equals . prefix FHDS$ tag K; /* LENGTH OF HEADER AREA
constant "LENGTH" equals . prefix FHDS$ tag C; /* LENGTH OF HEADER AREA
FILL 3 word dimension 232 fill prefix FHDDEF tag $$; /* REST OF FILE HEADER
CHECKSUM word unsigned;                      /* FILE HEADER CHECKSUM
end FHDDEF;

end_module $FHDDEF;

module $FHIDEF;

aggregate FHIDEF structure prefix FHIS;
FILENAME word unsigned dimension 3;          /* FILE NAME (RAD-50)
FILETYPE word unsigned;                     /* FILE TYPE (RAD-50)
VERSION word unsigned;                       /* VERSION NUMBER (BINARY)
REVISION word unsigned;                     /* REVISION NUMBER (BINARY)
REVDATE character length 7;                 /* REVISION DATE (ASCII DDMMYY)
REVTIME character length 6;                 /* REVISION TIME (ASCII HHMMSS)
CREDATE character length 7;                 /* CREATION DATE (ASCII DDMMYY)
CRETIME character length 6;                 /* CREATION TIME (ASCII HHMMSS)
EXPDATE character length 7;                 /* EXPIRATION DATE (ASCII DDMMYY)
FILL_1 byte fill prefix FHIDEF tag $$;      /* DUMMY BYTE TO ROUND UP
constant "LENGTH" equals . prefix FHIS$ tag K; /* LENGTH OF IDENT AREA
constant "LENGTH" equals . prefix FHIS$ tag C; /* LENGTH OF IDENT AREA
MTHDR1 character length 80;                 /* HDR1 OF ANSI MAGNETIC TAPE FILE
MTHDR2 character length 80;                 /* HDR2 OF ANSI MAGNETIC TAPE FILE
MTHDR3 character length 80;                 /* HDR3 OF ANSI MAGNETIC TAPE FILE
end FHIDEF;

end_module $FHIDEF;

module $FHMDEF;

aggregate FHMDEF structure prefix FHMS;
EX_SEGNUM byte unsigned;                    /* EXTENSION SEGMENT NUMBER OF THIS HEADER
EX_RVN byte unsigned;                       /* EXTENSION RELATIVE VOLUME NUMBER
EX_FILNUM word unsigned;                    /* EXTENSION FILE NUMBER
EX_FILSEQ word unsigned;                    /* EXTENSION FILE SEQUENCE NUMBER
COONTSIZE byte unsigned;                    /* RETRIEVAL POINTER COUNT FIELD SIZE
LBNSIZE byte unsigned;                      /* RETRIEVAL POINTER LBN FIELD SIZE
INUSE byte unsigned;                        /* NUMBER OF RETRIEVAL WORDS IN USE
AVAIL byte unsigned;                         /* NUMBER OF RETRIEVAL WORDS AVAILABLE
constant POINTERS equals . prefix FHMS$ tag K; /* START OF RETRIEVAL POINTERS
constant POINTERS equals . prefix FHMS$ tag C; /* START OF RETRIEVAL POINTERS
constant "LENGTH" equals . prefix FHMS$ tag K; /* LENGTH OF MAP AREA
constant "LENGTH" equals . prefix FHMS$ tag C; /* LENGTH OF MAP AREA

/* RETRIEVAL POINTER FORMAT

end FHMDEF;

aggregate FHMDEF1 structure prefix FHMS;
HIGHLBN byte unsigned;                       /* HIGH ORDER LBN
COUNT byte unsigned;                        /* BLOCK COUNT

```

LOWLBN word unsigned;
end FHMDEF1;

/* LOW ORDER LBN

aggregate FHMDEF2 structure prefix FHMS origin FILL_1;

PREVHLBN byte unsigned;
PREVCOUNT byte unsigned;
PREVLLBN word unsigned;
FILL_1 byte fill prefix FHMDEF tag \$\$;
end FHMDEF2;

/* PREVIOUS RETRIEVAL POINTER

end_module \$FHMDEF;


```
module $HMBDEF;
```

```
/*+
/*
/* HOME BLOCK DEFINITIONS FOR FILES-11 STRUCTURE LEVEL 1
/*
/*-
```

```
aggregate HMBDEF structure prefix HMB$;
```

```
  IBMAPSIZE word unsigned; /* INDEX FILE BITMAP SIZE, BLOCKS
  IBMAPLBN longword unsigned; /* INDEX FILE BITMAP STARTING LBN
  MAXFILES word unsigned; /* MAXIMUM ! FILES ON VOLUME
  CLUSTER word unsigned; /* STORAGE BITMAP CLUSTER FACTOR
  DEVTYPE word unsigned; /* DISK DEVICE TYPE
  STRUCLEV word unsigned; /* VOLUME STRUCTURE LEVEL
  constant LEVEL1 equals 257 prefix HMB tag $C; /* 401 OCTAL = STRUCTURE LEVEL 1
  VOLNAME character length 12; /* VOLUME NAME (ASCII)
  FILL 1 byte dimension 4 fill prefix HMBDEF tag $$; /* SPARE
  VOLOWNER word unsigned; /* VOLUME OWNER UIC
  PROTECT OVERLAY union;
    PROTECT word unsigned; /* VOLUME PROTECTION
    PROTECT BITS structure;
      SYSPRO bitfield length 4; /* SYSTEM PROTECTION
      OWNPRO bitfield length 4; /* OWNER PROTECTION
      GROUPRO bitfield length 4; /* GROUP PROTECTION
      WORLDPRO bitfield length 4; /* WORLD PROTECTION
    end PROTECT BITS;
  end PROTECT OVERLAY;
  VOLCHAR word unsigned; /* VOLUME CHARACTERISTICS
  FILEPROT word unsigned; /* DEFAULT FILE PROTECTION
  FILL 2 byte dimension 6 fill prefix HMBDEF tag $$; /* SPARE
  WINDOW byte unsigned; /* DEFAULT WINDOW SIZE
  EXTEND byte unsigned; /* DEFAULT FILE EXTEND
  LRU LIM byte unsigned; /* DEFAULT LRU LIMIT
  FILL 3 byte dimension 11 fill prefix HMBDEF tag $$; /* SPARE
  CHECKSUM1 word unsigned; /* FIRST CHECKSUM
  CREDATE character length 14; /* VOLUME CREATION DATE
  FILL 4 byte dimension 398 fill prefix HMBDEF tag $$; /* SPARE
  VOLNAME2 character length 12; /* 2ND COPY OF VOLUME NAME
  OWNERNAME character length 12; /* VOLUME OWNER NAME
  FORMAT character length 12; /* VOLUME FORMAT TYPE
  FILL 5 byte dimension 2 fill prefix HMBDEF tag $$; /* SPARE
  CHECKSUM2 word unsigned; /* SECOND CHECKSUM
end HMBDEF;
```

```
end_module $HMBDEF;
```


