```
MMM         MMM  DDDDDDDDDDDD     LLL                 333333333        222222222
MMM         MMM  DDDDDDDDDDDD     LLL                 333333333        222222222
MMM         MMM  DDDDDDDDDDDD     LLL                 333333333        222222222
MMMMMM   MMMMMM  DDD         DDD  LLL              333         333  222         222
MMMMMM   MMMMMM  DDD         DDD  LLL              333         333  222         222
MMMMMM   MMMMMM  DDD         DDD  LLL              333         333  222         222
MMM   MMM   MMM  DDD         DDD  LLL                          333                 222
MMM   MMM   MMM  DDD         DDD  LLL                          333                 222
MMM   MMM   MMM  DDD         DDD  LLL                          333                 222
MMM         MMM  DDD         DDD  LLL                       333                 222
MMM         MMM  DDD         DDD  LLL                       333                 222
MMM         MMM  DDD         DDD  LLL                       333                 222
MMM         MMM  DDD         DDD  LLL                          333        222
MMM         MMM  DDD         DDD  LLL                          333        222
MMM         MMM  DDD         DDD  LLL                          333        222
MMM         MMM  DDD         DDD  LLL              333         333     222
MMM         MMM  DDD         DDD  LLL              333         333     222
MMM         MMM  DDD         DDD  LLL              333         333     222
MMM         MMM  DDDDDDDDDDDD     LLLLLLLLLLLLLLL     333333333     222222222222222
MMM         MMM  DDDDDDDDDDDD     LLLLLLLLLLLLLLL     333333333     222222222222222
MMM         MMM  DDDDDDDDDDDD     LLLLLLLLLLLLLLL     333333333     222222222222222
```

FILEID**MDL32   G 1

```
MM        MM  DDDDDDDD    LL            333333      222222
MM        MM  DDDDDDDD    LL            333333      222222
MMMM    MMMM  DD      DD  LL          33      33  22      22
MMMM    MMMM  DD      DD  LL          33      33  22      22
MM  MM  MM    DD      DD  LL                  33          22
MM  MM  MM    DD      DD  LL                  33          22
MM        MM  DD      DD  LL                33          22
MM        MM  DD      DD  LL                33          22
MM        MM  DD      DD  LL                  33      22
MM        MM  DD      DD  LL                  33      22
MM        MM  DD      DD  LL          33      33    22
MM        MM  DD      DD  LL          33      33    22
MM        MM  DDDDDDDD    LLLLLLLLLL    333333    2222222222    ....
MM        MM  DDDDDDDD    LLLLLLLLLL    333333    2222222222    ....

LL          IIIIII    SSSSSSSS
LL          IIIIII    SSSSSSSS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II    SS
LL            II      SSSSSS
LL            II      SSSSSS
LL            II            SS
LL            II            SS
LL            II            SS
LL            II            SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```

```
C       Version 'V04-000'
C
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C*                                                                           *
C*****************************************************************************
C
C       REVISION HISTORY:
C               23-03-77        CP      IF OUTPUTTING TO TMP FILE, JUST OUTPUT
C                                       EACH LINE UNTIL THE END OF THE CONSTANT
C                                       DEFINITION, THEN RETURN.
C
C               04-04-77        TC      SPLIT LABEL 120 INTO 121 AND 122
C                                       WHICH ALLOWS LOOPING BACK TO TWO
C                                       ALTERNATE POINTS (65 AND 70)

        SUBROUTINE PCONST

C       THIS ROUTINE IS CALLED WHEN A LINE HAS BEEN RECOGNIZED
C       AS A CONSTANT DEFINITION. THE IMPLICIT ARGUMENT
C       INPTR IS THE OFFSET TO THE NEXT CHARACTER IN THE INPUT LINE.

C       PCONST FIRST DETERMINES WHETHER THIS IS A SINGLE CONSTANT
C       DEFINITION OR A LIST OF CONSTANT DEFINITIONS. IF A SINGLE
C       CONSTANT IS BEING DEFINED, THE ROUTINE PSCONS IS CALLED TO
C       PROCESS THE DEFINITION.

C       OTHERWISE, PCONST COLLECTS THE CONSTANT PREFIX NAME, THE
C       TAG, THE BASE, AND THE INCREMENT FOR THE LIST. THEN IT
C       COLLECTS A CONSTANT DEFINITION AT A TIME. EACH CONSTANT
C       DEFINITION CAN HAVE A NAME AND A VALUE. VALUES CAN
C       BE ARBITRARILY COMPLEX EXPRESSIONS. EACH CONSTANT IS
C       PROCESSED AND OUTPUT.

C       WHEN A SINGLE LEADING RIGHT ANGLE BRACKET IS RECOGNIZED AFTER
C       A NUMBER OF CONSTANT DEFINITIONS IN A LIST, THE PROCESSING
C       OF THE CONSTANT LIST IS COMPLETE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
```

```
	INTEGER PTR, CLNCON

C	THE CONSTANT CAN BE DEFINED WITH A "C" OR A "K". THEY
C	ARE SEMANTICALLY EQUIVALENT DEFINITIONS, BUT THE DEFAULT TAG
C	NAMES ARE DEPENDENT ON THE FIRST TOKEN IN THE LINE,
C	NAMELY "C" OR "K".

	TAGNAM (3) = TOKSTG (2)

C	SEE WHETHER THE NEXT TOKEN IS THE NAME OF A CONSTANT OR
C	A LEFT ANGLE BRACKET. THE LATTER INDICATES THAT THIS IS
C	THE BEGINNING OF A CONSTANT DEFINITION LIST.

	CALL GETTOK
	IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
300	FORMAT (' ',90A1)
	IF (DEBUG) TYPE 310, TOKTYP
310	FORMAT (' TOKTYP IS ',I3)
	IF (TOKTYP .EQ. LANGLE) GOTO 10
	IF (TMPOUT) GOTO 160
	CALL PSCONS
	RETURN

C	THIS IS THE DEFINITION OF A CONSTANT LIST. COLLECT THE
C	PARAMETERS FOR THE LIST. FIRST INITIALIZE SOME VARIABLES.

10	IF (.NOT. TMPOUT) GOTO 15
	CALL OUT2LN
	GOTO 70

15	CALL MOVSTG (TAGNAM, CONTAG)
	CALL MOVSTG (PRENAM, CONPRE)
	MRBASE (1) = 1
	MRBASE (2) = '0'
	CALL MOVSTG (MRBASE, BLBASE)
	MRINCR (1) = 1
	MRINCR (2) = '1'
	CALL MOVSTG (MRINCR, BLINCR)

C	LOOK FOR A PREFIX ARGUMENT. IF PRESENT, THIS PREFIX REPLACES
C	THE $STRUCT PREFIX FOR THE DURATION OF THE CONSTANT LIST.

	CALL GETTOK
	IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
	IF (TOKTYP .NE. ALPHA) GOTO 20
	CALL MOVSTG (TOKSTG, CONPRE)
	CALL GETTOK
	IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C	NAME, IF ANY, IS SAVED. LOOK FOR A TAG FIELD. IF ABSENT,
C	THE DEFAULT TAG FIELD IS '$C ' OR '$K ' AS STORED EARLIER AT
C	THE START OF THIS ROUTINE. ANY ALPHA STRING FOUND AS
C	THE SECOND ARGUMENT REPLACES THE DEFAULT TAG.

20	IF (DEBUG) TYPE 310, TOKTYP
```

```
              IF (TOKTYP .NE. COMMA) GOTO 50
              CALL GETTOK
              IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. ALPHA) GOTO 30
              CALL MOVSTG (TOKSTG, CONTAG)
              CALL GETTOK
              IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C             TAG NAME IS SAVED. SEE IF A BASE ARGUMENT IS SPECIFIED.
C             BASE ARGUMENT CAN BE AN EXPRESSION.

30            IF (DEBUG) TYPE 310, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 50
              PTR = INPTR
              IF (DEBUG) TYPE 520, PTR, INBUF (INPTR)
              CALL GETEXP (INPTR)
              IF (DEBUG) TYPE 530, INPTR, INBUF (INPTR)
              IF (INBUF (INPTR) .EQ. ',') GOTO 45
              IF ((INBUF (INPTR) .EQ. ' ') .OR.
              1         (INBUF (INPTR) .EQ. '	') .OR.
              2         (INBUF (INPTR) .EQ. EOL) .OR.
              3         (INBUF (INPTR) .EQ. ';')) GOTO 60
              INBUF (PTR - 1) = INPTR - PTR + 1
              CALL MOVSTG (INBUF (PTR - 1), CVALUE)
              CALL CVTEXP (CVALUE, BLBASE, MRBASE)

C             BASE EXPRESSION, IF ANY, IS SAVED. NOW RETRIEVE
C             THE INCREMENT ARGUMENT. THIS CAN ALSO BE AN EXPRESSION.

              INPTR = NEXTNB (INPTR)
              IF (INBUF (INPTR) .NE. ',') GOTO 50
45            PTR = INPTR + 1
              INPTR = INPTR + 1
              IF (DEBUG) TYPE 520, PTR, INBUF (INPTR)
              CALL GETEXP (INPTR)
              IF (DEBUG) TYPE 530, INPTR, INBUF (INPTR)
              IF ((INBUF (INPTR) .EQ. ',') .OR.
              1         (INBUF (INPTR) .EQ. ' ') .OR.
              2         (INBUF (INPTR) .EQ. '	') .OR.
              3         (INBUF (INPTR) .EQ. EOL) .OR.
              4         (INBUF (INPTR) .EQ. ';')) GOTO 60
              INBUF (PTR - 1) = INPTR - PTR + 1
              CALL MOVSTG (INBUF (PTR - 1), CVALUE)
              CALL CVTEXP (CVALUE, BLINCR, MRINCR)
              GOTO 60

C             THE OFFSET INTO THE INPUT BUFFER IS SLIGHTLY OFF BECAUSE
C             SOME OPTIONAL TRAILING ARGUMENTS WERE OMITTED. BACK UP
C             THE INPUT LINE OFFSET TO THE CORRECT SPOT.

50            INPTR = LASTNB (INPTR - 2)

C             ARGUMENTS ARE ALL COLLECTED. NOW OUTPUT LINES TO BLISS AND
C             MARS.

60            IF (DEBUG) TYPE 400, PTR, INBUF (INPTR)
400           FORMAT (' COMMENT STARTS AT ',I3,' CHAR IS ',A1)
```

```
          LINTYP = CONST
          CALL MDOUTL (INPTR)
          CALL BDOUTL (INPTR)

C         EACH CONSTANT NAME DEFINITION WITHIN A LIST STARTS WITH A COMMA

65        CLNCON = 0
          CONEXP = .FALSE.

C         NOW COLLECT THE CONSTANT NAME DEFINITIONS ONE AT A TIME UNTIL
C         THE END OF THE LIST IS REACHED.

70        CALL GETLIN
          IF (ENDFIL) RETURN

C         GET A TOKEN AND SEE WHETHER IT IS A RIGHT ANGLE BRACKET
C         OR AN ALPHA STRING. THE FORMER MEANS THAT THE CONSTANT
C         LIST IS FINISHED. THE LATTER MEANS THAT THIS IS ANOTHER
C         CONSTANT NAME DEFINITION.

          IF ((.NOT. ENDEXP) .AND. (CONEXP)) GOTO 77
          CALL GETTOK
          IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
          IF (DEBUG) TYPE 310, TOKTYP
          IF (TOKTYP .EQ. RANGLE) GOTO 150
          IF (TMPOUT) GOTO 140
          IF ((TOKTYP .EQ. EOL) .OR. (TOKTYP .EQ. SEMI)) GOTO 110
77        LINTYP = CONSTN

C         THIS IS THE DECLARATION OF A CONSTANT NAME.
C         NOW INITIALIZE SOME VARIABLES.

80        IF (TMPOUT) GOTO 140
          ENDEXP = .FALSE.
          CVALUE (1) = 0
          BVALUE (1) = 0
          MVALUE (1) = 0
          FLDNAM (1) = 0

          IF (CONEXP) GOTO 86
          IF (TOKTYP .NE. ALPHA) GOTO 220

C         THIS IS A NAME TO DEFINE. SAVE IT.

          CALL MOVSTG (TOKSTG, FLDNAM)
          CALL GETTOK
          IF (DEBUG) TYPE 300, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C         NOW SEE IF THERE IS A VALUE FIELD.

          IF (DEBUG) TYPE 310, TOKTYP
          IF (TOKTYP .NE. COMMA) GOTO 90
          GOTO 89

C         IF YOU GET HERE, THIS IS A CONTINUATION LINE FROM AN
C         EXPRESSION. SKIP OVER THE BLANKS AND TABS BEFORE TRYING
C         TO GET THE EXPRESSION.
```

```
86      DO 87 INPTR = 2, INBUF (1) + 1
        IF ((INBUF (INPTR) .NE. ' ') .AND.
     1          (INBUF (INPTR) .NE. '	')) GOTO 89
87      CONTINUE

C       ARRIVAL HERE IS AN ERROR

        GOTO 230

C       THE NAME HAS BEEN SAVED. THE NEXT ARGUMENT IS AN OPTIONAL
C       EXPRESSION. IF IT IS OF ZERO LENGTH, THE ARGUMENT DEFAULTS
C       TO THE VALUE OF ONE. SAVE THE LINE POINTER TO CHECK FOR ZERO
C       LENGTH LATER.

89      PTR = INPTR
        IF (DEBUG) TYPE 520, PTR, INBUF (INPTR)
520     FORMAT (' EXPRESSION STARTS AT OFFSET ',I3,' CHAR IS ',A1)
        CALL GETEXP (INPTR)
        IF (DEBUG) TYPE 530, INPTR, INBUF (INPTR)
530     FORMAT (' EXPRESSION STOPS AT OFFSET ',I3,' CHAR IS ',A1)
        IF ((INBUF (INPTR) .EQ. ',') .OR.
     1          (INBUF (INPTR) .EQ. ' ') .OR.
     2          (INBUF (INPTR) .EQ. '	') .OR.
     3          (INBUF (INPTR) .EQ. ';') .OR.
     4          (INBUF (INPTR) .EQ. EOL)) GOTO 95
        IF (INBUF (INPTR) .EQ. '-') CONEXP = .TRUE.
        IF ((INBUF (INPTR) .NE. '-') .AND.
     1          (CONEXP)) ENDEXP = .TRUE.

C       AN EXPRESSION WAS FOUND, COMPUTE ITS LENGTH.

        IF (DEBUG) TYPE 540, PTR, INPTR
540     FORMAT (' START IS ',I3,' END IS 'I3)
        INBUF (PTR - 1) = INPTR - PTR + 1
        IF (DEBUG) TYPE 550, INBUF (PTR - 1)
550     FORMAT (' COUNT IS ',I3)
        IF (DEBUG) TYPE 300, (INBUF (I), I = PTR, INBUF (PTR - 1) + 1)

C       NOW SAVE THE EXPRESSION STRING AND CONVERT IT TO MARS AND
C       BLISS.

        CALL MOVSTG (INBUF (PTR - 1), CVALUE)
        CALL CVTEXP (CVALUE, BVALUE, MVALUE)

C       THE EXPRESSION IS PROCESSED.
C       SAVE THE REST OF THE LINE AND GO LOOK FOR ANOTHER
C       CONSTANT DEFINITION.

        GOTO 95

C       THE OFFSET INTO THE INPUT LINE IS OFF BY A FEW CHARACTERS BECAUSE
C       THE EXPRESSION ARGUMENT WAS OMITTED. BACK UP TO THE CORRECT
C       POSITION.

90      INPTR = LASTNB (INPTR - 2)
```

```
C       COMMA WAS GIVEN AFTER NAME, BUT NO EXPRESSION WAS GIVEN.
C       ADJUST INPTR.

95      INBUF (INPTR) = INBUF (1) - INPTR + 1
100     CALL GETREM (INPTR)
        IF ((CLNCON .LT. 10) .OR. (CONEXP)) GOTO 121

C       10 CONSTANT NAMES HAVE BEEN DEFINED. CLOSE OUT THIS
C       CONSTANT DEFINITION LIST, AND START ANOTHER.

        CALL OUTCNL
        GOTO 122

C       THIS IS A BLANK OR COMMENT ONLY LINE.
C       OUTPUT IT AND GO BACK FOR ANOTHER.

110     CALL OUTBCL
        GOTO 70

C       OUTPUT THE CURRENT LINE THEN GO GET ANOTHER.

121     CALL MDOUTL(PTR)
        CALL BDOUTL(PTR)
        CLNCON = CLNCON+1
        IF (ENDEXP) CONEXP = .FALSE.
        GOTO 70

122     CALL MDOUTL(PTR)
        CALL BDOUTL(PTR)
        CLNCON = CLNCON+1
        IF (ENDEXP) CONEXP = .FALSE.
        GOTO 65

140     CALL OUT2LN
        GOTO 70

C       OUTPUT THE FINAL CLOSING OF THE CONSTANT DEFINITION LIST.

150     IF (TMPOUT) GOTO 160
        LINTYP = CONSTE
        CALL MDOUTL (INPTR)
        CALL BDOUTL (INPTR)
        RETURN

160     CALL OUT2LN
        RETURN

C       ERROR REPORTING

200     TYPE 2000
2000    FORMAT (' INVALID BASE ARGUMENT IN CONSTANT LIST')
        RETURN

210     TYPE 2100
2100    FORMAT (' INVALID INCREMENT ARGUMENT IN CONSTANT LIST')
        RETURN
```

```
220     TYPE 2200
2200    FORMAT (' INVALID NAME IN CONSTANT DEFINITION')
        RETURN

230     TYPE 2300
2300    FORMAT (' INVALID CONTINUED EXPRESSION IN CONSTANT LIST')
        RETURN

        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	2310	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	373	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	208	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG

Total Space Allocated 6790

ENTRY POINTS

Address	Type	Name
0-00000000		PCONST

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	2-00000002	I*2	CLNCON	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000004	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
2-00000000	I*2	PTR	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
  9-00000662  I*2  BLINCR    162  (81)
  6-0000017E  I*2  BLSSIZ     20  (10)
  9-000003D8  I*2  BVALUE    162  (81)
  6-000000EA  I*2  BYTSIZ     20  (10)
  6-000001B4  I*2  COMGBL     12  (6)
  6-000000C4  I*2  COMMAS      4  (2)
  6-00000112  I*2  CONBAS     20  (10)
  6-00000126  I*2  CONINC     20  (10)
  9-0000012C  I*2  CONPRE     32  (16)
  9-0000014C  I*2  CONTAG     32  (16)
  9-000007A6  I*2  CONTEX    198  (9, 11)
  6-000001D6  I*2  CPAREN      4  (2)
  6-000001D0  I*2  CPRCOM      6  (3)
  9-00000170  I*2  CVALUE    162  (81)
  6-0000004C  I*2  DEFEND     20  (10)
  6-00000022  I*2  DEFINI     20  (10)
  6-000001DE  I*2  DOLBIT     26  (13)
  6-000001F8  I*2  DOLBYT     28  (14)
  6-00000036  I*2  DOLDEF     12  (6)
  6-00000214  I*2  DOLFLD     24  (12)
  6-00000016  I*2  DOLGBL     12  (6)
  6-00000234  I*2  DOLLAR      4  (2)
  6-00000090  I*2  DOLVLD     18  (9)
  6-000000DE  I*2  DOTBLK     12  (6)
  6-00000042  I*2  DOTEQS     10  (5)
  6-00000000  I*2  DOTMAC     22  (11)
  6-00000060  I*2  ENDMAC     18  (9)
  6-000000B2  I*2  EQULST     18  (9)
  6-00000102  I*2  EQUTAB     12  (6)
  6-0000007E  I*2  EXCLSP     14  (7)
  6-00000230  I*2  EXPCLO      4  (2)
  6-0000022C  I*2  EXPOPN      4  (2)
  9-000000B8  I*2  FLDNAM     72  (36)
  6-000001B0  I*2  HYPHEN      4  (2)
 10-00000000  I*2  INBUF     166  (83)
  6-000000C8  I*2  LANHYP      6  (3)
  3-00000000  L*1  LINE      133  (133)
  6-0000013A  I*2  LITTAB     18  (9)
  6-0000015A  I*2  MACTAB     16  (8)
 10-000000AA  I*2  MARBUF    240  (120)
  9-000005C0  I*2  MRBASE    162  (81)
  9-00000704  I*2  MRINCR    162  (81)
  9-00000336  I*2  MVALUE    162  (81)
  3-0000010A  L*1  NAME       32  (32)
  7-00000000  I*2  NEGSGN      4  (2)
  3-0000012A  L*1  NUMSTR    133  (133)
  6-000001DA  I*2  OASIGN      4  (2)
  6-0000016A  I*2  OFFSET     20  (10)
  6-000001A2  I*2  ONESHF      6  (3)
  6-0000010E  I*2  OPAREN      4  (2)
  9-000002CE  I*2  OSBNAM     32  (16)
  9-000002EE  I*2  OTGNAM     32  (16)
  9-0000030E  I*2  OUNTYP     32  (16)
  6-0000019A  I*2  PCTSEM      8  (4)
  3-00000085  L*1  PREFIX    133  (133)
  9-00000052  I*2  PRENAM     32  (16)
  6-000000D4  I*2  RANHYP      6  (3)
```

```
 9-0000021A  I*2  RSTLIN       180  (90)
 6-00000154  I*2  SEMSPC         6  (3)
 6-000000FE  I*2  SPCSTG         4  (2)
 6-000001A8  I*2  SPHYSP         8  (4)
 9-00000092  I*2  STRSTG        32  (16)
 6-00000072  I*2  SUFDEF         8  (4)
 9-00000072  I*2  SUFNAM        32  (16)
 6-0000014C  I*2  TABEQS         8  (4)
 6-000000CE  I*2  TABLAN         6  (3)
 6-000001CA  I*2  TABOPR         6  (3)
 6-000001C0  I*2  TABPRN        10  (5)
 6-000000AC  I*2  TABRAN         6  (3)
 6-0000008C  I*2  TABSTG         4  (2)
 9-00000100  I*2  TAGNAM        32  (16)
 9-0000047A  I*2  TMPVAL       162  (81)
 9-00000000  I*2  TOKSTG        80  (40)
 6-00000238  I*2  UNDVLD        18  (9)
 6-0000007A  I*2  UNITYP         4  (2)
 6-00000192  I*2  ZEROSG         4  (2)
 6-000000A2  I*2  ZRLAHY        10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000A1	10	0-000000B3	15	0-00000172	20	0-00000228	30	0-00000354	45	0-0000042A	50
0-00000449	60	0-0000049E	65	0-000004A7	70	0-0000055B	77	**	80	0-0000060A	86
**	87	0-00000643	89	0-000007F8	90	0-00000817	95	**	100	0-0000084E	110
0-00000858	121	0-0000087E	122	0-000008A4	140	0-000008AE	150	0-000008CE	160	**	200
**	210	0-000008D6	220	0-000008EE	230	1-00000000	300'	1-00000008	310'	1-00000018	400'
1-0000003D	520'	1-0000006C	530'	1-0000009A	540'	1-000000B5	550'	1-000000C4	2000'	1-000000EE	2100'
1-0000011D	2200'	1-00000144	2300'								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		CVTEXP		GETEXP		GETLIN		GETREM		GETTOK
I*2	LASTNB		MDOUTL		MOVSTG	I*2	NEXTNB		OUT2LN		OUTBCL
	OUTCNL		PSCONS								

```
          SUBROUTINE PSCONS

C         THIS ROUTINE PROCESSES A SINGLE CONSTANT DEFINITION THAT
C         IS NOT PART OF A LIST. THE CONSTANT DEFINITION HAS TWO
C         ARGUMENTS, BOTH OF WHICH ARE REQUIRED -- THE NAME AND THE
C         VALUE. THE VALUE IS AN ARBITRARILY COMPLICATED EXPRESSION.

          INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

          INTEGER PTR

C         INITIALIZE THE LINE TYPE. REMEMBER THAT THE TAG NAME WAS
C         INITIALIZED IN THE ROUTINE PCONST, WHICH CALLED THIS ROUTINE.

          LINTYP = SCONST

C         NOW LOOK AT THE TYPE OF TOKEN THAT HAS BEEN FOUND BY THE
C         CALLING ROUTINE, PCONST.

          IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
500       FORMAT (' ',90A1)
          IF (DEBUG) TYPE 510, TOKTYP
510       FORMAT (' TOKTYP IS ',I3)
          IF (TOKTYP .NE. ALPHA) GOTO 100
          CALL MOVSTG (TOKSTG, FLDNAM)
          CALL GETTOK
          IF (DEBUG) TYPE 510, TOKTYP
          IF (TOKTYP .NE. COMMA) GOTO 110

C         THE NAME HAS BEEN SAVED. THE NEXT ARGUMENT IS AN EXPRESSION.
C         THE OFFSET TO THE BEGINNING OF THE EXPRESSION IS SAVED
C         TO LATER DETERMINE WHETHER THE EXPRESSION IS OF NON-ZERO
C         LENGTH.

          PTR = INPTR
          IF (DEBUG) TYPE 330, PTR, INBUF (INPTR)
330       FORMAT (' EXPRESSION STARTS AT OFFSET ',I3,' CHAR IS ',A1)
          CALL GETEXP (INPTR)
          IF (DEBUG) TYPE 340, INPTR, INBUF (INPTR)
340       FORMAT (' EXPRESSION STOPS AT OFFSET ',I3,' CHAR IS ',A1)
          IF (INBUF (INPTR) .EQ. ',') GOTO 110

C         AN EXPRESSION WAS FOUND. COMPUTE THE LENGTH OF THE EXPRESSION.

          INBUF (PTR - 1) = INPTR - PTR + 1
          IF (DEBUG) TYPE 500, (INBUF (I), I = PTR, INBUF (PTR - 1) + 1)

C         NOW SAVE THE EXPRESSION STRING AND CONVERT IT TO MARS
C         AND BLISS.

          CALL MOVSTG (INBUF (PTR - 1), CVALUE)
          CALL CVTEXP (CVALUE, BVALUE, MVALUE)
          INPTR = INPTR + 1

C         THE EXPRESSION IS PROCESSED. NOW OUTPUT THE DEFINITION
C         TO THE MARS AND BLISS TRANSLATED OUTPUT FILES.

```

```
              CALL MDOUTL (INPTR)
              CALL BDOUTL (INPTR)
              RETURN

      C       ERROR REPORTING

      100     TYPE 1000
      1000    FORMAT (' NAME MISSING IN CONSTANT DEFINITION')
              RETURN

      110     TYPE 1100
      1100    FORMAT (' EXPRESSION MISSING IN CONSTANT DEFINITION')
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	518	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	201	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	68	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4686	

ENTRY POINTS

Address	Type	Name
0-00000000		PSCONS

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000002	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN

9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	2-00000000	I*2	PTR
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)

```
 10-000000AA  I*2  MARBUF     240  (120)
  9-000005C0  I*2  MRBASE     162  (81)
  9-00000704  I*2  MRINCR     162  (81)
  9-00000336  I*2  MVALUE     162  (81)
  3-0000010A  L*1  NAME        32  (32)
  7-00000000  I*2  NEGSGN       4  (2)
  3-0000012A  L*1  NUMSTR     133  (133)
  6-000001DA  I*2  OASIGN       4  (2)
  6-0000016A  I*2  OFFSET      20  (10)
  6-000001A2  I*2  ONESHF       6  (3)
  6-0000010E  I*2  OPAREN       4  (2)
  9-000002CE  I*2  OSBNAM      32  (16)
  9-000002EE  I*2  OTGNAM      32  (16)
  9-0000030E  I*2  OUNTYP      32  (16)
  6-0000019A  I*2  PCTSEM       8  (4)
  3-00000085  L*1  PREFIX     133  (133)
  9-00000052  I*2  PRENAM      32  (16)
  6-000000D4  I*2  RANHYP       6  (3)
  9-0000021A  I*2  RSTLIN     180  (90)
  6-00000154  I*2  SEMSPC       6  (3)
  6-000000FE  I*2  SPCSTG       4  (2)
  6-000001A8  I*2  SPHYSP       8  (4)
  9-00000092  I*2  STRSTG      32  (16)
  6-00000072  I*2  SUFDEF       8  (4)
  9-00000072  I*2  SUFNAM      32  (16)
  6-0000014C  I*2  TABEQS       8  (4)
  6-000000CE  I*2  TABLAN       6  (3)
  6-000001CA  I*2  TABOPR       6  (3)
  6-000001C0  I*2  TABPRN      10  (5)
  6-000000AC  I*2  TABRAN       6  (3)
  6-0000008C  I*2  TABSTG       4  (2)
  9-00000100  I*2  TAGNAM      32  (16)
  9-0000047A  I*2  TMPVAL     162  (81)
  9-00000000  I*2  TOKSTG      80  (40)
  6-00000238  I*2  UNDVLD      18  (9)
  6-0000007A  I*2  UNITYP       4  (2)
  6-00000192  I*2  ZEROSG       4  (2)
  6-000000A2  I*2  ZRLAHY      10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000001D6	100	0-000001EE	110	1-00000018	330'	1-00000047	340'	1-00000000	500'	1-00000008	510'
1-00000075	1000'	1-0000009C	1100'								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		CVTEXP		GETEXP		GETTOK		MDOUTL		MOVSTG

```
C       Version V02-001
C
C*****************************************************************************
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C*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
C*                                                                           *
C*****************************************************************************
C
C       REVISION HISTORY:
C               22-03-77        CP      IF MARK IN A NEGATIVE CONTEXT, JUST
C                                       SAVE THE CURRENT NEGATIVE COUNT, AND
C                                       OUTPUT THE LINE TO THE TMP FILE.
C
C               19-04-77        TC      USE THE ADDITIONAL CONTEX VARIABLE
C                                       DISCUSSED IN IN:MDL32CMN.CMN

        SUBROUTINE PMARK

C       SAVES THE CONTEXT OF THE CURRENT STRUCTURE DECLARATION SO
C       THAT THIS CONTEXT CAN BE RESTORED AT SOME LATER POINT.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER INDEX

        CALL GETTOK
        IF (TOKTYP .NE. NUMBER) GOTO 1000
        INDEX = INTVAL (TOKSTG)
        IF ((INDEX .LE. 0) .OR.
        1       (INDEX .GT. 10)) GOTO 1000
        IF (TMPOUT) GOTO 20
        CALL SAVCTX (INDEX)
        INPTR = INPTR - 1
        CALL MDOUTL (INPTR)
        CALL BDOUTL (INPTR)
        RETURN

20      CONTEX (1, INDEX) = NEGCNT
        CONTEX (9, INDEX) = 1
        CALL OUT2LN
        RETURN
```

SA

```
C       ERROR REPORTING

1000    TYPE 1010
1010    FORMAT (' INVALID ARGUMENT TO MARK COMMAND')
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	142	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	36	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	28	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4105	

ENTRY POINTS

Address	Type	Name
0-00000000		PMARK

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	INDEX
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662   I*2   BLINCR        162   (81)
 6-0000017E   I*2   BLSSIZ         20   (10)
 9-000003D8   I*2   BVALUE        162   (81)
 6-000000EA   I*2   BYTSIZ         20   (10)
 6-000001B4   I*2   COMGBL         12   (6)
 6-000000C4   I*2   COMMAS          4   (2)
 6-00000112   I*2   CONBAS         20   (10)
 6-00000126   I*2   CONINC         20   (10)
 9-0000012C   I*2   CONPRE         32   (16)
 9-0000014C   I*2   CONTAG         32   (16)
 9-000007A6   I*2   CONTEX        198   (9, 11)
 6-000001D6   I*2   CPAREN          4   (2)
 6-000001D0   I*2   CPRCOM          6   (3)
 9-00000170   I*2   CVALUE        162   (81)
 6-0000004C   I*2   DEFEND         20   (10)
 6-00000022   I*2   DEFINI         20   (10)
 6-000001DE   I*2   DOLBIT         26   (13)
 6-000001F8   I*2   DOLBYT         28   (14)
 6-00000036   I*2   DOLDEF         12   (6)
 6-00000214   I*2   DOLFLD         24   (12)
 6-00000016   I*2   DOLGBL         12   (6)
 6-00000234   I*2   DOLLAR          4   (2)
 6-00000090   I*2   DOLVLD         18   (9)
 6-000000DE   I*2   DOTBLK         12   (6)
 6-00000042   I*2   DOTEQS         10   (5)
 6-00000000   I*2   DOTMAC         22   (11)
 6-00000060   I*2   ENDMAC         18   (9)
 6-000000B2   I*2   EQULST         18   (9)
 6-00000102   I*2   EQUTAB         12   (6)
 6-0000007E   I*2   EXCLSP         14   (7)
 6-00000230   I*2   EXPCLO          4   (2)
 6-0000022C   I*2   EXPOPN          4   (2)
 9-000000B8   I*2   FLDNAM         72   (36)
 6-000001B0   I*2   HYPHEN          4   (2)
10-00000000   I*2   INBUF         166   (83)
 6-000000C8   I*2   LANHYP          6   (3)
 3-00000000   L*1   LINE          133   (133)
 6-0000013A   I*2   LITTAB         18   (9)
 6-0000015A   I*2   MACTAB         16   (8)
10-000000AA   I*2   MARBUF        240   (120)
 9-000005C0   I*2   MRBASE        162   (81)
 9-00000704   I*2   MRINCR        162   (81)
 9-00000336   I*2   MVALUE        162   (81)
 3-0000010A   L*1   NAME           32   (32)
 7-00000000   I*2   NEGSGN          4   (2)
 3-0000012A   L*1   NUMSTR        133   (133)
 6-000001DA   I*2   OASIGN          4   (2)
 6-0000016A   I*2   OFFSET         20   (10)
 6-000001A2   I*2   ONESHF          6   (3)
 6-0000010E   I*2   OPAREN          4   (2)
 9-000002CE   I*2   OSBNAM         32   (16)
 9-000002EE   I*2   OTGNAM         32   (16)
 9-0000030E   I*2   OUNTYP         32   (16)
 6-0000019A   I*2   PCTSEM          8   (4)
 3-00000085   L*1   PREFIX        133   (133)
 9-00000052   I*2   PRENAM         32   (16)
 6-000000D4   I*2   RANHYP          6   (3)
```

```
9-0000021A  I*2  RSTLIN   180  (90)
6-00000154  I*2  SEMSPC     6  (3)
6-000000FE  I*2  SPCSTG     4  (2)
6-000001A8  I*2  SPHYSP     8  (4)
9-00000092  I*2  STRSTG    32  (16)
6-00000072  I*2  SUFDEF     8  (4)
9-00000072  I*2  SUFNAM    32  (16)
6-0000014C  I*2  TABEQS     8  (4)
6-000000CE  I*2  TABLAN     6  (3)
6-000001CA  I*2  TABOPR     6  (3)
6-000001C0  I*2  TABPRN    10  (5)
6-000000AC  I*2  TABRAN     6  (3)
6-0000008C  I*2  TABSTG     4  (2)
9-00000100  I*2  TAGNAM    32  (16)
9-0000047A  I*2  TMPVAL   162  (81)
9-00000000  I*2  TOKSTG    80  (40)
6-00000238  I*2  UNDVLD    18  (9)
6-0000007A  I*2  UNITYP     4  (2)
6-00000192  I*2  ZEROSG     4  (2)
6-000000A2  I*2  ZRLAHY    10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label
0-00000052	20	0-00000076	1000	1-00000000	1010'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		GETTOK	I*2	INTVAL		MDOUTL		OUT2LN		SAVCTX

```
C       REVISION HISTORY:
C               22-03-77        CP      RENAME THIS ROUTINE TO PPOINT FROM
C                                       PORIG. IF POINTING IN A NEGATIVE
C                                       CONTEXT, SAVE THE CURRENT NEGATIVE COUNT
C                                       IF IT IS A NEW MAXIMUM, AND RESTORE
C                                       THE NEGATIVE COUNT AT THE TIME OF THE
C                                       SPECIFIED MARK. THEN OUTPUT THE LINE
C                                       TO THE TMP FILE.
C                                       HAVE THIS ROUTINE ALSO HANDLE REORIGINS.
C                                       THEY ARE THE SAME AS POINTS ONLY FEWER
C                                       CONTEXT VARIABLES ARE RESET.
C                                       IN THE ERROR CHECK FOR AN UNSAVED MARK,
C                                       CHECK THE FIFTH POSITION INSTEAD OF THE
C                                       FIRST, SINCE BLFOFS CAN BE NEGATIVE.
C
C               13-04-77        TC      SAVING OF THE MAXIMUM NEGATIVE
C                                       COUNT ELIMINATED: MAXIMUM OFFSET
C                                       WILL ALWAYS BE POSITIVE OR ZERO.
C                                       POINT OR ORIGIN TO A PLACE
C                                       OUTSIDE THE CURRENT NEGATIVE
C                                       BLOCK TERMINATES THE BLOCK.
C
C               19-04-77        TC      USE THE NEW CONTEX VARIABLE
C                                       DISCUSSED IN SRC$:MDL32CMN.CMN
C
C               26-04-77        TC      MAKE "0" TERMINATE NEGATIVE
C                                       FIELD BLOCK REGARDLESS.

        SUBROUTINE PPOINT

C       RESTORES THE CONTEXT OF THE STRUCTURE DECLARATION AT THE
C       TIME OF A PREVIOUS MARK COMMAND. IF NO ARGUMENT IS GIVEN TO
C       THE REORIGIN COMMAND, THE CONTEXT OF THE MAXIMUM STRUCTURE
C       CONTEXT IS RESTORED.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER INDEX

        CALL GETTOK
        IF (TOKTYP .NE. NUMBER) GOTO 20
        INDEX = INTVAL (TOKSTG)
        IF ((INDEX .LE. 0) .OR.
        1       (INDEX .GT. 10)) GOTO 1000
        IF (CONTEX (9, INDEX) .LT. 0) GOTO 1100
        IF (TMPOUT) GOTO 50

C       SEE IF THE CURRENT STRUCTURE CONTEXT IS THE GREATEST
C       (LARGEST) YET. IF SO, SAVE IT AS THE NEW MAXIMUM VALUES.

        IF (BLFOFS .GT. CONTEX (1, 11)) CALL SAVCTX (11)
        GOTO 30

C       NO ARGUMENT WAS GIVEN. JUST REORIGIN TO THE MAXIMUM CONTEXT.

20      INDEX = 11
        IF (TMPOUT) GOTO 50
```

```
30      IF (LINTYP .EQ. ORIGIN) GOTO 35
        CALL RESCTX (INDEX)
        GOTO 40

35      CALL RESETO (INDEX)
40      INPTR = INPTR - 1
        LINTYP = ORIGIN
        CALL MDOUTL (INPTR)
        CALL BDOUTL (INPTR)
        RETURN

C       POINTER OR ORIGIN  IN NEGATIVE CONTEXT.

50      IF (LINTYP .EQ. ORIGIN) GOTO 55
        IF (CONTEX (9, INDEX) .LE. 0) GOTO 55
        NEGCNT = CONTEX (1, INDEX)
        CALL OUT2LN
        RETURN

C       POINTS OUTSIDE BLOCK OR IS AN "O" COMMAND

55      CALL OUT2LN
        CALL STANEG
        RETURN

C       ERROR REPORTING

1000    TYPE 1010
1010    FORMAT (' INVALID POSITION NAME')
        RETURN

1100    TYPE 1020
1020    FORMAT (' POSITION NAME NOT DEFINED')
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	270	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	58	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	36	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4263									

ENTRY POINTS

Address	Type	Name
0-00000000		PPOINT

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	INDEX
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662   I*2   BLINCR        162   (81)
 6-0000017E   I*2   BLSSIZ         20   (10)
 9-000003D8   I*2   BVALUE        162   (81)
 6-000000EA   I*2   BYTSIZ         20   (10)
 6-000001B4   I*2   COMGBL         12   (6)
 6-000000C4   I*2   COMMAS          4   (2)
 6-00000112   I*2   CONBAS         20   (10)
 6-00000126   I*2   CONINC         20   (10)
 9-0000012C   I*2   CONPRE         32   (16)
 9-0000014C   I*2   CONTAG         32   (16)
 9-000007A6   I*2   CONTEX        198   (9, 11)
 6-000001D6   I*2   CPAREN          4   (2)
 6-000001D0   I*2   CPRCOM          6   (3)
 9-00000170   I*2   CVALUE        162   (81)
 6-0000004C   I*2   DEFEND         20   (10)
 6-00000022   I*2   DEFINI         20   (10)
 6-000001DE   I*2   DOLBIT         26   (13)
 6-000001F8   I*2   DOLBYT         28   (14)
 6-00000036   I*2   DOLDEF         12   (6)
 6-00000214   I*2   DOLFLD         24   (12)
 6-00000016   I*2   DOLGBL         12   (6)
 6-00000234   I*2   DOLLAR          4   (2)
 6-00000090   I*2   DOLVLD         18   (9)
 6-000000DE   I*2   DOTBLK         12   (6)
 6-00000042   I*2   DOTEQS         10   (5)
 6-00000000   I*2   DOTMAC         22   (11)
 6-00000060   I*2   ENDMAC         18   (9)
 6-000000B2   I*2   EQULST         18   (9)
 6-00000102   I*2   EQUTAB         12   (6)
 6-0000007E   I*2   EXCLSP         14   (7)
 6-00000230   I*2   EXPCLO          4   (2)
 6-0000022C   I*2   EXPOPN          4   (2)
 9-000000B8   I*2   FLDNAM         72   (36)
 6-000001B0   I*2   HYPHEN          4   (2)
10-00000000   I*2   INBUF         166   (83)
 6-000000C8   I*2   LANHYP          6   (3)
 3-00000000   L*1   LINE          133   (133)
 6-0000013A   I*2   LITTAB         18   (9)
 6-0000015A   I*2   MACTAB         16   (8)
10-000000AA   I*2   MARBUF        240   (120)
 9-000005C0   I*2   MRBASE        162   (81)
 9-00000704   I*2   MRINCR        162   (81)
 9-00000336   I*2   MVALUE        162   (81)
 3-0000010A   L*1   NAME           32   (32)
 7-00000000   I*2   NEGSGN          4   (2)
 3-0000012A   L*1   NUMSTR        133   (133)
 6-000001DA   I*2   OASIGN          4   (2)
 6-0000016A   I*2   OFFSET         20   (10)
 6-000001A2   I*2   ONESHF          6   (3)
 6-0000010E   I*2   OPAREN          4   (2)
 9-000002CE   I*2   OSBNAM         32   (16)
 9-000002EE   I*2   OTGNAM         32   (16)
 9-0000030E   I*2   OUNTYP         32   (16)
 6-0000019A   I*2   PCTSEM          8   (4)
 3-00000085   L*1   PREFIX        133   (133)
 9-00000052   I*2   PRENAM         32   (16)
 6-000000D4   I*2   RANHYP          6   (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000060	20	0-0000006C	30	0-0000007D	35	0-00000085	40	0-000000A1	50	0-000000CF	55
0-000000DE	1000	1-00000004	1010'	1-0000001D	1020'	0-000000F6	1100				

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		GETTOK	I*2	INTVAL		MDOUTL		OUT2LN		RESCTX
	RESETO		SAVCTX		STANEG						

```
C       REVISION HISTORY
C               19-04-77        TC      USE NEW CONTEX VARIABLE DISCUSSED
C                                       IN SRC$:MDL32CMN.CMN

        SUBROUTINE SAVCTX (IND)

C       SAVES THE CONTEXT OF THE STRUCTURE DECLARATION. THE
C       VARIABLES SAVED ARE AS FOLLOWS:
C
C       BLFOFS  - THE TOTAL NUMBER OF BYTES ALLOCATED SO FAR.
C       BOFSET  - THE BASE OFFSET OF THE LAST GROUP OF SUBFIELDS.
C       FOFSET  - THE VALUE BLFOFS WILL BECOME WHEN THE TOTAL ALLOCATION
C                 IS PERFORMED FOR THE LAST FIELD DECLARATION.
C       SOFSET  - THE VALUE BLFOFS WILL BECOME WHEN THE ALLOCATION
C                 IS PERFORMED FOR THE LAST SUBFIELD DECLARATION.
C       LFDSIZ  - THE SIZE IN BYTES OF THE LAST FIELD DEFINED.
C       LSBSIZ  - THE TOTAL SIZE IN BYTES OF THE LAST SUBFIELD DEFINED.
C       LASLIN  - THE TYPE OF THE LAST DEFINITION LINE PROCESSED.
C       FLDLAS  - A BOOLEAN THAT TELLS WHETHER THE LAST DEFINITION
C                 PROCESSED WAS A FIELD OR A SUBFIELD, OR NEITHER.
C                 TRUE MEANS FIELD OR SUBFIELD. FALSE MEANS SOMETHING ELSE.
C
C       THE ARGUMENT IND IS THE INDEX INTO THE CONTEXT TABLE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER IND

        CONTEX (1, IND) = BLFOFS
        CONTEX (2, IND) = BOFSET
        CONTEX (3, IND) = FOFSET
        CONTEX (4, IND) = SOFSET
        CONTEX (5, IND) = LFDSIZ
        CONTEX (6, IND) = LSBSIZ
        CONTEX (7, IND) = LASLIN
        CONTEX (8, IND) = FLDLAS
        CONTEX (9, IND) = 0
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	89	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3988									

ENTRY POINTS

Address	Type	Name
0-00000000		SAVCTX

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	AP-00000004@	I*2	IND
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)

```
 9-000003D8   I*2   BVALUE    162   (81)
 6-000000EA   I*2   BYTSIZ     20   (10)
 6-000001B4   I*2   COMGBL     12   (6)
 6-000000C4   I*2   COMMAS      4   (2)
 6-00000112   I*2   CONBAS     20   (10)
 6-00000126   I*2   CONINC     20   (10)
 9-0000012C   I*2   CONPRE     32   (16)
 9-0000014C   I*2   CONTAG     32   (16)
 9-000007A6   I*2   CONTEX    198   (9, 11)
 6-000001D6   I*2   CPAREN      4   (2)
 6-000001D0   I*2   CPRCOM      6   (3)
 9-00000170   I*2   CVALUE    162   (81)
 6-0000004C   I*2   DEFEND     20   (10)
 6-00000022   I*2   DEFINI     20   (10)
 6-000001DE   I*2   DOLBIT     26   (13)
 6-000001F8   I*2   DOLBYT     28   (14)
 6-00000036   I*2   DOLDEF     12   (6)
 6-00000214   I*2   DOLFLD     24   (12)
 6-00000016   I*2   DOLGBL     12   (6)
 6-00000234   I*2   DOLLAR      4   (2)
 6-00000090   I*2   DOLVLD     18   (9)
 6-000000DE   I*2   DOTBLK     12   (6)
 6-00000042   I*2   DOTEQS     10   (5)
 6-00000000   I*2   DOTMAC     22   (11)
 6-00000060   I*2   ENDMAC     18   (9)
 6-000000B2   I*2   EQULST     18   (9)
 6-00000102   I*2   EQUTAB     12   (6)
 6-0000007E   I*2   EXCLSP     14   (7)
 6-00000230   I*2   EXPCLO      4   (2)
 6-0000022C   I*2   EXPOPN      4   (2)
 9-000000B8   I*2   FLDNAM     72   (36)
 6-000001B0   I*2   HYPHEN      4   (2)
10-00000000   I*2   INBUF     166   (83)
 6-000000C8   I*2   LANHYP      6   (3)
 3-00000000   L*1   LINE      133   (133)
 6-0000013A   I*2   LITTAB     18   (9)
 6-0000015A   I*2   MACTAB     16   (8)
10-000000AA   I*2   MARBUF    240   (120)
 9-000005C0   I*2   MRBASE    162   (81)
 9-00000704   I*2   MRINCR    162   (81)
 9-00000336   I*2   MVALUE    162   (81)
 3-0000010A   L*1   NAME       32   (32)
 7-00000000   I*2   NEGSGN      4   (2)
 3-0000012A   L*1   NUMSTR    133   (133)
 6-000001DA   I*2   OASIGN      4   (2)
 6-0000016A   I*2   OFFSET     20   (10)
 6-000001A2   I*2   ONESHF      6   (3)
 6-0000010E   I*2   OPAREN      4   (2)
 9-000002CE   I*2   OSBNAM     32   (16)
 9-000002EE   I*2   OTGNAM     32   (16)
 9-0000030E   I*2   OUNTYP     32   (16)
 6-0000019A   I*2   PCTSEM      8   (4)
 3-00000085   L*1   PREFIX    133   (133)
 9-00000052   I*2   PRENAM     32   (16)
 6-000000D4   I*2   RANHYP      6   (3)
 9-0000021A   I*2   RSTLIN    180   (90)
 6-00000154   I*2   SEMSPC      6   (3)
```

```
6-000000FE  I*2  SPCSTG     4  (2)
6-000001A8  I*2  SPHYSP     8  (4)
9-00000092  I*2  STRSTG    32  (16)
6-00000072  I*2  SUFDEF     8  (4)
9-00000072  I*2  SUFNAM    32  (16)
6-0000014C  I*2  TABEQS     8  (4)
6-000000CE  I*2  TABLAN     6  (3)
6-000001CA  I*2  TABOPR     6  (3)
6-000001C0  I*2  TABPRN    10  (5)
6-000000AC  I*2  TABRAN     6  (3)
6-0000008C  I*2  TABSTG     4  (2)
9-00000100  I*2  TAGNAM    32  (16)
9-0000047A  I*2  TMPVAL   162  (81)
9-00000000  I*2  TOKSTG    80  (40)
6-00000238  I*2  UNDVLD    18  (9)
6-0000007A  I*2  UNITYP     4  (2)
6-00000192  I*2  ZEROSG     4  (2)
6-000000A2  I*2  ZRLAHY    10  (5)
```

```
        SUBROUTINE RESCTX (IND)

C       RESTORES THE CONTEXT OF THE STRUCTURE DECLARATION. THE
C       ORDER AND DEFINITION OF THE VARIABLES ARE DESCRIBED IN
C       THE PROLOGUE FOR SAVCTX. THE ARGUMENT IND IS THE INDEX INTO THE
C       CONTEXT TABLE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER IND

        BLFOFS = CONTEX (1, IND)
        BOFSET = CONTEX (2, IND)
        FOFSET = CONTEX (3, IND)
        SOFSET = CONTEX (4, IND)
        LFDSIZ = CONTEX (5, IND)
        LSBSIZ = CONTEX (6, IND)
        LASLIN = CONTEX (7, IND)
        FLDLAS = CONTEX (8, IND)
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes								
0 $CODE	84	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
3 TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4 VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5 LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6 STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7 MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8 CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9 PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10 FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11 SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12 LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
Total Space Allocated	3983									

ENTRY POINTS

Address	Type	Name
0-00000000		RESCTX

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	AP-00000004@	I*2	IND
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)

9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)

```
6-000000FE   I*2   SPCSTG       4   (2)
6-000001A8   I*2   SPHYSP       8   (4)
9-00000092   I*2   STRSTG      32   (16)
6-00000072   I*2   SUFDEF       8   (4)
9-00000072   I*2   SUFNAM      32   (16)
6-0000014C   I*2   TABEQS       8   (4)
6-000000CE   I*2   TABLAN       6   (3)
6-000001CA   I*2   TABOPR       6   (3)
6-000001C0   I*2   TABPRM      10   (5)
6-000000AC   I*2   TABRAN       6   (3)
6-0000008C   I*2   TABSTG       4   (2)
9-00000100   I*2   TAGNAM      32   (16)
9-0000047A   I*2   TMPVAL     162   (81)
9-00000000   I*2   TOKSTG      80   (40)
6-00000238   I*2   UNDVLD      18   (9)
6-0000007A   I*2   UNITYP       4   (2)
6-00000192   I*2   ZEROSG       4   (2)
6-000000A2   I*2   ZRLAHY      10   (5)
```

```
      SUBROUTINE RESETO (IND)

C     THIS IS A NEW ROUTINE IN VERSION 1.3.
C
C     IT RESETS THE CONTEXT OF A PREVIOUSLY MARKED POINT. IT ONLY
C     RESETS A FEW VARIABLES. ALL OTHER CONTEXT VARIABLES ARE
C     SET TO THEIR VALUES AT THE BEGINNING OF THE STRUCTURE
C     DEFINITION.

      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

      INTEGER IND

      BLFOFS = CONTEX (1, IND)
      BOFSET = 0
      FOFSET = BLFOFS
      SOFSET = 0
      LFDSIZ = 0
      LSBSIZ = 0
      FLDLAS = .FALSE.
      LASLIN = 0
      RETURN
      END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	58	PIC CON REL LCL SHR EXE RD NOWRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	3957	

ENTRY POINTS

Address	Type	Name
0-00000000		RESETO

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	AP-00000004@	I*2	IND
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)

```
  6-00000102  I*2  EQUTAB    12  (6)
  6-0000007E  I*2  EXCLSP    14  (7)
  6-00000230  I*2  EXPCLO     4  (2)
  6-0000022C  I*2  EXPOPN     4  (2)
  9-000000B8  I*2  FLDNAM    72  (36)
  6-000001B0  I*2  HYPHEN     4  (2)
 10-00000000  I*2  INBUF    166  (83)
  6-000000C8  I*2  LANHYP     6  (3)
  3-00000000  L*1  LINE     133  (133)
  6-0000013A  I*2  LITTAB    18  (9)
  6-0000015A  I*2  MACTAB    16  (8)
 10-000000AA  I*2  MARBUF   240  (120)
  9-000005C0  I*2  MRBASE   162  (81)
  9-00000704  I*2  MRINCR   162  (81)
  9-00000336  I*2  MVALUE   162  (81)
  3-0000010A  L*1  NAME      32  (32)
  7-00000000  I*2  NEGSGN     4  (2)
  3-0000012A  L*1  NUMSTR   133  (133)
  6-000001DA  I*2  OASIGN     4  (2)
  6-0000016A  I*2  OFFSET    20  (10)
  6-000001A2  I*2  ONESHF     6  (3)
  6-0000010E  I*2  OPAREN     4  (2)
  9-000002CE  I*2  OSBNAM    32  (16)
  9-000002EE  I*2  OTGNAM    32  (16)
  9-0000030E  I*2  OUNTYP    32  (16)
  6-0000019A  I*2  PCTSEM     8  (4)
  3-00000085  L*1  PREFIX   133  (133)
  9-00000052  I*2  PRENAM    32  (16)
  6-000000D4  I*2  RANHYP     6  (3)
  9-0000021A  I*2  RSTLIN   180  (90)
  6-00000154  I*2  SEMSPC     6  (3)
  6-000000FE  I*2  SPCSTG     4  (2)
  6-000001A8  I*2  SPHYSP     8  (4)
  9-00000092  I*2  STRSTG    32  (16)
  6-00000072  I*2  SUFDEF     8  (4)
  9-00000072  I*2  SUFNAM    32  (16)
  6-0000014C  I*2  TABEQS     8  (4)
  6-000000CE  I*2  TABLAN     6  (3)
  6-000001CA  I*2  TABOPR     6  (3)
  6-000001C0  I*2  TABPRN    10  (5)
  6-000000AC  I*2  TABRAN     6  (3)
  6-0000008C  I*2  TABSTG     4  (2)
  9-00000100  I*2  TAGNAM    32  (16)
  9-0000047A  I*2  TMPVAL   162  (81)
  9-00000000  I*2  TOKSTG    80  (40)
  6-00000238  I*2  UNDVLD    18  (9)
  6-0000007A  I*2  UNITYP     4  (2)
  6-00000192  I*2  ZEROSG     4  (2)
  6-000000A2  I*2  ZRLAHY    10  (5)
```

```
C       Version V02-001
C
C*************************************************************************
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C*                                                                       *
C*************************************************************************
C
C       REVISION HISTORY:
C               29-06-77        TC      ROUTINE CHKMAK ELIMINATED (2.4)

        SUBROUTINE ETOBLS (INSTG, OUTSTG)

C       CONVERTS AN EXPRESSION TO STANDARD BLISS EXPRESSION
C       SYNTAX.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER INSTG(*),OUTSTG(*)
        INTEGER I, ICNT, J, K, L, M, N

        K = 2
        J = 2
2       IF (J .GT. (INSTG(1)+1)) GOTO 95
        DO 90 I = J, INSTG (1) + 1
        ICNT = I
        IF (INSTG (I) .NE. '<') GOTO 3
        OUTSTG (K) = '('
        GOTO 80

3       IF (INSTG (I) .NE. '>')  GOTO 6
        OUTSTG (K) = ')'
        GOTO 80

6       IF (INSTG (I) .NE. '@') GOTO 8
        OUTSTG (K) = '^'
        GOTO 80

8       IF (INSTG (I) .NE. '!') GOTO 10
        OUTSTG (K) = ' '
        K = K + 1
        OUTSTG (K) = 'O'
```

```
              K = K + 1
              OUTSTG (K) = 'R'
              K = K + 1
              OUTSTG (K) = ' '
              GOTO 80

        10    IF (INSTG (I) .NE. '&') GOTO 15
              OUTSTG (K) = ' '
              K = K + 1
              OUTSTG (K) = 'A'
              K = K + 1
              OUTSTG (K) = 'N'
              K = K + 1
              OUTSTG (K) = 'D'
              K = K + 1
              OUTSTG (K) = ' '
              GOTO 80

        15    IF ((INSTG (I) .NE. '^') .OR.
              1       (INSTG (I + 1) .NE. 'C')) GOTO 20
              OUTSTG (K) = ' '
              K = K + 1
              OUTSTG (K) = 'N'
              K = K + 1
              OUTSTG (K) = 'O'
              K = K + 1
              OUTSTG (K) = 'T'
              K = K + 1
              OUTSTG (K) = ' '
              GOTO 100

        20    IF ((INSTG (I) .NE. '^') .OR.
              1       (INSTG (I + 1) .NE. 'B')) GOTO 35
              OUTSTG (K) = '%'
              K = K + 1
              OUTSTG (K) = 'B'
              K = K + 1
              OUTSTG (K) = ''''
              K = K + 1
              L = 0
              DO 25 M = I + 2, INSTG (1) + 1
              IF ((INSTG (M) .NE. '1') .AND.
              1       (INSTG (M) .NE. '0')) GOTO 30
              L = L + 1
              OUTSTG (K) = INSTG (M)
              K = K + 1
        25    CONTINUE
        30    OUTSTG (K) = ''''
              GOTO 110

        35    IF ((INSTG (I) .NE. '^') .OR.
              1       (INSTG (I + 1) .NE. 'O')) GOTO 50
              OUTSTG (K) = '%'
              K = K + 1
              OUTSTG (K) = 'O'
              K = K + 1
              OUTSTG (K) = ''''
```

```
              K = K + 1
              L = 0
              DO 40 M = I + 2, INSTG (1) + 1
              IF ((INSTG (M) .LT. '0') .AND.
      1               (INSTG (M) .GT. '7')) GOTO 45
              L = L + 1
              OUTSTG (K) = INSTG (M)
              K = K + 1
  40          CONTINUE
  45          OUTSTG (K) = ''''
              GOTO 110

  50          IF ((INSTG (I) .NE. '^') .OR.
      1               (INSTG (I + 1) .NE. 'X')) GOTO 65
              OUTSTG (K) = '%'
              K = K + 1
              OUTSTG (K) = 'X'
              K = K + 1
              OUTSTG (K) = ''''
              K = K + 1
              L = 0
              DO 55 M = I + 2, INSTG (1) + 1
              IF (((INSTG (M) .LT. '0') .OR.
      1               (INSTG (M) .GT. '9')) .AND.
      2               ((INSTG (M) .LT. 'A') .OR.
      3               (INSTG (M) .GT. 'F'))) GOTO 60
              L = L + 1
              OUTSTG (K) = INSTG (M)
              K = K + 1
  55          CONTINUE
  60          OUTSTG (K) = ''''
              GOTO 110


  65          IF ((INSTG (I) .NE. '^') .OR.
      1               (INSTG (I + 1) .NE. 'A')) GOTO 75
              DELIM = INSTG(I+2)
              OUTSTG (K) = ''''
              K = K + 1
              L = 1
              DO 66 M = (I + 3), (INSTG (1) + 1)
              IF (INSTG (M) .EQ. DELIM) GOTO 67
              OUTSTG (K) = INSTG (M)
              K = K + 1
              L = L + 1
  66          CONTINUE
  67          OUTSTG (K) = ''''
              L = L + 1
              GOTO 110


  75          OUTSTG (K) = INSTG (I)

  80          K = K + 1
  C           IF (DEBUG) TYPE 500, K, I, OUTSTG (K - 1), INSTG (I + 1)
  500         FORMAT (' OUTOFF ',I3,' INOFF ',I3,' CHAROUT ',A1,' NEXTCHAR ',A1)
```

```
90      CONTINUE
95      OUTSTG (1) = K - 2
        RETURN

100     J = ICNT + 2
        K = K + 1
        GOTO 2

110     J = ICNT + 2 + L
        K = K + 1
        GOTO 2
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	1001	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	58	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4958									

ENTRY POINTS

Address	Type	Name
0-00000000		ETOBLS

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	2-0000000E	I*2	DELIM	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000000	I*2	I	2-00000002	I*2	ICNT	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN
10-000000A6	I*2	INPTR	2-00000004	I*2	J	2-00000006	I*2	K	2-00000008	I*2	L
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	2-0000000A	I*2	M	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	2-0000000C	I*2	N
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)

```
10-0000019C  I*2  BLIBUF     240  (120)
 9-00000662  I*2  BLINCR     162  (81)
 6-0000017E  I*2  BLSSIZ      20  (10)
 9-000003D8  I*2  BVALUE     162  (81)
 6-000000EA  I*2  BYTSIZ      20  (10)
 6-000001B4  I*2  COMGBL      12  (6)
 6-000000C4  I*2  COMMAS       4  (2)
 6-00000112  I*2  CONBAS      20  (10)
 6-00000126  I*2  CONINC      20  (10)
 9-0000012C  I*2  CONPRE      32  (16)
 9-0000014C  I*2  CONTAG      32  (16)
 9-000007A6  I*2  CONTEX     198  (9, 11)
 6-000001D6  I*2  CPAREN       4  (2)
 6-000001D0  I*2  CPRCOM       6  (3)
 9-00000170  I*2  CVALUE     162  (81)
 6-0000004C  I*2  DEFEND      20  (10)
 6-00000022  I*2  DEFINI      20  (10)
 6-000001DE  I*2  DOLBIT      26  (13)
 6-000001F8  I*2  DOLBYT      28  (14)
 6-00000036  I*2  DOLDEF      12  (6)
 6-00000214  I*2  DOLFLD      24  (12)
 6-00000016  I*2  DOLGBL      12  (6)
 6-00000234  I*2  DOLLAR       4  (2)
 6-00000090  I*2  DOLVLD      18  (9)
 6-000000DE  I*2  DOTBLK      12  (6)
 6-00000042  I*2  DOTEQS      10  (5)
 6-00000000  I*2  DOTMAC      22  (11)
 6-00000060  I*2  ENDMAC      18  (9)
 6-000000B2  I*2  EQULST      18  (9)
 6-00000102  I*2  EQUTAB      12  (6)
 6-0000007E  I*2  EXCLSP      14  (7)
 6-00000230  I*2  EXPCLO       4  (2)
 6-0000022C  I*2  EXPOPN       4  (2)
 9-000000B8  I*2  FLDNAM      72  (36)
 6-000001B0  I*2  HYPHEN       4  (2)
10-00000000  I*2  INBUF      166  (83)
AP-00000004@ I*2  INSTG       **  (*)
 6-000000C8  I*2  LANHYP       6  (3)
 3-00000000  L*1  LINE       133  (133)
 6-0000013A  I*2  LITTAB      18  (9)
 6-0000015A  I*2  MACTAB      16  (8)
10-000000AA  I*2  MARBUF     240  (120)
 9-000005C0  I*2  MRBASE     162  (81)
 9-00000704  I*2  MRINCR     162  (81)
 9-00000336  I*2  MVALUE     162  (81)
 3-0000010A  L*1  NAME        32  (32)
 7-00000000  I*2  NEGSGN       4  (2)
 3-0000012A  L*1  NUMSTR     133  (133)
 6-000001DA  I*2  OASIGN       4  (2)
 6-0000016A  I*2  OFFSET      20  (10)
 6-000001A2  I*2  ONESHF       6  (3)
 6-0000010E  I*2  OPAREN       4  (2)
 9-000002CE  I*2  OSBNAM      32  (16)
 9-000002EE  I*2  OTGNAM      32  (16)
 9-0000030E  I*2  OUNTYP      32  (16)
AP-00000008@ I*2  OUTSTG      **  (*)
 6-0000019A  I*2  PCTSEM       8  (4)
```

```
 3-00000085   L*1   PREFIX          133   (133)
 9-00000052   I*2   PRENAM           32   (16)
 6-000000D4   I*2   RANHYP            6   (3)
 9-0000021A   I*2   RSTLIN          180   (90)
 6-00000154   I*2   SEMSPC            6   (3)
 6-000000FE   I*2   SPCSTG            4   (2)
 6-000001A8   I*2   SPHYSP            8   (4)
 9-00000092   I*2   STRSTG           32   (16)
 6-00000072   I*2   SUFDEF            8   (4)
 9-00000072   I*2   SUFNAM           32   (16)
 6-0000014C   I*2   TABEQS            8   (4)
 6-000000CE   I*2   TABLAN            6   (3)
 6-000001CA   I*2   TABOPR            6   (3)
 6-000001C0   I*2   TABPRN           10   (5)
 6-000000AC   I*2   TABRAN            6   (3)
 6-0000008C   I*2   TABSTG            4   (2)
 9-00000100   I*2   TAGNAM           32   (16)
 9-0000047A   I*2   TMPVAL          162   (81)
 9-00000000   I*2   TOKSTG           80   (40)
 6-00000238   I*2   UNDVLD           18   (9)
 6-0000007A   I*2   UNITYP            4   (2)
 6-00000192   I*2   ZEROSG            4   (2)
 6-000000A2   I*2   ZRLAHY           10   (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000027	2	0-0000007A	3	0-0000008F	6	0-000000A4	8	0-000000E0	10	0-00000129	15
0-0000017B	20	**	25	0-000001F0	30	0-000001FE	35	**	40	0-0000027F	45
0-0000028D	50	**	55	0-00000324	60	0-00000332	65	**	66	0-00000397	67
0-000003A7	75	0-000003B6	80	**	90	0-000003C1	95	0-000003CC	100	0-000003D8	110
**	500'										

```
C       REVISION HISTORY:
C               29-06-77        TC      ROUTINE ADDED (2.4)

        LOGICAL FUNCTION MTCHR(SRC,PNT,MCH)

C THIS SUBROUTINE CHECKS TO SEE IF THE STRING IN MCH MATCHES
C THE STRING IN SRC STARTING AT PNT.
C VARIABLES:
C       I       --      INDEXES SRC
C       J       --      INDEXES MCH
        INTEGER I,J,PNT
        INTEGER SRC(*),MCH(*)

C       INITILIZE
        I=PNT
        J=2

C       MAIN CODE
10      IF (SRC(I) .NE. MCH(J)) GOTO 20
        J=J+1
        IF (J.GT. (MCH(1)+1)) GOTO 30
        I=I+1
        IF (I.GT. (SRC(1)+1)) GOTO 20
        GOTO 10

C       FAILURE
20      MTCHR = .FALSE.
        RETURN

C       SUCCEED
30      MTCHR = .TRUE.
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	100	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	48	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	148	

ENTRY POINTS

Address	Type	Name
0-00000000	L*2	MTCHR

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name
2-00000000	I*2	I	2-00000002	I*2	J	AP-00000008@	I*2	PNT

ARRAYS

Address	Type	Name	Bytes	Dimensions
AP-0000000C@	I*2	MCH	**	(*)
AP-00000004@	I*2	SRC	**	(*)

LABELS

Address	Label	Address	Label	Address	Label
0-00000028	10	0-0000005D	20	0-00000060	30

```
C       REVISION HISTORY:
C               29-06-77        TC      ROUTINE ADDED (2.4)

        INTEGER FUNCTION ELIMPF(SRC,PNT,ARGSTR)

C       ELIMINATE THE PSEUDO-FUNCTION WHICH MAY START IN SRC AT PNT.
C       PLACE THE ARGUMENT IN ARGSTR.  RETURN VALUES ACCORDING TO THE
C       FOLLOWING SCHEME:
C               0       --      NO PSEUDO-FUNCTION
C               1       --      NO "(" FOUND
C               2       --      NO ")" FOUND
C               3       --      PSEUDO-FUNCTION WAS $BITPOSITION
C               4       --      PSEUDO-FUNCTION WAS $BYTEOFFSET
C               5       --      PSEUDO-FUNCTION WAS $FIELDWIDTH
C       IF THE VALUE RETURNED US 3, 4 OR 5; PNT IS UPDATED TO POINT
C       TO THE CHARACTER AFTER THE ")".  THIS MAY BE OFF THE END OF
C       THE STRING.
C       VARIABLES:
C               I       --      INDEXES SRC
C               J       --      INDEXES ARGSTR.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER I,J,PNT
        INTEGER SRC(*),ARGSTR(*)
        LOGICAL MTCHR

        I=PNT
        IF (MTCHR(SRC,I,DOLBIT)) GOTO 10
        IF (MTCHR(SRC,I,DOLBYT)) GOTO 20
        IF (MTCHR(SRC,I,DOLFLD)) GOTO 30

C       NOT A PSEUDO-FUNCTION
        ELIMPF=0
        RETURN

C       PSEUDO-FUNCTION IS $BITPOSITION
10      ELIMPF=3
        I=I+DOLBIT(1)
        GOTO 40

C       PSEUDO-FUNCTION IS $BYTEOFFSET
20      ELIMPF=4
        I=I+DOLBYT(1)
        GOTO 40

C       PSEUDO-FUNCTION IS $FIELDWIDTH
30      ELIMPF=5
        I=I+DOLFLD(1)

C       LOOK FOR "(", SKIPPING ANY SPACES
40      IF (I.GT.(SRC(1)+1))GOTO 50
        IF (SRC(I) .EQ. '(') GOTO 60
        IF ((SRC(I).NE.' ') .AND.
        1       (SRC(I).NE.'    ')) GOTO 50
        I=I+1
        GOTO 40
```

```

C       COULDN'T FINE "("
50      ELIMPF=1
        RETURN

C       LOOK FOR ")". MOVE CHARACTERS PASSED OVER TO ARGSTR
60      J=2
        I=I+1
70      IF (I.GT.(SRC(1)+1)) GOTO 80
        IF (SRC(I) .EQ. ')') GOTO 90
        ARGSTR(J)=SRC(I)
        I=I+1
        J=J+1
        GOTO 70

C       COULDN'T FIND ")"
80      ELIMPF = 2
        RETURN

C       WE'RE DONE. CLEAN UP AND RETURN.
90      ARGSTR(1)=J-2
        PNT=I+1
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	259	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	96	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4254									

ENTRY POINTS

Address	Type	Name
0-00000000	I*2	ELIMPF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000002	I*2	J
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	AP-00000008@	I*2	PNT
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
AP-0000000C@	I*2	ARGSTR	**	(*)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
   9-00000662  I*2  BLINCR        162  (81)
   6-0000017E  I*2  BLSSIZ         20  (10)
   9-000003D8  I*2  BVALUE        162  (81)
   6-000000EA  I*2  BYTSIZ         20  (10)
   6-000001B4  I*2  COMGBL         12  (6)
   6-000000C4  I*2  COMMAS          4  (2)
   6-00000112  I*2  CONBAS         20  (10)
   6-00000126  I*2  CONINC         20  (10)
   9-0000012C  I*2  CONPRE         32  (16)
   9-0000014C  I*2  CONTAG         32  (16)
   9-000007A6  I*2  CONTEX        198  (9, 11)
   6-000001D6  I*2  CPAREN          4  (2)
   6-000001D0  I*2  CPRCOM          6  (3)
   9-00000170  I*2  CVALUE        162  (81)
   6-0000004C  I*2  DEFEND         20  (10)
   6-00000022  I*2  DEFINI         20  (10)
   6-000001DE  I*2  DOLBIT         26  (13)
   6-000001F8  I*2  DOLBYT         28  (14)
   6-00000036  I*2  DOLDEF         12  (6)
   6-00000214  I*2  DOLFLD         24  (12)
   6-00000016  I*2  DOLGBL         12  (6)
   6-00000234  I*2  DOLLAR          4  (2)
   6-00000090  I*2  DOLVLD         18  (9)
   6-000000DE  I*2  DOTBLK         12  (6)
   6-00000042  I*2  DOTEQS         10  (5)
   6-00000000  I*2  DOTMAC         22  (11)
   6-00000060  I*2  ENDMAC         18  (9)
   6-000000B2  I*2  EQULST         18  (9)
   6-00000102  I*2  EQUTAB         12  (6)
   6-0000007E  I*2  EXCLSP         14  (7)
   6-00000230  I*2  EXPCLO          4  (2)
   6-0000022C  I*2  EXPOPN          4  (2)
   9-000000B8  I*2  FLDNAM         72  (36)
   6-000001B0  I*2  HYPHEN          4  (2)
  10-00000000  I*2  INBUF         166  (83)
   6-000000C8  I*2  LANHYP          6  (3)
   3-00000000  L*1  LINE          133  (133)
   6-0000013A  I*2  LITTAB         18  (9)
   6-0000015A  I*2  MACTAB         16  (8)
  10-000000AA  I*2  MARBUF        240  (120)
   9-000005C0  I*2  MRBASE        162  (81)
   9-00000704  I*2  MRINCR        162  (81)
   9-00000336  I*2  MVALUE        162  (81)
   3-0000010A  L*1  NAME           32  (32)
   7-00000000  I*2  NEGSGN          4  (2)
   3-0000012A  L*1  NUMSTR        133  (133)
   6-000001DA  I*2  OASIGN          4  (2)
   6-0000016A  I*2  OFFSET         20  (10)
   6-000001A2  I*2  ONESHF          6  (3)
   6-0000010E  I*2  OPAREN          4  (2)
   9-000002CE  I*2  OSBNAM         32  (16)
   9-000002EE  I*2  OTGNAM         32  (16)
   9-0000030E  I*2  OUNTYP         32  (16)
   6-0000019A  I*2  PCTSEM          8  (4)
   3-00000085  L*1  PREFIX        133  (133)
   9-00000052  I*2  PRENAM         32  (16)
   6-000000D4  I*2  RANHYP          6  (3)
```

```
 9-0000021A   I*2  RSTLIN        180  (90)
 6-00000154   I*2  SEMSPC          6  (3)
 6-000000FE   I*2  SPCSTG          4  (2)
 6-000001A8   I*2  SPHYSP          8  (4)
AP-0000004@   I*2  SRC            **  (*)
 9-00000092   I*2  STRSTG         32  (16)
 6-00000072   I*2  SUFDEF          8  (4)
 9-00000072   I*2  SUFNAM         32  (16)
 6-0000014C   I*2  TABEQS          8  (4)
 6-000000CE   I*2  TABLAN          6  (3)
 6-000001CA   I*2  TABOPR          6  (3)
 6-000001C0   I*2  TABPRN         10  (5)
 6-000000AC   I*2  TABRAN          6  (3)
 6-0000008C   I*2  TABSTG          4  (2)
 9-00000100   I*2  TAGNAM         32  (16)
 9-0000047A   I*2  TMPVAL        162  (81)
 9-00000000   I*2  TOKSTG         80  (40)
 6-00000238   I*2  UNDVLD         18  (9)
 6-0000007A   I*2  UNITYP          4  (2)
 6-00000192   I*2  ZEROSG          4  (2)
 6-000000A2   I*2  ZRLAHY         10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000057	10	0-00000065	20	0-00000073	30	0-0000007F	40	0-000000AF	50	0-000000B3	60
0-000000C2	70	0-000000EA	80	0-000000EE	90						

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
L*2	MTCHR

```
C       REVISION HISTORY:
C               29-06-77        TC      ROUTINE ADDED (2.4)
C
C               17-02-80                TIM HALVORSEN
C                                       ALLOW _V_ AS WELL AS $V_

        SUBROUTINE ETOMAR(SRC,DST)

C CONVERTS AN EXPRESSION TO STANDARD MARS SYNTAX.
C THE FOLLOWING VARIABLES ARE USED:
C       TMPSTG  --      HOLDS THE ARGUMENT TO A PSEUDO-FUNCTION
C       I       --      INDEXES THE SOURCE STRING
C       J       --      INDEXES THE DESTINATION STRING
C       K       --      INDEXES TMPSTG
C       CODE    --      RESULT FROM ELIMPF

        INTEGER I,J,K,CODE
        INTEGER SRC(*),DST(*),TMPSTG(81)
        INTEGER ELIMPF

C       INITILIZE
        I=2
        J=2

C       MAIN LOOP (THIS IS A FOR LOOP WITH AN INITIAL CHECK)
10      IF (I .GT. (SRC(1)+1)) GOTO 100
        IF (SRC(I) .NE. '$') GOTO 90

C       WE HAVE FOUND A DOLLAR SIGN.  IT MAY BE A PSEUDO-FUNCTION
        CODE = ELIMPF(SRC,I,TMPSTG)
C       CODE=0 -- NOT A PSEUDO-FUNCTION
        IF (CODE .EQ. 0) GOTO 90

C       CODE=1 -- ERROR: NO OPEN PARENTHESIS
        IF (CODE .EQ. 1) GOTO 70

C       CODE=2 -- ERROR: NO CLOSE PARENTHESIS
        IF (CODE .EQ. 2) GOTO 60

C       CODE=3 -- PSEUDO-FUNCTION WAS $BITPOSITION
        IF (CODE .EQ. 3) GOTO 40

C       CODE=4 -- PSEUDO-FUNCTION WAS $BYTEOFFSET
        IF (CODE .EQ. 4) GOTO 40

C       CODE MUST EQUAL 5 -- PSEUDO-FUNCTION WAS $FIELDWIDTH
C       WE MUST CHANGE '$V_' IN THE ARGUMENT TO '$S_'
        K=2
20      IF (K .GT. TMPSTG(1)-1) GOTO 80
        IF (TMPSTG(K) .NE. '$' .AND. TMPSTG(K) .NE. '_') GOTO 30
        IF (TMPSTG(K+1) .NE. 'V') GOTO 30
        IF (TMPSTG(K+2) .NE. '_') GOTO 30
        TMPSTG(K+1)='S'
        GOTO 40
30      K=K+1
        GOTO 20
```

```
C       COPY THE PSEUDO-FUNCTION ARGUMENT TO THE DESTINATION STRING
40      K=2
50      IF(K.GT.(TMPSTG(1)+1)) GOTO 10
        DST(J)=TMPSTG(K)
        J=J+1
        K=K+1
        GOTO 50

C       ERROR --
60      TYPE 1000
1000    FORMAT(' NO CLOSE PARENTHESIS FOR PSEUDO-FUNCTION')
        GOTO 90

C       ERROR --
70      TYPE 1010
1010    FORMAT(' NO OPEN PARENTHESIS FOR PSEUDO-FUNTION')
        GOTO 90

C       ERROR --
80      TYPE 1020
1020    FORMAT(' ARGUMENT TO $FIELDWIDTH IS NOT A VIELD')
        GOTO 40

C       JUST COPY THE CHARACTER FROM SOURCE TO DESTINATION
90      DST(J)=SRC(I)
        J=J+1
        I=I+1
        GOTO 10

C       END OF THE LOOP
100     DST(1)=J-2
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	353	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 $PDATA	128	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 $LOCAL	228	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	709	

ENTRY POINTS

Address	Type	Name
0-00000000		ETOMAR

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
2-000000A8	I*2	CODE	2-000000A2	I*2	I	2-000000A4	I*2	J	2-000000A6	I*2	K

ARRAYS

Address	Type	Name	Bytes	Dimensions
AP-00000008@	I*2	DST	**	(*)
AP-00000004@	I*2	SRC	**	(*)
2-00000000	I*2	TMPSTG	162	(81)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000027	10	0-0000007E	20	0-000000C3	30	0-000000C8	40	0-000000CC	50	0-000000F3	60
0-0000010C	70	0-00000125	80	0-0000013E	90	0-00000156	100	1-00000000	1000'	1-0000002C	1010'
1-00000056	1020'										

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
I*2	ELIMPF

```
C       Version V02-001
C
C***********************************************************************
C*                                                                     *
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C*                                                                     *
C***********************************************************************
C
C       REVISION HISTORY:
C               22-03-77        CP      ADD LOGIC AT LABEL 30 TO SEND LINE TO
C                                       THE TMP FILE IF THIS IS A NEGATIVE
C                                       FIELD DEFINITION.
C               04-04-77        TC      ADD LOGIC TO KEEP TRACK OF MNGCNT
C                                       (MAXIMUM NEGATIVE COUNT)

        SUBROUTINE PFIELD

C       THIS ROUTINE IS CALLED WHEN A LINE HAS BEEN RECOGNIZED
C       AS A FIELD DEFINITION. THE IMPLICIT ARGUMENT INPTR IS THE OFFSET
C       TO THE NEXT CHARACTER TO BE READ IN THE INPUT LINE.

C       PFIELD COLLECTS THE ARGUMENTS OF THE FIELD DEFINITION,
C       AND THEN OUTPUTS APPROPRIATE STATEMENTS TO THE BLISS
C       AND MARS TRANSLATED FILES.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       INITIALIZE THE DEFAULT VALUES FOR UNIT DESCRIPTOR,
C       NUMBER OF BYTES PER UNIT, NUMBER OF UNITS, AND SIGN.

        CALL INIFLD

C       GET THE FIRST TOKEN. VALID TOKENS ARE
C       ALPHA (THE FIELDNAME) OR COMMA (MEANING THAT NO NAME
C       IS BEING DEFINED, SPACE IS SIMPLY BEING RESERVED).

        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
500     FORMAT (' ',90A1)
        IF (TOKTYP .NE. ALPHA) GOTO 10
        CALL MOVSTG (TOKSTG, FLDNAM)
        IF (DEBUG) TYPE 500, (FLDNAM (I), I = 2, FLDNAM (1) + 1)
```

```
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

      C       NAME, IF ANY, HAS BEEN SAVED. NOW LOOK FOR A UNIT
      C       DESCRIPTOR ARGUMENT. VALID CHARACTERS FOR THIS
      C       ARGUMENT ARE L, B, W, Q, AND T.

      10      IF (DEBUG) TYPE 420, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 25
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. ALPHA) GOTO 15
              CALL GETUND
              IF (UNDOK .EQ. .FALSE.) GOTO 100
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

      C       UNIT DESCRIPTOR, IF ANY, HAS BEEN SAVED. NOW LOOK FOR
      C       THE SIZE ARGUMENT.

      15      IF (DEBUG) TYPE 420, TOKTYP
      420     FORMAT (' TOKTYP IS ',I3)
              IF (TOKTYP .NE. COMMA) GOTO 25
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. NUMBER) GOTO 20
              FSIZ = INTVAL (TOKSTG)
              IF (FSIZ .EQ. -1) GOTO 110
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

      C       SIZE OF FIELD, IF ANY, HAS BEEN SAVED. NOW LOOK FOR
      C       THE SIGN ARGUMENT.

      20      IF (DEBUG) TYPE 420, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 25
      C       IF (DEBUG) TYPE 430
      430     FORMAT (' GETTING SIGN')
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. ALPHA) GOTO 25
              IF (TOKSTG (1) .NE. 1) GOTO 120
              IF (TOKSTG (2) .NE. 'S') GOTO 120
              FSIGN = 1
              ASIGN (2) = '1'
              INPTR = INPTR - 1
              GOTO 30

      C       THE OFFSET INTO THE INPUT BUFFER IS OFF BY ONE CHARACTER
      C       BECAUSE SOME TRAILING OPTIONAL ARGUMENTS WERE OMITTED.  BACK
      C       UP THE OFFSET BY ONE.

      25      INPTR = LASTNB (INPTR - 2)

      C       IF THIS IS A NEGATIVE FIELD DECLARATION, OUTPUT IT
      C       TO THE TMP FILE.
```

```
30      IF (POSOFF) GOTO 40
        IF ((.NOT. TMPOUT) .AND. (FLDLAS)) CALL CHKALC
        IF (.NOT. TMPOUT) GOTO 35
        NEGCNT = NEGCNT + FSIZ * UNISIZ
        MNGCNT = MAXO(NEGCNT,MNGCNT)
        CALL OUT2LN
        RETURN

35      NEGCNT = FSIZ * UNISIZ
        MNGCNT = NEGCNT
        TMPOUT = .TRUE.
        CALL OUT2LN
        RETURN

40      IF (.NOT. TMPOUT) GOTO 45
        CALL OUT2LN
        CALL STANEG
        RETURN

C       FIELDS ARE ALL COLLECTED. NOW OUTPUT LINES TO
C       BLISS AND MARS.

45      SOFSET = 0
        FLDLAS = .TRUE.
        LFDSIZ = FSIZ * UNISIZ
        LSBSIZ = 0
        CALL SAVSBA
        INBUF (INPTR) = INBUF (1) - INPTR + 1
        CALL GETREM (INPTR)
        CALL OUTFLD
        RETURN

C       ERROR REPORTING

100     TYPE 1000
1000    FORMAT (' INVALID UNIT DESCRIPTOR IN FIELD DEFINITION')
        RETURN

110     TYPE 1100
1100    FORMAT (' INVALID SIZE IN FIELD DEFINITION')
        RETURN

120     TYPE 1200
1200    FORMAT (' INVALID SIGN ARGUMENT IN FIELD DEFINITION')
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	1058	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	152	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	72	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	5181									

ENTRY POINTS

Address	Type	Name
0-00000000		PFIELD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR       162  (81)
 6-0000017E  I*2  BLSSIZ        20  (10)
 9-000003D8  I*2  BVALUE       162  (81)
 6-000000EA  I*2  BYTSIZ        20  (10)
 6-000001B4  I*2  COMGBL        12  (6)
 6-000000C4  I*2  COMMAS         4  (2)
 6-00000112  I*2  CONBAS        20  (10)
 6-00000126  I*2  CONINC        20  (10)
 9-0000012C  I*2  CONPRE        32  (16)
 9-0000014C  I*2  CONTAG        32  (16)
 9-000007A6  I*2  CONTEX       198  (9, 11)
 6-000001D6  I*2  CPAREN         4  (2)
 6-000001D0  I*2  CPRCOM         6  (3)
 9-00000170  I*2  CVALUE       162  (81)
 6-0000004C  I*2  DEFEND        20  (10)
 6-00000022  I*2  DEFINI        20  (10)
 6-000001DE  I*2  DOLBIT        26  (13)
 6-000001F8  I*2  DOLBYT        28  (14)
 6-00000036  I*2  DOLDEF        12  (6)
 6-00000214  I*2  DOLFLD        24  (12)
 6-00000016  I*2  DOLGBL        12  (6)
 6-00000234  I*2  DOLLAR         4  (2)
 6-00000090  I*2  DOLVLD        18  (9)
 6-000000DE  I*2  DOTBLK        12  (6)
 6-00000042  I*2  DOTEQS        10  (5)
 6-00000000  I*2  DOTMAC        22  (11)
 6-00000060  I*2  ENDMAC        18  (9)
 6-000000B2  I*2  EQULST        18  (9)
 6-00000102  I*2  EQUTAB        12  (6)
 6-0000007E  I*2  EXCLSP        14  (7)
 6-00000230  I*2  EXPCLO         4  (2)
 6-0000022C  I*2  EXPOPN         4  (2)
 9-000000B8  I*2  FLDNAM        72  (36)
 6-000001B0  I*2  HYPHEN         4  (2)
10-00000000  I*2  INBUF        166  (83)
 6-000000C8  I*2  LANHYP         6  (3)
 3-00000000  L*1  LINE         133  (133)
 6-0000013A  I*2  LITTAB        18  (9)
 6-0000015A  I*2  MACTAB        16  (8)
10-000000AA  I*2  MARBUF       240  (120)
 9-000005C0  I*2  MRBASE       162  (81)
 9-00000704  I*2  MRINCR       162  (81)
 9-00000336  I*2  MVALUE       162  (81)
 3-0000010A  L*1  NAME          32  (32)
 7-00000000  I*2  NEGSGN         4  (2)
 3-0000012A  L*1  NUMSTR       133  (133)
 6-000001DA  I*2  OASIGN         4  (2)
 6-0000016A  I*2  OFFSET        20  (10)
 6-000001A2  I*2  ONESHF         6  (3)
 6-0000010E  I*2  OPAREN         4  (2)
 9-000002CE  I*2  OSBNAM        32  (16)
 9-000002EE  I*2  OTGNAM        32  (16)
 9-0000030E  I*2  OUNTYP        32  (16)
 6-0000019A  I*2  PCTSEM         8  (4)
 3-00000085  L*1  PREFIX       133  (133)
 9-00000052  I*2  PRENAM        32  (16)
 6-000000D4  I*2  RANHYP         6  (3)
```

```
  9-0000021A  I*2  RSTLIN          180  (90)
  6-00000154  I*2  SEMSPC            6  (3)
  6-000000FE  I*2  SPCSTG            4  (2)
  6-000001A8  I*2  SPHYSP            8  (4)
  9-00000092  I*2  STRSTG           32  (16)
  6-00000072  I*2  SUFDEF            8  (4)
  9-00000072  I*2  SUFNAM           32  (16)
  6-0000014C  I*2  TABEQS            8  (4)
  6-000000CE  I*2  TABLAN            6  (3)
  6-000001CA  I*2  TABOPR            6  (3)
  6-000001C0  I*2  TABPRN           10  (5)
  6-000000AC  I*2  TABRAN            6  (3)
  6-0000008C  I*2  TABSTG            4  (2)
  9-00000100  I*2  TAGNAM           32  (16)
  9-0000047A  I*2  TMPVAL          162  (81)
  9-00000000  I*2  TOKSTG           80  (40)
  6-00000238  I*2  UNDVLD           18  (9)
  6-0000007A  I*2  UNITYP            4  (2)
  6-00000192  I*2  ZEROSG            4  (2)
  6-000000A2  I*2  ZRLAHY           10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000E2	10	0-0000019F	15	0-0000025D	20	0-000002F2	25	0-00000310	30	0-00000364	35
0-00000381	40	0-00000395	45	0-000003DA	100	0-000003F2	110	0-0000040A	120	1-00000008	420'
**	430'	1-00000000	500'	1-00000018	1000'	1-00000047	1100'	1-0000006B	1200'		

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	CHKALC		GETREM		GETTOK		GETUND		INIFLD	I*2	INTVAL
I*2	LASTNB		MOVSTG		OUT2LN		OUTFLD		SAVSBA		STANEG

```
              SUBROUTINE PSBFLD

        C     THIS ROUTINE IS CALLED WHEN A LINE HAS BEEN RECOGNIZED
        C     AS A SUBFIELD DEFINITION. THE IMPLICIT ARGUMENT
        C     INPTR IS THE OFFSET TO THE NEXT CHARACTER IN THE INPUT LINE.

        C     PSBFLD COLLECTS THE NAME OF THE SUBFIELD, THE OFFSET,
        C     THE UNIT, THE SIZE, AND THE SIGN. THEN IT OUTPUTS
        C     APPROPRIATE STATEMENTS TO THE BLISS AND MARS TRANSLATED FILES.

              INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

              INTEGER LOCAL, COUNT, OSFSET

        C     INITIALIZE THE OFFSET, UNIT TYPE, SIZE, SIGN, AND
        C     NAME FIELDS

              LOCAL = -1
              CALL INIFLD

        C     PICK UP THE NAME TOKEN

              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
        500   FORMAT (' ',90A1)
              IF (TOKTYP .NE. ALPHA) GOTO 10
              CALL MOVSTG (TOKSTG, FLDNAM)
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

        C     NAME, IF ANY, IS RETRIEVED. NOW CHECK FOR AN OFFSET ARGUMENT.

        10    IF (DEBUG) TYPE 420, TOKTYP
        420   FORMAT (' TOKTYP IS ',I3)
              IF (TOKTYP .NE. COMMA) GOTO 30
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. NUMBER) GOTO 15
              LOCAL = INTVAL (TOKSTG)
              IF (DEBUG) TYPE 310, LOCAL, SOFSET, LSBSIZ
        310   FORMAT (' OFFSET ',I3,' SOFSET ',I3,' LSBSIZ ',I3)
              IF (LOCAL .EQ. -1) GOTO 100
              IF ((LOCAL + BOFSET) .LT. BLFOFS) GOTO 105

        C     NOW LOOK FOR A UNIT DESCRIPTOR FIELD.

              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

        C     OFFSET ARGUMENT, IF ANY, HAS BEEN COLLECTED. NOW LOOK FOR
        C     A UNIT DESCRIPTOR ARGUMENT.

        15    IF (DEBUG) TYPE 420, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 30
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. ALPHA) GOTO 20
```

```
              CALL GETUND (TOKSTG)
              IF (UNDOK .EQ. .FALSE.) GOTO 110
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C             UNIT DESCRIPTOR, IF ANY, HAS BEEN SAVED. NOW LOOK FOR
C             THE SIZE ARGUMENT.

20            IF (DEBUG) TYPE 420, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 30
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. NUMBER) GOTO 25
              FSIZ = INTVAL (TOKSTG)
              IF (FSIZ .EQ. -1) GOTO 120
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C             SIZE OF SUBFIELD, IF ANY, HAS BEEN SAVED. NOW
C             LOOK FOR THE SIGN ARGUMENT.

25            IF (DEBUG) TYPE 420, TOKTYP
              IF (TOKTYP .NE. COMMA) GOTO 30
              CALL GETTOK
              IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
              IF (TOKTYP .NE. ALPHA) GOTO 30
              IF (TOKSTG (1) .NE. 1) GOTO 130
              IF (TOKSTG (2) .NE. 'S') GOTO 130
              FSIGN = 1
              ASIGN (2) = '1'
              INPTR = INPTR - 1
              GOTO 35

C             FIELDS ARE ALL COLLECTED. NOW OUTPUT LINES TO BLISS AND
C             MARS, AND UPDATE SUBFIELD OFFSET COUNTER. IF SOME
C             TRAILING FIELDS WERE OMITTED, THE INPUT LINE POINTER
C             IS ONE CHARACTER TOO FAR. BACK IT UP TO THE CORRECT
C             POSITION.

30            INPTR = LASTNB (INPTR - 2)

35            IF (DEBUG) TYPE 430, BLFOFS, LSBSIZ, FOFSET, SOFSET
430           FORMAT (' BLFOFS ',I3,' LSBSIZ ',I3,' FOFSET ',I3,' SOFSET ',I3)

C             SEE WHAT SORT OF ALLOCATION TO DO.

              IF (LOCAL .EQ. -1) GOTO 40
              IF (LOCAL .GT. SOFSET) GOTO 45
              IF (LOCAL .LT. SOFSET) GOTO 50

C             IN THIS CASE, THE OFFSET SPECIFIED IS EQUAL TO THE
C             CURRENT SUBFIELD OFFSET. JUST OUTPUT THE SIZE OF THE LAST SUBFIELD,
C             IF ANY.

              IF (DEBUG) TYPE 440, LSBSIZ
440           FORMAT (' OFFSET REMAINS SAME, OUTPUT LSBSIZ ',I3)
              IF (LSBSIZ .NE. 0) CALL OUTBLK (LSBSIZ)
```

```
              GOTO 60

C             HERE, NO OFFSET WAS SPECIFIED, JUST OUTPUT THE SIZE OF THE
C             LAST SUBFIELD.

40            IF (DEBUG) TYPE 450, LSBSIZ
450           FORMAT (' NO OFFSET SPECIFIED, OUTPUT LSBSIZ ',I3)
              IF (LSBSIZ .NE. 0) CALL OUTBLK (LSBSIZ)
              GOTO 60

C             HERE, THE OFFSET SPECIFIED WAS GREATER THAN THE CURRENT
C             SUBFIELD OFFSET. OUTPUT THE SIZE OF THE LAST FIELD, AND THEN
C             OUTPUT THE ADDITIONAL BYTES TO BRING IT UP TO THE SPECIFIED
C             OFFSET.

45            IF (DEBUG) TYPE 460, LOCAL, LSBSIZ
460           FORMAT (' OFFSET SPECIFIED IS ',I3,' OUTPUT LSBSIZ ',I3)
              IF (LSBSIZ .NE. 0) CALL OUTBLK (LSBSIZ)
              COUNT = LOCAL - SOFSET
              IF (DEBUG) TYPE 470, COUNT
470           FORMAT (' NOW ADDITIONAL SIZE OF ',I3)
              IF (COUNT .NE. 0) CALL OUTBLK (COUNT)
              SOFSET = LOCAL
              GOTO 60

C             HERE, THE OFFSET SPECIFIED WAS LESS THAN THE CURRENT
C             SUBFIELD OFFSET. REDUCE THE CURRENT OFFSET TO THAT SPECIFIED.
C             COMPUTE THE NOW REDUCED SIZE OF THE LAST SUBFIELD, AND ALLOCATE
C             THAT AMOUNT.

50            IF (DEBUG) TYPE 480, LOCAL, LSBSIZ
480           FORMAT (' REDUCED OFFSET IS ',I3,', LAST LSBSIZ IS ',I3)
              OSFSET = SOFSET - LSBSIZ
              SOFSET = LOCAL
              LSBSIZ = SOFSET - OSFSET
              IF (DEBUG) TYPE 490, LSBSIZ
490           FORMAT (' NEW LSBSIZ IS ',I3)
              IF (LSBSIZ .NE. 0) CALL OUTBLK (LSBSIZ)
              GOTO 60

C             NOW SET UP ALL THE FIELDS AND OUTPUT THE FIELD NAME.

60            IF ((SOFSET + (FSIZ * UNISIZ)) .GT. LFDSIZ) GOTO 125
              FLDLAS = .TRUE.
              LSBSIZ = FSIZ * UNISIZ
              CALL SAVSBA
              INBUF (INPTR) = INBUF (1) - INPTR + 1
              CALL GETREM (INPTR)
              CALL OUTFLD
              RETURN

C             ERROR REPORTING

100           TYPE 1000
1000          FORMAT (' INVALID OFFSET IN SUBFIELD DEFINITION')
              RETURN
```

```
105     TYPE 1010
1010    FORMAT (' SUBFIELD OFFSET OUT OF ORDER')
        RETURN

110     TYPE 1100
1100    FORMAT (' INVALID UNIT DESCRIPTOR IN SUBFIELD DEFINITION')
        RETURN

120     TYPE 1200
1200    FORMAT (' INVALID SIZE IN SUBFIELD DEFINITION')
        RETURN

125     TYPE 1210
1210    FORMAT (' SUBFIELD SIZE TOO LARGE')
        RETURN

130     TYPE 1300
1300    FORMAT (' INVALID SIGN ARGUMENT IN SUBFIELD DEFINITION')
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	1750	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	568	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	76	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	6293	

ENTRY POINTS

Address	Type	Name
0-00000000		PSBFLD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
2-00000002	I*2	COUNT	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000006	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
2-00000000	I*2	LOCAL	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	2-00000004	I*2	OSFSET
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)

```
  6-000000B2   I*2   EQULST        18  (9)
  6-00000102   I*2   EQUTAB        12  (6)
  6-0000007E   I*2   EXCLSP        14  (7)
  6-00000230   I*2   EXPCLO         4  (2)
  6-0000022C   I*2   EXPOPN         4  (2)
  9-000000B8   I*2   FLDNAM        72  (36)
  6-000001B0   I*2   HYPHEN         4  (2)
 10-00000000   I*2   INBUF        166  (83)
  6-000000C8   I*2   LANHYP         6  (3)
  3-00000000   L*1   LINE         133  (133)
  6-0000013A   I*2   LITTAB        18  (9)
  6-0000015A   I*2   MACTAB        16  (8)
 10-000000AA   I*2   MARBUF       240  (120)
  9-000005C0   I*2   MRBASE       162  (81)
  9-00000704   I*2   MRINCR       162  (81)
  9-00000336   I*2   MVALUE       162  (81)
  3-0000010A   L*1   NAME          32  (32)
  7-00000000   I*2   NEGSGN         4  (2)
  3-0000012A   L*1   NUMSTR       133  (133)
  6-000001DA   I*2   OASIGN         4  (2)
  6-0000016A   I*2   OFFSET        20  (10)
  6-000001A2   I*2   ONESHF         6  (3)
  6-0000010E   I*2   OPAREN         4  (2)
  9-000002CE   I*2   OSBNAM        32  (16)
  9-000002EE   I*2   OTGNAM        32  (16)
  9-0000030E   I*2   OUNTYP        32  (16)
  6-0000019A   I*2   PCTSEM         8  (4)
  3-00000085   L*1   PREFIX       133  (133)
  9-00000052   I*2   PRENAM        32  (16)
  6-000000D4   I*2   RANHYP         6  (3)
  9-0000021A   I*2   RSTLIN       180  (90)
  6-00000154   I*2   SEMSPC         6  (3)
  6-000000FE   I*2   SPCSTG         4  (2)
  6-000001A8   I*2   SPHYSP         8  (4)
  9-00000092   I*2   STRSTG        32  (16)
  6-00000072   I*2   SUFDEF         8  (4)
  9-00000072   I*2   SUFNAM        32  (16)
  6-0000014C   I*2   TABEQS         8  (4)
  6-000000CE   I*2   TABLAN         6  (3)
  6-000001CA   I*2   TABOPR         6  (3)
  6-000001C0   I*2   TABPRN        10  (5)
  6-000000AC   I*2   TABRAN         6  (3)
  6-0000008C   I*2   TABSTG         4  (2)
  9-00000100   I*2   TAGNAM        32  (16)
  9-0000047A   I*2   TMPVAL       162  (81)
  9-00000000   I*2   TOKSTG        80  (40)
  6-00000238   I*2   UNDVLD        18  (9)
  6-0000007A   I*2   UNITYP         4  (2)
  6-00000192   I*2   ZEROSG         4  (2)
  6-000000A2   I*2   ZRLAHY        10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000B0	10	0-000001C0	15	0-0000027E	20	0-0000033C	25	0-000003D1	30	0-000003EF	35
0-00000493	40	0-000004CE	45	0-0000055F	50	0-000005EC	60	0-00000646	100	0-0000065E	105
0-00000676	110	0-0000068E	120	0-000006A6	125	0-000006BE	130	1-00000018	310'	1-00000008	420'
1-0000003D	430'	1-0000006E	440'	1-00000097	450'	1-000000C0	460'	1-000000ED	470'	1-0000010A	480'
1-00000137	490'	1-00000000	500'	1-0000014B	1000'	1-00000174	1010'	1-00000194	1100'	1-000001C6	1200'
1-000001ED	1210'	1-00000208	1300'								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	GETREM		GETTOK		GETUND		INIFLD	I*2	INTVAL	I*2	LASTNB
	MOVSTG		OUTBLK		OUTFLD		SAVSBA				

```
C       Version V02-001
C
C****************************************************************************
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C*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
C*                                                                          *
C****************************************************************************
C
C       MDL MAINLINE
C
        INCLUDE 'SRC$:MDL32CMN.CMN'
C
C       INITIALISE
C
        INP = 2
        MAR = 1
        BLI = 3
        TMP = 4
        MAS = 8
C
        CALL INISTG
        CALL GETCMD
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	46	PIC CON REL LCL SHR EXE RD NOWRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	3945	

ENTRY POINTS

Address	Type	Name
0-00000000		MDL32CMN$MAIN

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)

```
9-000003D8   I*2   BVALUE        162   (81)
6-000000EA   I*2   BYTSIZ         20   (10)
6-000001B4   I*2   COMGBL         12   (6)
6-000000C4   I*2   COMMAS          4   (2)
6-00000112   I*2   CONBAS         20   (10)
6-00000126   I*2   CONINC         20   (10)
9-0000012C   I*2   CONPRE         32   (16)
9-0000014C   I*2   CONTAG         32   (16)
9-000007A6   I*2   CONTEX        198   (9, 11)
6-000001D6   I*2   CPAREN          4   (2)
6-000001D0   I*2   CPRCOM          6   (3)
9-00000170   I*2   CVALUE        162   (81)
6-0000004C   I*2   DEFEND         20   (10)
6-00000022   I*2   DEFINI         20   (10)
6-000001DE   I*2   DOLBIT         26   (13)
6-000001F8   I*2   DOLBYT         28   (14)
6-00000036   I*2   DOLDEF         12   (6)
6-00000214   I*2   DOLFLD         24   (12)
6-00000016   I*2   DOLGBL         12   (6)
6-00000234   I*2   DOLLAR          4   (2)
6-00000090   I*2   DOLVLD         18   (9)
6-000000DE   I*2   DOTBLK         12   (6)
6-00000042   I*2   DOTEQS         10   (5)
6-00000000   I*2   DOTMAC         22   (11)
6-00000060   I*2   ENDMAC         18   (9)
6-000000B2   I*2   EQULST         18   (9)
6-00000102   I*2   EQUTAB         12   (6)
6-0000007E   I*2   EXCLSP         14   (7)
6-00000230   I*2   EXPCLO          4   (2)
6-0000022C   I*2   EXPOPN          4   (2)
9-000000B8   I*2   FLDNAM         72   (36)
6-000001B0   I*2   HYPHEN          4   (2)
10-00000000  I*2   INBUF         166   (83)
6-000000C8   I*2   LANHYP          6   (3)
3-00000000   L*1   LINE          133   (133)
6-0000013A   I*2   LITTAB         18   (9)
6-0000015A   I*2   MACTAB         16   (8)
10-000000AA  I*2   MARBUF        240   (120)
9-000005C0   I*2   MRBASE        162   (81)
9-00000704   I*2   MRINCR        162   (81)
9-00000336   I*2   MVALUE        162   (81)
3-0000010A   L*1   NAME           32   (32)
7-00000000   I*2   NEGSGN          4   (2)
3-0000012A   L*1   NUMSTR        133   (133)
6-000001DA   I*2   OASIGN          4   (2)
6-0000016A   I*2   OFFSET         20   (10)
6-000001A2   I*2   ONESHF          6   (3)
6-0000010E   I*2   OPAREN          4   (2)
9-000002CE   I*2   OSBNAM         32   (16)
9-000002EE   I*2   OTGNAM         32   (16)
9-0000030E   I*2   OUNTYP         32   (16)
6-0000019A   I*2   PCTSEM          8   (4)
3-00000085   L*1   PREFIX        133   (133)
9-00000052   I*2   PRENAM         32   (16)
6-000000D4   I*2   RANHYP          6   (3)
9-0000021A   I*2   RSTLIN        180   (90)
6-00000154   I*2   SEMSPC          6   (3)
```

```
  6-000000FE   I*2   SPCSTG              4   (2)
  6-000001A8   I*2   SPHYSP              8   (4)
  9-00000092   I*2   STRSTG             32   (16)
  6-00000072   I*2   SUFDEF              8   (4)
  9-00000072   I*2   SUFNAM             32   (16)
  6-0000014C   I*2   TABEQS              8   (4)
  6-000000CE   I*2   TABLAN              6   (3)
  6-000001CA   I*2   TABOPR              6   (3)
  6-000001C0   I*2   TABPRN             10   (5)
  6-000000AC   I*2   TABRAN              6   (3)
  6-0000008C   I*2   TABSTG              4   (2)
  9-00000100   I*2   TAGNAM             32   (16)
  9-0000047A   I*2   TMPVAL            162   (81)
  9-00000000   I*2   TOKSTG             80   (40)
  6-00000238   I*2   UNDVLD             18   (9)
  6-0000007A   I*2   UNITYP              4   (2)
  6-00000192   I*2   ZEROSG              4   (2)
  6-000000A2   I*2   ZRLAHY             10   (5)

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name              Type  Name

        GETCMD                  INISTG
```

```
      BLOCK DATA
C
C INITIALISE STATIC DATA FOR MDL
C
      INCLUDE 'SRC$:MDL32CMN.CMN'
      DATA BLANK,TAB,EOLCH/' ','	',0/
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
1	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
2	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
3	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	3899	

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
1-00000006	I*4	BINVAL	8-00000000	I*2	BLANK	6-00000212	I*2	BLBITS	6-00000332	I*2	BLFOFS
9-00000002	I*2	BLI	7-0000028C	I*2	BLIPTR	2-00000012	L*2	BLKOUT	6-0000012A	I*2	BOFSET
6-0000016C	I*2	CBASE	6-0000016E	I*2	CINCR	1-00000004	I*2	COL	2-00000016	L*2	CONEXP
5-00000000	I*2	DEBUG	2-00000014	L*2	ENDEXP	2-00000000	L*2	ENDFIL	8-00000004	I*2	EOLCH
9-00000008	I*2	ERR	2-00000002	L*2	ERROR	2-0000000E	L*2	ERROUT	2-00000010	L*2	FLDLAS
6-00000122	I*2	FOFSET	6-000000B6	I*2	FSIGN	6-000000B4	I*2	FSIZ	9-00000000	I*2	INP
7-000000A8	I*2	INPLIN	7-000000A6	I*2	INPTR	6-0000051C	I*2	LASLIN	6-00000216	I*2	LFDSIZ
1-0000000A	I*2	LINELEN	6-00000126	I*2	LINTYP	6-00000218	I*2	LPTR	6-00000214	I*2	LSBSIZ
9-00000004	I*2	MAR	7-0000019A	I*2	MARPTR	9-0000000C	I*2	MAS	6-0000086E	I*2	MNGCNT
6-0000086C	I*2	NEGCNT	1-00000000	I*4	NUM	6-00000334	I*2	OBBITS	6-0000032E	I*2	OFSIZ
6-00000330	I*2	OUNSIZ	2-00000018	L*2	POSOFF	2-0000000C	L*2	SMASK	6-00000120	I*2	SOFSET
2-00000004	L*2	STGEQL	2-00000006	L*2	STROK	8-00000002	I*2	TAB	9-00000006	I*2	TMP
2-0000001C	L*2	TMPIN	2-0000001A	L*2	TMPOUT	6-00000050	I*2	TOKTYP	9-0000000A	I*2	TTY
2-00000008	L*2	UNDOK	6-000000B2	I*2	UNISIZ	2-0000000A	L*2	VMASK	6-00000124	I*2	VOFSET
6-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
3-000000DA	I*2	AMASK	4	(2)
3-00000196	I*2	ASIGN	4	(2)
6-0000051E	I*2	BLBASE	162	(81)

```
7-0000019C  I*2  BLIBUF      240  (120)
6-00000662  I*2  BLINCR      162  (81)
3-0000017E  I*2  BLSSIZ       20  (10)
6-000003D8  I*2  BVALUE      162  (81)
3-000000EA  I*2  BYTSIZ       20  (10)
3-000001B4  I*2  COMGBL       12  (6)
3-000000C4  I*2  COMMAS        4  (2)
3-00000112  I*2  CONBAS       20  (10)
3-00000126  I*2  CONINC       20  (10)
6-0000012C  I*2  CONPRE       32  (16)
6-0000014C  I*2  CONTAG       32  (16)
6-000007A6  I*2  CONTEX      198  (9, 11)
3-000001D6  I*2  CPAREN        4  (2)
3-000001D0  I*2  CPRCOM        6  (3)
6-00000170  I*2  CVALUE      162  (81)
3-0000004C  I*2  DEFEND       20  (10)
3-00000022  I*2  DEFINI       20  (10)
3-000001DE  I*2  DOLBIT       26  (13)
3-000001F8  I*2  DOLBYT       28  (14)
3-00000036  I*2  DOLDEF       12  (6)
3-00000214  I*2  DOLFLD       24  (12)
3-00000016  I*2  DOLGBL       12  (6)
3-00000234  I*2  DOLLAR        4  (2)
3-00000090  I*2  DOLVLD       18  (9)
3-000000DE  I*2  DOTBLK       12  (6)
3-00000042  I*2  DOTEQS       10  (5)
3-00000000  I*2  DOTMAC       22  (11)
3-00000060  I*2  ENDMAC       18  (9)
3-000000B2  I*2  EQULST       18  (9)
3-00000102  I*2  EQUTAB       12  (6)
3-0000007E  I*2  EXCLSP       14  (7)
3-00000230  I*2  EXPCLO        4  (2)
3-0000022C  I*2  EXPOPN        4  (2)
6-000000B8  I*2  FLDNAM       72  (36)
3-000001B0  I*2  HYPHEN        4  (2)
7-00000000  I*2  INBUF       166  (83)
3-000000C8  I*2  LANHYP        6  (3)
0-00000000  L*1  LINE        133  (133)
3-0000013A  I*2  LITTAB       18  (9)
3-0000015A  I*2  MACTAB       16  (8)
7-000000AA  I*2  MARBUF      240  (120)
6-000005C0  I*2  MRBASE      162  (81)
6-00000704  I*2  MRINCR      162  (81)
6-00000336  I*2  MVALUE      162  (81)
0-0000010A  L*1  NAME         32  (32)
4-00000000  I*2  NEGSGN        4  (2)
0-0000012A  L*1  NUMSTR      133  (133)
3-000001DA  I*2  OASIGN        4  (2)
3-0000016A  I*2  OFFSET       20  (10)
3-000001A2  I*2  ONESHF        6  (3)
3-0000010E  I*2  OPAREN        4  (2)
6-000002CE  I*2  OSBNAM       32  (16)
6-000002EE  I*2  OTGNAM       32  (16)
6-0000030E  I*2  OUNTYP       32  (16)
3-0000019A  I*2  PCTSEM        8  (4)
0-00000085  L*1  PREFIX      133  (133)
6-00000052  I*2  PRENAM       32  (16)
```

```
3-000000D4  I*2  RANHYP     6  (3)
6-0000021A  I*2  RSTLIN   180  (90)
3-00000154  I*2  SEMSPC     6  (3)
3-000000FE  I*2  SPCSTG     4  (2)
3-000001A8  I*2  SPHYSP     8  (4)
6-00000092  I*2  STRSTG    32  (16)
3-00000072  I*2  SUFDEF     8  (4)
6-00000072  I*2  SUFNAM    32  (16)
3-0000014C  I*2  TABEQS     8  (4)
3-000000CE  I*2  TABLAN     6  (3)
3-000001CA  I*2  TABOPR     6  (3)
3-000001C0  I*2  TABPRN    10  (5)
3-000000AC  I*2  TABRAN     6  (3)
3-0000008C  I*2  TABSTG     4  (2)
6-00000100  I*2  TAGNAM    32  (16)
6-0000047A  I*2  TMPVAL   162  (81)
6-00000000  I*2  TOKSTG    80  (40)
3-00000238  I*2  UNDVLD    18  (9)
3-0000007A  I*2  UNITYP     4  (2)
3-00000192  I*2  ZEROSG     4  (2)
3-000000A2  I*2  ZRLAHY    10  (5)
```

```
C       Version V02-001
C
C****************************************************************************
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C*                                                                          *
C****************************************************************************
C
C REVISION HISTORY:
C       22-03-77        CP      ADD TMP FILE OPEN AND CLOSE.
C
C  VARIABLES:
C
C       BLINAM--OUTPUT FILE SPECIFICATION FOR BLISS.
C       INPNAM--INPUT FILE SPECIFICATION
C       ISWTCH--VALUE OF SWITCHES SPECIFIED WITH INPUT FILE SPECIFICATION
C       MARNAM--OUTPUT FILE SPECIFICATION FOR MARS
C       OSWTCH--VALUE OF SWITCHES SPECIFIED WITH OUTPUT FILE SPECIFICATION
C       TMPNAM--TMP FILE SPECIFICATION.
C
C
```

```
              SUBROUTINE GETCMD
      C
      C       INCLUDE COMMON FILE
      C
              INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
      C
      C       DATA DECLARATIONS
      C
              CHARACTER*80 INPNAM,MARNAM,BLINAM
              CHARACTER*132 COMLINE
      C
      C       GET COMMAND LINE PARAMETERS.
      C
              IERR=LIB$GET_FOREIGN(COMLINE,'MDL>',LLEN)
      50      CONTINUE
              IF ((IERR.AND.1).EQ.0) CALL LIB$STOP(%VAL(IERR))
              EQSIGN=INDEX(COMLINE,'=')
              IF (EQSIGN.EQ.0) STOP 'No input'
              INPNAM=COMLINE(EQSIGN+1:LLEN)
              I=INDEX(INPNAM,']')
              IF (I.EQ.0) I=INDEX(INPNAM,'>')
              IF (INDEX(INPNAM(I+1:80),'.').NE.0) GOTO 60
              INPNAM(77:80)='.MDL'
      C
      C       SET UP OUTPUT FILE SPECIFICATIONS.
      C
      60      IF (EQSIGN.EQ.1) THEN
                MARNAM=INPNAM
                BLINAM=INPNAM
                I=INDEX(INPNAM(I+1:80),'.')
                MARNAM(I:I+3)='.MAR'
                BLINAM(I:I+3)='.B32'
               ELSE
                ENDOUT=INDEX(COMLINE,',')
                IF (ENDOUT.EQ.0) ENDOUT=EQSIGN
                MARNAM=COMLINE(1:ENDOUT-1)
                IF (ENDOUT.EQ.EQSIGN) THEN
                  BLINAM=MARNAM
                 ELSE
                  BLINAM=COMLINE(ENDOUT+1:EQSIGN-1)
                ENDIF
              ENDIF
              I=INDEX(MARNAM,']')
              IF (I.EQ.0) I=INDEX(MARNAM,'>')
              IF (INDEX(MARNAM(I+1:80),'.').EQ.0) MARNAM(77:80)='.MAR'
              I=INDEX(BLINAM,']')
              IF (I.EQ.0) I=INDEX(BLINAM,'>')
              IF (INDEX(BLINAM(I+1:80),'.').EQ.0) BLINAM(77:80)='.B32'
      C
      C       CREATE A NAME FOR THE BLISS OUTPUT FILE THAT IS THE SAME AS
      C       FOR THE MARS OUTPUT FILE EXCEPT THAT THE EXTENSION IS .B32.
      C
      C       OPEN A TEMP FILE TO PUT THE FIRST PASS OF THE MARS OUTPUT IN.
      C
      C       OPEN A TEMP FILE TO ALLOW HANDLING OF NEGATIVE FIELDS.
      C
      C       OPEN AND PROCESS THE FILES.
```

```
C
        OPEN( UNIT=INP,TYPE='OLD',NAME=INPNAM,
     1        ACCESS='SEQUENTIAL',READONLY,ERR=500)
        OPEN( UNIT=MAR,TYPE='SCRATCH',NAME='SYS$LOGIN:MAROUT.TMP',
     1        ACCESS='SEQUENTIAL',ERR=530)
        OPEN( UNIT=MAS,TYPE='NEW',NAME=MARNAM,CARRIAGECONTROL='LIST',
     1        ACCESS='SEQUENTIAL',ERR=510)
        OPEN( UNIT=BLI,TYPE='NEW',NAME=BLINAM,!CARRIAGECONTROL='NONE',
     1        ACCESS='SEQUENTIAL',ERR=520)
        OPEN( UNIT=TMP,TYPE='SCRATCH',NAME='SYS$LOGIN:NEGFLD.TMP',
     1        FORM='UNFORMATTED',ACCESS='SEQUENTIAL',ERR=530)
        ENDFIL = .FALSE.
100     CALL STPROC
        IF (.NOT. ENDFIL) GOTO 100
        CLOSE (UNIT = BLI)
        CLOSE (UNIT = INP)
        CLOSE (UNIT = TMP, DISPOSE='DELETE')
        REWIND (UNIT = MAR)
        CALL REAREND
        CLOSE (UNIT = MAR, DISPOSE='DELETE')
        CLOSE (UNIT = MAS)
        CALL EXIT
C
C       ERROR OPENING INPUT FILE
C
500     TYPE 1010
1010    FORMAT (' %MDL-F-Error opening input file')
        RETURN

510     TYPE 1020
1020    FORMAT (' %MDL-F-Error opening mars output file')
        RETURN

520     TYPE 1030
1030    FORMAT (' %MDL-F-Error opening bliss output file')
        RETURN

530     TYPE 1040
1040    FORMAT (' %MDL-F-Error opening temp file')
        RETURN

        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	795	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	229	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	888	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	5811									

ENTRY POINTS

Address	Type	Name
0-00000000		GETCMD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	2-000000A0	CHAR	BLINAM	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT
9-0000012A	I*2	BOFSET	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
2-000000F0	CHAR	COMLINE	5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP
5-00000000	L*2	ENDFIL	2-0000017C	I*2	ENDOUT	11-00000004	I*2	EOLCH	2-00000178	I*2	EQSIGN
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-0000017A	I*2	I
2-00000174	I*2	IERR	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	2-00000000	CHAR	INPNAM
10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	2-00000176	I*2	LLEN	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	2-00000050	CHAR	MARNAM	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)

```
6-0000010E  I*2  OPAREN      4  (2)
9-000002CE  I*2  OSBNAM     32  (16)
9-000002EE  I*2  OTGNAM     32  (16)
9-0000030E  I*2  OUNTYP     32  (16)
6-0000019A  I*2  PCTSEM      8  (4)
3-00000085  L*1  PREFIX    133  (133)
9-00000052  I*2  PRENAM     32  (16)
6-000000D4  I*2  RANHYP      6  (3)
9-0000021A  I*2  RSTLIN    180  (90)
6-00000154  I*2  SEMSPC      6  (3)
6-000000FE  I*2  SPCSTG      4  (2)
6-000001A8  I*2  SPHYSP      8  (4)
9-00000092  I*2  STRSTG     32  (16)
6-00000072  I*2  SUFDEF      8  (4)
9-00000072  I*2  SUFNAM     32  (16)
6-0000014C  I*2  TABEQS      8  (4)
6-000000CE  I*2  TABLAN      6  (3)
6-000001CA  I*2  TABOPR      6  (3)
6-000001C0  I*2  TABPRN     10  (5)
6-000000AC  I*2  TABRAN      6  (3)
6-0000008C  I*2  TABSTG      4  (2)
9-00000100  I*2  TAGNAM     32  (16)
9-0000047A  I*2  TMPVAL    162  (81)
9-00000000  I*2  TOKSTG     80  (40)
6-00000238  I*2  UNDVLD     18  (9)
6-0000007A  I*2  UNITYP      4  (2)
6-00000192  I*2  ZEROSG      4  (2)
6-000000A2  I*2  ZRLAHY     10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	50	0-000000AF	60	0-00000263	100	0-000002BB	500	0-000002D3	510	0-000002EB	520
0-00000303	530	1-00000041	1010'	1-00000064	1020'	1-0000008D	1030'	1-000000B7	1040'		

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name
	FOR$CLOSE		FOR$EXIT		FOR$OPEN
I*2	LIB$GET_FOREIGN	I*4	LIB$INDEX		LIB$STOP
	REAREND		STPROC		

```
        SUBROUTINE LITSTG(CS,LS,NC)
C
C       CONVERT LITERAL STRING TO COUNTED STRING
C
        IMPLICIT INTEGER(A-Z)
        INTEGER LS(*),CS(*),A(30)
C
        N = NC/2+1
        ENCODE(60,100,A) (LS(I),I=1,N)
100     FORMAT(20A2)
        DECODE(60,200,A) (CS(I),I=2,NC+1)
200     FORMAT(150A1)
        CS(1) = NC
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	171	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 $PDATA	11	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 $LOCAL	104	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	286	

ENTRY POINTS

Address	Type	Name
0-00000000		LITSTG

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name
2-0000003E	I*2	I	2-0000003C	I*2	N	AP-0000000C@	I*2	NC

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000000	I*2	A	60	(30)
AP-00000004@	I*2	CS	**	(*)
AP-00000008@	I*2	LS	**	(*)

LABELS

Address	Label	Address	Label
1-00000000	100'	1-00000005	200'

```
              SUBROUTINE NUMSTG(CS,X)
        C
        C     CONVERT INTEGER TO COUNTED STRING
        C
              IMPLICIT INTEGER(A-Z)
              INTEGER CS(*),A(10),B(10)
              ENCODE(20,100,A) X
        100   FORMAT(I10)
              DECODE(10,200,A) B
        200   FORMAT(10A1)
              DO 10 I = 1,10
        10    IF(B(I).NE.' ')GOTO 20
        20    CS(1)=11-I
              DO 30 J=I,10
        30    CS(J-I+2) = B(J)
              RETURN
              END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	163	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 $PDATA	8	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 $LOCAL	80	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	251	

ENTRY POINTS

Address	Type	Name
0-00000000		NUMSTG

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name
2-00000028	I*2	I	2-0000002A	I*2	J	AP-00000008@	I*2	X

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000000	I*2	A	20	(10)
2-00000014	I*2	B	20	(10)
AP-00000004@	I*2	CS	**	(*)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	10	0-00000072	20	**	30	1-00000000	100'	1-00000003	200'

```
C       Version V02-001
C
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C*                                                                           *
C*****************************************************************************
C
C REVISION HISTORY:
C
C       TIM HALVORSEN   31-MAR-1980        ALLOW ANY LETTER AS UNIT NAME AND
C                                          ASSIGN UNIT SIZE OF 1 FOR UNKNOWNS
C
```

```
C               23-03-77        CP      INITIALIZE THE STRING SUFNAM TO
C                                       THE SAME STRING OF CHARACTERS AS
C                                       THE STRING SUFDEF.
        SUBROUTINE GETSTC


C       ONCE A LINE IS IDENTIFIED AS A STRUCTURE DECLARATION,
C       THIS SUBROUTINE, GETSTC, IS CALLED TO COLLECT THE NAME
C       OF THE STRUCTURE (HEREAFTER REFERRED TO AS THE PREFIX)
C       AND THE SUFFIX (OPTIONAL).

C       THE INPUT ARGUMENT IS THE SUBSCRIPT OFFSET TO THE NEXT
C       CHARACTER TO BE READ IN THE INPUT LINE.

C       IF AN ERROR IS DETECTED, THE LOGICAL VARIABLE STROK IS
C       SET TO FALSE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       FIRST INITIALIZE THE SUFFIX NAME TO THE DEFAULT VALUE.
C       ALSO INITIALIZE THE PREFIX NAME TO A LENGTH OF ZERO.

        DO 10 I = 1,4
        SUFNAM (I) = SUFDEF (I)
10      CONTINUE
        PRENAM (1) = 0

C       NOW LOOK FOR THE STRUCTURE PREFIX NAME.

        IF (DEBUG) TYPE 500
500     FORMAT (' INTO GETSTC')
        CALL GETTOK
        IF (TOKTYP .NE. ALPHA) GOTO 100
        CALL MOVSTG (TOKSTG, PRENAM)
C       IF (DEBUG) TYPE 510, (PRENAM (I), I = 2, PRENAM (1) + 1)
510     FORMAT (' PREFIX IS ',15A1)
        CALL GETTOK
        IF (TOKTYP .NE. COMMA) GOTO 15
        CALL GETTOK
        IF (TOKTYP .NE. ALPHA) GOTO 100
        CALL MOVSTG (TOKSTG, SUFNAM)
C       IF (DEBUG) TYPE 520, (SUFNAM (I), I = 2, SUFNAM (1) + 1)
520     FORMAT (' SUFFIX IS ',15A1)

15      INPTR = LASTNB (INPTR - 2)
20      CALL OUTSTR
        CALL INISTR
        STROK = .TRUE.
        RETURN

100     TYPE 1000
1000    FORMAT (' INVALID STRUCTURE DECLARATION')
        STROK = .FALSE.
        END
```

```
PROGRAM SECTIONS

    Name                                     Bytes   Attributes

  0 $CODE                                      212   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
  1 $PDATA                                      48   PIC CON REL LCL   SHR NOEXE   RD NOWRT LONG
  2 $LOCAL                                      36   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG
  3 TEXT                                       431   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  4 VARS                                        12   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  5 LOG                                         30   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  6 STGS                                       586   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  7 MORSTG                                       4   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  8 CHECKS                                       2   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  9 PARSE                                     2160   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 10 FILES                                      654   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 11 SPCHR                                        6   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 12 LUNS                                        14   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG

    Total Space Allocated                     4195

ENTRY POINTS

    Address   Type  Name

  0-00000000        GETSTC

VARIABLES

    Address   Type  Name              Address   Type  Name              Address   Type  Name              Address   Type  Name

  4-00000006  I*4   BINVAL         11-00000000  I*2   BLANK           9-00000212  I*2   BLBITS          9-00000332  I*2   BLFOFS
 12-00000002  I*2   BLI            10-0000028C  I*2   BLIPTR          5-00000012  L*2   BLKOUT          9-0000012A  I*2   BOFSET
  9-0000016C  I*2   CBASE           9-0000016E  I*2   CINCR           4-00000004  I*2   COL             5-00000016  L*2   CONEXP
  8-00000000  I*2   DEBUG           5-00000014  L*2   ENDEXP          5-00000000  L*2   ENDFIL         11-00000004  I*2   EOLCH
 12-00000008  I*2   ERR             5-00000002  L*2   ERROR           5-0000000E  L*2   ERROUT          5-00000010  L*2   FLDLAS
  9-00000122  I*2   FOFSET          9-000000B6  I*2   FSIGN           9-000000B4  I*2   FSIZ            2-00000000  I*2   I
 12-00000000  I*2   INP            10-000000A8  I*2   INPLIN         10-000000A6  I*2   INPTR           9-0000051C  I*2   LASLIN
  9-00000216  I*2   LFDSIZ          4-0000000A  I*2   LINELEN         9-00000126  I*2   LINTYP          9-00000218  I*2   LPTR
  9-00000214  I*2   LSBSIZ         12-00000004  I*2   MAR            10-0000019A  I*2   MARPTR         12-0000000C  I*2   MAS
  9-0000086E  I*2   MNGCNT          9-0000086C  I*2   NEGCNT          4-00000000  I*4   NUM             9-00000334  I*2   OBBITS
  9-0000032E  I*2   OFSIZ           9-00000330  I*2   OUNSIZ          5-00000018  L*2   POSOFF          5-0000000C  L*2   SMASK
  9-00000120  I*2   SOFSET          5-00000004  L*2   STGEQL          5-00000006  L*2   STROK          11-00000002  I*2   TAB
 12-00000006  I*2   TMP             5-0000001C  L*2   TMPIN           5-0000001A  L*2   TMPOUT          9-00000050  I*2   TOKTYP
 12-0000000A  I*2   TTY             5-00000008  L*2   UNDOK           9-000000B2  I*2   UNISIZ          5-0000000A  L*2   VMASK
  9-00000124  I*2   VOFSET          9-00000128  I*2   VSIZ

ARRAYS

    Address   Type  Name                 Bytes  Dimensions

  6-000000DA  I*2   AMASK                    4  (2)
  6-00000196  I*2   ASIGN                    4  (2)
  9-0000051E  I*2   BLBASE                 162  (81)
 10-0000019C  I*2   BLIBUF                 240  (120)
```

```
  9-00000662  I*2  BLINCR        162  (81)
  6-0000017E  I*2  BLSSIZ         20  (10)
  9-000003D8  I*2  BVALUE        162  (81)
  6-000000EA  I*2  BYTSIZ         20  (10)
  6-000001B4  I*2  COMGBL         12  (6)
  6-000000C4  I*2  COMMAS          4  (2)
  6-00000112  I*2  CONBAS         20  (10)
  6-00000126  I*2  CONINC         20  (10)
  9-0000012C  I*2  CONPRE         32  (16)
  9-0000014C  I*2  CONTAG         32  (16)
  9-000007A6  I*2  CONTEX        198  (9, 11)
  6-000001D6  I*2  CPAREN          4  (2)
  6-000001D0  I*2  CPRCOM          6  (3)
  9-00000170  I*2  CVALUE        162  (81)
  6-0000004C  I*2  DEFEND         20  (10)
  6-00000022  I*2  DEFINI         20  (10)
  6-000001DE  I*2  DOLBIT         26  (13)
  6-000001F8  I*2  DOLBYT         28  (14)
  6-00000036  I*2  DOLDEF         12  (6)
  6-00000214  I*2  DOLFLD         24  (12)
  6-00000016  I*2  DOLGBL         12  (6)
  6-00000234  I*2  DOLLAR          4  (2)
  6-00000090  I*2  DOLVLD         18  (9)
  6-000000DE  I*2  DOTBLK         12  (6)
  6-00000042  I*2  DOTEQS         10  (5)
  6-00000000  I*2  DOTMAC         22  (11)
  6-00000060  I*2  ENDMAC         18  (9)
  6-000000B2  I*2  EQULST         18  (9)
  6-00000102  I*2  EQUTAB         12  (6)
  6-0000007E  I*2  EXCLSP         14  (7)
  6-00000230  I*2  EXPCLO          4  (2)
  6-0000022C  I*2  EXPOPN          4  (2)
  9-000000B8  I*2  FLDNAM         72  (36)
  6-000001B0  I*2  HYPHEN          4  (2)
 10-00000000  I*2  INBUF         166  (83)
  6-000000C8  I*2  LANHYP          6  (3)
  3-00000000  L*1  LINE          133  (133)
  6-0000013A  I*2  LITTAB         18  (9)
  6-0000015A  I*2  MACTAB         16  (8)
 10-000000AA  I*2  MARBUF        240  (120)
  9-000005C0  I*2  MRBASE        162  (81)
  9-00000704  I*2  MRINCR        162  (81)
  9-00000336  I*2  MVALUE        162  (81)
  3-0000010A  L*1  NAME           32  (32)
  7-00000000  I*2  NEGSGN          4  (2)
  3-0000012A  L*1  NUMSTR        133  (133)
  6-000001DA  I*2  OASIGN          4  (2)
  6-0000016A  I*2  OFFSET         20  (10)
  6-000001A2  I*2  ONESHF          6  (3)
  6-0000010E  I*2  OPAREN          4  (2)
  9-000002CE  I*2  OSBNAM         32  (16)
  9-000002EE  I*2  OTGNAM         32  (16)
  9-0000030E  I*2  OUNTYP         32  (16)
  6-0000019A  I*2  PCTSEM          8  (4)
  3-00000085  L*1  PREFIX        133  (133)
  9-00000052  I*2  PRENAM         32  (16)
  6-000000D4  I*2  RANHYP          6  (3)
```

```
 9-0000021A  I*2  RSTLIN   180  (90)
 6-00000154  I*2  SEMSPC     6  (3)
 6-000000FE  I*2  SPCSTG     4  (2)
 6-000001A8  I*2  SPHYSP     8  (4)
 9-00000092  I*2  STRSTG    32  (16)
 6-00000072  I*2  SUFDEF     8  (4)
 9-00000072  I*2  SUFNAM    32  (16)
 6-0000014C  I*2  TABEQS     8  (4)
 6-000000CE  I*2  TABLAN     6  (3)
 6-000001CA  I*2  TABOPR     6  (3)
 6-000001C0  I*2  TABPRN    10  (5)
 6-000000AC  I*2  TABRAN     6  (3)
 6-0000008C  I*2  TABSTG     4  (2)
 9-00000100  I*2  TAGNAM    32  (16)
 9-0000047A  I*2  TMPVAL   162  (81)
 9-00000000  I*2  TOKSTG    80  (40)
 6-00000238  I*2  UNDVLD    18  (9)
 6-0000007A  I*2  UNITYP     4  (2)
 6-00000192  I*2  ZEROSG     4  (2)
 6-000000A2  I*2  ZRLAHY    10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	10	0-00000082	15	**	20	0-000000B6	100	1-00000000	500'	**	510'
**	520'	1-0000000F	1000'								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	GETTOK		INISTR	I*2	LASTNB		MOVSTG		OUTSTR

```
C       REVISION HISTORY:
C               22-03-77        CP      CHANGE ORIGIN TO POINTD, PORIG
C                                       TO PPOINT. ADD LEGAL DEFINITION
C                                       OF 'O', ORIGIN, SETS LINE TYPE TO
C                                       ORIGIN AND CALLS PPOINT.
C                                       ADD LOGIC TO HANDLE NEGATIVE OFFSETS.
C                                       BASICALLY, OF SEE A NEGATIVE FIELD,
C                                       OUTPUT THAT LINE AND ALL SUBSEQUENT
C                                       LINES UNTIL A POSITIVE FIELD IS SEEN TO
C                                       A TMP FILE. WHEN A POSITIVE FIELD IS
C                                       SEEN, PROCESS THE TMP FILE AS THOUGH
C                                       IT WERE THE SOURCE FILE, PRECEDING ITS
C                                       OUTPUT WITH A NEGATIVE BLKB DECLARATION.
C                                       THEN RESUME PROCESSING OF THE SOURCE FILE.
C
C
C               04-04-77        TC      CORRECT BUG IN RETURNING TO NORMAL
C                                       PROCESSING (CORRECTION DUE TO CP)
C                                       CHANGE START OF NEGATIVE OFFSET FIELDS
C                                       FROM NEGCNT TO MNGCNT (MAXIMUM NEGATIVE
C                                       COUNT).
C
C               17-02-80                TIM HALVORSEN
C                                       ADD 'STRUCT' KEYWORD TO SIGNIFY THE
C                                       BEGINNING OF A USER STRUCTURE DEFN.
C                                       THE ONLY DIFFERENCE IS THAT AN '_' IS
C                                       USED RATHER THAN '$' AFTER THE PREFIX.

        SUBROUTINE STPROC

C       INPUTS LINES UNTIL A $STRUCT DECLARATION IS FOUND.
C       THEN PROCEEDS TO PROCESS A STRUCTURE THROUGH THE
C       END STATEMENT OF THE DECLARATION.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
        INTEGER STRUSR(7),STRTYP

        DATA STRSTG(1)/7/,STRSTG(2)/'$'/,STRSTG(3)/'S'/,
        1       STRSTG(4)/'T'/,STRSTG(5)/'R'/,STRSTG(6)/'U'/,
        2       STRSTG(7)/'C'/,STRSTG(8)/'T'/
        DATA STRUSR(1)/6/,STRUSR(2)/'S'/,STRUSR(3)/'T'/,
        1       STRUSR(4)/'R'/,STRUSR(5)/'U'/,STRUSR(6)/'C'/,
        2       STRUSR(7)/'T'/

C       INPUT LINES UNTIL A STRUCT OR $STRUCT IS FOUND. THE
C       FIRST TOKEN IN THE LINE SHOULD BE TYPE ALPHA.

        IF (DEBUG) TYPE 1010
1010    FORMAT (' IN STPROC')

C       ASSUME SYSTEM TYPE STRUCTURE (USING '$')

        STRTYP = '$'

10      CALL GETLIN
        IF (.NOT. ENDFIL) GOTO 12
        IF (.NOT. TMPIN) RETURN
```

```
              REWIND TMP
              TMPIN = .FALSE.
              ENDFIL = .FALSE.
              GOTO 10

      12      CALL GETTOK
              IF (DEBUG) TYPE 1000, TOKTYP
      1000    FORMAT (' TOKTYP IS ',I2)
              IF (TOKTYP .NE. ALPHA) GOTO 15
              IF (DEBUG) TYPE 1020, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
      1020    FORMAT (' TOKSTG IS ',15A1)
              CALL CMPSTG (TOKSTG, STRSTG)
              IF (STGEQL) GOTO 20
              CALL CMPSTG (TOKSTG, STRUSR)
              IF (STGEQL) GOTO 21

      C       THIS LINE DOES NOT DECLARE A STRUCTURE. JUST OUTPUT IT
      C       TO BOTH BLISS AND MARS AS IS.

      15      CALL OUT2LN
              GOTO 10

      C       USER STRUCTURE DECLARATION RECOGNIZED.  REMEMBER TO CHANGE
      C       THE TAGNAM SO THAT UNDERSCORE IS USED RATHER THAN $.

      21      STRTYP = '_'

      C       STRUCTURE DECLARATION RECOGNIZED. COLLECT THE PREFIX AND
      C       SUFFIX NAMES AND OUTPUT THE STRUCTURE DEFINITION LINES
      C       (TAGNAM(2) IS SET TO INDICATE THE PROPER FORM OF MACRO NAME).

      20      LINTYP = 0
              BLKOUT = .FALSE.
              TAGNAM (2) = STRTYP
              CALL GETSTC
              IF (STROK) GOTO 25
              RETURN

      C       NOW INPUT A LINE AND SEE WHAT TYPE OF DEFINITION IT IS.
      C       THE STRUCTURE VARIABLES HAVE BEEN INITIALIZED BY GETSTC.
      C       (RESET TAGNAM(2) BECAUSE STRUCT INIT. SETS IT TO '$').

      25      TAGNAM (2) = STRTYP
              POSOFF = .TRUE.
              CALL GETLIN
              IF (.NOT. ENDFIL) GOTO 30
              IF (.NOT. TMPIN) RETURN
              REWIND TMP
              TMPIN = .FALSE.
              ENDFIL = .FALSE.
              GOTO 25

      30      CALL GETTOK
              IF (TOKTYP .EQ. MINUS) GOTO 35
              IF (TOKTYP .NE. PLUS) GOTO 45
              GOTO 40
```

```
35      POSOFF = .FALSE.
        INBUF (INPTR - 1) = '+'
        IF (.NOT. TMPIN) GOTO 40
        TYPE 2000
2000    FORMAT (' NEGATIVE DEFINITION IN TMP FILE')
        RETURN

40      CALL GETTOK
45      IF ((TOKTYP .EQ. ALPHA) .AND.
        1      (TOKSTG (1) .EQ. 1)) GOTO 55

50      CALL OUT2LN
        GOTO 25

55      IF (TOKSTG (2) .NE. 'F') GOTO 65
        IF (.NOT. POSOFF) GOTO 60
        IF (FLDLAS) CALL CHKALC

60      LINTYP = FIELD
        CALL PFIELD
        GOTO 25

65      IF (POSOFF) GOTO 70
        TYPE 2010
2010    FORMAT (' INVALID NEGATIVE DEFINITION')
        GOTO 50

70      IF (TOKSTG (2) .EQ. 'E') GOTO 155
        IF (TOKSTG (2) .EQ. 'M') GOTO 160
        IF (TOKSTG (2) .EQ. 'P') GOTO 165
        IF (TOKSTG (2) .EQ. 'O') GOTO 170
        IF (TOKSTG (2) .EQ. 'V') GOTO 140
        IF ((TOKSTG (2) .EQ. 'C') .OR.
        1      (TOKSTG (2) .EQ. 'K')) GOTO 145
        IF (TMPOUT) GOTO 50
        IF (TOKSTG (2) .EQ. 'S') GOTO 135
        IF (TOKSTG (2) .EQ. 'L') GOTO 150
        GOTO 50

C       PROCESS A SUBFIELD DECLARATION

135     LINTYP = SBFLD
        CALL PSBFLD
        GOTO 25

C       PROCESS A BITFIELD DECLARATION

140     LINTYP = VIELD
        CALL PVIELD
        GOTO 25

C       PROCESS A CONSTANT DECLARATION

145           LINTYP = CONST
        CALL PCONST
        GOTO 25
```

```
C       PROCESS A LABEL DECLARATION

150     IF (FLDLAS) CALL CHKALC
        LINTYP = LABELN
        CALL PLABEL
        GOTO 25

C       PROCESS AN END DECLARATION

155     IF (TMPOUT) GOTO 157
        IF (FLDLAS) CALL CHKALC
        CALL OUTSTE
        RETURN

157     CALL OUT2LN
        CALL STANEG
        GOTO 25

C       THIS IS A POSITION MARKING

160     LINTYP = MARKPT
        CALL PMARK
        GOTO 25

C       THIS IS A POINT COMMAND

165     IF (FLDLAS) CALL CHKALC
        LINTYP = POINTD
        CALL PPOINT
        GOTO 25

C       THIS IS A REORIGINING COMMAND

170     IF (FLDLAS) CALL CHKALC
        LINTYP = ORIGIN
        CALL PPOINT
        GOTO 25

        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	862	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	113	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	44	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4918	

ENTRY POINTS

Address	Type	Name
0-00000000		STPROC

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000010	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	2-0000000E	I*2	STRTYP
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR     162  (81)
 6-0000017E  I*2  BLSSIZ      20  (10)
 9-000003D8  I*2  BVALUE     162  (81)
 6-000000EA  I*2  BYTSIZ      20  (10)
 6-000001B4  I*2  COMGBL      12  (6)
 6-000000C4  I*2  COMMAS       4  (2)
 6-00000112  I*2  CONBAS      20  (10)
 6-00000126  I*2  CONINC      20  (10)
 9-0000012C  I*2  CONPRE      32  (16)
 9-0000014C  I*2  CONTAG      32  (16)
 9-000007A6  I*2  CONTEX     198  (9, 11)
 6-000001D6  I*2  CPAREN       4  (2)
 6-000001D0  I*2  CPRCOM       6  (3)
 9-00000170  I*2  CVALUE     162  (81)
 6-0000004C  I*2  DEFEND      20  (10)
 6-00000022  I*2  DEFINI      20  (10)
 6-000001DE  I*2  DOLBIT      26  (13)
 6-000001F8  I*2  DOLBYT      28  (14)
 6-00000036  I*2  DOLDEF      12  (6)
 6-00000214  I*2  DOLFLD      24  (12)
 6-00000016  I*2  DOLGBL      12  (6)
 6-00000234  I*2  DOLLAR       4  (2)
 6-00000090  I*2  DOLVLD      18  (9)
 6-000000DE  I*2  DOTBLK      12  (6)
 6-00000042  I*2  DOTEQS      10  (5)
 6-00000000  I*2  DOTMAC      22  (11)
 6-00000060  I*2  ENDMAC      18  (9)
 6-000000B2  I*2  EQULST      18  (9)
 6-00000102  I*2  EQUTAB      12  (6)
 6-0000007E  I*2  EXCLSP      14  (7)
 6-00000230  I*2  EXPCLO       4  (2)
 6-0000022C  I*2  EXPOPN       4  (2)
 9-000000B8  I*2  FLDNAM      72  (36)
 6-000001B0  I*2  HYPHEN       4  (2)
10-00000000  I*2  INBUF      166  (83)
 6-000000C8  I*2  LANHYP       6  (3)
 3-00000000  L*1  LINE       133  (133)
 6-0000013A  I*2  LITTAB      18  (9)
 6-0000015A  I*2  MACTAB      16  (8)
10-000000AA  I*2  MARBUF     240  (120)
 9-000005C0  I*2  MRBASE     162  (81)
 9-00000704  I*2  MRINCR     162  (81)
 9-00000336  I*2  MVALUE     162  (81)
 3-0000010A  L*1  NAME        32  (32)
 7-00000000  I*2  NEGSGN       4  (2)
 3-0000012A  L*1  NUMSTR     133  (133)
 6-000001DA  I*2  OASIGN       4  (2)
 6-0000016A  I*2  OFFSET      20  (10)
 6-000001A2  I*2  ONESHF       6  (3)
 6-0000010E  I*2  OPAREN       4  (2)
 9-000002CE  I*2  OSBNAM      32  (16)
 9-000002EE  I*2  OTGNAM      32  (16)
 9-0000030E  I*2  OUNTYP      32  (16)
 6-0000019A  I*2  PCTSEM       8  (4)
 3-00000085  L*1  PREFIX     133  (133)
 9-00000052  I*2  PRENAM      32  (16)
 6-000000D4  I*2  RANHYP       6  (3)
```

```
  9-0000021A   I*2   RSTLIN          180   (90)
  6-00000154   I*2   SEMSPC            6   (3)
  6-000000FE   I*2   SPCSTG            4   (2)
  6-000001A8   I*2   SPHYSP            8   (4)
  9-00000092   I*2   STRSTG           32   (16)
  2-00000000   I*2   STRUSR           14   (7)
  6-00000072   I*2   SUFDEF            8   (4)
  9-00000072   I*2   SUFNAM           32   (16)
  6-0000014C   I*2   TABEQS            8   (4)
  6-000000CE   I*2   TABLAN            6   (3)
  6-000001CA   I*2   TABOPR            6   (3)
  6-000001C0   I*2   TABPRN           10   (5)
  6-000000AC   I*2   TABRAN            6   (3)
  6-0000008C   I*2   TABSTG            4   (2)
  9-00000100   I*2   TAGNAM           32   (16)
  9-0000047A   I*2   TMPVAL          162   (81)
  9-00000000   I*2   TOKSTG           80   (40)
  6-00000238   I*2   UNDVLD           18   (9)
  6-0000007A   I*2   UNITYP            4   (2)
  6-00000192   I*2   ZEROSG            4   (2)
  6-000000A2   I*2   ZRLAHY           10   (5)

LABELS

    Address    Label       Address    Label       Address    Label       Address    Label       Address    Label       Address    Label

  0-0000002E   10        0-0000005B   12        0-000000FA   15        0-0000010A   20        0-00000104   21        0-0000012E   25
  0-00000167   30        0-00000182   35        0-000001B3   40        0-000001BA   45        0-000001CC   50        0-000001D6   55
  0-000001FC   60        0-0000020B   65        0-0000022C   70        0-0000028E   135       0-0000029D   140       0-000002AC   145
  0-000002BD   150       0-000002DD   155       0-000002FC   157       0-0000030D   160       0-0000031E   165       0-0000033E   170
  1-0000000D   1000'     1-00000000   1010'     1-0000001D   1020'     1-0000002F   2000'     1-00000052   2010'

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name           Type  Name           Type  Name           Type  Name           Type  Name           Type  Name

        CHKALC               CMPSTG               GETLIN               GETSTC               GETTOK               OUT2LN
        OUTSTE               PCONST               PFIELD               PLABEL               PMARK                PPOINT
        PSBFLD               PVIELD               STANEG
```

```
C       REVISION HISTORY
C               11-04-77        TC      ELIMINATED EXTRANEOUS STATEMENT
C                                       NUMBER.
C

        SUBROUTINE STANEG

C       THIS IS A NEW ROUTINE, VERSION 1.3
C
C       THIS CLOSES THE TMP FILE FOR OUTPUT. REWINDS IT.
C       SETS FLAGS SO THAT INPUT NOW COMES FROM THE TMP
C       FILE. SETS ALL CONTEXT VARIABLES CORRECTLY.
C       OUTPUTS NEGATIVE BLOCK ALLOCATION IF NECESSARY.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        END FILE TMP
        REWIND TMP
        TMPIN = .TRUE.
        BLFOFS = BLFOFS - MNGCNT
        BOFSET = BLFOFS
        FOFSET = BLFOFS
        OUNSIZ = 1
        OUNTYP (2) = 'B'
        IF (MNGCNT .GT. 0) CALL OUTBLK (MNGCNT)
        FLDLAS = .FALSE.
        TMPOUT = .FALSE.
        RETURN
        END
```

```
PROGRAM SECTIONS

    Name                              Bytes   Attributes

  0 $CODE                               107   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
  2 $LOCAL                                8   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG
  3 TEXT                                431   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  4 VARS                                 12   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  5 LOG                                  30   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  6 STGS                                586   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  7 MORSTG                                4   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  8 CHECKS                                2   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  9 PARSE                              2160   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 10 FILES                               654   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 11 SPCHR                                 6   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 12 LUNS                                 14   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG

    Total Space Allocated              4014

ENTRY POINTS

    Address  Type  Name

  0-00000000       STANEG

VARIABLES

    Address  Type  Name             Address  Type  Name             Address  Type  Name             Address  Type  Name

  4-00000006  I*4  BINVAL       11-00000000  I*2  BLANK         9-00000212  I*2  BLBITS        9-00000332  I*2  BLFOFS
 12-00000002  I*2  BLI          10-0000028C  I*2  BLIPTR        5-00000012  L*2  BLKOUT        9-0000012A  I*2  BOFSET
  9-0000016C  I*2  CBASE         9-0000016E  I*2  CINCR         4-00000004  I*2  COL           5-00000016  L*2  CONEXP
  8-00000000  I*2  DEBUG         5-00000014  L*2  ENDEXP        5-00000000  L*2  ENDFIL       11-00000004  I*2  EOLCH
 12-00000008  I*2  ERR           5-00000002  L*2  ERROR         5-0000000E  L*2  ERROUT        5-00000010  L*2  FLDLAS
  9-00000122  I*2  FOFSET        9-000000B6  I*2  FSIGN         9-000000B4  I*2  FSIZ         12-00000000  I*2  INP
 10-000000AB  I*2  INPLIN       10-000000A6  I*2  INPTR         9-0000051C  I*2  LASLIN        9-00000216  I*2  LFDSIZ
  4-0000000A  I*2  LINELEN       9-00000126  I*2  LINTYP        9-00000218  I*2  LPTR          9-00000214  I*2  LSBSIZ
 12-00000004  I*2  MAR          10-0000019A  I*2  MARPTR       12-0000000C  I*2  MAS           9-0000086E  I*2  MNGCNT
  9-0000086C  I*2  NEGCNT        4-00000000  I*4  NUM           9-00000334  I*2  OBBITS        9-0000032E  I*2  OFSIZ
  9-00000330  I*2  OUNSIZ        5-00000018  L*2  POSOFF        5-0000000C  L*2  SMASK         9-00000120  I*2  SOFSET
  5-00000004  L*2  STGEQL        5-00000006  L*2  STROK        11-00000002  I*2  TAB          12-00000006  I*2  TMP
  5-0000001C  L*2  TMPIN         5-0000001A  L*2  TMPOUT        9-00000050  I*2  TOKTYP       12-0000000A  I*2  TTY
  5-00000008  L*2  UNDOK         9-000000B2  I*2  UNISIZ        5-0000000A  L*2  VMASK         9-00000124  I*2  VOFSET
  9-00000128  I*2  VSIZ

ARRAYS

    Address  Type  Name                 Bytes  Dimensions

  6-000000DA  I*2  AMASK                    4  (2)
  6-00000196  I*2  ASIGN                    4  (2)
  9-0000051E  I*2  BLBASE                 162  (81)
 10-0000019C  I*2  BLIBUF                 240  (120)
  9-00000662  I*2  BLINCR                 162  (81)
```

```
 6-0000017E  I*2   BLSSIZ              20   (10)
 9-000003D8  I*2   BVALUE             162   (81)
 6-000000EA  I*2   BYTSIZ              20   (10)
 6-000001B4  I*2   COMGBL              12   (6)
 6-000000C4  I*2   COMMAS               4   (2)
 6-00000112  I*2   CONBAS              20   (10)
 6-00000126  I*2   CONINC              20   (10)
 9-0000012C  I*2   CONPRE              32   (16)
 9-0000014C  I*2   CONTAG              32   (16)
 9-000007A6  I*2   CONTEX             198   (9, 11)
 6-000001D6  I*2   CPAREN               4   (2)
 6-000001D0  I*2   CPRCOM               6   (3)
 9-00000170  I*2   CVALUE             162   (81)
 6-0000004C  I*2   DEFEND              20   (10)
 6-00000022  I*2   DEFINI              20   (10)
 6-000001DE  I*2   DOLBIT              26   (13)
 6-000001F8  I*2   DOLBYT              28   (14)
 6-00000036  I*2   DOLDEF              12   (6)
 6-00000214  I*2   DOLFLD              24   (12)
 6-00000016  I*2   DOLGBL              12   (6)
 6-00000234  I*2   DOLLAR               4   (2)
 6-00000090  I*2   DOLVLD              18   (9)
 6-000000DE  I*2   DOTBLK              12   (6)
 6-00000042  I*2   DOTEQS              10   (5)
 6-00000000  I*2   DOTMAC              22   (11)
 6-00000060  I*2   ENDMAC              18   (9)
 6-000000B2  I*2   EQULST              18   (9)
 6-00000102  I*2   EQUTAB              12   (6)
 6-0000007E  I*2   EXCLSP              14   (7)
 6-00000230  I*2   EXPCLO               4   (2)
 6-0000022C  I*2   EXPOPN               4   (2)
 9-000000B8  I*2   FLDNAM              72   (36)
 6-000001B0  I*2   HYPHEN               4   (2)
10-00000000  I*2   INBUF              166   (83)
 6-000000C8  I*2   LANHYP               6   (3)
 3-00000000  L*1   LINE               133   (133)
 6-0000013A  I*2   LITTAB              18   (9)
 6-0000015A  I*2   MACTAB              16   (8)
10-000000AA  I*2   MARBUF             240   (120)
 9-000005C0  I*2   MRBASE             162   (81)
 9-00000704  I*2   MRINCR             162   (81)
 9-00000336  I*2   MVALUE             162   (81)
 3-0000010A  L*1   NAME                32   (32)
 7-00000000  I*2   NEGSGN               4   (2)
 3-0000012A  L*1   NUMSTR             133   (133)
 6-000001DA  I*2   OASIGN               4   (2)
 6-0000016A  I*2   OFFSET              20   (10)
 6-000001A2  I*2   ONESHF               6   (3)
 6-0000010E  I*2   OPAREN               4   (2)
 9-000002CE  I*2   OSBNAM              32   (16)
 9-000002EE  I*2   OTGNAM              32   (16)
 9-0000030E  I*2   OUNTYP              32   (16)
 6-0000019A  I*2   PCTSEM               8   (4)
 3-00000085  L*1   PREFIX             133   (133)
 9-00000052  I*2   PRENAM              32   (16)
 6-000000D4  I*2   RANHYP               6   (3)
 9-0000021A  I*2   RSTLIN             180   (90)
```

```
6-00000154  I*2  SEMSPC      6  (3)
6-000000FE  I*2  SPCSTG      4  (2)
6-000001A8  I*2  SPHYSP      8  (4)
9-00000092  I*2  STRSTG     32  (16)
6-00000072  I*2  SUFDEF      8  (4)
9-00000072  I*2  SUFNAM     32  (16)
6-0000014C  I*2  TABEQS      8  (4)
6-000000CE  I*2  TABLAN      6  (3)
6-000001CA  I*2  TABOPR      6  (3)
6-000001C0  I*2  TABPRN     10  (5)
6-000000AC  I*2  TABRAN      6  (3)
6-0000008C  I*2  TABSTG      4  (2)
9-00000100  I*2  TAGNAM     32  (16)
9-0000047A  I*2  TMPVAL    162  (81)
9-00000000  I*2  TOKSTG     80  (40)
6-00000238  I*2  UNDVLD     18  (9)
6-0000007A  I*2  UNITYP      4  (2)
6-00000192  I*2  ZEROSG      4  (2)
6-000000A2  I*2  ZRLAHY     10  (5)
```

FUNCTIONS AND SUBROUTINES REFERENCED

```
Type  Name

      OUTBLK
```

```
        SUBROUTINE PLABEL

C       THIS ROUTINE IS CALLED WHEN A LINE HAS BEEN RECOGNIZED
C       AS A LABEL DEFINITION. THE IMPLIC ARGUMENT INPTR IS THE OFFSET
C       TO THE NEXT CHARACTER TO BE READ IN THE INPUT LINE.

C       PLABEL COLLECTS THE NAME OF THE LABEL BEING DEFINED AND
C       THEN OUTPUTS APPROPRIATE STATEMENTS TO THE BLISS AND MARS
C       TRANSLATED FILES.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        CALL GETTOK
        IF (TOKTYP .NE. ALPHA) GOTO 100
        CALL MOVSTG (TOKSTG, FLDNAM)
        TAGNAM (3) = 'C'
        INPTR = INPTR - 1
        CALL MDOUTL (INPTR)
        CALL BDOUTL (INPTR)
        RETURN

C       ERROR REPORTING

100     TYPE 1000
1000    FORMAT (' INVALID LABEL DEFINITION')
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	88	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	28	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	20	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG

Total Space Allocated 4035

```
ENTRY POINTS

    Address  Type  Name

  0-00000000       PLABEL

VARIABLES

    Address  Type  Name             Address  Type  Name             Address  Type  Name             Address  Type  Name

  4-00000006  I*4  BINVAL        11-00000000  I*2  BLANK          9-00000212  I*2  BLBITS          9-00000332  I*2  BLFOFS
 12-00000002  I*2  BLI           10-0000028C  I*2  BLIPTR         5-00000012  L*2  BLKOUT          9-0000012A  I*2  BOFSET
  9-0000016C  I-2  CBASE          9-0000016E  I*2  CINCR          4-00000004  I*2  COL             5-00000016  L*2  CONEXP
  8-00000000  I*2  DEBUG          5-00000014  L*2  ENDEXP         5-00000000  L*2  ENDFIL         11-00000004  I*2  EOLCH
 12-00000008  I*2  ERR            5-00000002  L*2  ERROR          5-0000000E  L*2  ERROUT          5-00000010  L*2  FLDLAS
  9-00000122  I*2  FOFSET         9-000000B6  I*2  FSIGN          9-000000B4  I*2  FSIZ           12-00000000  I*2  INP
 10-000000A8  I*2  INPLIN        10-000000A6  I*2  INPTR          9-0000051C  I*2  LASLIN          9-00000216  I*2  LFDSIZ
  4-0000000A  I*2  LINELEN        9-00000126  I*2  LINTYP         9-00000218  I*2  LPTR            9-00000214  I*2  LSBSIZ
 12-00000004  I*2  MAR           10-0000019A  I*2  MARPTR        12-0000000C  I*2  MAS             9-0000086E  I*2  MNGCNT
  9-0000086C  I*2  NEGCNT         4-00000000  I*4  NUM            9-00000334  I*2  OBBITS          9-0000032E  I*2  OFSIZ
  9-00000330  I*2  OUNSIZ         5-00000018  L*2  POSOFF         5-0000000C  L*2  SMASK           9-00000120  I*2  SOFSET
  5-00000004  L*2  STGEQL         5-00000006  L*2  STROK         11-00000002  I*2  TAB            12-00000006  I*2  TMP
  5-0000001C  L*2  TMPIN          5-0000001A  L*2  TMPOUT         9-00000050  I*2  TOKTYP         12-0000000A  I*2  TTY
  5-00000008  L*2  UNDOK          9-000000B2  I*2  UNISIZ         5-0000000A  L*2  VMASK           9-00000124  I*2  VOFSET
  9-00000128  I*2  VSIZ

ARRAYS

    Address  Type  Name                Bytes  Dimensions

  6-000000DA  I*2  AMASK                   4  (2)
  6-00000196  I*2  ASIGN                   4  (2)
  9-0000051E  I*2  BLBASE                162  (81)
 10-0000019C  I*2  BLIBUF                240  (120)
  9-00000662  I*2  BLINCR                162  (81)
  6-0000017E  I*2  BLSSIZ                 20  (10)
  9-000003D8  I*2  BVALUE                162  (81)
  6-000000EA  I*2  BYTSIZ                 20  (10)
  6-000001B4  I*2  COMGBL                 12  (6)
  6-000000C4  I*2  COMMAS                  4  (2)
  6-00000112  I*2  CONBAS                 20  (10)
  6-00000126  I*2  CONINC                 20  (10)
  9-0000012C  I*2  CONPRE                 32  (16)
  9-0000014C  I*2  CONTAG                 32  (16)
  9-000007A6  I*2  CONTEX                198  (9, 11)
  6-000001D6  I*2  CPAREN                  4  (2)
  6-000001D0  I*2  CPRCOM                  6  (3)
  9-00000170  I*2  CVALUE                162  (81)
  6-0000004C  I*2  DEFEND                 20  (10)
  6-00000022  I*2  DEFINI                 20  (10)
  6-000001DE  I*2  DOLBIT                 26  (13)
  6-000001F8  I*2  DOLBYT                 28  (14)
  6-00000036  I*2  DOLDEF                 12  (6)
  6-00000214  I*2  DOLFLD                 24  (12)
  6-00000016  I*2  DOLGBL                 12  (6)
```

```
 6-00000234   I*2    DOLLAR                    4   (2)
 6-00000090   I*2    DOLVLD                   18   (9)
 6-000000DE   I*2    DOTBLK                   12   (6)
 6-00000042   I*2    DOTEQS                   10   (5)
 6-00000000   I*2    DOTMAC                   22   (11)
 6-00000060   I*2    ENDMAC                   18   (9)
 6-000000B2   I*2    EQULST                   18   (9)
 6-00000102   I*2    EQUTAB                   12   (6)
 6-0000007E   I*2    EXCLSP                   14   (7)
 6-00000230   I*2    EXPCLO                    4   (2)
 6-0000022C   I*2    EXPOPN                    4   (2)
 9-000000B8   I*2    FLDNAM                   72   (36)
 6-000001B0   I*2    HYPHEN                    4   (2)
10-00000000   I*2    INBUF                   166   (83)
 6-000000C8   I*2    LANHYP                    6   (3)
 3-00000000   L*1    LINE                    133   (133)
 6-0000013A   I*2    LITTAB                   18   (9)
 6-0000015A   I*2    MACTAB                   16   (8)
10-000000AA   I*2    MARBUF                  240   (120)
 9-000005C0   I*2    MRBASE                  162   (81)
 9-00000704   I*2    MRINCR                  162   (81)
 9-00000336   I*2    MVALUE                  162   (81)
 3-0000010A   L*1    NAME                     32   (32)
 7-00000000   I*2    NEGSGN                    4   (2)
 3-0000012A   L*1    NUMSTR                  133   (133)
 6-000001DA   I*2    OASIGN                    4   (2)
 6-0000016A   I*2    OFFSET                   20   (10)
 6-000001A2   I*2    ONESHF                    6   (3)
 6-0000010E   I*2    OPAREN                    4   (2)
 9-000002CE   I*2    OSBNAM                   32   (16)
 9-000002EE   I*2    OTGNAM                   32   (16)
 9-0000030E   I*2    OUNTYP                   32   (16)
 6-0000019A   I*2    PCTSEM                    8   (4)
 3-00000085   L*1    PREFIX                  133   (133)
 9-00000052   I*2    PRENAM                   32   (16)
 6-000000D4   I*2    RANHYP                    6   (3)
 9-0000021A   I*2    RSTLIN                  180   (90)
 6-00000154   I*2    SEMSPC                    6   (3)
 6-000000FE   I*2    SPCSTG                    4   (2)
 6-000001A8   I*2    SPHYSP                    8   (4)
 9-00000092   I*2    STRSTG                   32   (16)
 6-00000072   I*2    SUFDEF                    8   (4)
 9-00000072   I*2    SUFNAM                   32   (16)
 6-0000014C   I*2    TABEQS                    8   (4)
 6-000000CE   I*2    TABLAN                    6   (3)
 6-000001CA   I*2    TABOPR                    6   (3)
 6-000001C0   I*2    TABPRN                   10   (5)
 6-000000AC   I*2    TABRAN                    6   (3)
 6-0000008C   I*2    TABSTG                    4   (2)
 9-00000100   I*2    TAGNAM                   32   (16)
 9-0000047A   I*2    TMPVAL                  162   (81)
 9-00000000   I*2    TOKSTG                   80   (40)
 6-00000238   I*2    UNDVLD                   18   (9)
 6-0000007A   I*2    UNITYP                    4   (2)
 6-00000192   I*2    ZEROSG                    4   (2)
 6-000000A2   I*2    ZRLAHY                   10   (5)
```

LABELS

Address	Label	Address	Label
0-00000040	100	1-00000000	1000'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		GETTOK		MDOUTL		MOVSTG

```
0001
```

```
        SUBROUTINE GETUND
C       ANALYZES AN ALPHA STRING THAT CLAIMS TO BE A UNIT
C       DESCRIPTOR. IF IT IS VALID, STORES THE LETTER
C       IN UNITYP AND THE APPROPRIATE SIZE VALUE IN UNISIZ.
C       ALSO COMPOSES A TAG NAME STRING FROM A DOLLAR SIGN FOLLOWED
C       BY THE UNIT DESCRIPTOR LETTER, FOLLOWED BY AN UNDERSCORE.
C       THE IMPLICIT ARGUMENT IS THE COUNTED STRING, TOKSTG, THAT IS
C       THE UNIT DESCRIPTOR LETTER. A LOGICAL VARIABLE IS
C       SET TO TRUE OR FALSE ACCORDING TO THE VALIDITY OF THE
C       ARGUMENT.
        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
C       IF (DEBUG) TYPE 500
500     FORMAT (' IN UNIT DESCRIPTOR ANALYZER')
        IF (TOKSTG (1) .NE. 1) GOTO 100
        UNITYP (2) = TOKSTG (2)
        TAGNAM (3) = TOKSTG (2)
        IF (TOKSTG (2) .EQ. 'W') GOTO 15
        IF ((TOKSTG (2) .EQ. 'L')  .OR. (TOKSTG (2) .EQ. 'A')) GOTO 20
        IF (TOKSTG (2) .EQ. 'Q') GOTO 25
        UNISIZ = 1
        UNITYP (2) = 'B'
        BLBITS = 8
        GOTO 30
15      UNISIZ = 2
        BLBITS = 16
        GOTO 30
20      UNISIZ = 4
        UNITYP (2) = 'L'
        BLBITS = 32
        GOTO 30
25      UNISIZ = 8
        BLBITS = 64
30      UNDOK = .TRUE.
        RETURN
100     UNDOK = .FALSE.
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	148	PIC CON REL LCL SHR EXE RD NOWRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4047	

ENTRY POINTS

Address	Type	Name
0-00000000		GETUND

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)

```
  9-000003D8   I*2   BVALUE          162  (81)
  6-000000EA   I*2   BYTSIZ           20  (10)
  6-000001B4   I*2   COMGBL           12  (6)
  6-000000C4   I*2   COMMAS            4  (2)
  6-00000112   I*2   CONBAS           20  (10)
  6-00000126   I*2   CONINC           20  (10)
  9-0000012C   I*2   CONPRE           32  (16)
  9-0000014C   I*2   CONTAG           32  (16)
  9-000007A6   I*2   CONTEX          198  (9, 11)
  6-000001D6   I*2   CPAREN            4  (2)
  6-000001D0   I*2   CPRCOM            6  (3)
  9-00000170   I*2   CVALUE          162  (81)
  6-0000004C   I*2   DEFEND           20  (10)
  6-00000022   I*2   DEFINI           20  (10)
  6-000001DE   I*2   DOLBIT           26  (13)
  6-000001F8   I*2   DOLBYT           28  (14)
  6-00000036   I*2   DOLDEF           12  (6)
  6-00000214   I*2   DOLFLD           24  (12)
  6-00000016   I*2   DOLGBL           12  (6)
  6-00000234   I*2   DOLLAR            4  (2)
  6-00000090   I*2   DOLVLD           18  (9)
  6-000000DE   I*2   DOTBLK           12  (6)
  6-00000042   I*2   DOTEQS           10  (5)
  6-00000000   I*2   DOTMAC           22  (11)
  6-00000060   I*2   ENDMAC           18  (9)
  6-000000B2   I*2   EQULST           18  (9)
  6-00000102   I*2   EQUTAB           12  (6)
  6-0000007E   I*2   EXCLSP           14  (7)
  6-00000230   I*2   EXPCLO            4  (2)
  6-0000022C   I*2   EXPOPN            4  (2)
  9-000000B8   I*2   FLDNAM           72  (36)
  6-000001B0   I*2   HYPHEN            4  (2)
 10-00000000   I*2   INBUF           166  (83)
  6-000000C8   I*2   LANHYP            6  (3)
  3-00000000   L*1   LINE            133  (133)
  6-0000013A   I*2   LITTAB           18  (9)
  6-0000015A   I*2   MACTAB           16  (8)
 10-000000AA   I*2   MARBUF          240  (120)
  9-000005C0   I*2   MRBASE          162  (81)
  9-00000704   I*2   MRINCR          162  (81)
  9-00000336   I*2   MVALUE          162  (81)
  3-0000010A   L*1   NAME             32  (32)
  7-00000000   I*2   NEGSGN            4  (2)
  3-0000012A   L*1   NUMSTR          133  (133)
  6-000001DA   I*2   OASIGN            4  (2)
  6-0000016A   I*2   OFFSET           20  (10)
  6-000001A2   I*2   ONESHF            6  (3)
  6-0000010E   I*2   OPAREN            4  (2)
  9-000002CE   I*2   OSBNAM           32  (16)
  9-000002EE   I*2   OTGNAM           32  (16)
  9-0000030E   I*2   OUNTYP           32  (16)
  6-0000019A   I*2   PCTSEM            8  (4)
  3-00000085   L*1   PREFIX          133  (133)
  9-00000052   I*2   PRENAM           32  (16)
  6-000000D4   I*2   RANHYP            6  (3)
  9-0000021A   I*2   RSTLIN          180  (90)
  6-00000154   I*2   SEMSPC            6  (3)
```

```
6-000000FE  I*2  SPCSTG     4  (2)
6-000001A8  I*2  SPHYSP     8  (4)
9-00000092  I*2  STRSTG    32  (16)
6-00000072  I*2  SUFDEF     8  (4)
9-00000072  I*2  SUFNAM    32  (16)
6-0000014C  I*2  TABEQS     8  (4)
6-000000CE  I*2  TABLAN     6  (3)
6-000001CA  I*2  TABOPR     6  (3)
6-000001C0  I*2  TABPRN    10  (5)
6-000000AC  I*2  TABRAN     6  (3)
6-0000008C  I*2  TABSTG     4  (2)
9-00000100  I*2  TAGNAM    32  (16)
9-0000047A  I*2  TMPVAL   162  (81)
9-00000000  I*2  TOKSTG    80  (40)
6-00000238  I*2  UNDVLD    18  (9)
6-0000007A  I*2  UNITYP     4  (2)
6-00000192  I*2  ZEROSG     4  (2)
6-000000A2  I*2  ZRLAHY    10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000051	15	0-0000005D	20	0-00000076	25	0-00000085	30	0-0000008D	100	**	500'

```
C       REVISION HISTORY:
C               23-03-77        CP      IF SAVING INPUT IN TMP FILE, SAVE
C                                       EACH LINE OF A BITFIELD DECLARATION,
C                                       AND RETURN AFTER THE CLOSING RIGHT
C                                       ANGLE BRACKET.
C
C               22-04-77        TC      CALL BDOUTL AT START AND
C                                       END TO OUTPUT COMMENTS INTO
C                                       THE BLISS FILE.

        SUBROUTINE PVIELD

C       THIS ROUTINE IS CALLED WHEN ALINE HAS BEEN RECOGNIZED
C       AS A BITFIELD DEFINITION. THE IMPLICIT ARGUMENT
C       INPTR IS THE OFFSET TO THE NEXT CHARACTER IN THE INPUT LINE.

C       PVIELD COLLECTS THE MASK FLAG FOR THE SET OF BITFIELDS TO
C       BE DEFINED. THEN IT COLLECTS A BITFIELD DEFINITION AT A TIME.
C       EACH BITFIELD DEFINITION CAN HAVE A NAME, SIZE, SIGN, AND
C       INDIVIDUAL MASK. EACH BITFIELD IS PROCESSED AND OUTPUT.

C       WHEN A SINGLE LEADING RIGHT ANGLE BRACKET IS RECOGNIZED,
C       PROCESSING OF THE VIELD IS COMPLETE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       INITIALIZE MASK AND SIGN ARGUMENTS

        VMASK = .FALSE.
        AMASK (1) = 0
        ASIGN (1) = 1

        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
500     FORMAT (' ',90A1)
        IF (TOKTYP .NE. LANGLE) GOTO 100
        IF (TMPOUT) GOTO 50
        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
        IF (TOKTYP .NE. ALPHA) GOTO 10
        IF (TOKSTG (1) .NE. 1) GOTO 110
        IF (TOKSTG (2) .NE. 'M') GOTO 110
        VMASK = .TRUE.
        AMASK (1) = 1
        INPTR = INPTR - 1
        GOTO 12

C       THE POINTER INTO THE INPUT LINE IS TOO FAR ALONG, BACK IT
C       UP ONE POSITION.

10      INPTR = LASTNB (INPTR - 2)

C       NOW OUTPUT THE LINE THAT INITIATES A BITFIELD DEFINITION LIST.

12      VOFSET = 0
        TAGNAM (3) = 'V'
        CALL MDOUTL (INPTR)
```

```
        CALL BDOUTL (INPTR)

C       INITIALIZE VARIABLES, AND INPUT A LINE.

15      VSIZ = 0
        FSIGN = 0
        SMASK = .FALSE.
        IF (.NOT. VMASK) AMASK (1) = 0
        ASIGN (2) = '0'
        DO 20 I = 1, 15
        FLDNAM (I) = 0
20      CONTINUE

21      CALL GETLIN
        IF (.NOT. ENDFIL) GOTO 22
        RETURN

C       CHECK THE FIRST TOKEN. IF IT IS A RIGHT ANGLE,
C       THIS IS THE LAST STATEMENT IN THE BITFIELD DEFINITIONS.

22      CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
        IF (DEBUG) TYPE 510, TOKTYP
510     FORMAT (' TOKTYP IS ',I3)
        IF (TOKTYP .EQ. RANGLE) GOTO 90
        IF (TMPOUT) GOTO 50
        LINTYP = BITFNM

C       SEE IF THIS HAS A BITFIELD NAME OR IS END OF LINE

        IF (TOKTYP .EQ. ALPHA) GOTO 24
        IF ((TOKTYP .NE. SEMI) .AND.
        1       (TOKTYP .NE. EOL)) GOTO 25

C       THIS LINE IS BLANK OR ONLY COMMENTS

        CALL OUTBCL
        GOTO 21

C       THIS IS A BITFIELD NAME DEFINITION

24      CALL MOVSTG (TOKSTG, FLDNAM)
        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C       NOW LOOK FOR THE SIZE FIELD.

25      IF (DEBUG) TYPE 510, TOKTYP
        IF (TOKTYP .NE. COMMA) GOTO 40
        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
        IF (TOKTYP .NE. NUMBER) GOTO 30
        VSIZ = INTVAL (TOKSTG)
        IF (VSIZ .EQ. - 1) GOTO 120
        CALL GETTOK
        IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
```

```
C        NOW CHECK FOR A SIGN FIELD.

30       IF (DEBUG) TYPE 510, TOKTYP
         IF (TOKTYP .NE. COMMA) GOTO 40
         CALL GETTOK
         IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
         IF (TOKTYP .NE. ALPHA) GOTO 35
         IF (TOKSTG (1) .NE. 1) GOTO 130
         IF (TOKSTG (2) .NE. 'S') GOTO 130
         FSIGN = 1
         ASIGN (2) = '1'
         CALL GETTOK
         IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)

C        FINALLY, LOOK FOR A MASK ARGUMENT.

35       IF (DEBUG) TYPE 510, TOKTYP
         IF (TOKTYP .NE. COMMA) GOTO 40
         CALL GETTOK
         IF (DEBUG) TYPE 500, (TOKSTG (I), I = 2, TOKSTG (1) + 1)
         IF (TOKTYP .NE. ALPHA) GOTO 40
         IF (TOKSTG (1) .NE. 1) GOTO 110
         IF (TOKSTG (2) .NE. 'M') GOTO 110
         SMASK = .TRUE.
         AMASK (1) = 1
         INPTR = INPTR - 1
         GOTO 45

C        THE OFFSET INTO THE INPUT LINE IS ONE CHARACTER OFF
C        BECAUSE SOME TRAILING OPTIONAL ARGUMENTS WERE OMITTED. BACK UP
C        THE OFFSET COUNT BY ONE.

40       INPTR = LASTNB (INPTR - 2)

C        ARGUMENTS ARE ALL COLLECTED. OUTPUT THE LINE.

45       CALL MDOUTL (INPTR)
         CALL BDOUTL (INPTR)
         IF (VSIZ .EQ. 0) VOFSET = VOFSET + 1
         IF (VSIZ .GT. 0) VOFSET = VOFSET + VSIZ
         GOTO 15

C        IF OUTPUTTING TO TMP FILE, JUST DO IT, THEN GO FOR NEXT LINE.

50       CALL OUT2LN
         GOTO 21

C        OUTPUT THE FINAL CLOSING OF THE BITFIELD DEFINITIONS.

90       IF (TMPOUT) GOTO 95
         LINTYP = VIELDE
         CALL MDOUTL (INPTR)
         CALL BDOUTL (INPTR)
         RETURN

C        OUTPUT THE FINAL CLOSING LINE TO TMP FILE AND RETURN.

```

```
95      CALL OUT2LN
        RETURN

C       ERROR REPORTING

100     TYPE 1000
1000    FORMAT (' INVALID BITFIELD DEFINITION')
        RETURN

110     TYPE 1100
1100    FORMAT (' INVALID MASK SPECIFICATION')
        RETURN

120     TYPE 1200
1200    FORMAT (' INVALID SIZE ARGUMENT IN BITFIELD DEFINITION')
        RETURN

130     TYPE 1300
1300    FORMAT (' INVALID SIGN ARGUMENT IN BITFIELD DEFINITION')
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes							
0	$CODE	1390	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	181	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	56	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	5526									

ENTRY POINTS

Address	Type	Name
0-00000000		PVIELD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)

```
 6-00000102   I*2   EQUTAB      12   (6)
 6-0000007E   I*2   EXCLSP      14   (7)
 6-00000230   I*2   EXPCLO       4   (2)
 6-0000022C   I*2   EXPOPN       4   (2)
 9-000000B8   I*2   FLDNAM      72   (36)
 6-000001B0   I*2   HYPHEN       4   (2)
10-00000000   I*2   INBUF      166   (83)
 6-000000C8   I*2   LANHYP       6   (3)
 3-00000000   L*1   LINE       133   (133)
 6-0000013A   I*2   LITTAB      18   (9)
 6-0000015A   I*2   MACTAB      16   (8)
10-000000AA   I*2   MARBUF     240   (120)
 9-000005C0   I*2   MRBASE     162   (81)
 9-00000704   I*2   MRINCR     162   (81)
 9-00000336   I*2   MVALUE     162   (81)
 3-0000010A   L*1   NAME        32   (32)
 7-00000000   I*2   NEGSGN       4   (2)
 3-0000012A   L*1   NUMSTR     133   (133)
 6-000001DA   I*2   OASIGN       4   (2)
 6-0000016A   I*2   OFFSET      20   (10)
 6-000001A2   I*2   ONESHF       6   (3)
 6-0000010E   I*2   OPAREN       4   (2)
 9-000002CE   I*2   OSBNAM      32   (16)
 9-000002EE   I*2   OTGNAM      32   (16)
 9-0000030E   I*2   OUNTYP      32   (16)
 6-0000019A   I*2   PCTSEM       8   (4)
 3-00000085   L*1   PREFIX     133   (133)
 9-00000052   I*2   PRENAM      32   (16)
 6-000000D4   I*2   RANHYP       6   (3)
 9-0000021A   I*2   RSTLIN     180   (90)
 6-00000154   I*2   SEMSPC       6   (3)
 6-000000FE   I*2   SPCSTG       4   (2)
 6-000001A8   I*2   SPHYSP       8   (4)
 9-00000092   I*2   STRSTG      32   (16)
 6-00000072   I*2   SUFDEF       8   (4)
 9-00000072   I*2   SUFNAM      32   (16)
 6-0000014C   I*2   TABEQS       8   (4)
 6-000000CE   I*2   TABLAN       6   (3)
 6-000001CA   I*2   TABOPR       6   (3)
 6-000001C0   I*2   TABPRN      10   (5)
 6-000000AC   I*2   TABRAN       6   (3)
 6-0000008C   I*2   TABSTG       4   (2)
 9-00000100   I*2   TAGNAM      32   (16)
 9-0000047A   I*2   TMPVAL     162   (81)
 9-00000000   I*2   TOKSTG      80   (40)
 6-00000238   I*2   UNDVLD      18   (9)
 6-0000007A   I*2   UNITYP       4   (2)
 6-00000192   I*2   ZEROSG       4   (2)
 6-000000A2   I*2   ZRLAHY      10   (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000EF	10	0-0000010C	12	0-00000127	15	**	20	0-00000167	21	0-00000177	22
0-0000021B	24	0-00000262	25	0-0000032E	30	0-000003F9	35	0-0000048E	40	0-000004AB	45
0-000004DC	50	0-000004E6	90	0-00000506	95	0-0000050E	100	0-00000526	110	0-0000053E	120
0-00000556	130	1-00000000	500'	1-00000008	510'	1-00000018	1000'	1-00000037	1100'	1-00000055	1200'
1-00000085	1300'										

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	BDOUTL		GETLIN		GETTOK	I*2	INTVAL	I*2	LASTNB		MDOUTL
	MOVSTG		OUT2LN		OUTBCL						

```
C       Version V02-001
C
C************************************************************************
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C************************************************************************
C
C       REVISION HISTORY:
C               08-03-82                JIM TEAGUE # JWT0027
C                                       ADD SIZE SYMBOLS FOR FIELDS GREATER
C                                       THAN 4 BYTES LONG.
C
C               **** BEWARE ***         THESE CAN POSSIBLY CAUSE CONFLICTS
C                                       WITH BIT FIELD SIZES.
C
C
C               19-02-80                TIM HALVORSEN
C                                       IF USER STRUCTURE, USE _VIELD RATHER
C                                       THAN $VIELD.
        SUBROUTINE MDOUTL (PTR)

C       OUTPUTS A LINE TO THE TRANSLATED MARS FILE.
C       THE ARGUMENT PTR POINTS TO THE LOGICAL END
C       OF LINE IN THE INPUT FILE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER PTR

        IF (DEBUG) TYPE 290
290     FORMAT (' IN MARS OUTPUT')
        IF (LINTYP .EQ. FIELD) GOTO 10
        IF (LINTYP .EQ. SBFLD) GOTO 20
        IF (LINTYP .EQ. VIELD) GOTO 30
        IF (LINTYP .EQ. VIELDE) GOTO 35
        IF (LINTYP .EQ. CONST) GOTO 40
        IF (LINTYP .EQ. CONSTE) GOTO 45
        IF (LINTYP .EQ. BITFNM) GOTO 50
        IF (LINTYP .EQ. CONSTN) GOTO 60
        IF (LINTYP .EQ. SCONST) GOTO 70
        IF (LINTYP .EQ. MARKPT) GOTO 80
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              IF (LINTYP .EQ. ORIGIN) GOTO 90
              IF (LINTYP .NE. LABELN) GOTO 100

C             THIS IS A LABEL DEFINITION TO BE OUTPUT. THE FORMAT IS
C             '$DEF (TAB) PRENAM\TAGNAM\FLDNAM
C              $DEF (TAB) PRENAM\KTAGNAM\FLDNAM' FOLLOWED BY THE REST OF THE
C             INPUT LINE, WHERE KTAGNAM IS THE TAGNAM WITH THE SECOND
C             CHARACTER CHANGED TO A 'K'.

              IF (DEBUG) TYPE 490
490           FORMAT (' LABEL OUTPUT')
              CALL PUTMAR (DOLDEF)
              CALL PUTMAR (PRENAM)
              CALL PUTMAR (TAGNAM)
              CALL PUTMAR (FLDNAM)
              CALL OUTMAR
              TAGNAM(3) = 'K'
              CALL PUTMAR (DOLDEF)
              CALL PUTMAR (PRENAM)
              CALL PUTMAR (TAGNAM)
              CALL PUTMAR (FLDNAM)
              CALL PUTMAR (TABSTG)
              CALL PUTMAR (TABSTG)
              INBUF (PTR) = INBUF (1) - PTR + 1
              CALL PUTMAR (INBUF (PTR))
              IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
300           FORMAT (' ',90A1)
              CALL OUTMAR
              RETURN

C             THIS IS A FIELD DEFINITION TO BE OUTPUT. THE FORMAT IS
C             '$DEF (TAB) PRENAM\TAGNAM\FLDNAM (TAB) .BLK\UNITYP'
C             FOLLOWED BY THE REST OF THE LINE.

10            IF (DEBUG) TYPE 500
500           FORMAT (' FIELD OUTPUT')
              CALL NUMSTG (BYTSIZ, OFSIZ)
              IF (OSBNAM (1) .EQ. 0) GOTO 11
              CALL PUTMAR (DOLDEF)
              CALL PUTMAR (PRENAM)
              CALL PUTMAR (OTGNAM)
              CALL PUTMAR (OSBNAM)
              GOTO 12

C             THIS IS JUST ALLOCATION OF SPACE, WITH NO ACCOMPANYING
C             FIELD NAME.

11            CALL PUTMAR (TABSTG)
              CALL PUTMAR (TABSTG)
12            IF (.NOT. BLKOUT) GOTO 13
              CALL PUTMAR (DOTBLK)
              CALL PUTMAR (OUNTYP)
              CALL PUTMAR (TABSTG)
              CALL PUTMAR (BYTSIZ)
              GOTO 15

C             THIS IS FOR NO BLOCK ALLOCATION
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13      CALL PUTMAR (TABSTG)
        CALL PUTMAR (TABSTG)

15      CALL PUTMAR (SPCSTG)
        CALL PUTMAR (RSTLIN)
        IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
C===
C
C  JIM TEAGUE    3/8/82    ADD SIZE CONSTANTS TO MACRO OUTPUT
C
C  begin first code insertion
C
C===
        NBYTES = OFSIZ * OUNSIZ
        IF(NBYTES .LT. 5)GOTO 16
        IF(OSBNAM(1) .EQ. 0) GOTO 16
        CALL NUMSTG (BYTSIZ, NBYTES)
        CALL PUTMAR (EQUTAB)
        CALL PUTMAR (PRENAM)
        ISAVE = OTGNAM(3)
        OTGNAM(3) = 'S'
        CALL PUTMAR (OTGNAM)
        CALL PUTMAR (OSBNAM)
        CALL PUTMAR (TABSTG)
        CALL PUTMAR (BYTSIZ)
        IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        OTGNAM(3) = ISAVE
16      CONTINUE
C===
C
C  JIM TEAGUE    3/8/82    ADD SIZE CONSTANTS TO MACRO OUTPUT
C
C  end first code insertion
C
C===
        RETURN

C       THIS IS A SUBFIELD DEFINITION TO BE OUTPUT. THE FORMAT IS
C       '$DEF (TAB) PRENAM\TAGNAM\FLDNAM (TAB) .BLK\UNITYP'
C       FOLLOWED BY THE REST OF THE LINE.

20      IF (DEBUG) TYPE 510
510     FORMAT (' SUBFIELD OUTPUT')
        IF (OSBNAM (1) .EQ. 0) RETURN
        CALL PUTMAR (DOLDEF)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (OTGNAM)
        CALL PUTMAR (OSBNAM)
        IF (.NOT. BLKOUT) GOTO 23
        CALL PUTMAR (DOTBLK)
        CALL PUTMAR (OUNTYP)
        CALL PUTMAR (TABSTG)
        CALL PUTMAR (BYTSIZ)
        GOTO 25
```

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23      CALL PUTMAR (TABSTG)
        CALL PUTMAR (TABSTG)
25      CALL PUTMAR (SPCSTG)
        CALL PUTMAR (RSTLIN)
        IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
C===
C
C  JIM TEAGUE    3/8/82    ADD SIZE CONSTANTS TO MACRO OUTPUT
C
C   Begin second code insertion
C
C===
        NBYTES = OFSIZ * OUNSIZ
        IF(NBYTES .LT. 5)GOTO 26
        IF(OSBNAM(1) .EQ. 0) GOTO 26
        CALL NUMSTG (BYTSIZ, NBYTES)
        CALL PUTMAR (EQUTAB)
        CALL PUTMAR (PRENAM)
        ISAVE = OTGNAM(3)
        OTGNAM(3) = 'S'
        CALL PUTMAR (OTGNAM)
        CALL PUTMAR (OSBNAM)
        CALL PUTMAR (TABSTG)
        CALL PUTMAR (BYTSIZ)
        IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        OTGNAM(3) = ISAVE
26      CONTINUE
C===
C
C  JIM TEAGUE    3/8/82    ADD SIZE CONSTANTS TO MACRO OUTPUT
C
C  end second (and last) code insertion
C
C===
        RETURN

C       THIS IS THE BEGINNING OF A BITFIELD DEFINITION LIST. THE FORMAT IS
C       '(TAB) $VIELD (TAB) PRENAM,0,<-' FOLLOWED BY THE
C       REST OF THE LINE.

30      IF (DEBUG) TYPE 520
520     FORMAT (' BITFIELD OUTPUT')
        IF (TAGNAM(2).EQ.'$') CALL PUTMAR (DOLVLD)
        IF (TAGNAM(2).EQ.' ') CALL PUTMAR (UNDVLD)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (COMMAS)
        CALL PUTMAR (ZRLAHY)
        CALL PUTMAR (SPCSTG)
        INBUF (PTR) = INBUF (1) - PTR + 1
        CALL PUTMAR (INBUF (PTR))
        IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        RETURN

C       THIS IS THE END OF A BITFIELD DEFINITION LIST TO BE
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C          OUTPUT. THE FORMAT IS '(TAB) (TAB) >' FOLLOWED BY THE
C          REST OF THE LINE.

 35        IF (DEBUG) TYPE 530
 530       FORMAT (' END VIELD OUTPUT')
           CALL PUTMAR (TABSTG)
           CALL PUTMAR (TABRAN)
           CALL PUTMAR (TABSTG)
           INBUF (PTR) = INBUF (1) - PTR + 1
           CALL PUTMAR (INBUF (PTR))
           IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
           CALL OUTMAR
           RETURN

C          THIS IS THE BEGINNING OF A CONSTANT DEFINITION LIST.
C          THE FORMAT IS '$EQULST (TAB) PRENAM\TAG,$GBL,BASE,INCREMENT,<-'
C          FOLLOWED BY THE REST OF THE LINE.

 40        IF (DEBUG) TYPE 540
 540       FORMAT (' CONSTANT LIST OUTPUT')
           CALL PUTMAR (EQULST)
           CALL PUTMAR (CONPRE)
           CALL PUTMAR (CONTAG)
           CALL PUTMAR (DOLGBL)
           CALL PUTMAR (COMMAS)
           CALL PUTMAR (MRBASE)
           CALL PUTMAR (COMMAS)
           CALL PUTMAR (MRINCR)
           CALL PUTMAR (COMMAS)
           CALL PUTMAR (LANHYP)
           CALL PUTMAR (SPCSTG)
           INBUF (PTR) = INBUF (1) - PTR + 1
           CALL PUTMAR (INBUF (PTR))
           IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
           CALL OUTMAR
           RETURN

C          THIS IS THE END OF A CONSTANT DEFINITION LIST TO BE
C          OUTPUT. THE FORMAT IS '(TAB) (TAB) >' FOLLOWED BY THE REST OF
C          THE LINE.

 45        IF (DEBUG) TYPE 550
 550       FORMAT (' END CONSTANT LIST OUTPUT')
           CALL PUTMAR (TABSTG)
           CALL PUTMAR (TABRAN)
           INBUF (PTR) = INBUF (1) - PTR + 1
           CALL PUTMAR (INBUF (PTR))
           IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
           CALL OUTMAR
           RETURN

C          THIS IS A BITFIELD DEFINITION TO BE OUTPUT. THE FORMAT IS
C          '(TAB) (TAB) <FLDNAM,SIZE,M>-' FOLLOWED BY THE REST OF
C          THE LINE.

 50        IF (DEBUG) TYPE 560
 560       FORMAT (' ONE BITFIELD OUTPUT')
```

```
      CALL PUTMAR (TABSTG)
      CALL PUTMAR (TABLAN)
      CALL PUTMAR (FLDNAM)
      CALL PUTMAR (COMMAS)
      IF (VSIZ .EQ. 0) GOTO 52
      CALL NUMSTG (BYTSIZ, VSIZ)
      CALL PUTMAR (BYTSIZ)
52    CALL PUTMAR (COMMAS)
      CALL PUTMAR (AMASK)
      CALL PUTMAR (RANHYP)
      CALL PUTMAR (SPCSTG)
      INBUF (PTR) = INBUF (1) - PTR + 1
      CALL PUTMAR (INBUF (PTR))
      IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
      CALL OUTMAR
      RETURN

C     THIS IS A CONSTANT NAME DEFINITION WITHIN A LIST. THE FORMAT
C     IS '(TAB) (TAB) <FLDNAM,VALUE>-' FOLLOWED BY THE REST OF
C     THE LINE.

60    IF (DEBUG) TYPE 570
570   FORMAT (' LIST CONSTANT OUTPUT')
      CALL PUTMAR (TABSTG)
      IF ((CONEXP) .AND. (FLDNAM (1) .EQ. 0)) GOTO 61
      CALL PUTMAR (TABLAN)
      GOTO 62
61    CALL PUTMAR (TABSTG)
62    IF ((CONEXP) .AND. (FLDNAM (1) .EQ. 0)) CALL PUTMAR (TABSTG)
      CALL PUTMAR (FLDNAM)
      IF (MVALUE (1) .EQ. 0) GOTO 65
      IF (FLDNAM (1) .NE. 0) CALL PUTMAR (COMMAS)
      IF (.NOT. CONEXP) GOTO 63
      IF (FLDNAM (1) .NE. 0) CALL PUTMAR (EXPOPN)
63    CALL PUTMAR (MVALUE)
      IF ((.NOT. ENDEXP) .AND. (CONEXP)) GOTO 67
      IF (ENDEXP) CALL PUTMAR (EXPCLO)
65    CALL PUTMAR (RANHYP)
67    CALL PUTMAR (SPCSTG)
      CALL PUTMAR (RSTLIN)
      IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
      CALL OUTMAR
      RETURN

C     THIS IS A SINGLE CONSTANT DEFINITION TO BE OUTPUT. THE
C     FORMAT IS '$EQU (TAB) PRENAM\TAGNAM\FLDNAM (TAB) CVALUE'
C     FOLLOWED BY THE REST OF THE LINE.

70    IF (DEBUG) TYPE 580
580   FORMAT (' SINGLE CONSTANT OUTPUT')
      CALL PUTMAR (EQUTAB)
      CALL PUTMAR (PRENAM)
      CALL PUTMAR (TAGNAM)
      CALL PUTMAR (FLDNAM)
      CALL PUTMAR (TABSTG)
      CALL PUTMAR (MVALUE)
      CALL PUTMAR (TABSTG)
```

```
              CALL PUTMAR (TABSTG)
              INBUF (PTR) = INBUF (1) - PTR + 1
              CALL PUTMAR (INBUF (PTR))
              IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
              CALL OUTMAR
              RETURN

C             THIS IS A POSITION MARKING DECLARATION.  ONLY THE COMMENT
C             OF THE LINE IS OUTPUT.

80            IF (DEBUG) TYPE 600
600           FORMAT (' POSITION MARK OUTPUT')
              CALL PUTMAR (TABSTG)
              CALL PUTMAR (TABSTG)
              CALL PUTMAR (TABSTG)
              INBUF (PTR) = INBUF (1) - PTR + 1
              CALL PUTMAR (INBUF (PTR))
              IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
              CALL OUTMAR
              RETURN

C             THIS IS REORIGINING COMMAND. THE POINTER IS RESET BY
C             A DECLARATION OF THE FORM '. = (VALUE)' FOLLOWED BY THE
C             REST OF THE LINE.

90            IF (DEBUG) TYPE 610
610           FORMAT (' REORIGIN OUTPUT')
              CALL PUTMAR (TABSTG)
              CALL PUTMAR (DOTEQS)
              CALL NUMSTG (OFFSET, BLFOFS)
              CALL PUTMAR (OFFSET)
              CALL PUTMAR (SPCSTG)
              INBUF (PTR) = INBUF (1) - PTR + 1
              CALL PUTMAR (INBUF (PTR))
              IF (DEBUG) TYPE 300, (MARBUF (I), I = 2, MARBUF (1) + 1)
              CALL OUTMAR
              RETURN

C             ERROR REPORTING

100           TYPE 2000
2000          FORMAT (' INVALID OUTPUT LINE TYPE')
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	3040	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	312	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	344	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	7595	

ENTRY POINTS

Address	Type	Name
0-00000000		MDOUTL

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000004	I*2	ISAVE
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	2-00000002	I*2	NBYTES	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	AP-00000004@	I*2	PTR	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)

10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)

6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-0000018E	10	0-000001D8	11	0-000001E8	12	0-00000212	13	0-00000222	15	0-00000317	16
0-00000318	20	0-0000038E	23	0-0000039E	25	0-0000049F	26	0-000004A0	30	0-00000575	35
0-00000619	40	0-00000706	45	0-000007A2	50	0-000007FC	52	0-0000088B	60	0-000008D6	61
0-000008DE	62	0-00000922	63	0-00000943	65	0-0000094C	67	0-000009A2	70	0-00000A6F	80
0-00000B12	90	0-00000BC8	100	1-00000000	290'	1-00000022	300'	1-00000012	490'	1-0000002A	500'
1-0000003A	510'	1-0000004D	520'	1-00000060	530'	1-00000074	540'	1-0000008C	550'	1-000000A8	560'
1-000000BF	570'	1-000000D7	580'	1-000000F1	600'	1-00000109	610'	1-0000011C	2000'		

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name
	NUMSTG		OUTMAR		PUTMAR

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C       REVISION HISTORY:
C               23-03-77        CP      WHEN OUTPUTTING BITFIELD MASK,
C                                       AMOUNT TO SHIFT BITS IS VOFSET +
C                                       VSIZ, NOT VOFSET + 1.
C
C               04-04-77        TC      CONDITIONALIZE OUTPUT OF ")" IN CONSTANTS
C                                       TO AVOID PREMATURLY CLOSING IN THE MIDDLE OF
C                                       MULTI-LINE CONSTANTS
C
C               22-04-77        TC      OUTPUT COMMENTS FROM VIELD
C                                       AND VIELDE (BEGINNING
C                                       AND END OF BITFIELD DEFINITION
C                                       LIST).

        SUBROUTINE BDOUTL (PTR)

C       OUTPUTS A DEFINITION TO THE BLISS FILE. THE ARGUMENT
C       PTR POINTS TO THE LOGICAL END OF LINE IN THE INPUT
C       LINE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER PTR, LOCAL

        IF (DEBUG) TYPE 300
300     FORMAT (' IN BLISS OUTPUT')
        IF (LINTYP .EQ. FIELD) GOTO 10
        IF (LINTYP .EQ. SBFLD) GOTO 20
        IF (LINTYP .EQ. VIELD) GOTO 30
        IF (LINTYP .EQ. VIELDE) GOTO 35
        IF (LINTYP .EQ. CONST) GOTO 40
        IF (LINTYP .EQ. CONSTE) GOTO 45
        IF (LINTYP .EQ. BITFNM) GOTO 50
        IF (LINTYP .EQ. CONSTN) GOTO 60
        IF (LINTYP .EQ. SCONST) GOTO 70
        IF (LINTYP .EQ. MARKPT) GOTO 80
        IF (LINTYP .EQ. ORIGIN) GOTO 90
        IF (LINTYP .NE. LABELN) GOTO 100

C       THIS IS A LABEL DEFINITION TO BE OUTPUT. THE FORMAT IS
C       'LITERAL (TAB) PRENAM\CTAGNAM\FLDNAM (TAB) = (SPACE) BYTOFF;
C        LITERAL (TAB) PRENAM\KTAGNAM\FLDNAM (TAB) = (SPACE) BYTOFF;'
C       FOLLOWED BY THE REST OF THE LINE.  HERE CTAGNAM IS THE
C       TAGNAM WITH THE SECOND CHARACTER CHANGED TO A 'C',
C       KTAGNAM IS THE TAGNAM WITH THE SECOND CHARACTER CHANGED TO
C       A 'K', AND BYTOFF IS THE CURRENT OFFSET IN THE STRUCTURE
C       EXPRESSED IN BYTES.

        IF (DEBUG) TYPE 400
400     FORMAT (' LABEL OUTPUT')
        TAGNAM (3) = 'C'
        CALL PUTBLI (LITTAB)
        CALL PUTBLI (PRENAM)
        CALL PUTBLI (TAGNAM)
        CALL PUTBLI (FLDNAM)
        CALL PUTBLI (TABEQS)
        CALL NUMSTG (BYTSIZ, FOFSET)
```

```
        CALL PUTBLI (BYTSIZ)
        CALL PUTBLI (SEMSPC)
        CALL OUTBLI
        TAGNAM (3) = 'K'
        CALL PUTBLI (LITTAB)
        CALL PUTBLI (PRENAM)
        CALL PUTBLI (TAGNAM)
        CALL PUTBLI (FLDNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (BYTSIZ)
        CALL PUTBLI (SEMSPC)
        CALL PUTBLI (TABSTG)
        CALL EXCCMT (INBUF, PTR)
        CALL PUTBLI (INBUF (PTR))
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
250     FORMAT (' ',90A1)
        CALL OUTBLI
        RETURN

C       THIS IS A FIELD DEFINITION TO BE OUTPUT. THE FORMAT
C       IS 'MACRO (TAB) PRENAM\TAGNAM\FLDNAM (TAB) = (SPACE)'
C       FOLLOWED BY A BLISS MACRO DEFINITION. THERE ARE FOUR
C       VALUES, THE OFFSET, POSITION, SIZE, AND SIGN. FINALLY THERE
C       IS A '%; (SPACE)' FOLLOWED BY THE REST OF THE LINE.

10      IF (DEBUG) TYPE 410
410     FORMAT (' FIELD OUTPUT')
        IF (FLDNAM (1) .EQ. 0) RETURN
        CALL NUMSTG (OFFSET, FOFSET)
        LOCAL = OBBITS * OFSIZ
        CALL NUMSTG (BLSSIZ, LOCAL)
        CALL PUTBLI (MACTAB)
        CALL PUTBLI (PRENAM)
        CALL PUTBLI (OTGNAM)
        CALL PUTBLI (OSBNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (OFFSET)
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (ZEROSG)
        CALL PUTBLI (COMMAS)

C       SEE WHETHER THE SIZE OF THIS FIELD IS LARGER THAN 32 BITS.
C       IF SO, OUTPUT A ZERO.

        IF ((OFSIZ * OUNSIZ) .LT. 5) GOTO 11
        CALL PUTBLI (ZEROSG)
        GOTO 12
11      CALL PUTBLI (BLSSIZ)
12      CALL PUTBLI (COMMAS)
        CALL PUTBLI (OASIGN)
        CALL PUTBLI (PCTSEM)
        CALL EXCCMT (RSTLIN, 1)
        CALL PUTBLI (RSTLIN)
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI

C       IF THE SIZE OF THE FIELD DEFINED IS GREATER THAN 4 BYTES,
```

```
C       A SECOND BLISS DECLARATION IS OUTPUT. THIS IS A LITERAL
C       DEFINITION OF THE LENGTH OF THE FIELD. THE FORMAT IS
C       'LITERAL (TAB) PRENAM\TAGNAM (CHANGED TO S)\FLDNAM
C       (TAB) = (SPACE)' FOLLOWED BY THE LENGTH OF THE FIELD IN
C       BYTES AND A SEMI-COLON.

        LOCAL = OFSIZ * OUNSIZ
        IF (LOCAL .LT. 5) GOTO 13
        CALL NUMSTG (BYTSIZ, LOCAL)
        IF (DEBUG) TYPE 420
420     FORMAT (' FIELD LENGTH OUTPUT')
        CALL PUTBLI (LITTAB)
        CALL PUTBLI (PRENAM)
        OTGNAM (3) = 'S'
        CALL PUTBLI (OTGNAM)
        CALL PUTBLI (OSBNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (BYTSIZ)
        CALL PUTBLI (SEMSPC)
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI
13      RETURN

C       THIS IS A SUBFIELD DEFINITION TO BE OUTPUT. IT IS EXACTLY
C       LIKE A FIELD EXCEPT THAT THE OFFSET FIELD IS DETERMINED
C       BY THE SOFSET VARIABLE INSTEAD OF THE FOFSET VARIABLE
C       AND THE NAMES OF THE STORED VARIABLES ARE DIFFERENT.

20      IF (DEBUG) TYPE 430
430     FORMAT (' SUBFIELD OUTPUT')
        IF (OSBNAM (1) .EQ. 0) RETURN
        IF (FLDNAM (1) .EQ. 0) RETURN
        CALL NUMSTG (OFFSET, BLFOFS)
        LOCAL = OBBITS * OFSIZ
        CALL NUMSTG (BLSSIZ, LOCAL)
        CALL PUTBLI (MACTAB)
        CALL PUTBLI (PRENAM)
        CALL PUTBLI (OTGNAM)
        CALL PUTBLI (OSBNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (OFFSET)
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (ZEROSG)
        CALL PUTBLI (COMMAS)

C       SEE WHETHER THE SIZE OF THIS FIELD IS GREATER THAN 32
C       BITS. IF SO, JUST OUTPUT A ZERO IN THE SIZE FIELD.

        IF ((OFSIZ * OUNSIZ) .LT. 5) GOTO 21
        CALL PUTBLI (ZEROSG)
        GOTO 22
21      CALL PUTBLI (BLSSIZ)
22      CALL PUTBLI (COMMAS)
        CALL PUTBLI (OASIGN)
        CALL PUTBLI (PCTSEM)
        CALL EXCCMT (RSTLIN, 1)
        CALL PUTBLI (RSTLIN)
```

```
                IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
                CALL OUTBLI

        C       IF THE SIZE OF THE SUBFIELD DEFINED IS GREATER THAN 4 BYTES,
        C       A SECOND BLISS DECLARATION IS OUTPUT. THIS IS A LITERAL
        C       DEFINITION OF THE LENGTH OF THE FIELD. THE FORMAT IS
        C       'LITERAL (TAB) PRENAM\OTGNAM (CHANGED TO S)\OSBNAM
        C       (TAB) = (SPACE)' FOLLOWED BY THE LENGTH OF THE FIELD IN
        C       BYTES AND A SEMI-COLON.

                LOCAL = OFSIZ * OUNSIZ
                IF (LOCAL .LT. 5) GOTO 25
                CALL NUMSTG (BYTSIZ, LOCAL)
                IF (DEBUG) TYPE 420
                CALL PUTBLI (LITTAB)
                CALL PUTBLI (PRENAM)
                OTGNAM (3) = 'S'
                CALL PUTBLI (OTGNAM)
                CALL PUTBLI (OSBNAM)
                CALL PUTBLI (TABEQS)
                CALL PUTBLI (BYTSIZ)
                CALL PUTBLI (SEMSPC)
                IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
                CALL OUTBLI
        25      RETURN

        C       THIS IS THE BEGINNING OF A BITFIELD DEFINITION LIST.
        C       ONLY THE COMMENT PART IS PRINTED.

        30      IF (DEBUG) TYPE 435
        435     FORMAT (' BITFIELD OUTPUT')
                CALL PUTBLI (TABSTG)
                CALL PUTBLI (TABSTG)
                CALL PUTBLI (TABSTG)
                CALL EXCCMT (INBUF, PTR)
                CALL PUTBLI (INBUF (PTR))
                IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
                CALL OUTBLI
                RETURN

        C       THIS IS THE END OF A BITFIELD DEFINITION LIST.
        C       ONLY THE COMMENT PART IS PRINTED.

        35      IF (DEBUG) TYPE 437
        437     FORMAT (' BITFIELD OUTPUT')
                CALL PUTBLI (TABSTG)
                CALL PUTBLI (TABSTG)
                CALL PUTBLI (TABSTG)
                CALL EXCCMT (INBUF, PTR)
                CALL PUTBLI (INBUF (PTR))
                IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
                CALL OUTBLI
                RETURN

        C       THIS IS THE BEGINNING OF A CONSTANT DEFINITION LIST. THE
        C       THIS IS THE BEGINNING OF A CONSTANT DEFINITION LIST. THE
        C       FORMAT IS A LINE CONTAINING ONLY THE WORD 'LITERAL'; THEN
```

```
C       A LINE CONTAINING '$EQULST (TAB) ( PRENAM\CONTAG (COMMA) GBL
C       (COMMA) BASE (COMMA) INCREMENT'
C       FOLLOWED BY THE REST OF THE LINE.

40      IF (DEBUG) TYPE 440
440     FORMAT (' CONSTANT LIST OUTPUT')
        CALL PUTBLI (LITTAB)
        CALL OUTBLI
        CALL PUTBLI (EQULST)
        CALL PUTBLI (OPAREN)
        CALL PUTBLI (CONPRE)
        CALL PUTBLI (CONTAG)
        CALL PUTBLI (COMGBL)
        CALL PUTBLI (BLBASE)
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (BLINCR)
        CALL PUTBLI (SPCSTG)
        CALL EXCCMT (INBUF, PTR)
        CALL PUTBLI (INBUF (PTR))
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI
        RETURN

C       THIS IS THE END OF A CONSTANT DEFINITION LIST TO BE OUTPUT.

45      IF (DEBUG) TYPE 450
450     FORMAT (' CONSTANT LIST END')
        CALL PUTBLI (TABPRN)
        CALL EXCCMT (INBUF, PTR)
        CALL PUTBLI (INBUF (PTR))
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI
        RETURN

C       THIS IS A BITFIELD DEFINITION TO BE OUTPUT. THE FORMAT
C       IS 'MACRO (TAB) PRENAM\TAGNAM\FLDNAM (TAB) = (SPACE)'
C       OFFSET FOR STARTING VIELD BYTE, POSITION OF THIS BITFIELD,
C       SIZE OF THIS BITFIELD, AND SIGN, FOLLOWED BY 'PERCENT
C       SEMI-COLON' AND THE REST OF THE LINE.

50      IF (DEBUG) TYPE 500
500     FORMAT (' ONE BITFIELD OUTPUT')
        IF (FLDNAM (1) .EQ. 0) GOTO 51
        CALL NUMSTG (OFFSET, BLFOFS)
        CALL NUMSTG (BYTSIZ, VOFSET)
        IF (VSIZ .EQ. 0) VSIZ = 1
        CALL NUMSTG (BLSSIZ, VSIZ)
        CALL PUTBLI (MACTAB)
        CALL PUTBLI (PRENAM)
        CALL PUTBLI (TAGNAM)
        CALL PUTBLI (FLDNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (OFFSET)
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (BYTSIZ)
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (BLSSIZ)
```

```
        CALL PUTBLI (COMMAS)
        CALL PUTBLI (ASIGN)
        CALL PUTBLI (PCTSEM)
        GOTO 53

51      CALL PUTBLI (TABSTG)
        CALL PUTBLI (TABSTG)
        CALL PUTBLI (TABSTG)
        CALL PUTBLI (TABSTG)

53      CALL EXCCMT (INBUF, PTR)
        CALL PUTBLI (INBUF (PTR))
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI

C       IF THE MASK FOR THIS FIELD IS REQUIRED, A LITERAL
C       DECLARATION IS OUTPUT FOR THE MASK.

        IF ((.NOT. SMASK) .AND. (.NOT. VMASK)) RETURN
        IF (FLDNAM(1) .EQ. 0) RETURN
        IF (DEBUG) TYPE 510
510     FORMAT (' LITERAL MASK OUTPUT')
        LOCAL = VOFSET + VSIZ
        CALL NUMSTG (BLSSIZ, LOCAL)
        CALL PUTBLI (LITTAB)
        CALL PUTBLI (PRENAM)
        TAGNAM (3) = 'M'
        CALL PUTBLI (TAGNAM)
        TAGNAM (3) = 'V'
        CALL PUTBLI (FLDNAM)
        CALL PUTBLI (TABEQS)
        CALL PUTBLI (ONESHF)
        CALL PUTBLI (BLSSIZ)
        CALL PUTBLI (SPHYSP)
        CALL PUTBLI (ONESHF)
        CALL PUTBLI (BYTSIZ)
        CALL PUTBLI (SEMSPC)
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI
        RETURN

C       THIS IS A CONSTANT NAME DEFINITION WITHIN A LIST.
C       THE FORMAT IS '(TAB) (COMMA) FLDNAM (COMMA) BVALUE'
C        FOLLOWED BY THE REST OF THE LINE.

60      IF (DEBUG) TYPE 520
520     FORMAT (' CONSTANT NAME OUTPUT')
        CALL PUTBLI (TABSTG)
        IF ((CONEXP).AND.(FLDNAM(1).EQ.0)) GOTO 67
        CALL PUTBLI(COMMAS)
        CALL PUTBLI(OPAREN)
        CALL PUTBLI(FLDNAM)
        CALL PUTBLI(COMMAS)
65      CALL PUTBLI(BVALUE)
        IF (ENDEXP .OR. (.NOT. CONEXP))
        1   CALL PUTBLI(CPAREN)
        CALL PUTBLI(SPCSTG)
```

```
            CALL PUTBLI(TABSTG)
            CALL EXCCMT(RSTLIN,1)
            CALL PUTBLI(RSTLIN)
            IF (DEBUG) TYPE 250, (BLIBUF(I), I = 2,BLIBUF(1)+1)
            CALL OUTBLI
            RETURN

    67      CALL PUTBLI(TABSTG)
            GOTO 65


    C       THIS IS A SINGLE CONSTANT DEFINITION TO BE OUTPUT.
    C       THE FORMAT IS 'LITERAL (TAB) (TAB) = (SPACE)' FOLLOWED
    C       BY THE VALUE OF THE CONSTANT, THEN '; (SPACE)' AND
    C       THE REST OF THE LINE.

    70      IF (DEBUG) TYPE 600
    600     FORMAT (' SINGLE CONSTANT OUTPUT')
            CALL PUTBLI (LITTAB)
            CALL PUTBLI (PRENAM)
            CALL PUTBLI (TAGNAM)
            CALL PUTBLI (FLDNAM)
            CALL PUTBLI (TABEQS)
            CALL PUTBLI (BVALUE)
            CALL PUTBLI (SEMSPC)
            CALL PUTBLI (TABSTG)
            CALL PUTBLI (TABSTG)
            CALL EXCCMT (INBUF, PTR)
            CALL PUTBLI (INBUF (PTR))
            IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
            CALL OUTBLI
            RETURN

    C       THIS IS A POSITION MARKING DECLARATION. ONLY THE COMMENT
    C       PORTION OF THE LINE IS OUTPUT.

    80      IF (DEBUG) TYPE 610
    610     FORMAT (' POSITION MARK OUTPUT')
            CALL PUTBLI (TABSTG)
            CALL PUTBLI (TABSTG)
            CALL PUTBLI (TABSTG)
            CALL EXCCMT (INBUF, PTR)
            CALL PUTBLI (INBUF (PTR))
            IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
            CALL OUTBLI
            RETURN

    C       THIS IS REORIGINING COMMAND. ONLY THE COMMENT PORTION OF
    C       THE LINE IS OUTPUT.

    90      IF (DEBUG) TYPE 620
    620     FORMAT (' REORIGIN OUTPUT')
            CALL PUTBLI (TABSTG)
            CALL PUTBLI (TABSTG)
            CALL PUTBLI (TABSTG)
            CALL EXCCMT (INBUF, PTR)
            CALL PUTBLI (INBUF (PTR))
```

```
        IF (DEBUG) TYPE 250, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
        CALL OUTBLI
        RETURN

C       ERROR REPORTING

100     TYPE 2000
2000    FORMAT (' INVALID OUTPUT LINE TYPE')
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	3475	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	355	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	392	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	8121									

ENTRY POINTS

Address	Type	Name
0-00000000		BDOUTL

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000002	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	2-00000000	I*2	LOCAL
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
AP-00000004@	I*2	PTR	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

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 9-00000662   I*2   BLINCR                    162   (81)
 6-0000017E   I*2   BLSSIZ                     20   (10)
 9-000003D8   I*2   BVALUE                    162   (81)
 6-000000EA   I*2   BYTSIZ                     20   (10)
 6-000001B4   I*2   COMGBL                     12   (6)
 6-000000C4   I*2   COMMAS                      4   (2)
 6-00000112   I*2   CONBAS                     20   (10)
 6-00000126   I*2   CONINC                     20   (10)
 9-0000012C   I*2   CONPRE                     32   (16)
 9-0000014C   I*2   CONTAG                     32   (16)
 9-000007A6   I*2   CONTEX                    198   (9, 11)
 6-000001D6   I*2   CPAREN                      4   (2)
 6-000001D0   I*2   CPRCOM                      6   (3)
 9-00000170   I*2   CVALUE                    162   (81)
 6-0000004C   I*2   DEFEND                     20   (10)
 6-00000022   I*2   DEFINI                     20   (10)
 6-000001DE   I*2   DOLBIT                     26   (13)
 6-000001F8   I*2   DOLBYT                     28   (14)
 6-00000036   I*2   DOLDEF                     12   (6)
 6-00000214   I*2   DOLFLD                     24   (12)
 6-00000016   I*2   DOLGBL                     12   (6)
 6-00000234   I*2   DOLLAR                      4   (2)
 6-00000090   I*2   DOLVLD                     18   (9)
 6-000000DE   I*2   DOTBLK                     12   (6)
 6-00000042   I*2   DOTEQS                     10   (5)
 6-00000000   I*2   DOTMAC                     22   (11)
 6-00000060   I*2   ENDMAC                     18   (9)
 6-000000B2   I*2   EQULST                     18   (9)
 6-00000102   I*2   EQUTAB                     12   (6)
 6-0000007E   I*2   EXCLSP                     14   (7)
 6-00000230   I*2   EXPCLO                      4   (2)
 6-0000022C   I*2   EXPOPN                      4   (2)
 9-000000B8   I*2   FLDNAM                     72   (36)
 6-000001B0   I*2   HYPHEN                      4   (2)
10-00000000   I*2   INBUF                     166   (83)
 6-000000C8   I*2   LANHYP                      6   (3)
 3-00000000   L*1   LINE                      133   (133)
 6-0000013A   I*2   LITTAB                     18   (9)
 6-0000015A   I*2   MACTAB                     16   (8)
10-000000AA   I*2   MARBUF                    240   (120)
 9-000005C0   I*2   MRBASE                    162   (81)
 9-00000704   I*2   MRINCR                    162   (81)
 9-00000336   I*2   MVALUE                    162   (81)
 3-0000010A   L*1   NAME                       32   (32)
 7-00000000   I*2   NEGSGN                      4   (2)
 3-0000012A   L*1   NUMSTR                    133   (133)
 6-000001DA   I*2   OASIGN                      4   (2)
 6-0000016A   I*2   OFFSET                     20   (10)
 6-000001A2   I*2   ONESHF                      6   (3)
 6-0000010E   I*2   OPAREN                      4   (2)
 9-000002CE   I*2   OSBNAM                     32   (16)
 9-000002EE   I*2   OTGNAM                     32   (16)
 9-0000030E   I*2   OUNTYP                     32   (16)
 6-0000019A   I*2   PCTSEM                      8   (4)
 3-00000085   L*1   PREFIX                    133   (133)
 9-00000052   I*2   PRENAM                     32   (16)
 6-000000D4   I*2   RANHYP                      6   (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000001C8	10	0-00000269	11	0-00000272	12	0-00000393	13	0-00000394	20	0-00000448	21
0-00000451	22	0-00000582	25	0-00000583	30	0-00000622	35	0-000006C1	40	0-000007A7	45
0-00000837	50	0-000008FD	51	0-0000091D	53	0-00000A7B	60	0-00000AD8	65	0-00000B63	67
0-00000B6E	70	0-00000C3D	80	0-00000CDC	90	0-00000D7B	100	1-00000027	250'	1-00000004	300'
1-00000017	400'	1-0000002F	410'	1-0000003F	420'	1-00000056	430'	1-00000069	435'	1-0000007C	437'
1-0000008F	440'	1-000000A7	450'	1-000000BC	500'	1-000000D3	510'	1-000000EA	520'	1-00000102	600'
1-0000011C	610'	1-00000134	620'	1-00000147	2000'						

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name
	EXCCMT		NUMSTG		OUTBLI		PUTBLI

```
              SUBROUTINE OUTFLD

        C     OUTPUTS A FIELD OR SUBFIELD DEFINITION. IF THE IMPLICIT ARGUMENT
        C     BLKOUT IS TRUE, OUTPUTS A '.BLK' ALLOCATION TO THE MARS FILE.
        C     OTHERWISE, OUTPUTS THE FIELD WITHOUT THE ALLOCATION.

              INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

              IF (DEBUG) TYPE 490
        490   FORMAT (' IN OUTFLD')
              CALL MDOUTL (INPTR)
              CALL BDOUTL (INPTR)
              IF (LINTYP .NE. FIELD) GOTO 10
              IF (DEBUG) TYPE 500, FOFSET, OUNSIZ, OFSIZ, BLFOFS
        500   FORMAT (' FOFSET ',I3,' OUNSIZ ',I3,' OFSIZ ',I3,' BLFOFS ',I3)
              BOFSET = FOFSET
              FOFSET = FOFSET + OUNSIZ * OFSIZ
              OSBNAM (1) = 0
              LASLIN = FIELD
              RETURN

        10    IF (LINTYP .NE. SBFLD) GOTO 20
              IF (DEBUG) TYPE 510, FOFSET, SOFSET, LSBSIZ, BLFOFS
        510   FORMAT (' FOFSET ',I3,' SOFSET ',I3,' LSBSIZ ',I3,' BLFOFS ',I3)
              SOFSET = SOFSET + LSBSIZ
              LASLIN = SBFLD
              OSBNAM (1) = 0

        20    RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	272	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	110	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	8	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4289									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTFLD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR        162  (81)
 6-0000017E  I*2  BLSSIZ         20  (10)
 9-000003D8  I*2  BVALUE        162  (81)
 6-000000EA  I*2  BYTSIZ         20  (10)
 6-000001B4  I*2  COMGBL         12  (6)
 6-000000C4  I*2  COMMAS          4  (2)
 6-00000112  I*2  CONBAS         20  (10)
 6-00000126  I*2  CONINC         20  (10)
 9-0000012C  I*2  CONPRE         32  (16)
 9-0000014C  I*2  CONTAG         32  (16)
 9-000007A6  I*2  CONTEX        198  (9, 11)
 6-000001D6  I*2  CPAREN          4  (2)
 6-000001D0  I*2  CPRCOM          6  (3)
 9-00000170  I*2  CVALUE        162  (81)
 6-0000004C  I*2  DEFEND         20  (10)
 6-00000022  I*2  DEFINI         20  (10)
 6-000001DE  I*2  DOLBIT         26  (13)
 6-000001F8  I*2  DOLBYT         28  (14)
 6-00000036  I*2  DOLDEF         12  (6)
 6-00000214  I*2  DOLFLD         24  (12)
 6-00000016  I*2  DOLGBL         12  (6)
 6-00000234  I*2  DOLLAR          4  (2)
 6-00000090  I*2  DOLVLD         18  (9)
 6-000000DE  I*2  DOTBLK         12  (6)
 6-00000042  I*2  DOTEQS         10  (5)
 6-00000000  I*2  DOTMAC         22  (11)
 6-00000060  I*2  ENDMAC         18  (9)
 6-000000B2  I*2  EQULST         18  (9)
 6-00000102  I*2  EQUTAB         12  (6)
 6-0000007E  I*2  EXCLSP         14  (7)
 6-00000230  I*2  EXPCLO          4  (2)
 6-0000022C  I*2  EXPOPN          4  (2)
 9-000000B8  I*2  FLDNAM         72  (36)
 6-000001B0  I*2  HYPHEN          4  (2)
10-00000000  I*2  INBUF         166  (83)
 6-000000C8  I*2  LANHYP          6  (3)
 3-00000000  L*1  LINE          133  (133)
 6-0000013A  I*2  LITTAB         18  (9)
 6-0000015A  I*2  MACTAB         16  (8)
10-000000AA  I*2  MARBUF        240  (120)
 9-000005C0  I*2  MRBASE        162  (81)
 9-00000704  I*2  MRINCR        162  (81)
 9-00000336  I*2  MVALUE        162  (81)
 3-0000010A  L*1  NAME           32  (32)
 7-00000000  I*2  NEGSGN          4  (2)
 3-0000012A  L*1  NUMSTR        133  (133)
 6-000001DA  I*2  OASIGN          4  (2)
 6-0000016A  I*2  OFFSET         20  (10)
 6-000001A2  I*2  ONESHF          6  (3)
 6-0000010E  I*2  OPAREN          4  (2)
 9-000002CE  I*2  OSBNAM         32  (16)
 9-000002EE  I*2  OTGNAM         32  (16)
 9-0000030E  I*2  OUNTYP         32  (16)
 6-0000019A  I*2  PCTSEM          8  (4)
 3-00000085  L*1  PREFIX        133  (133)
 9-00000052  I*2  PRENAM         32  (16)
 6-000000D4  I*2  RANHYP          6  (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000AD	10	0-0000010F	20	1-00000000	490'	1-0000000D	500'	1-0000003D	510'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name
	BDOUTL		MDOUTL

```
      SUBROUTINE OUTBCL

C     OUTPUTS A SINGLE LINE IN A CONSTANT DEFINITION LIST. THE
C     LINE IS BLANK OR HAS ONLY COMMENTS. FOR MARS, IT MUST BEGIN
C     WITH A HYPHEN, FOR BLISS IT CAN GO OUT AS IS.

      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

      CALL PUTMAR (HYPHEN)
      CALL PUTMAR (INBUF (1))
      IF (DEBUG) TYPE 500, (MARBUF (I), I = 2, MARBUF (1) + 1)
500   FORMAT (' ',90A1)
      CALL OUTMAR

C     NOW OUTPUT THE BLISS LINE

      CALL EXCCMT (INBUF, 1)
      CALL PUTBLI (INBUF (1))
      IF (DEBUG) TYPE 500, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
      CALL OUTBLI

      RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	192	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	12	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	48	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4151									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTBCL

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2   BLINCR                 162   (81)
 6-0000017E  I*2   BLSSIZ                  20   (10)
 9-000003D8  I*2   BVALUE                 162   (81)
 6-000000EA  I*2   BYTSIZ                  20   (10)
 6-000001B4  I*2   COMGBL                  12   (6)
 6-000000C4  I*2   COMMAS                   4   (2)
 6-00000112  I*2   CONBAS                  20   (10)
 6-00000126  I*2   CONINC                  20   (10)
 9-0000012C  I*2   CONPRE                  32   (16)
 9-0000014C  I*2   CONTAG                  32   (16)
 9-000007A6  I*2   CONTEX                 198   (9, 11)
 6-000001D6  I*2   CPAREN                   4   (2)
 6-000001D0  I*2   CPRCOM                   6   (3)
 9-00000170  I*2   CVALUE                 162   (81)
 6-0000004C  I*2   DEFEND                  20   (10)
 6-00000022  I*2   DEFINI                  20   (10)
 6-000001DE  I*2   DOLBIT                  26   (13)
 6-000001F8  I*2   DOLBYT                  28   (14)
 6-00000036  I*2   DOLDEF                  12   (6)
 6-00000214  I*2   DOLFLD                  24   (12)
 6-00000016  I*2   DOLGBL                  12   (6)
 6-00000234  I*2   DOLLAR                   4   (2)
 6-00000090  I*2   DOLVLD                  18   (9)
 6-000000DE  I*2   DOTBLK                  12   (6)
 6-00000042  I*2   DOTEQS                  10   (5)
 6-00000000  I*2   DOTMAC                  22   (11)
 6-00000060  I*2   ENDMAC                  18   (9)
 6-000000B2  I*2   EQULST                  18   (9)
 6-00000102  I*2   EQUTAB                  12   (6)
 6-0000007E  I*2   EXCLSP                  14   (7)
 6-00000230  I*2   EXPCLO                   4   (2)
 6-0000022C  I*2   EXPOPN                   4   (2)
 9-000000B8  I*2   FLDNAM                  72   (36)
 6-000001B0  I*2   HYPHEN                   4   (2)
10-00000000  I*2   INBUF                  166   (83)
 6-000000C8  I*2   LANHYP                   6   (3)
 3-00000000  L*1   LINE                   133   (133)
 6-0000013A  I*2   LITTAB                  18   (9)
 6-0000015A  I*2   MACTAB                  16   (8)
10-000000AA  I*2   MARBUF                 240   (120)
 9-000005C0  I*2   MRBASE                 162   (81)
 9-00000704  I*2   MRINCR                 162   (81)
 9-00000336  I*2   MVALUE                 162   (81)
 3-0000010A  L*1   NAME                    32   (32)
 7-00000000  I*2   NEGSGN                   4   (2)
 3-0000012A  L*1   NUMSTR                 133   (133)
 6-000001DA  I*2   OASIGN                   4   (2)
 6-0000016A  I*2   OFFSET                  20   (10)
 6-000001A2  I*2   ONESHF                   6   (3)
 6-0000010E  I*2   OPAREN                   4   (2)
 9-000002CE  I*2   OSBNAM                  32   (16)
 9-000002EE  I*2   OTGNAM                  32   (16)
 9-0000030E  I*2   OUNTYP                  32   (16)
 6-0000019A  I*2   PCTSEM                   8   (4)
 3-00000085  L*1   PREFIX                 133   (133)
 9-00000052  I*2   PRENAM                  32   (16)
 6-000000D4  I*2   RANHYP                   6   (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label
1-00000004	500'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	EXCCMT		OUTBLI		OUTMAR		PUTBLI		PUTMAR

```
C       REVISION HISTORY:
C               22-03-77        CP      IF TMP FILE FLAG IS TRUE, OUTPUT
C                                       COUNT AS NEGATIVE ALLOCATION.

        SUBROUTINE OUTBLK (COUNT)

C       OUTPUTS A DECLARATION OF BLOCK ALLOCATION TO THE
C       TRANSLATED MARS FILE. THE ARGUMENT COUNT IS THE NUMBER
C       OF BYTES TO ALLOCATE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER COUNT, LOCAL

        IF (DEBUG) TYPE 500, COUNT
500     FORMAT (' ALLOCATING ',I3,' BLOCKS')
        LOCAL = COUNT / OUNSIZ
        IF (COUNT .NE. OUNSIZ * LOCAL) GOTO 20
        CALL NUMSTG (BYTSIZ, LOCAL)
        GOTO 25
20      CALL NUMSTG (BYTSIZ, COUNT)
        OUNTYP (2) = 'B'
25      CALL PUTMAR (TABSTG)
        CALL PUTMAR (TABSTG)
        CALL PUTMAR (DOTBLK)
        CALL PUTMAR (OUNTYP)
        CALL PUTMAR (TABSTG)
        IF (TMPOUT) CALL PUTMAR (NEGSGN)
        CALL PUTMAR (BYTSIZ)
        CALL PUTMAR (SPCSTG)
        IF (DEBUG) TYPE 510, (MARBUF (I), I = 2, MARBUF (1) + 1)
510     FORMAT (' ',90A1)
        CALL OUTMAR
        IF (.NOT. TMPOUT) BLFOFS = BLFOFS + COUNT
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	276	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	34	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	76	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4285									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTBLK

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
AP-00000004@	I*2	COUNT	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000002	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
2-00000000	I*2	LOCAL	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
  9-00000662   I*2   BLINCR          162  (81)
  6-0000017E   I*2   BLSSIZ           20  (10)
  9-000003D8   I*2   BVALUE          162  (81)
  6-000000EA   I*2   BYTSIZ           20  (10)
  6-000001B4   I*2   COMGBL           12  (6)
  6-000000C4   I*2   COMMAS            4  (2)
  6-00000112   I*2   CONBAS           20  (10)
  6-00000126   I*2   CONINC           20  (10)
  9-0000012C   I*2   CONPRE           32  (16)
  9-0000014C   I*2   CONTAG           32  (16)
  9-000007A6   I*2   CONTEX          198  (9, 11)
  6-000001D6   I*2   CPAREN            4  (2)
  6-000001D0   I*2   CPRCOM            6  (3)
  9-00000170   I*2   CVALUE          162  (81)
  6-0000004C   I*2   DEFEND           20  (10)
  6-00000022   I*2   DEFINI           20  (10)
  6-000001DE   I*2   DOLBIT           26  (13)
  6-000001F8   I*2   DOLBYT           28  (14)
  6-00000036   I*2   DOLDEF           12  (6)
  6-00000214   I*2   DOLFLD           24  (12)
  6-00000016   I*2   DOLGBL           12  (6)
  6-00000234   I*2   DOLLAR            4  (2)
  6-00000090   I*2   DOLVLD           18  (9)
  6-000000DE   I*2   DOTBLK           12  (6)
  6-00000042   I*2   DOTEQS           10  (5)
  6-00000000   I*2   DOTMAC           22  (11)
  6-00000060   I*2   ENDMAC           18  (9)
  6-000000B2   I*2   EQULST           18  (9)
  6-00000102   I*2   EQUTAB           12  (6)
  6-0000007E   I*2   EXCLSP           14  (7)
  6-00000230   I*2   EXPCLO            4  (2)
  6-0000022C   I*2   EXPOPN            4  (2)
  9-000000B8   I*2   FLDNAM           72  (36)
  6-000001B0   I*2   HYPHEN            4  (2)
 10-00000000   I*2   INBUF           166  (83)
  6-000000C8   I*2   LANHYP            6  (3)
  3-00000000   L*1   LINE            133  (133)
  6-0000013A   I*2   LITTAB           18  (9)
  6-0000015A   I*2   MACTAB           16  (8)
 10-000000AA   I*2   MARBUF          240  (120)
  9-000005C0   I*2   MRBASE          162  (81)
  9-00000704   I*2   MRINCR          162  (81)
  9-00000336   I*2   MVALUE          162  (81)
  3-0000010A   L*1   NAME             32  (32)
  7-00000000   I*2   NEGSGN            4  (2)
  3-0000012A   L*1   NUMSTR          133  (133)
  6-000001DA   I*2   OASIGN            4  (2)
  6-0000016A   I*2   OFFSET           20  (10)
  6-000001A2   I*2   ONESHF            6  (3)
  6-0000010E   I*2   OPAREN            4  (2)
  9-000002CE   I*2   OSBNAM           32  (16)
  9-000002EE   I*2   OTGNAM           32  (16)
  9-0000030E   I*2   OUNTYP           32  (16)
  6-0000019A   I*2   PCTSEM            8  (4)
  3-00000085   L*1   PREFIX          133  (133)
  9-00000052   I*2   PRENAM           32  (16)
  6-000000D4   I*2   RANHYP            6  (3)
```

```
  9-0000021A   I*2  RSTLIN                180  (90)
  6-00000154   I*2  SEMSPC                  6  (3)
  6-000000FE   I*2  SPCSTG                  4  (2)
  6-000001A8   I*2  SPHYSP                  8  (4)
  9-00000092   I*2  STRSTG                 32  (16)
  6-00000072   I*2  SUFDEF                  8  (4)
  9-00000072   I*2  SUFNAM                 32  (16)
  6-0000014C   I*2  TABEQS                  8  (4)
  6-000000CE   I*2  TABLAN                  6  (3)
  6-000001CA   I*2  TABOPR                  6  (3)
  6-000001C0   I*2  TABPRN                 10  (5)
  6-000000AC   I*2  TABRAN                  6  (3)
  6-0000008C   I*2  TABSTG                  4  (2)
  9-00000100   I*2  TAGNAM                 32  (16)
  9-0000047A   I*2  TMPVAL                162  (81)
  9-00000000   I*2  TOKSTG                 80  (40)
  6-00000238   I*2  UNDVLD                 18  (9)
  6-0000007A   I*2  UNITYP                  4  (2)
  6-00000192   I*2  ZEROSG                  4  (2)
  6-000000A2   I*2  ZRLAHY                 10  (5)

LABELS

    Address   Label         Address   Label         Address   Label         Address   Label

  0-00000054  20          0-0000006A  25          1-00000000  500'        1-0000001A  510'

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name            Type  Name            Type  Name

        NUMSTG                OUTMAR                PUTMAR
```

```
C       REVISION HISTORY:
C               22-03-77        CP      IF OUTPUTTING TO TMP FILE, CALL TMPWRT
C                                       INSTEAD OF OUTMAR AND OUTBLI.

        SUBROUTINE OUT2LN

C       THIS ROUTINE SIMPLY OUTPUTS A SINGLE LINE TO BOTH OUTPUT
C       FILES. THE LINE IS IDENTICAL TO THE INPUT LINE IN THE MARS
C       FILE, AND HAS SEMI-COLONS CHANGED TO EXCLAMATION POINTS
C       IN THE BLISS FILE.
C
C       IF OUTPUTTING TO THE TMP FILE, JUST OUTPUT THE LINE ONCE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER I

C       OUTPUT THE MARS LINE.

        IF (TMPOUT) GOTO 20
        CALL PUTMAR (INBUF)
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 10
        RETURN

C       NOW THE BLISS LINE.

10      I = 1
        CALL EXCCMT (INBUF, I)
        CALL PUTBLI (INBUF)
        CALL OUTBLI
        RETURN

20      CALL TMPWRT
        RETURN

        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes								
0 $CODE	75	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2 $LOCAL	24	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3 TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4 VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5 LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6 STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7 MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8 CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9 PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10 FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11 SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12 LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
Total Space Allocated	3998									

ENTRY POINTS

Address	Type	Name
0-00000000		OUT2LN

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)

```
 6-0000017E   I*2   BLSSIZ        20  (10)
 9-000003D8   I*2   BVALUE       162  (81)
 6-000000EA   I*2   BYTSIZ        20  (10)
 6-000001B4   I*2   COMGBL        12  (6)
 6-000000C4   I*2   COMMAS         4  (2)
 6-00000112   I*2   CONBAS        20  (10)
 6-00000126   I*2   CONINC        20  (10)
 9-0000012C   I*2   CONPRE        32  (16)
 9-0000014C   I*2   CONTAG        32  (16)
 9-000007A6   I*2   CONTEX       198  (9, 11)
 6-000001D6   I*2   CPAREN         4  (2)
 6-000001D0   I*2   CPRCOM         6  (3)
 9-00000170   I*2   CVALUE       162  (81)
 6-0000004C   I*2   DEFEND        20  (10)
 6-00000022   I*2   DEFINI        20  (10)
 6-000001DE   I*2   DOLBIT        26  (13)
 6-000001F8   I*2   DOLBYT        28  (14)
 6-00000036   I*2   DOLDEF        12  (6)
 6-00000214   I*2   DOLFLD        24  (12)
 6-00000016   I*2   DOLGBL        12  (6)
 6-00000234   I*2   DOLLAR         4  (2)
 6-00000090   I*2   DOLVLD        18  (9)
 6-000000DE   I*2   DOTBLK        12  (6)
 6-00000042   I*2   DOTEQS        10  (5)
 6-00000000   I*2   DOTMAC        22  (11)
 6-00000060   I*2   ENDMAC        18  (9)
 6-000000B2   I*2   EQULST        18  (9)
 6-00000102   I*2   EQUTAB        12  (6)
 6-0000007E   I*2   EXCLSP        14  (7)
 6-00000230   I*2   EXPCLO         4  (2)
 6-0000022C   I*2   EXPOPN         4  (2)
 9-000000B8   I*2   FLDNAM        72  (36)
 6-000001B0   I*2   HYPHEN         4  (2)
10-00000000   I*2   INBUF        166  (83)
 6-000000C8   I*2   LANHYP         6  (3)
 3-00000000   L*1   LINE         133  (133)
 6-0000013A   I*2   LITTAB        18  (9)
 6-0000015A   I*2   MACTAB        16  (8)
10-000000AA   I*2   MARBUF       240  (120)
 9-000005C0   I*2   MRBASE       162  (81)
 9-00000704   I*2   MRINCR       162  (81)
 9-00000336   I*2   MVALUE       162  (81)
 3-0000010A   L*1   NAME          32  (32)
 7-00000000   I*2   NEGSGN         4  (2)
 3-0000012A   L*1   NUMSTR       133  (133)
 6-000001DA   I*2   OASIGN         4  (2)
 6-0000016A   I*2   OFFSET        20  (10)
 6-000001A2   I*2   ONESHF         6  (3)
 6-0000010E   I*2   OPAREN         4  (2)
 9-000002CE   I*2   OSBNAM        32  (16)
 9-000002EE   I*2   OTGNAM        32  (16)
 9-0000030E   I*2   OUNTYP        32  (16)
 6-0000019A   I*2   PCTSEM         8  (4)
 3-00000085   L*1   PREFIX       133  (133)
 9-00000052   I*2   PRENAM        32  (16)
 6-000000D4   I*2   RANHYP         6  (3)
 9-0000021A   I*2   RSTLIN       180  (90)
```

```
  6-00000154  I*2  SEMSPC          6  (3)
  6-000000FE  I*2  SPCSTG          4  (2)
  6-000001A8  I*2  SPHYSP          8  (4)
  9-00000092  I*2  STRSTG         32  (16)
  6-00000072  I*2  SUFDEF          8  (4)
  9-00000072  I*2  SUFNAM         32  (16)
  6-0000014C  I*2  TABEQS          8  (4)
  6-000000CE  I*2  TABLAN          6  (3)
  6-000001CA  I*2  TABOPR          6  (3)
  6-000001C0  I*2  TABPRN         10  (5)
  6-000000AC  I*2  TABRAN          6  (3)
  6-0000008C  I*2  TABSTG          4  (2)
  9-00000100  I*2  TAGNAM         32  (16)
  9-0000047A  I*2  TMPVAL        162  (81)
  9-00000000  I*2  TOKSTG         80  (40)
  6-00000238  I*2  UNDVLD         18  (9)
  6-0000007A  I*2  UNITYP          4  (2)
  6-00000192  I*2  ZEROSG          4  (2)
  6-000000A2  I*2  ZRLAHY         10  (5)

LABELS

    Address   Label        Address   Label

  0-00000028  10         0-00000043  20

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name        Type  Name        Type  Name        Type  Name        Type  Name        Type  Name
        EXCCMT            OUTBLI            OUTMAR            PUTBLI            PUTMAR            TMPWRT
```

```
C       REVISION HISTORY:
C               23-03-77        CP      OUTPUT SUFNAM INSTEAD OF SUFDEF.
C
C               19-01-78        TC      OUTPUT SUFNAM AS A FINAL ARGUMENT
C                                       TO DEFEND.
C
C               18-02-80                TIM HALVORSEN
C                                       OUTPUT $ ON FRONT OF MACRO NAME
C                                       ONLY IF SYSTEM STRUCTURE ($STRUCT)

        SUBROUTINE OUTSTE

C       FORMATS AND OUTPUTS THE END MACRO DEFINITIONS FOR A
C       STRUCTURE TO MARS. THEN FORMATS AND OUTPUTS ONLY
C       THE COMMENTS FROM THE LINE TO BLISS.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       IF (DEBUG) TYPE 400
400     FORMAT (' IN OUTSTE')
        MARBUF (1) = 1
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 5
        RETURN

5       CALL PUTMAR (DEFEND)
C       IF (DEBUG) TYPE 410, (DEFEND (I), I = 2, DEFEND (1) + 1)
410     FORMAT (' ',90A1)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (DOLGBL)
        CALL PUTMAR (COMMAS)
        CALL PUTMAR (SUFNAM)
        INBUF (INPTR) = INBUF (1) - INPTR + 1
        CALL PUTMAR (INBUF (INPTR))
C       IF (DEBUG) TYPE 410, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 10
        RETURN

10      MARBUF (1) = 1
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 20
        RETURN

20      CALL PUTMAR (ENDMAC)
C       IF (DEBUG) TYPE 410, (ENDMAC (I), I = 2, ENDMAC (1) + 1)
        IF (TAGNAM (2) .EQ. '$') CALL PUTMAR (DOLLAR)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (SUFNAM)
        IF (DEBUG) TYPE 410, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 30
        RETURN

30      CALL EXCCMT (INBUF, INPTR)
        CALL PUTBLI (INBUF (INPTR))
        CALL OUTBLI
```

```
0159            RETURN
0160            END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	294	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	8	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	96	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4297									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTSTE

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
  9-00000662  I*2  BLINCR      162  (81)
  6-0000017E  I*2  BLSSIZ       20  (10)
  9-000003D8  I*2  BVALUE      162  (81)
  6-000000EA  I*2  BYTSIZ       20  (10)
  6-000001B4  I*2  COMGBL       12  (6)
  6-000000C4  I*2  COMMAS        4  (2)
  6-00000112  I*2  CONBAS       20  (10)
  6-00000126  I*2  CONINC       20  (10)
  9-0000012C  I*2  CONPRE       32  (16)
  9-0000014C  I*2  CONTAG       32  (16)
  9-000007A6  I*2  CONTEX      198  (9, 11)
  6-000001D6  I*2  CPAREN        4  (2)
  6-000001D0  I*2  CPRCOM        6  (3)
  9-00000170  I*2  CVALUE      162  (81)
  6-0000004C  I*2  DEFEND       20  (10)
  6-00000022  I*2  DEFINI       20  (10)
  6-000001DE  I*2  DOLBIT       26  (13)
  6-000001F8  I*2  DOLBYT       28  (14)
  6-00000036  I*2  DOLDEF       12  (6)
  6-00000214  I*2  DOLFLD       24  (12)
  6-00000016  I*2  DOLGBL       12  (6)
  6-00000234  I*2  DOLLAR        4  (2)
  6-00000090  I*2  DOLVLD       18  (9)
  6-000000DE  I*2  DOTBLK       12  (6)
  6-00000042  I*2  DOTEQS       10  (5)
  6-00000000  I*2  DOTMAC       22  (11)
  6-00000060  I*2  ENDMAC       18  (9)
  6-000000B2  I*2  EQULST       18  (9)
  6-00000102  I*2  EQUTAB       12  (6)
  6-0000007E  I*2  EXCLSP       14  (7)
  6-00000230  I*2  EXPCLO        4  (2)
  6-0000022C  I*2  EXPOPN        4  (2)
  9-000000B8  I*2  FLDNAM       72  (36)
  6-000001B0  I*2  HYPHEN        4  (2)
 10-00000000  I*2  INBUF       166  (83)
  6-000000C8  I*2  LANHYP        6  (3)
  3-00000000  L*1  LINE        133  (133)
  6-0000013A  I*2  LITTAB       18  (9)
  6-0000015A  I*2  MACTAB       16  (8)
 10-000000AA  I*2  MARBUF      240  (120)
  9-000005C0  I*2  MRBASE      162  (81)
  9-00000704  I*2  MRINCR      162  (81)
  9-00000336  I*2  MVALUE      162  (81)
  3-0000010A  L*1  NAME         32  (32)
  7-00000000  I*2  NEGSGN        4  (2)
  3-0000012A  L*1  NUMSTR      133  (133)
  6-000001DA  I*2  OASIGN        4  (2)
  6-0000016A  I*2  OFFSET       20  (10)
  6-000001A2  I*2  ONESHF        6  (3)
  6-0000010E  I*2  OPAREN        4  (2)
  9-000002CE  I*2  OSBNAM       32  (16)
  9-000002EE  I*2  OTGNAM       32  (16)
  9-0000030E  I*2  OUNTYP       32  (16)
  6-0000019A  I*2  PCTSEM        8  (4)
  3-00000085  L*1  PREFIX      133  (133)
  9-00000052  I*2  PRENAM       32  (16)
  6-000000D4  I*2  RANHYP        6  (3)
```

```
9-0000021A  I*2  RSTLIN   180  (90)
6-00000154  I*2  SEMSPC     6  (3)
6-000000FE  I*2  SPCSTG     4  (2)
6-000001A8  I*2  SPHYSP     8  (4)
9-00000092  I*2  STRSTG    32  (16)
6-00000072  I*2  SUFDEF     8  (4)
9-00000072  I*2  SUFNAM    32  (16)
6-0000014C  I*2  TABEQS     8  (4)
6-000000CE  I*2  TABLAN     6  (3)
6-000001CA  I*2  TABOPR     6  (3)
6-000001C0  I*2  TABPRN    10  (5)
6-000000AC  I*2  TABRAN     6  (3)
6-0000008C  I*2  TABSTG     4  (2)
9-00000100  I*2  TAGNAM    32  (16)
9-0000047A  I*2  TMPVAL   162  (81)
9-00000000  I*2  TOKSTG    80  (40)
6-00000238  I*2  UNDVLD    18  (9)
6-0000007A  I*2  UNITYP     4  (2)
6-00000192  I*2  ZEROSG     4  (2)
6-000000A2  I*2  ZRLAHY    10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000025	5	0-00000079	10	0-0000008E	20	0-00000103	30	**	400'	1-00000000	410'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	EXCCMT		OUTBLI		OUTMAR		PUTBLI		PUTMAR

```
C       REVISION HISTORY:
C               23-03-77        CP      OUTPUT SUFNAM INSTEAD OF SUFDEF.
C
C               18-02-80                TIM HALVORSEN
C                                       OUTPUT $ ON FRONT OF MACRO NAME
C                                       ONLY IF SYSTEM STRUCTURE ($STRUCT)

        SUBROUTINE OUTSTR

C       FORMATS THE MACRO DEFINITION OF A DATA STRUCTURE AND
C       OUTPUTS IT TO THE MARS FILE. FORMATS AND OUTPUTS THE COMMENT
C       PART OF THE LINE TO THE BLISS FILE.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       FIRST OUTPUT THREE LINES FOR MARS

C       IF (DEBUG) TYPE 400
400     FORMAT (' IN OUTSTR')
        CALL PUTMAR (DOTMAC)
        IF (TAGNAM (2) .EQ. '$') CALL PUTMAR (DOLLAR)
C       IF (DEBUG) TYPE 410, (DOTMAC (I), I = 2, DOTMAC (1) + 1)
        INPTR = INPTR + 1
410     FORMAT (' ',90A1)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (SUFNAM)
C       IF (DEBUG) TYPE 410, (PRENAM (I), I = 2, PRENAM (1) + 1)
        CALL PUTMAR (DOLGBL)
C       IF (DEBUG) TYPE 410, (DOLGBL (I), I = 2, DOLGBL (1) + 1)
        INBUF (INPTR) = INBUF (1) - INPTR + 1
        CALL PUTMAR (INBUF (INPTR))
        IF (DEBUG) TYPE 410, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 10
        RETURN

10      MARBUF (1) = 1
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 20
        RETURN

20      CALL PUTMAR (DEFINI)
C       IF (DEBUG) TYPE 410, (DEFINI (I), I = 2, DEFINI (1) + 1)
        CALL PUTMAR (PRENAM)
        CALL PUTMAR (DOLGBL)
C       IF (DEBUG) TYPE 410, (MARBUF (I), I = 2, MARBUF (1) + 1)
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 30
        RETURN

30      MARBUF (1) = 1
        CALL OUTMAR
        IF (.NOT. ERROUT) GOTO 40
        RETURN

40      CALL PUTBLI (EXCLSP)
        CALL PUTBLI (PRENAM)
```

```
      CALL PUTBLI (SUFNAM)
      CALL PUTBLI (TABSTG)
      CALL EXCCMT (INBUF, INPTR)
      CALL PUTBLI (INBUF (INPTR))
      IF (DEBUG) TYPE 410, (BLIBUF (I), I = 2, BLIBUF (1) + 1)
      CALL OUTBLI
      RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	380	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	8	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	120	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4407									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTSTR

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR   162  (81)
 6-0000017E  I*2  BLSSIZ    20  (10)
 9-000003D8  I*2  BVALUE   162  (81)
 6-000000EA  I*2  BYTSIZ    20  (10)
 6-000001B4  I*2  COMGBL    12  (6)
 6-000000C4  I*2  COMMAS     4  (2)
 6-00000112  I*2  CONBAS    20  (10)
 6-00000126  I*2  CONINC    20  (10)
 9-0000012C  I*2  CONPRE    32  (16)
 9-0000014C  I*2  CONTAG    32  (16)
 9-000007A6  I*2  CONTEX   198  (9, 11)
 6-000001D6  I*2  CPAREN     4  (2)
 6-000001D0  I*2  CPRCOM     6  (3)
 9-00000170  I*2  CVALUE   162  (81)
 6-0000004C  I*2  DEFEND    20  (10)
 6-00000022  I*2  DEFINI    20  (10)
 6-000001DE  I*2  DOLBIT    26  (13)
 6-000001F8  I*2  DOLBYT    28  (14)
 6-00000036  I*2  DOLDEF    12  (6)
 6-00000214  I*2  DOLFLD    24  (12)
 6-00000016  I*2  DOLGBL    12  (6)
 6-00000234  I*2  DOLLAR     4  (2)
 6-00000090  I*2  DOLVLD    18  (9)
 6-000000DE  I*2  DOTBLK    12  (6)
 6-00000042  I*2  DOTEQS    10  (5)
 6-00000000  I*2  DOTMAC    22  (11)
 6-00000060  I*2  ENDMAC    18  (9)
 6-000000B2  I*2  EQULST    18  (9)
 6-00000102  I*2  EQUTAB    12  (6)
 6-0000007E  I*2  EXCLSP    14  (7)
 6-00000230  I*2  EXPCLO     4  (2)
 6-0000022C  I*2  EXPOPN     4  (2)
 9-000000B8  I*2  FLDNAM    72  (36)
 6-000001B0  I*2  HYPHEN     4  (2)
10-00000000  I*2  INBUF    166  (83)
 6-000000C8  I*2  LANHYP     6  (3)
 3-00000000  L*1  LINE     133  (133)
 6-0000013A  I*2  LITTAB    18  (9)
 6-0000015A  I*2  MACTAB    16  (8)
10-000000AA  I*2  MARBUF   240  (120)
 9-000005C0  I*2  MRBASE   162  (81)
 9-00000704  I*2  MRINCR   162  (81)
 9-00000336  I*2  MVALUE   162  (81)
 3-0000010A  L*1  NAME      32  (32)
 7-00000000  I*2  NEGSGN     4  (2)
 3-0000012A  L*1  NUMSTR   133  (133)
 6-000001DA  I*2  OASIGN     4  (2)
 6-0000016A  I*2  OFFSET    20  (10)
 6-000001A2  I*2  ONESHF     6  (3)
 6-0000010E  I*2  OPAREN     4  (2)
 9-000002CE  I*2  OSBNAM    32  (16)
 9-000002EE  I*2  OTGNAM    32  (16)
 9-0000030E  I*2  OUNTYP    32  (16)
 6-0000019A  I*2  PCTSEM     8  (4)
 3-00000085  L*1  PREFIX   133  (133)
 9-00000052  I*2  PRENAM    32  (16)
 6-000000D4  I*2  RANHYP     6  (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-000000AD	10	0-000000C2	20	0-000000EA	30	0-000000FF	40	**	400'	1-00000000	410'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	EXCCMT		OUTBLI		OUTMAR		PUTBLI		PUTMAR

```
      SUBROUTINE OUTCNL

C     OUTPUTS THE CLOSING OF A CONSTANT NAME DEFINITION LIST
C     AND THE BEGINNING OF ANOTHER NAMED THE SAME AS THE LAST ONE.

      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

      IF (DEBUG) TYPE 300
300   FORMAT (' CONSTANT LIST REPEAT')

      CALL PUTMAR (TABSTG)
      CALL PUTMAR (TABRAN)
      CALL OUTMAR

      CALL PUTMAR (EQULST)
      CALL PUTMAR (CONPRE)
      CALL PUTMAR (CONTAG)
      CALL PUTMAR (DOLGBL)
      CALL PUTMAR (COMMAS)
      CALL PUTMAR (COMMAS)
      CALL PUTMAR (MRINCR)
      CALL PUTMAR (COMMAS)
      CALL PUTMAR (LANHYP)
      CALL OUTMAR

      RETURN
      END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	142	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 $PDATA	24	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 $LOCAL	72	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	4137	

ENTRY POINTS

Address	Type	Name
0-00000000		OUTCNL

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
  9-00000662  I*2  BLINCR   162  (81)
  6-0000017E  I*2  BLSSIZ    20  (10)
  9-000003D8  I*2  BVALUE   162  (81)
  6-000000EA  I*2  BYTSIZ    20  (10)
  6-000001B4  I*2  COMGBL    12  (6)
  6-000000C4  I*2  COMMAS     4  (2)
  6-00000112  I*2  CONBAS    20  (10)
  6-00000126  I*2  CONINC    20  (10)
  9-0000012C  I*2  CONPRE    32  (16)
  9-0000014C  I*2  CONTAG    32  (16)
  9-000007A6  I*2  CONTEX   198  (9, 11)
  6-000001D6  I*2  CPAREN     4  (2)
  6-000001D0  I*2  CPRCOM     6  (3)
  9-00000170  I*2  CVALUE   162  (81)
  6-0000004C  I*2  DEFEND    20  (10)
  6-00000022  I*2  DEFINI    20  (10)
  6-000001DE  I*2  DOLBIT    26  (13)
  6-000001F8  I*2  DOLBYT    28  (14)
  6-00000036  I*2  DOLDEF    12  (6)
  6-00000214  I*2  DOLFLD    24  (12)
  6-00000016  I*2  DOLGBL    12  (6)
  6-00000234  I*2  DOLLAR     4  (2)
  6-00000090  I*2  DOLVLD    18  (9)
  6-000000DE  I*2  DOTBLK    12  (6)
  6-00000042  I*2  DOTEQS    10  (5)
  6-00000000  I*2  DOTMAC    22  (11)
  6-00000060  I*2  ENDMAC    18  (9)
  6-000000B2  I*2  EQULST    18  (9)
  6-00000102  I*2  EQUTAB    12  (6)
  6-0000007E  I*2  EXCLSP    14  (7)
  6-00000230  I*2  EXPCLO     4  (2)
  6-0000022C  I*2  EXPOPN     4  (2)
  9-000000B8  I*2  FLDNAM    72  (36)
  6-000001B0  I*2  HYPHEN     4  (2)
 10-00000000  I*2  INBUF    166  (83)
  6-000000C8  I*2  LANHYP     6  (3)
  3-00000000  L*1  LINE     133  (133)
  6-0000013A  I*2  LITTAB    18  (9)
  6-0000015A  I*2  MACTAB    16  (8)
 10-000000AA  I*2  MARBUF   240  (120)
  9-000005C0  I*2  MRBASE   162  (81)
  9-00000704  I*2  MRINCR   162  (81)
  9-00000336  I*2  MVALUE   162  (81)
  3-0000010A  L*1  NAME      32  (32)
  7-00000000  I*2  NEGSGN     4  (2)
  3-0000012A  L*1  NUMSTR   133  (133)
  6-000001DA  I*2  OASIGN     4  (2)
  6-0000016A  I*2  OFFSET    20  (10)
  6-000001A2  I*2  ONESHF     6  (3)
  6-0000010E  I*2  OPAREN     4  (2)
  9-000002CE  I*2  OSBNAM    32  (16)
  9-000002EE  I*2  OTGNAM    32  (16)
  9-0000030E  I*2  OUNTYP    32  (16)
  6-0000019A  I*2  PCTSEM     8  (4)
  3-00000085  L*1  PREFIX   133  (133)
  9-00000052  I*2  PRENAM    32  (16)
  6-000000D4  I*2  RANHYP     6  (3)
```

```
  9-0000021A  I*2  RSTLIN              180  (90)
  6-00000154  I*2  SEMSPC                6  (3)
  6-000000FE  I*2  SPCSTG                4  (2)
  6-000001A8  I*2  SPHYSP                8  (4)
  9-00000092  I*2  STRSTG               32  (16)
  6-00000072  I*2  SUFDEF                8  (4)
  9-00000072  I*2  SUFNAM               32  (16)
  6-0000014C  I*2  TABEQS                8  (4)
  6-000000CE  I*2  TABLAN                6  (3)
  6-000001CA  I*2  TABOPR                6  (3)
  6-000001C0  I*2  TABPRN               10  (5)
  6-000000AC  I*2  TABRAN                6  (3)
  6-0000008C  I*2  TABSTG                4  (2)
  9-00000100  I*2  TAGNAM               32  (16)
  9-0000047A  I*2  TMPVAL              162  (81)
  9-00000000  I*2  TOKSTG               80  (40)
  6-00000238  I*2  UNDVLD               18  (9)
  6-0000007A  I*2  UNITYP                4  (2)
  6-00000192  I*2  ZEROSG                4  (2)
  6-000000A2  I*2  ZRLAHY               10  (5)

LABELS

    Address   Label

  1-00000000  300'

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name            Type  Name

        OUTMAR                PUTMAR
```

```
        SUBROUTINE TMPWRT

C       THIS IS A NEW ROUTINE FOR VERSION 1.3.
C
C       IT OUTPUTS A LINE FROM THE SOURCE FILE TO THE TMP FILE.
C       THE LINE IS IDENTICAL TO THE SOURCE LINE, EXCEPT THAT
C       A LEADING MINUS HAS BEEN CHANGED TO A PLUS IN
C       THE CASE THAT THE LINE IS A FIELD DEFINITION.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        WRITE (TMP) INBUF (1), (INBUF (I), I = 2, INBUF (1) + 1)
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	72	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	16	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	3987	

ENTRY POINTS

Address	Type	Name
0-00000000		TMPWRT

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR

9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)

```
9-000005C0  I*2  MRBASE    162  (81)
9-00000704  I*2  MRINCR    162  (81)
9-00000336  I*2  MVALUE    162  (81)
3-0000010A  L*1  NAME       32  (32)
7-00000000  I*2  NEGSGN      4  (2)
3-0000012A  L*1  NUMSTR    133  (133)
6-000001DA  I*2  OASIGN      4  (2)
6-0000016A  I*2  OFFSET     20  (10)
6-000001A2  I*2  ONESHF      6  (3)
6-0000010E  I*2  OPAREN      4  (2)
9-000002CE  I*2  OSBNAM     32  (16)
9-000002EE  I*2  OTGNAM     32  (16)
9-0000030E  I*2  OUNTYP     32  (16)
6-0000019A  I*2  PCTSEM      8  (4)
3-00000085  L*1  PREFIX    133  (133)
9-00000052  I*2  PRENAM     32  (16)
6-000000D4  I*2  RANHYP      6  (3)
9-0000021A  I*2  RSTLIN    180  (90)
6-00000154  I*2  SEMSPC      6  (3)
6-000000FE  I*2  SPCSTG      4  (2)
6-000001A8  I*2  SPHYSP      8  (4)
9-00000092  I*2  STRSTG     32  (16)
6-00000072  I*2  SUFDEF      8  (4)
9-00000072  I*2  SUFNAM     32  (16)
6-0000014C  I*2  TABEQS      8  (4)
6-000000CE  I*2  TABLAN      6  (3)
6-000001CA  I*2  TABOPR      6  (3)
6-000001C0  I*2  TABPRN     10  (5)
6-000000AC  I*2  TABRAN      6  (3)
6-0000008C  I*2  TABSTG      4  (2)
9-00000100  I*2  TAGNAM     32  (16)
9-0000047A  I*2  TMPVAL    162  (81)
9-00000000  I*2  TOKSTG     80  (40)
6-00000238  I*2  UNDVLD     18  (9)
6-0000007A  I*2  UNITYP      4  (2)
6-00000192  I*2  ZEROSG      4  (2)
6-000000A2  I*2  ZRLAHY     10  (5)
```

```
C       Version V02-001
C
C***********************************************************************
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C***********************************************************************
C
C       REVISION HISTORY:
C               22-03-77        CP      ADD NEGSGN FOR NEGATIVE POSITIONING.
C
C               29-06-77        TC      CHANGED STRING FOR DOLBYT FROM
C                                       '$BYTEPOSITION' TO '$BYTEOFFSET'
C                                       (2.4)
C
C               18-02-80                TIM HALVORSEN
C                                       REMOVED $ FROM DOLMAC AND ADDED NEW
C                                       STRING DOLLAR AND UNDVLD


        SUBROUTINE INISTG

C       THIS ROUTINE INITIALIZES A SET OF STRINGS THAT ARE USED
C       OVER AND OVER AGAIN IN OUTPUT LINES FOR THE BLISS AND MARS
C       TRANSLATED FILES.

C       EACH CALL TO LITSTG CONVERTS A STRING LITERAL INTO A COUNTED
C       STRING THAT IS STORED IN THE ARRAY LISTED AS THE FIRST
C       PARAMETER.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        CALL LITSTG (DOTMAC, '  .MACRO  ', 8)
        CALL LITSTG (DOLLAR, '$', 1)
        CALL LITSTG (DOTBLK, '  .BLK', 5)
        CALL LITSTG (DOLGBL, ',$GBL', 5)
        CALL LITSTG (DEFINI, '  $DEFINI ', 9)
        CALL LITSTG (DOLDEF, '$DEF     ', 5)
        CALL LITSTG (DEFEND, '  $DEFEND ', 9)
        CALL LITSTG (ENDMAC, '  .ENDM   ', 7)
        CALL LITSTG (SUFDEF, 'DEF', 3)
        CALL LITSTG (AMASK, 'M', 1)
```

```
      CALL LITSTG (UNITYP, 'L', 1)
      CALL LITSTG (TABSTG, '	', 1)
      CALL LITSTG (SPCSTG, ' ', 1)
      CALL LITSTG (DOLVLD, '  $VIELD  ', 8)
      CALL LITSTG (UNDVLD, '   VIELD  ', 8)
      CALL LITSTG (ZRLAHY, '0,<-', 4)
      CALL LITSTG (TABRAN, '  >', 2)
      CALL LITSTG (EQULST, '$EQULST ', 8)
      CALL LITSTG (EQUTAB, '$EQU    ', 5)
      CALL LITSTG (COMMAS, ',', 1)
      CALL LITSTG (LANHYP, '<-', 2)
      CALL LITSTG (TABLAN, '  <', 2)
      CALL LITSTG (RANHYP, '>-', 2)
      CALL LITSTG (LITTAB, 'LITERAL   ', 8)
      CALL LITSTG (TABEQS, '  = ', 3)
      CALL LITSTG (SEMSPC, '; ', 2)
      CALL LITSTG (MACTAB, 'MACRO                 ', 7)
      CALL LITSTG (ZEROSG, '0', 1)
      CALL LITSTG (PCTSEM, '%; ', 3)
      CALL LITSTG (ONESHF, '1^', 2)
      CALL LITSTG (SPHYSP, ' - ', 3)
      CALL LITSTG (HYPHEN, '-', 1)
      CALL LITSTG (OUNTYP, 'B', 1)
      CALL LITSTG (COMGBL, ',GBL,', 5)
      CALL LITSTG (TABPRN, '   ); ', 4)
      CALL LITSTG (TABOPR, '   (', 2)
      CALL LITSTG (CPRCOM, '),', 2)
      CALL LITSTG (CPAREN, ')', 1)
      CALL LITSTG (DOLBIT, '$BITPOSITION', 12)
      CALL LITSTG (DOLBYT, '$BYTEOFFSET', 11)
      CALL LITSTG (DOLFLD, '$FIELDWIDTH', 11)
      CALL LITSTG (EXPOPN, '<', 1)
      CALL LITSTG (EXPCLO, '>', 1)
      CALL LITSTG (OPAREN, '(', 1)
      CALL LITSTG (EXCLSP, '!...$', 5)
      CALL LITSTG (DOTEQS, '. = ', 4)
      CALL LITSTG (NEGSGN, '-', 1)
      RETURN
      END
```

```
PROGRAM SECTIONS

    Name                                     Bytes   Attributes

  0 $CODE                                      428   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
  1 $PDATA                                     275   PIC CON REL LCL   SHR NOEXE   RD NOWRT LONG
  2 $LOCAL                                    1120   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG
  3 TEXT                                       431   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  4 VARS                                        12   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  5 LOG                                         30   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  6 STGS                                       586   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  7 MORSTG                                       4   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  8 CHECKS                                       2   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  9 PARSE                                     2160   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 10 FILES                                      654   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 11 SPCHR                                        6   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 12 LUNS                                        14   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG

    Total Space Allocated                     5722

ENTRY POINTS

    Address   Type  Name

  0-00000000        INISTG

VARIABLES

    Address   Type  Name                  Address   Type  Name                  Address   Type  Name                  Address   Type  Name

  4-00000006  I*4   BINVAL             11-00000000  I*2   BLANK               9-00000212  I*2   BLBITS              9-00000332  I*2   BLFOFS
 12-00000002  I*2   BLI                10-0000028C  I*2   BLIPTR              5-00000012  L*2   BLKOUT              9-0000012A  I*2   BOFSET
  9-0000016C  I*2   CBASE               9-0000016E  I*2   CINCR               4-00000004  I*2   COL                 5-00000016  L*2   CONEXP
  8-00000000  I*2   DEBUG               5-00000014  L*2   ENDEXP              5-00000000  L*2   ENDFIL             11-00000004  I*2   EOLCH
 12-00000008  I*2   ERR                 5-00000002  L*2   ERROR               5-0000000E  L*2   ERROUT              5-00000010  L*2   FLDLAS
  9-00000122  I*2   FOFSET              9-000000B6  I*2   FSIGN               9-000000B4  I*2   FSIZ               12-00000000  I*2   INP
 10-000000A8  I*2   INPLIN             10-000000A6  I*2   INPTR               9-0000051C  I*2   LASLIN              9-00000216  I*2   LFDSIZ
  4-0000000A  I*2   LINELEN             9-00000126  I*2   LINTYP              9-00000218  I*2   LPTR                9-00000214  I*2   LSBSIZ
 12-00000004  I*2   MAR                10-0000019A  I*2   MARPTR             12-0000000C  I*2   MAS                 9-0000086E  I*2   MNGCNT
  9-0000086C  I*2   NEGCNT              4-00000000  I*4   NUM                 9-00000334  I*2   OBBITS              9-0000032E  I*2   OFSIZ
  9-00000330  I*2   OUNSIZ              5-00000018  L*2   POSOFF              5-0000000C  L*2   SMASK               9-00000120  I*2   SOFSET
  5-00000004  L*2   STGEQL              5-00000006  L*2   STROK              11-00000002  I*2   TAB                12-00000006  I*2   TMP
  5-0000001C  L*2   TMPIN               5-0000001A  L*2   TMPOUT              9-00000050  I*2   TOKTYP             12-0000000A  I*2   TTY
  5-00000008  L*2   UNDOK               9-000000B2  I*2   UNISIZ              5-0000000A  L*2   VMASK               9-00000124  I*2   VOFSET
  9-00000128  I*2   VSIZ

ARRAYS

    Address   Type  Name                Bytes  Dimensions

  6-000000DA  I*2   AMASK                   4  (2)
  6-00000196  I*2   ASIGN                   4  (2)
  9-0000051E  I*2   BLBASE                162  (81)
 10-0000019C  I*2   BLIBUF                240  (120)
```

```
 9-00000662  I*2  BLINCR   162  (81)
 6-0000017E  I*2  BLSSIZ    20  (10)
 9-000003D8  I*2  BVALUE   162  (81)
 6-000000EA  I*2  BYTSIZ    20  (10)
 6-000001B4  I*2  COMGBL    12  (6)
 6-000000C4  I*2  COMMAS     4  (2)
 6-00000112  I*2  CONBAS    20  (10)
 6-00000126  I*2  CONINC    20  (10)
 9-0000012C  I*2  CONPRE    32  (16)
 9-0000014C  I*2  CONTAG    32  (16)
 9-000007A6  I*2  CONTEX   198  (9, 11)
 6-000001D6  I*2  CPAREN     4  (2)
 6-000001D0  I*2  CPRCOM     6  (3)
 9-00000170  I*2  CVALUE   162  (81)
 6-0000004C  I*2  DEFEND    20  (10)
 6-00000022  I*2  DEFINI    20  (10)
 6-000001DE  I*2  DOLBIT    26  (13)
 6-000001F8  I*2  DOLBYT    28  (14)
 6-00000036  I*2  DOLDEF    12  (6)
 6-00000214  I*2  DOLFLD    24  (12)
 6-00000016  I*2  DOLGBL    12  (6)
 6-00000234  I*2  DOLLAR     4  (2)
 6-00000090  I*2  DOLVLD    18  (9)
 6-000000DE  I*2  DOTBLK    12  (6)
 6-00000042  I*2  DOTEQS    10  (5)
 6-00000000  I*2  DOTMAC    22  (11)
 6-00000060  I*2  ENDMAC    18  (9)
 6-000000B2  I*2  EQULST    18  (9)
 6-00000102  I*2  EQUTAB    12  (6)
 6-0000007E  I*2  EXCLSP    14  (7)
 6-00000230  I*2  EXPCLO     4  (2)
 6-0000022C  I*2  EXPOPN     4  (2)
 9-000000B8  I*2  FLDNAM    72  (36)
 6-000001B0  I*2  HYPHEN     4  (2)
10-00000000  I*2  INBUF    166  (83)
 6-000000C8  I*2  LANHYP     6  (3)
 3-00000000  L*1  LINE     133  (133)
 6-0000013A  I*2  LITTAB    18  (9)
 6-0000015A  I*2  MACTAB    16  (8)
10-000000AA  I*2  MARBUF   240  (120)
 9-000005C0  I*2  MRBASE   162  (81)
 9-00000704  I*2  MRINCR   162  (81)
 9-00000336  I*2  MVALUE   162  (81)
 3-0000010A  L*1  NAME      32  (32)
 7-00000000  I*2  NEGSGN     4  (2)
 3-0000012A  L*1  NUMSTR   133  (133)
 6-000001DA  I*2  OASIGN     4  (2)
 6-0000016A  I*2  OFFSET    20  (10)
 6-000001A2  I*2  ONESHF     6  (3)
 6-0000010E  I*2  OPAREN     4  (2)
 9-000002CE  I*2  OSBNAM    32  (16)
 9-000002EE  I*2  OTGNAM    32  (16)
 9-0000030E  I*2  OUNTYP    32  (16)
 6-0000019A  I*2  PCTSEM     8  (4)
 3-00000085  L*1  PREFIX   133  (133)
 9-00000052  I*2  PRENAM    32  (16)
 6-000000D4  I*2  RANHYP     6  (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
	LITSTG

```
        SUBROUTINE CMPSTG (STGONE, STGTWO)

C       COMPARES TWO COUNTED STRINGS. RETURNS A .TRUE. IN STGEQL IF
C       THEY MATCH EXACTLY. OTHERWISE RETURNS A .FALSE. IN STGEQL.

C       STGTWO IS THE CONTROL STRING, I.E., HAS A LENGTH COUNT
C       AS LONG AS THE STRING MUST BE TO MATCH.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER STGONE (*), STGTWO (*)

C       IF (DEBUG) TYPE 1000, (STGONE (I), I = 2, STGONE (1) + 1),
C       1       (STGTWO (I), I = 2, STGTWO (1) + 1)
1000    FORMAT (' STRINGS ARE ',40A1)

        DO 10 I = 1, STGTWO (1) + 1
        IF (STGONE (I) .EQ. STGTWO (I)) GOTO 10
        STGEQL = .FALSE.
        RETURN
10      CONTINUE
        STGEQL = .TRUE.
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	87	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	44	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4030									

ENTRY POINTS

Address	Type	Name
0-00000000		CMPSTG

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)

6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
AP-00000004@	I*2	STGONE	**	(*)
AP-00000008@	I*2	STGTWO	**	(*)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label
0-00000048	10	**	1000'

0001

```
        SUBROUTINE MOVSTG (SRCSTG, DSTSTG)

C       MOVES ONE STRING INTO ANOTHER LOCATION. THE FIRST
C       ARGUMENT IS THE SOURCE STRING ADDRESS, THE SECOND ARGUMENT
C       THE DESTINATION STRING ADDRESS.

C       THE NUMBER OF LOCATIONS MOVED IS THE COUNT STORED IN THE
C       FIRST LOCATION OF THE SOURCE STRING PLUS 1

        INTEGER SRCSTG(*), DSTSTG(*)

        DO 10 I = 1, SRCSTG (1) + 1
        DSTSTG (I) = SRCSTG (I)
10      CONTINUE
        END
```

```
PROGRAM SECTIONS

    Name                                    Bytes   Attributes

  0 $CODE                                      71   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
  2 $LOCAL                                     44   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG

    Total Space Allocated                     115

ENTRY POINTS

    Address   Type  Name

  0-00000000        MOVSTG

VARIABLES

    Address   Type  Name

  2-00000000  I*2   I

ARRAYS

    Address   Type  Name                   Bytes  Dimensions

 AP-00000008@ I*2   DSTSTG                    **  (*)
 AP-00000004@ I*2   SRCSTG                    **  (*)

LABELS

    Address    Label

      **       10
```

```
C       REVISION HISTORY:
C               22-03-77        CP      INITIALIZE TMP FILE CONTEXT.
C                                       CHANGE INITIALIZATION OF CONTEXT
C                                       ARRAY SO THAT THE FIFTH FIELD IS
C                                       A NEGATIVE ONE IF NO MARK HAS BEEN
C                                       SET FOR THIS CONTEXT POSITION.
C                                       VARIABLES.
C
C               20-04-77        TC      CHANGE INIT. OF CONTEXT ARRAY
C                                       SO THAT THE NINTH (RATHER
C                                       THAN THE FIFTH) FIELD IS -1 IF NO
C                                       MARK HAS BEEN SET FOR THIS CONTEXT
C                                       POSITION.

        SUBROUTINE INISTR

C       INITIALIZES VARIABLES FOR A NEW STRUCTURE DECLARATION.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

C       INITIALIZE TMP FILE CONTEXT VALUES.

        TMPIN = .FALSE.
        TMPOUT = .FALSE.

C       INITIALIZE EACH CONTEXT FIELD.

        BLFOFS = 0
        SOFSET = 0
        FOFSET = 0
        BOFSET = 0
        LFDSIZ = 0
        LSBSIZ = 0

C       INITIALIZE THE SAVED CONTEXT ARRAY.

        DO 10 I = 1,10
        CONTEX (9, I) = -1
10      CONTINUE

C       INITIALIZE THE MAXIMUM VALUES TO ZERO

        DO 20 I = 1,8
        CONTEX (I, 11) = 0
20      CONTINUE

C       INITIALIZE THE FIELD NAME AND TAG NAME

        FLDNAM (1) = 0
        TAGNAM (1) = 3
        TAGNAM (2) = '$'
        TAGNAM (4) = '_'

C       INITIALIZE LINE TYPE VARIABLES

        LASLIN = 0
        FLDLAS = .FALSE.
```

```
        RETURN
        END
```

```
PROGRAM SECTIONS

    Name                                  Bytes   Attributes

  0 $CODE                                   128   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
  2 $LOCAL                                    4   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG
  3 TEXT                                    431   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  4 VARS                                     12   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  5 LOG                                      30   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  6 STGS                                    586   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  7 MORSTG                                    4   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  8 CHECKS                                    2   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
  9 PARSE                                  2160   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 10 FILES                                   654   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 11 SPCHR                                     6   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG
 12 LUNS                                     14   PIC OVR REL GBL   SHR NOEXE   RD   WRT LONG

    Total Space Allocated                  4031

ENTRY POINTS

    Address   Type  Name

  0-00000000        INISTR

VARIABLES

    Address   Type  Name             Address   Type  Name             Address   Type  Name             Address   Type  Name

  4-00000006  I*4   BINVAL        11-00000000  I*2   BLANK          9-00000212  I*2   BLBITS         9-00000332  I*2   BLFOFS
 12-00000002  I*2   BLI           10-0000028C  I*2   BLIPTR         5-00000012  L*2   BLKOUT         9-0000012A  I*2   BOFSET
  9-0000016C  I*2   CBASE          9-0000016E  I*2   CINCR          4-00000004  I*2   COL            5-00000016  L*2   CONEXP
  8-00000000  I*2   DEBUG          5-00000014  L*2   ENDEXP         5-00000000  L*2   ENDFIL        11-00000004  I*2   EOLCH
 12-00000008  I*2   ERR            5-00000002  L*2   ERROR          5-0000000E  L*2   ERROUT         5-00000010  L*2   FLDLAS
  9-00000122  I*2   FOFSET         9-000000B6  I*2   FSIGN          9-000000B4  I*2   FSIZ           2-00000000  I*2   I
 12-00000000  I*2   INP           10-000000A8  I*2   INPLIN        10-000000A6  I*2   INPTR          9-0000051C  I*2   LASLIN
  9-00000216  I*2   LFDSIZ         4-0000000A  I*2   LINELEN        9-00000126  I*2   LINTYP         9-00000218  I*2   LPTR
  9-00000214  I*2   LSBSIZ        12-00000004  I*2   MAR           10-0000019A  I*2   MARPTR        12-0000000C  I*2   MAS
  9-0000086E  I*2   MNGCNT         9-0000086C  I*2   NEGCNT         4-00000000  I*4   NUM            9-00000334  I*2   OBBITS
  9-0000032E  I*2   OFSIZ          9-00000330  I*2   OUNSIZ         5-00000018  L*2   POSOFF         5-0000000C  L*2   SMASK
  9-00000120  I*2   SOFSET         5-00000004  L*2   STGEQL         5-00000006  L*2   STROK         11-00000002  I*2   TAB
 12-00000006  I*2   TMP            5-0000001C  L*2   TMPIN          5-0000001A  L*2   TMPOUT         9-00000050  I*2   TOKTYP
 12-0000000A  I*2   TTY            5-00000008  L*2   UNDOK          9-000000B2  I*2   UNISIZ         5-0000000A  L*2   VMASK
  9-00000124  I*2   VOFSET         9-00000128  I*2   VSIZ

ARRAYS

    Address   Type  Name                       Bytes  Dimensions

  6-000000DA  I*2   AMASK                          4  (2)
  6-00000196  I*2   ASIGN                          4  (2)
  9-0000051E  I*2   BLBASE                       162  (81)
 10-0000019C  I*2   BLIBUF                       240  (120)
  9-00000662  I*2   BLINCR                       162  (81)
```

```
 6-0000017E   I*2   BLSSIZ        20   (10)
 9-000003D8   I*2   BVALUE       162   (81)
 6-000000EA   I*2   BYTSIZ        20   (10)
 6-000001B4   I*2   COMGBL        12   (6)
 6-000000C4   I*2   COMMAS         4   (2)
 6-00000112   I*2   CONBAS        20   (10)
 6-00000126   I*2   CONINC        20   (10)
 9-0000012C   I*2   CONPRE        32   (16)
 9-0000014C   I*2   CONTAG        32   (16)
 9-000007A6   I*2   CONTEX       198   (9, 11)
 6-000001D6   I*2   CPAREN         4   (2)
 6-000001D0   I*2   CPRCOM         6   (3)
 9-00000170   I*2   CVALUE       162   (81)
 6-0000004C   I*2   DEFEND        20   (10)
 6-00000022   I*2   DEFINI        20   (10)
 6-000001DE   I*2   DOLBIT        26   (13)
 6-000001F8   I*2   DOLBYT        28   (14)
 6-00000036   I*2   DOLDEF        12   (6)
 6-00000214   I*2   DOLFLD        24   (12)
 6-00000016   I*2   DOLGBL        12   (6)
 6-00000234   I*2   DOLLAR         4   (2)
 6-00000090   I*2   DOLVLD        18   (9)
 6-000000DE   I*2   DOTBLK        12   (6)
 6-00000042   I*2   DOTEQS        10   (5)
 6-00000000   I*2   DOTMAC        22   (11)
 6-00000060   I*2   ENDMAC        18   (9)
 6-000000B2   I*2   EQULST        18   (9)
 6-00000102   I*2   EQUTAB        12   (6)
 6-0000007E   I*2   EXCLSP        14   (7)
 6-00000230   I*2   EXPCLO         4   (2)
 6-0000022C   I*2   EXPOPN         4   (2)
 9-000000B8   I*2   FLDNAM        72   (36)
 6-000001B0   I*2   HYPHEN         4   (2)
10-00000000   I*2   INBUF        166   (83)
 6-000000C8   I*2   LANHYP         6   (3)
 3-00000000   L*1   LINE         133   (133)
 6-0000013A   I*2   LITTAB        18   (9)
 6-0000015A   I*2   MACTAB        16   (8)
10-000000AA   I*2   MARBUF       240   (120)
 9-000005C0   I*2   MRBASE       162   (81)
 9-00000704   I*2   MRINCR       162   (81)
 9-00000336   I*2   MVALUE       162   (81)
 3-0000010A   L*1   NAME          32   (32)
 7-00000000   I*2   NEGSGN         4   (2)
 3-0000012A   L*1   NUMSTR       133   (133)
 6-000001DA   I*2   OASIGN         4   (2)
 6-0000016A   I*2   OFFSET        20   (10)
 6-000001A2   I*2   ONESHF         6   (3)
 6-0000010E   I*2   OPAREN         4   (2)
 9-000002CE   I*2   OSBNAM        32   (16)
 9-000002EE   I*2   OTGNAM        32   (16)
 9-0000030E   I*2   OUNTYP        32   (16)
 6-0000019A   I*2   PCTSEM         8   (4)
 3-00000085   L*1   PREFIX       133   (133)
 9-00000052   I*2   PRENAM        32   (16)
 6-000000D4   I*2   RANHYP         6   (3)
 9-0000021A   I*2   RSTLIN       180   (90)
```

```
  6-00000154  I*2  SEMSPC      6  (3)
  6-000000FE  I*2  SPCSTG      4  (2)
  6-000001A8  I*2  SPHYSP      8  (4)
  9-00000092  I*2  STRSTG     32  (16)
  6-00000072  I*2  SUFDEF      8  (4)
  9-00000072  I*2  SUFNAM     32  (16)
  6-0000014C  I*2  TABEQS      8  (4)
  6-000000CE  I*2  TABLAN      6  (3)
  6-000001CA  I*2  TABOPR      6  (3)
  6-000001C0  I*2  TABPRN     10  (5)
  6-000000AC  I*2  TABRAN      6  (3)
  6-0000008C  I*2  TABSTG      4  (2)
  9-00000100  I*2  TAGNAM     32  (16)
  9-0000047A  I*2  TMPVAL    162  (81)
  9-00000000  I*2  TOKSTG     80  (40)
  6-00000238  I*2  UNDVLD     18  (9)
  6-0000007A  I*2  UNITYP      4  (2)
  6-00000192  I*2  ZEROSG      4  (2)
  6-000000A2  I*2  ZRLAHY     10  (5)
```

LABELS

```
    Address   Label      Address   Label

      **      10           **      20
```

```
      SUBROUTINE INIFLD

C     INITIALIZES THE ARGUMENT DEFAULTS FOR FIELD AND SUBFIELD
C     DEFINITIONS.

      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

      UNITYP (2) = 'L'
      TAGNAM (3) = 'L'
      FLDNAM (1) = 0
      UNISIZ = 4
      FSIZ = 1
      BLBITS = 32
      FSIGN = 0
      ASIGN (1) = 1
      ASIGN (2) = '0'
      RETURN
      END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	65	PIC CON REL LCL SHR EXE RD NOWRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	3964	

ENTRY POINTS

Address	Type	Name
0-00000000		INIFLD

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)

```
  9-000003D8   I*2   BVALUE           162   (81)
  6-000000EA   I*2   BYTSIZ            20   (10)
  6-000001B4   I*2   COMGBL            12   (6)
  6-000000C4   I*2   COMMAS             4   (2)
  6-00000112   I*2   CONBAS            20   (10)
  6-00000126   I*2   CONINC            20   (10)
  9-0000012C   I*2   CONPRE            32   (16)
  9-0000014C   I*2   CONTAG            32   (16)
  9-000007A6   I*2   CONTEX           198   (9, 11)
  6-000001D6   I*2   CPAREN             4   (2)
  6-000001D0   I*2   CPRCOM             6   (3)
  9-00000170   I*2   CVALUE           162   (81)
  6-0000004C   I*2   DEFEND            20   (10)
  6-00000022   I*2   DEFINI            20   (10)
  6-000001DE   I*2   DOLBIT            26   (13)
  6-000001F8   I*2   DOLBYT            28   (14)
  6-00000036   I*2   DOLDEF            12   (6)
  6-00000214   I*2   DOLFLD            24   (12)
  6-00000016   I*2   DOLGBL            12   (6)
  6-00000234   I*2   DOLLAR             4   (2)
  6-00000090   I*2   DOLVLD            18   (9)
  6-000000DE   I*2   DOTBLK            12   (6)
  6-00000042   I*2   DOTEQS            10   (5)
  6-00000000   I*2   DOTMAC            22   (11)
  6-00000060   I*2   ENDMAC            18   (9)
  6-000000B2   I*2   EQULST            18   (9)
  6-00000102   I*2   EQUTAB            12   (6)
  6-0000007E   I*2   EXCLSP            14   (7)
  6-00000230   I*2   EXPCLO             4   (2)
  6-0000022C   I*2   EXPOPN             4   (2)
  9-000000B8   I*2   FLDNAM            72   (36)
  6-000001B0   I*2   HYPHEN             4   (2)
 10-00000000   I*2   INBUF            166   (83)
  6-000000C8   I*2   LANHYP             6   (3)
  3-00000000   L*1   LINE             133   (133)
  6-0000013A   I*2   LITTAB            18   (9)
  6-0000015A   I*2   MACTAB            16   (8)
 10-000000AA   I*2   MARBUF           240   (120)
  9-000005C0   I*2   MRBASE           162   (81)
  9-00000704   I*2   MRINCR           162   (81)
  9-00000336   I*2   MVALUE           162   (81)
  3-0000010A   L*1   NAME              32   (32)
  7-00000000   I*2   NEGSGN             4   (2)
  3-0000012A   L*1   NUMSTR           133   (133)
  6-000001DA   I*2   OASIGN             4   (2)
  6-0000016A   I*2   OFFSET            20   (10)
  6-000001A2   I*2   ONESHF             6   (3)
  6-0000010E   I*2   OPAREN             4   (2)
  9-000002CE   I*2   OSBNAM            32   (16)
  9-000002EE   I*2   OTGNAM            32   (16)
  9-0000030E   I*2   OUNTYP            32   (16)
  6-0000019A   I*2   PCTSEM             8   (4)
  3-00000085   L*1   PREFIX           133   (133)
  9-00000052   I*2   PRENAM            32   (16)
  6-000000D4   I*2   RANHYP             6   (3)
  9-0000021A   I*2   RSTLIN           180   (90)
  6-00000154   I*2   SEMSPC             6   (3)
```

6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

```
        SUBROUTINE SAVSBA

C       SAVES SUBFIELD NAME, TAGNAME, UNIT TYPE, AND UNIT SIZE
C       SO THAT THE SUBFIELD DEFINITION CAN BE OUTPUT
C       PARTWAY THROUGH THE PROCESSING OF THE NEXT SUBFIELD.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        DO 10 I = 1, FLDNAM (1) + 1
        OSBNAM (I) = FLDNAM (I)
10      CONTINUE

        DO 20 I = 1, TAGNAM (1) + 1
        OTGNAM (I) = TAGNAM (I)
20      CONTINUE

        DO 30 I = 1, UNITYP (1) + 1
        OUNTYP (I) = UNITYP (I)
30      CONTINUE

        OFSIZ = FSIZ
        OUNSIZ = UNISIZ

        OASIGN (1) = ASIGN (1)
        OASIGN (2) = ASIGN (2)

        OBBITS = BLBITS

        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	157	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	4	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	4060	

ENTRY POINTS

Address	Type	Name
0-00000000		SAVSBA

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)

```
 6-0000017E  I*2  BLSSIZ          20  (10)
 9-000003D8  I*2  BVALUE         162  (81)
 6-000000EA  I*2  BYTSIZ          20  (10)
 6-000001B4  I*2  COMGBL          12  (6)
 6-000000C4  I*2  COMMAS           4  (2)
 6-00000112  I*2  CONBAS          20  (10)
 6-00000126  I*2  CONINC          20  (10)
 9-0000012C  I*2  CONPRE          32  (16)
 9-0000014C  I*2  CONTAG          32  (16)
 9-000007A6  I*2  CONTEX         198  (9, 11)
 6-000001D6  I*2  CPAREN           4  (2)
 6-000001D0  I*2  CPRCOM           6  (3)
 9-00000170  I*2  CVALUE         162  (81)
 6-0000004C  I*2  DEFEND          20  (10)
 6-00000022  I*2  DEFINI          20  (10)
 6-000001DE  I*2  DOLBIT          26  (13)
 6-000001F8  I*2  DOLBYT          28  (14)
 6-00000036  I*2  DOLDEF          12  (6)
 6-00000214  I*2  DOLFLD          24  (12)
 6-00000016  I*2  DOLGBL          12  (6)
 6-00000234  I*2  DOLLAR           4  (2)
 6-00000090  I*2  DOLVLD          18  (9)
 6-000000DE  I*2  DOTBLK          12  (6)
 6-00000042  I*2  DOTEQS          10  (5)
 6-00000000  I*2  DOTMAC          22  (11)
 6-00000060  I*2  ENDMAC          18  (9)
 6-000000B2  I*2  EQULST          18  (9)
 6-00000102  I*2  EQUTAB          12  (6)
 6-0000007E  I*2  EXCLSP          14  (7)
 6-00000230  I*2  EXPCLO           4  (2)
 6-0000022C  I*2  EXPOPN           4  (2)
 9-000000B8  I*2  FLDNAM          72  (36)
 6-000001B0  I*2  HYPHEN           4  (2)
10-00000000  I*2  INBUF          166  (83)
 6-000000C8  I*2  LANHYP           6  (3)
 3-00000000  L*1  LINE           133  (133)
 6-0000013A  I*2  LITTAB          18  (9)
 6-0000015A  I*2  MACTAB          16  (8)
10-000000AA  I*2  MARBUF         240  (120)
 9-000005C0  I*2  MRBASE         162  (81)
 9-00000704  I*2  MRINCR         162  (81)
 9-00000336  I*2  MVALUE         162  (81)
 3-0000010A  L*1  NAME            32  (32)
 7-00000000  I*2  NEGSGN           4  (2)
 3-0000012A  L*1  NUMSTR         133  (133)
 6-000001DA  I*2  OASIGN           4  (2)
 6-0000016A  I*2  OFFSET          20  (10)
 6-000001A2  I*2  ONESHF           6  (3)
 6-0000010E  I*2  OPAREN           4  (2)
 9-000002CE  I*2  OSBNAM          32  (16)
 9-000002EE  I*2  OTGNAM          32  (16)
 9-0000030E  I*2  OUNTYP          32  (16)
 6-0000019A  I*2  PCTSEM           8  (4)
 3-00000085  L*1  PREFIX         133  (133)
 9-00000052  I*2  PRENAM          32  (16)
 6-000000D4  I*2  RANHYP           6  (3)
 9-0000021A  I*2  RSTLIN         180  (90)
```

6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000A[illegible]	I*2	TABRAN	6	(3)
6-0000006[illegible]	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label
**	10	**	20	**	30

```
              SUBROUTINE CHKALC

C             CHECKS TO SEE WHETHER THE TOTAL ALLOCATION OF
C             BYTES IN THE MARS OUTPUT FILE IS EQUAL TO THE ACTUAL
C             FIELD OFFSET. THIS DISCREPANCY OCCURS WHEN A SET OF
C             SUBFIELDS DOES NOT TOTAL THE AMOUNT OF SPACE PERMITTED
C             BY THE SURROUNDING FIELD.

              INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

              INTEGER LOCAL

C             IF (DEBUG) TYPE 500, BLFOFS, FOFSET, SOFSET, LSBSIZ
500           FORMAT (' BLFOFS ',I3,' FOFSET ',I3,' SOFSET ',I3,' LSBSIZ ',I3)
              IF (BLFOFS .EQ. FOFSET) GOTO 30
              IF ((LASLIN .NE. SBFLD) .OR.
              1       (LSBSIZ .LE. 0)) GOTO 20
              CALL OUTBLK (LSBSIZ)
20            LOCAL = FOFSET - BLFOFS
              IF (LOCAL .GT. 0) CALL OUTBLK (LOCAL)
30            RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	65	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	20	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3984									

ENTRY POINTS

Address	Type	Name
0-00000000		CHKALC

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	2-00000000	I*2	LOCAL	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)

```
  6-0000017E  I*2  BLSSIZ         20  (10)
  9-000003D8  I*2  BVALUE        162  (81)
  6-000000EA  I*2  BYTSIZ         20  (10)
  6-000001B4  I*2  COMGBL         12  (6)
  6-000000C4  I*2  COMMAS          4  (2)
  6-00000112  I*2  CONBAS         20  (10)
  6-00000126  I*2  CONINC         20  (10)
  9-0000012C  I*2  CONPRE         32  (16)
  9-0000014C  I*2  CONTAG         32  (16)
  9-000007A6  I*2  CONTEX        198  (9, 11)
  6-000001D6  I*2  CPAREN          4  (2)
  6-000001D0  I*2  CPRCOM          6  (3)
  9-00000170  I*2  CVALUE        162  (81)
  6-0000004C  I*2  DEFEND         20  (10)
  6-00000022  I*2  DEFINI         20  (10)
  6-000001DE  I*2  DOLBIT         26  (13)
  6-000001F8  I*2  DOLBYT         28  (14)
  6-00000036  I*2  DOLDEF         12  (6)
  6-00000214  I*2  DOLFLD         24  (12)
  6-00000016  I*2  DOLGBL         12  (6)
  6-00000234  I*2  DOLLAR          4  (2)
  6-00000090  I*2  DOLVLD         18  (9)
  6-000000DE  I*2  DOTBLK         12  (6)
  6-00000042  I*2  DOTEQS         10  (5)
  6-00000000  I*2  DOTMAC         22  (11)
  6-00000060  I*2  ENDMAC         18  (9)
  6-000000B2  I*2  EQULST         18  (9)
  6-00000102  I*2  EQUTAB         12  (6)
  6-0000007E  I*2  EXCLSP         14  (7)
  6-00000230  I*2  EXPCLO          4  (2)
  6-0000022C  I*2  EXPOPN          4  (2)
  9-000000B8  I*2  FLDNAM         72  (36)
  6-000001B0  I*2  HYPHEN          4  (2)
 10-00000000  I*2  INBUF         166  (83)
  6-000000C8  I*2  LANHYP          6  (3)
  3-00000000  L*1  LINE          133  (133)
  6-0000013A  I*2  LITTAB         18  (9)
  6-0000015A  I*2  MACTAB         16  (8)
 10-000000AA  I*2  MARBUF        240  (120)
  9-000005C0  I*2  MRBASE        162  (81)
  9-00000704  I*2  MRINCR        162  (81)
  9-00000336  I*2  MVALUE        162  (81)
  3-0000010A  L*1  NAME           32  (32)
  7-00000000  I*2  NEGSGN          4  (2)
  3-0000012A  L*1  NUMSTR        133  (133)
  6-000001DA  I*2  OASIGN          4  (2)
  6-0000016A  I*2  OFFSET         20  (10)
  6-000001A2  I*2  ONESHF          6  (3)
  6-0000010E  I*2  OPAREN          4  (2)
  9-000002CE  I*2  OSBNAM         32  (16)
  9-000002EE  I*2  OTGNAM         32  (16)
  9-0000030E  I*2  OUNTYP         32  (16)
  6-0000019A  I*2  PCTSEM          8  (4)
  3-00000085  L*1  PREFIX        133  (133)
  9-00000052  I*2  PRENAM         32  (16)
  6-000000D4  I*2  RANHYP          6  (3)
  9-0000021A  I*2  RSTLIN        180  (90)
```

```
  6-00000154  I*2  SEMSPC          6  (3)
  6-000000FE  I*2  SPCSTG          4  (2)
  6-000001A8  I*2  SPHYSP          8  (4)
  9-00000092  I*2  STRSTG         32  (16)
  6-00000072  I*2  SUFDEF          8  (4)
  9-00000072  I*2  SUFNAM         32  (16)
  6-0000014C  I*2  TABEQS          8  (4)
  6-000000CE  I*2  TABLAN          6  (3)
  6-000001CA  I*2  TABOPR          6  (3)
  6-000001C0  I*2  TABPRN         10  (5)
  6-000000AC  I*2  TABRAN          6  (3)
  6-0000008C  I*2  TABSTG          4  (2)
  9-00000100  I*2  TAGNAM         32  (16)
  9-0000047A  I*2  TMPVAL        162  (81)
  9-00000000  I*2  TOKSTG         80  (40)
  6-00000238  I*2  UNDVLD         18  (9)
  6-0000007A  I*2  UNITYP          4  (2)
  6-00000192  I*2  ZEROSG          4  (2)
  6-000000A2  I*2  ZRLAHY         10  (5)
```

LABELS

```
    Address    Label       Address    Label       Address    Label

  0-0000002D  20         0-00000040  30              **      500'
```

FUNCTIONS AND SUBROUTINES REFERENCED

```
  Type  Name

        OUTBLK
```

```
        SUBROUTINE GETREM (PTR)

C       COLLECTS THE REST OF AN INPUT LINE AFTER THE DEFINITION
C       COMPONENTS AND SAVES IT IN AN AUXILIARY BUFFER.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER PTR, LOCAL

C       IF (DEBUG) TYPE 500, (INBUF (I), I = PTR + 1, INBUF (PTR) + PTR)
500     FORMAT (' ',90A1)
C       IF (DEBUG) TYPE 510, PTR, INBUF (PTR)
510     FORMAT (' POINTER IS ',I3,', COUNT IS ',I3)
        DO 10 I = PTR, INBUF (PTR) + PTR
        LOCAL = I - PTR + 1
        RSTLIN (LOCAL) = INBUF (I)
10      CONTINUE
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	74	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	4	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3977									

ENTRY POINTS

Address	Type	Name
0-00000000		GETREM

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000002	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	2-00000000	I*2	LOCAL
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
AP-00000004@	I*2	PTR	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)

```
 6-0000017E  I*2  BLSSIZ      20  (10)
 9-000003D8  I*2  BVALUE     162  (81)
 6-000000EA  I*2  BYTSIZ      20  (10)
 6-000001B4  I*2  COMGBL      12  (6)
 6-000000C4  I*2  COMMAS       4  (2)
 6-00000112  I*2  CONBAS      20  (10)
 6-00000126  I*2  CONINC      20  (10)
 9-0000012C  I*2  CONPRE      32  (16)
 9-0000014C  I*2  CONTAG      32  (16)
 9-000007A6  I*2  CONTEX     198  (9, 11)
 6-000001D6  I*2  CPAREN       4  (2)
 6-000001D0  I*2  CPRCOM       6  (3)
 9-00000170  I*2  CVALUE     162  (81)
 6-0000004C  I*2  DEFEND      20  (10)
 6-00000022  I*2  DEFINI      20  (10)
 6-000001DE  I*2  DOLBIT      26  (13)
 6-000001F8  I*2  DOLBYT      28  (14)
 6-00000036  I*2  DOLDEF      12  (6)
 6-00000214  I*2  DOLFLD      24  (12)
 6-00000016  I*2  DOLGBL      12  (6)
 6-00000234  I*2  DOLLAR       4  (2)
 6-00000090  I*2  DOLVLD      18  (9)
 6-000000DE  I*2  DOTBLK      12  (6)
 6-00000042  I*2  DOTEQS      10  (5)
 6-00000000  I*2  DOTMAC      22  (11)
 6-00000060  I*2  ENDMAC      18  (9)
 6-000000B2  I*2  EQULST      18  (9)
 6-00000102  I*2  EQUTAB      12  (6)
 6-0000007E  I*2  EXCLSP      14  (7)
 6-00000230  I*2  EXPCLO       4  (2)
 6-0000022C  I*2  EXPOPN       4  (2)
 9-000000B8  I*2  FLDNAM      72  (36)
 6-000001B0  I*2  HYPHEN       4  (2)
10-00000000  I*2  INBUF      166  (83)
 6-000000C8  I*2  LANHYP       6  (3)
 3-00000000  L*1  LINE       133  (133)
 6-0000013A  I*2  LITTAB      18  (9)
 6-0000015A  I*2  MACTAB      16  (8)
10-000000AA  I*2  MARBUF     240  (120)
 9-000005C0  I*2  MRBASE     162  (81)
 9-00000704  I*2  MRINCR     162  (81)
 9-00000336  I*2  MVALUE     162  (81)
 3-0000010A  L*1  NAME        32  (32)
 7-00000000  I*2  NEGSGN       4  (2)
 3-0000012A  L*1  NUMSTR     133  (133)
 6-000001DA  I*2  OASIGN       4  (2)
 6-0000016A  I*2  OFFSET      20  (10)
 6-000001A2  I*2  ONESHF       6  (3)
 6-0000010E  I*2  OPAREN       4  (2)
 9-000002CE  I*2  OSBNAM      32  (16)
 9-000002EE  I*2  OTGNAM      32  (16)
 9-0000030E  I*2  OUNTYP      32  (16)
 6-0000019A  I*2  PCTSEM       8  (4)
 3-00000085  L*1  PREFIX     133  (133)
 9-00000052  I*2  PRENAM      32  (16)
 6-000000D4  I*2  RANHYP       6  (3)
 9-0000021A  I*2  RSTLIN     180  (90)
```

```
6-00000154  I*2  SEMSPC      6  (3)
6-000000FE  I*2  SPCSTG      4  (2)
6-000001A8  I*2  SPHYSP      8  (4)
9-00000092  I*2  STRSTG     32  (16)
6-00000072  I*2  SUFDEF      8  (4)
9-00000072  I*2  SUFNAM     32  (16)
6-0000014C  I*2  TABEQS      8  (4)
6-000000CE  I*2  TABLAN      6  (3)
6-000001CA  I*2  TABOPR      6  (3)
6-000001C0  I*2  TABPRN     10  (5)
6-000000AC  I*2  TABRAN      6  (3)
6-0000008C  I*2  TABSTG      4  (2)
9-00000100  I*2  TAGNAM     32  (16)
9-0000047A  I*2  TMPVAL    162  (81)
9-00000000  I*2  TOKSTG     80  (40)
6-00000238  I*2  UNDVLD     18  (9)
6-0000007A  I*2  UNITYP      4  (2)
6-0C000192  I*2  ZEROSG      4  (2)
6-000000A2  I*2  ZRLAHY     10  (5)
```

LABELS

```
   Address   Label        Address   Label        Address   Label

     **      10             **      500'           **      510'
```

```
        SUBROUTINE EXCCMT (BUF, PTR)

C       EXCHANGES SEMI COLONS IN A LINE FOR EXCLAMATION POINTS.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER BUF(*), PTR, LOCAL

        LOCAL = BUF (PTR) + 1
C       IF (DEBUG) TYPE 100, LOCAL
100     FORMAT (' END OF LOOP COUNT IS ',I3)
        DO 10 I = PTR + 1, BUF (PTR) + PTR
        IF (BUF (I) .NE. ';') GOTO 10
        BUF (I) = '!'
10      CONTINUE
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	76	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	24	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3999									

ENTRY POINTS

Address	Type	Name
0-00000000		EXCCMT

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000002	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	2-00000000	I*2	LOCAL
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
AP-00000008@	I*2	PTR	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)

6-0000017E	I*2	BLSSIZ	20	(10)
AP-00000004@	I*2	BUF	**	(*)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label
0-00000041	10	**	100'

```
C       REVISION HISTORY:
C               29-06-77        TC      REPLACED THREE CALLS ON CHKMAK
C                                       AND ONE CALL ON MOVSTG WITH A
C                                       CALL ON ETOMAR. (2.4)

        SUBROUTINE CVTEXP (INPVAL, BLIDUM, MARDUM)

C       CONVERTS AN EXPRESSION FOUND AT INPVAL INTO A BLISS
C       AND A MARS EXPRESSION. THE BLISS EXPRESSION IS SAVED
C       AT BLIDUM. THE MARS EXPRESSION IS SAVED AT MARDUM.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'

        INTEGER INPVAL (*), BLIDUM (*), MARDUM (*)
        CALL MOVSTG (INPVAL, TMPVAL)
        CALL ETOBLS (TMPVAL, BLIDUM)
        IF (BLIDUM (BLIDUM (1) + 1) .EQ. '-')
        1       BLIDUM (1) = BLIDUM (1) - 1
C       IF (DEBUG) TYPE 500, (BLIDUM (I), I = 2, BLIDUM (1) + 1)
C       IF (DEBUG) TYPE 500, (INPVAL (I), I = 2, INPVAL (1) + 1)
500     FORMAT (' ',90A1)
        CALL ETOMAR(INPVAL,MARDUM)
C       IF (DEBUG) TYPE 500, (MARDUM (I), I = 2, MARDUM (1) + 1)
        RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	107	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	96	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	4102	

ENTRY POINTS

Address	Type	Name
0-00000000		CVTEXP

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
AP-00000008@	I*2	BLIDUM	**	(*)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)

```
  6-000000B2   I*2   EQULST          18   (9)
  6-00000102   I*2   EQUTAB          12   (6)
  6-0000007E   I*2   EXCLSP          14   (7)
  6-00000230   I*2   EXPCLO           4   (2)
  6-0000022C   I*2   EXPOPN           4   (2)
  9-000000B8   I*2   FLDNAM          72   (36)
  6-000001B0   I*2   HYPHEN           4   (2)
 10-00000000   I*2   INBUF          166   (83)
 AP-00000004@  I*2   INPVAL          **   (*)
  6-000000C8   I*2   LANHYP           6   (3)
  3-00000000   L*1   LINE           133   (133)
  6-0000013A   I*2   LITTAB          18   (9)
  6-0000015A   I*2   MACTAB          16   (8)
 10-000000AA   I*2   MARBUF         240   (120)
 AP-0000000C@  I*2   MARDUM          **   (*)
  9-000005C0   I*2   MRBASE         162   (81)
  9-00000704   I*2   MRINCR         162   (81)
  9-00000336   I*2   MVALUE         162   (81)
  3-0000010A   L*1   NAME            32   (32)
  7-00000000   I*2   NEGSGN           4   (2)
  3-0000012A   L*1   NUMSTR         133   (133)
  6-000001DA   I*2   OASIGN           4   (2)
  6-0000016A   I*2   OFFSET          20   (10)
  6-000001A2   I*2   ONESHF           6   (3)
  6-0000010E   I*2   OPAREN           4   (2)
  9-000002CE   I*2   OSBNAM          32   (16)
  9-000002EE   I*2   OTGNAM          32   (16)
  9-0000030E   I*2   OUNTYP          32   (16)
  6-0000019A   I*2   PCTSEM           8   (4)
  3-00000085   L*1   PREFIX         133   (133)
  9-00000052   I*2   PRENAM          32   (16)
  6-000000D4   I*2   RANHYP           6   (3)
  9-0000021A   I*2   RSTLIN         180   (90)
  6-00000154   I*2   SEMSPC           6   (3)
  6-000000FE   I*2   SPCSTG           4   (2)
  6-000001A8   I*2   SPHYSP           8   (4)
  9-00000092   I*2   STRSTG          32   (16)
  6-00000072   I*2   SUFDEF           8   (4)
  9-00000072   I*2   SUFNAM          32   (16)
  6-0000014C   I*2   TABEQS           8   (4)
  6-000000CE   I*2   TABLAN           6   (3)
  6-000001CA   I*2   TABOPR           6   (3)
  6-000001C0   I*2   TABPRN          10   (5)
  6-000000AC   I*2   TABRAN           6   (3)
  6-0000008C   I*2   TABSTG           4   (2)
  9-00000100   I*2   TAGNAM          32   (16)
  9-0000047A   I*2   TMPVAL         162   (81)
  9-00000000   I*2   TOKSTG          80   (40)
  6-00000238   I*2   UNDVLD          18   (9)
  6-0000007A   I*2   UNITYP           4   (2)
  6-00000192   I*2   ZEROSG           4   (2)
  6-000000A2   I*2   ZRLAHY          10   (5)
```

LABELS

Address	Label
**	500'

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name
	ETOBLS		ETOMAR		MOVSTG

```
C       Version V02-001
C
C*************************************************************************
C*                                                                       *
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C*                                                                       *
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C*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.              *
C*                                                                       *
C*************************************************************************
C
C       UTILITIES FOR MDL
C
C       REVISION HISTORY:
C               22-03-77        CP      CHANGE GETLIN TO ACCEPT INPUT LINES
C                                       FROM THE INPUT FILE OR FROM THE TMP
C                                       FILE, DEPENDING UPON THE SETTING OF
C                                       THE FLAG TMPIN.

        SUBROUTINE GETLIN
        INCLUDE 'SRC$:MDL32CMN.CMN'
        EQUIVALENCE (INCNT,INBUF(1))
C       READS A LINE OF INPUT FILE - SETS ENDFILE IF EOF, COUNTS LINES
C
        IF (TMPIN) GOTO 300
        INPLIN = INPLIN+1
        READ(INP,200,END=99,ERR=99) (INBUF(I),I=2,81)
200     FORMAT(80A1)
        INCNT = 80
        DO 20 I=1,80
        IF(INBUF(82-I).NE.BLANK) GOTO 21
        INCNT = INCNT-1
20      CONTINUE
21      INCNT = INCNT+1
        INBUF(INCNT+2) = EOLCH
        INPTR = 2
        RETURN
99      CONTINUE
C       IF (DEBUG) TYPE 1000
1000    FORMAT (' END OF FILE')
        ENDFIL = .TRUE.
        RETURN

C       WE READ THE SIZE INTO THE TEMPORARY I2 AND THEN MOVE
C       IT INTO INBUF(1) BECAUSE OF A BUG IN THE FORTRAN-10
```

```
C       OPTIMIZER.
C
300     READ (TMP, END=399, ERR=399) I2,
     1          (INBUF (I), I = 2, I2 + 1)
        INBUF (1) = I2
        INPTR = 2
        INBUF(INCNT+2) = EOLCH
        RETURN

399     ENDFIL = .TRUE.
        RETURN

        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	286	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	5	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	16	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4206	

ENTRY POINTS

Address	Type	Name
0-00000000		GETLIN

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
2-00000002	I*2	I2	10-00000000	I*2	INCNT	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN
10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR     162  (81)
 6-0000017E  I*2  BLSSIZ      20  (10)
 9-000003D8  I*2  BVALUE     162  (81)
 6-000000EA  I*2  BYTSIZ      20  (10)
 6-000001B4  I*2  COMGBL      12  (6)
 6-000000C4  I*2  COMMAS       4  (2)
 6-00000112  I*2  CONBAS      20  (10)
 6-00000126  I*2  CONINC      20  (10)
 9-0000012C  I*2  CONPRE      32  (16)
 9-0000014C  I*2  CONTAG      32  (16)
 9-000007A6  I*2  CONTEX     198  (9, 11)
 6-000001D6  I*2  CPAREN       4  (2)
 6-000001D0  I*2  CPRCOM       6  (3)
 9-00000170  I*2  CVALUE     162  (81)
 6-0000004C  I*2  DEFEND      20  (10)
 6-00000022  I*2  DEFINI      20  (10)
 6-000001DE  I*2  DOLBIT      26  (13)
 6-000001F8  I*2  DOLBYT      28  (14)
 6-00000036  I*2  DOLDEF      12  (6)
 6-00000214  I*2  DOLFLD      24  (12)
 6-00000016  I*2  DOLGBL      12  (6)
 6-00000234  I*2  DOLLAR       4  (2)
 6-00000090  I*2  DOLVLD      18  (9)
 6-000000DE  I*2  DOTBLK      12  (6)
 6-00000042  I*2  DOTEQS      10  (5)
 6-00000000  I*2  DOTMAC      22  (11)
 6-00000060  I*2  ENDMAC      18  (9)
 6-000000B2  I*2  EQULST      18  (9)
 6-00000102  I*2  EQUTAB      12  (6)
 6-0000007E  I*2  EXCLSP      14  (7)
 6-00000230  I*2  EXPCLO       4  (2)
 6-0000022C  I*2  EXPOPN       4  (2)
 9-000000B8  I*2  FLDNAM      72  (36)
 6-000001B0  I*2  HYPHEN       4  (2)
10-00000000  I*2  INBUF      166  (83)
 6-000000C8  I*2  LANHYP       6  (3)
 3-00000000  L*1  LINE       133  (133)
 6-0000013A  I*2  LITTAB      18  (9)
 6-0000015A  I*2  MACTAB      16  (8)
10-000000AA  I*2  MARBUF     240  (120)
 9-000005C0  I*2  MRBASE     162  (81)
 9-00000704  I*2  MRINCR     162  (81)
 9-00000336  I*2  MVALUE     162  (81)
 3-0000010A  L*1  NAME        32  (32)
 7-00000000  I*2  NEGSGN       4  (2)
 3-0000012A  L*1  NUMSTR     133  (133)
 6-000001DA  I*2  OASIGN       4  (2)
 6-0000016A  I*2  OFFSET      20  (10)
 6-000001A2  I*2  ONESHF       6  (3)
 6-0000010E  I*2  OPAREN       4  (2)
 9-000002CE  I*2  OSBNAM      32  (16)
 9-000002EE  I*2  OTGNAM      32  (16)
 9-0000030E  I*2  OUNTYP      32  (16)
 6-0000019A  I*2  PCTSEM       8  (4)
 3-00000085  L*1  PREFIX     133  (133)
 9-00000052  I*2  PRENAM      32  (16)
 6-000000D4  I*2  RANHYP       6  (3)
```

```
9-0000021A  I*2  RSTLIN     180  (90)
6-00000154  I*2  SEMSPC       6  (3)
6-000000FE  I*2  SPCSTG       4  (2)
6-000001A8  I*2  SPHYSP       8  (4)
9-00000092  I*2  STRSTG      32  (16)
6-00000072  I*2  SUFDEF       8  (4)
9-00000072  I*2  SUFNAM      32  (16)
6-0000014C  I*2  TABEQS       8  (4)
6-000000CE  I*2  TABLAN       6  (3)
6-000001CA  I*2  TABOPR       6  (3)
6-000001C0  I*2  TABPRN      10  (5)
6-000000AC  I*2  TABRAN       6  (3)
6-0000008C  I*2  TABSTG       4  (2)
9-00000100  I*2  TAGNAM      32  (16)
9-0000047A  I*2  TMPVAL     162  (81)
9-00000000  I*2  TOKSTG      80  (40)
6-00000238  I*2  UNDVLD      18  (9)
6-0000007A  I*2  UNITYP       4  (2)
6-00000192  I*2  ZEROSG       4  (2)
6-000000A2  I*2  ZRLAHY      10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	20	0-00000086	21	0-000000A7	99	1-00000000	200'	0-000000AF	300	0-00000116	399
**	1000'										

```
C       REVISION HISTORY:
C               22-03-77        CP      ADD PLUS AND MINUS AS TOKEN TYPES.

        SUBROUTINE GETTOK
C
C       RETURNS A TOKEN - AND IDENTIFIES IT IN TOKTYP
C
        INCLUDE 'SRC$:MDL32CMN.CMN'
        INTEGER TERM(7),TTYP(7)
        EQUIVALENCE (TC,TOKSTG(1))
        DATA TERM/';',',',0,'<','>','+','-'/
        DATA NTERM,TTYP/7,SEMI,COMMA,EOL,LANGLE,RANGLE,PLUS,MINUS/
C
C
C       SKIP LEADING BLANKS OR TABS
C
        K = INPTR
        L = INBUF(1) + 1
        IF (K .GT. L) GO TO 12
        DO 10 INPTR=K,L
        IF((INBUF(INPTR).NE.BLANK).AND.(INBUF(INPTR).NE.TAB)) GOTO 12
10      CONTINUE
C
C       LINE WAS EMPTY
C
12      TC = 0
        TP = 2
15      CHAR = INBUF(INPTR)
        TOKSTG(TP) = CHAR
        TC = TC+1
        TP = TP+1
        INPTR = INPTR+1
C CHECK FOR TERMINATORS
        DO 20 I=1,NTERM
20      IF(TERM(I).EQ.CHAR) GOTO 50
        DO 22 I=1,NTERM
22      IF (TERM(I).EQ.INBUF(INPTR)) GOTO 30
        IF((INBUF(INPTR).NE.BLANK).AND.(INBUF(INPTR).NE.TAB)) GOTO 15
C
C       FINISHED , CLASSIFY STRING
C
30      IF((TOKSTG(2).GE.'A').AND.(TOKSTG(2).LE.'Z')) TOKTYP = ALPHA
        IF((TOKSTG(2).EQ.'$').OR.(TOKSTG(2).EQ.'_')) TOKTYP = ALPHA
        IF((TOKSTG(2).GE.'0').AND.(TOKSTG(2).LE.'9')) TOKTYP = NUMBER
        RETURN
50      TOKTYP = TTYP(I)
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	321	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	40	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4260									

ENTRY POINTS

Address	Type	Name
0-00000000		GETTOK

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	2-00000024	I*2	CHAR	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000026	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
2-0000001E	I*2	K	2-00000020	I*2	L	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	2-0000001C	I*2	NTERM	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
9-00000000	I*2	TC	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	2-00000022	I*2	TP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)

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```
 9-0000021A  I*2  RSTLIN        180  (90)
 6-00000154  I*2  SEMSPC          6  (3)
 6-000000FE  I*2  SPCSTG          4  (2)
 6-000001A8  I*2  SPHYSP          8  (4)
 9-00000092  I*2  STRSTG         32  (16)
 6-00000072  I*2  SUFDEF          8  (4)
 9-00000072  I*2  SUFNAM         32  (16)
 6-0000014C  I*2  TABEQS          8  (4)
 6-000000CE  I*2  TABLAN          6  (3)
 6-000001CA  I*2  TABOPR          6  (3)
 6-000001C0  I*2  TABPRN         10  (5)
 6-000000AC  I*2  TABRAN          6  (3)
 6-0000008C  I*2  TABSTG          4  (2)
 9-00000100  I*2  TAGNAM         32  (16)
 2-00000000  I*2  TERM           14  (7)
 9-0000047A  I*2  TMPVAL        162  (81)
 9-00000000  I*2  TOKSTG         80  (40)
 2-0000000E  I*2  TTYP           14  (7)
 6-00000238  I*2  UNDVLD         18  (9)
 6-0000007A  I*2  UNITYP          4  (2)
 6-00000192  I*2  ZEROSG          4  (2)
 6-000000A2  I*2  ZRLAHY         10  (5)
```

LABELS

```
  Address    Label      Address    Label      Address    Label      Address    Label      Address    Label      Address    Label

    **       10      0-00000054   12       0-0000005E   15            **       20            **       22       0-000000EF   30
0-00000133   50
```

```
      INTEGER FUNCTION INTVAL(S)
C
C RETURNS THE DECIMAL INTEGER VALUE OF A STRING
C
      IMPLICIT INTEGER(A-Z)
      INTEGER S(*)
      INTEGER NUM(10)
      DATA NUM/'0','1','2','3','4','5','6','7','8','9'/
C
      X = 0
      DO 10 I = 1,S(1)
      C = S(I+1)
C TO BE INDEPENDENT OF SYSTEM COMPARE CHARS
      DO 20 N=1,10
20    IF(C.EQ.NUM(N))GOTO 30
C ILLEGAL CHAR
      INTVAL = -1
      RETURN
C
30    X = 10*X + (N-1)
10    CONTINUE
      INTVAL = X
      RETURN
      END
```

PROGRAM SECTIONS

```
   Name                          Bytes   Attributes

 0 $CODE                           110   PIC CON REL LCL   SHR   EXE   RD NOWRT LONG
 2 $LOCAL                           54   PIC CON REL LCL NOSHR NOEXE   RD   WRT LONG

   Total Space Allocated           164
```

ENTRY POINTS

```
   Address    Type  Name

 0-00000000   I*2   INTVAL
```

VARIABLES

```
   Address    Type  Name        Address    Type  Name        Address    Type  Name        Address    Type  Name

 2-00000018   I*2   C         2-00000016   I*2   I         2-0000001A   I*2   N         2-00000014   I*2   X
```

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000000	I*2	NUM	20	(10)
AP-00000004@	I*2	S	**	(*)

LABELS

Address	Label	Address	Label	Address	Label
**	10	**	20	0-00000052	30

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LA

```
      SUBROUTINE GETEXP(P)
C
C     PTR -> START OF AN EXPRESSION
C     RETURN WITH IT POINTING TO THE LAST CHAR OF THE EXPRESSION
C
      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
C
C GO FORWARDS UNTIL EITHER EOL, COMMA, OR ; IS SEEN
C THEN BACK UP OVER BLANKS OR TABS AND POINT TO
C THE LAST NONBLANK/NONTAB
C
      DO 10 I=P,INBUF(1)+1
      K = I
      IF((INBUF(I).EQ.';') .OR.
     1        (INBUF(I).EQ.',')) GOTO 20
10    CONTINUE
20    IF (K .EQ. P) GOTO 40
      K = K-1
      K1 = K
      DO 25 I=1,K1
      IF((INBUF(K).NE.BLANK).AND.(INBUF(K).NE.TAB)) GOTO 30
      K = K-1
25    CONTINUE
30    P = K
40    RETURN
      END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	143	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	8	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	4050	

ENTRY POINTS

Address	Type	Name
0-00000000		GETEXP

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000002	I*2	K
2-00000004	I*2	K1	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
AP-00000004@	I*2	P	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)

```
  6-000000B2   I*2   EQULST       18  (9)
  6-00000102   I*2   EQUTAB       12  (6)
  6-0000007E   I*2   EXCLSP       14  (7)
  6-00000230   I*2   EXPCLO        4  (2)
  6-0000022C   I*2   EXPOPN        4  (2)
  9-000000B8   I*2   FLDNAM       72  (36)
  6-000001B0   I*2   HYPHEN        4  (2)
 10-00000000   I*2   INBUF       166  (83)
  6-000000C8   I*2   LANHYP        6  (3)
  3-00000000   L*1   LINE        133  (133)
  6-0000013A   I*2   LITTAB       18  (9)
  6-0000015A   I*2   MACTAB       16  (8)
 10-000000AA   I*2   MARBUF      240  (120)
  9-000005C0   I*2   MRBASE      162  (81)
  9-00000704   I*2   MRINCR      162  (81)
  9-00000336   I*2   MVALUE      162  (81)
  3-0000010A   L*1   NAME         32  (32)
  7-00000000   I*2   NEGSGN        4  (2)
  3-0000012A   L*1   NUMSTR      133  (133)
  6-000001DA   I*2   OASIGN        4  (2)
  6-0000016A   I*2   OFFSET       20  (10)
  6-000001A2   I*2   ONESHF        6  (3)
  6-0000010E   I*2   OPAREN        4  (2)
  9-000002CE   I*2   OSBNAM       32  (16)
  9-000002EE   I*2   OTGNAM       32  (16)
  9-0000030E   I*2   OUNTYP       32  (16)
  6-0000019A   I*2   PCTSEM        8  (4)
  3-00000085   L*1   PREFIX      133  (133)
  9-00000052   I*2   PRENAM       32  (16)
  6-000000D4   I*2   RANHYP        6  (3)
  9-0000021A   I*2   RSTLIN      180  (90)
  6-00000154   I*2   SEMSPC        6  (3)
  6-000000FE   I*2   SPCSTG        4  (2)
  6-000001A8   I*2   SPHYSP        8  (4)
  9-00000092   I*2   STRSTG       32  (16)
  6-00000072   I*2   SUFDEF        8  (4)
  9-00000072   I*2   SUFNAM       32  (16)
  6-0000014C   I*2   TABEQS        8  (4)
  6-000000CE   I*2   TABLAN        6  (3)
  6-000001CA   I*2   TABOPR        6  (3)
  6-000001C0   I*2   TABPRN       10  (5)
  6-000000AC   I*2   TABRAN        6  (3)
  6-0000008C   I*2   TABSTG        4  (2)
  9-00000100   I*2   TAGNAM       32  (16)
  9-0000047A   I*2   TMPVAL      162  (81)
  9-00000000   I*2   TOKSTG       80  (40)
  6-00000238   I*2   UNDVLD       18  (9)
  6-0000007A   I*2   UNITYP        4  (2)
  6-00000192   I*2   ZEROSG        4  (2)
  6-000000A2   I*2   ZRLAHY       10  (5)
```

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LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	10	0-00000044	20	**	25	0-00000089	30	0-0000008E	40

```
          SUBROUTINE PUTMAR(CS)
          INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
          INTEGER CS(*)
C
C         PUTS COUNTED STRING INTO THE BUFFER (AT THE END)
C
          K = MARBUF(1)
          L = CS(1)
          DO 10 I=1,L
10        MARBUF(K+I+1)=CS(I+1)
          MARBUF(1) = K+L
          RETURN
          END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	90	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	28	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4017									

ENTRY POINTS

Address	Type	Name
0-00000000		PUTMAR

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000004	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000000	I*2	K
2-00000002	I*2	L	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN

9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
AP-00000004@	I*2	CS	**	(*)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)

```
10-000000AA  I*2  MARBUF   240  (120)
 9-000005C0  I*2  MRBASE   162  (81)
 9-00000704  I*2  MRINCR   162  (81)
 9-00000336  I*2  MVALUE   162  (81)
 3-0000010A  L*1  NAME      32  (32)
 7-00000000  I*2  NEGSGN     4  (2)
 3-0000012A  L*1  NUMSTR   133  (133)
 6-000001DA  I*2  OASIGN     4  (2)
 6-0000016A  I*2  OFFSET    20  (10)
 6-000001A2  I*2  ONESHF     6  (3)
 6-0000010E  I*2  OPAREN     4  (2)
 9-000002CE  I*2  OSBNAM    32  (16)
 9-000002EE  I*2  OTGNAM    32  (16)
 9-0000030E  I*2  OUNTYP    32  (16)
 6-0000019A  I*2  PCTSEM     8  (4)
 3-00000085  L*1  PREFIX   133  (133)
 9-00000052  I*2  PRENAM    32  (16)
 6-000000D4  I*2  RANHYP     6  (3)
 9-0000021A  I*2  RSTLIN   180  (90)
 6-00000154  I*2  SEMSPC     6  (3)
 6-000000FE  I*2  SPCSTG     4  (2)
 6-000001A8  I*2  SPHYSP     8  (4)
 9-00000092  I*2  STRSTG    32  (16)
 6-00000072  I*2  SUFDEF     8  (4)
 9-00000072  I*2  SUFNAM    32  (16)
 6-0000014C  I*2  TABEQS     8  (4)
 6-000000CE  I*2  TABLAN     6  (3)
 6-000001CA  I*2  TABOPR     6  (3)
 6-000001C0  I*2  TABPRN    10  (5)
 6-000000AC  I*2  TABRAN     6  (3)
 6-0000008C  I*2  TABSTG     4  (2)
 9-00000100  I*2  TAGNAM    32  (16)
 9-0000047A  I*2  TMPVAL   162  (81)
 9-00000000  I*2  TOKSTG    80  (40)
 6-00000238  I*2  UNDVLD    18  (9)
 6-0000007A  I*2  UNITYP     4  (2)
 6-00000192  I*2  ZEROSG     4  (2)
 6-000000A2  I*2  ZRLAHY    10  (5)
```

LABELS

```
    Address   Label

      **      10
```

```
          SUBROUTINE PUTBLI(CS)
          INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
          INTEGER CS(*)
    C
    C     PUTS COUNTED STRING INTO THE BUFFER (AT THE END)
    C
          K = BLIBUF(1)
          L = CS(1)
          DO 10 I=1,L
    10    BLIBUF(K+I+1)=CS(I+1)
          BLIBUF(1) = K+L
          RETURN
          END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	90	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	28	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3 TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4 VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5 LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6 STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7 MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8 CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9 PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10 FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11 SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12 LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
Total Space Allocated	4017	

ENTRY POINTS

Address	Type	Name
0-00000000		PUTBLI

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000004	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000000	I*2	K
2-00000002	I*2	L	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR

10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN
5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
AP-00000004@	I*2	CS	**	(*)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)

```
9-000005C0  I*2  MRBASE     162  (81)
9-00000704  I*2  MRINCR     162  (81)
9-00000336  I*2  MVALUE     162  (81)
3-0000010A  L*1  NAME        32  (32)
7-00000000  I*2  NEGSGN       4  (2)
3-0000012A  L*1  NUMSTR     133  (133)
6-000001DA  I*2  OASIGN       4  (2)
6-0000016A  I*2  OFFSET      20  (10)
6-000001A2  I*2  ONESHF       6  (3)
6-0000010E  I*2  OPAREN       4  (2)
9-000002CE  I*2  OSBNAM      32  (16)
9-000002EE  I*2  OTGNAM      32  (16)
9-0000030E  I*2  OUNTYP      32  (16)
6-0000019A  I*2  PCTSEM       8  (4)
3-00000085  L*1  PREFIX     133  (133)
9-00000052  I*2  PRENAM      32  (16)
6-000000D4  I*2  RANHYP       6  (3)
9-0000021A  I*2  RSTLIN     180  (90)
6-00000154  I*2  SEMSPC       6  (3)
6-000000FE  I*2  SPCSTG       4  (2)
6-000001A8  I*2  SPHYSP       8  (4)
9-00000092  I*2  STRSTG      32  (16)
6-00000072  I*2  SUFDEF       8  (4)
9-00000072  I*2  SUFNAM      32  (16)
6-0000014C  I*2  TABEQS       8  (4)
6-000000CE  I*2  TABLAN       6  (3)
6-000001CA  I*2  TABOPR       6  (3)
6-000001C0  I*2  TABPRN      10  (5)
6-000000AC  I*2  TABRAN       6  (3)
6-0000008C  I*2  TABSTG       4  (2)
9-00000100  I*2  TAGNAM      32  (16)
9-0000047A  I*2  TMPVAL     162  (81)
9-00000000  I*2  TOKSTG      80  (40)
6-00000238  I*2  UNDVLD      18  (9)
6-0000007A  I*2  UNITYP       4  (2)
6-00000192  I*2  ZEROSG       4  (2)
6-000000A2  I*2  ZRLAHY      10  (5)
```

LABELS

```
    Address   Label

      **      10
```

```
      SUBROUTINE OUTBUF(CHN,BUF)
C     OUTPUTS BUFFER BUF
      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
      INTEGER BUF(*)
C
C
      IF(BUF(1).GT.1) GOTO 20
      IF(BUF(2).NE.EOLCH) GOTO 20
      WRITE(CHN,101)
101   FORMAT()
      GOTO 30
20    WRITE(CHN,100) (BUF(I),I=2,BUF(1)+1)
100   FORMAT(1X,120A1)
30    BUF(1) = 0
      BUF(2) = EOLCH
      RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	146	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	8	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	24	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4077									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTBUF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	AP-00000004@	I*2	CHN	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL

11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000000	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
AP-00000008@	I*2	BUF	**	(*)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-00000082	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)

6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label
0-00000042	20	0-00000082	30	1-00000001	100'	1-00000000	101'

NE

LA

```
C
        SUBROUTINE OUTMAR
C OUTPUTS THE MARS BUFFER
        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
        CALL OUTBUF(MAR,MARBUF)
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	17	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	12	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3928									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTMAR

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET

```
  9-00000128  I*2  VSIZ
```

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)

```
 6-000001DA  I*2  OASIGN      4  (2)
 6-0000016A  I*2  OFFSET     20  (10)
 6-000001A2  I*2  ONESHF      6  (3)
 6-0000010E  I*2  OPAREN      4  (2)
 9-000002CE  I*2  OSBNAM     32  (16)
 9-000002EE  I*2  OTGNAM     32  (16)
 9-0000030E  I*2  OUNTYP     32  (16)
 6-0000019A  I*2  PCTSEM      8  (4)
 3-00000085  L*1  PREFIX    133  (133)
 9-00000052  I*2  PRENAM     32  (16)
 6-000000D4  I*2  RANHYP      6  (3)
 9-0000021A  I*2  RSTLIN    180  (90)
 6-00000154  I*2  SEMSPC      6  (3)
 6-000000FE  I*2  SPCSTG      4  (2)
 6-000001A8  I*2  SPHYSP      8  (4)
 9-00000092  I*2  STRSTG     32  (16)
 6-00000072  I*2  SUFDEF      8  (4)
 9-00000072  I*2  SUFNAM     32  (16)
 6-0000014C  I*2  TABEQS      8  (4)
 6-000000CE  I*2  TABLAN      6  (3)
 6-000001CA  I*2  TABOPR      6  (3)
 6-000001C0  I*2  TABPRN     10  (5)
 6-000000AC  I*2  TABRAN      6  (3)
 6-0000008C  I*2  TABSTG      4  (2)
 9-00000100  I*2  TAGNAM     32  (16)
 9-0000047A  I*2  TMPVAL    162  (81)
 9-00000000  I*2  TOKSTG     80  (40)
 6-00000238  I*2  UNDVLD     18  (9)
 6-0000007A  I*2  UNITYP      4  (2)
 6-00000192  I*2  ZEROSG      4  (2)
 6-000000A2  I*2  ZRLAHY     10  (5)
```

FUNCTIONS AND SUBROUTINES REFERENCED

```
 Type  Name

       OUTBUF
```

```
        SUBROUTINE OUTBLI
C OUTPUTS THE BLISS BUFFER
        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
        CALL OUTBUF(BLI,BLIBUF)
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	17	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	12	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3928									

ENTRY POINTS

Address	Type	Name
0-00000000		OUTBLI

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)

6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
	OUTBUF

```
      INTEGER FUNCTION LASTNB(P)
C
C     RETURNS INDEX OF LAST NON-BLANK,NON-TAB BEFORE THE POINTER
C
C
      INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
C
      K = P-1
      DO 10 I=1,K
      C = INBUF(P-I+1)
      IF((C.NE.BLANK).AND.(C.NE.TAB)) GOTO 30
10    CONTINUE
30    LASTNB = P-I+1
      RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	81	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	8	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3988									

ENTRY POINTS

Address	Type	Name
0-00000000	I*2	LASTNB

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
2-00000004	I*2	C	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000002	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR

2-00000000	I*2	K	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
AP-00000004@	I*2	P	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)

6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label
**	10	0-00000048	30

```

        INTEGER FUNCTION NEXTNB (P)

C       RETURNS THE INDEX OF THE NEXT NON-BLANK, NON-TAB
C       CHARACTER AFTER THE CURRENT CHARACTER.

        INCLUDE 'SRC$:MDL32CMN.CMN/NOLIST'
        INTEGER C

        DO 10 I = P + 1, INBUF (1) + 1
        K = I
        C = INBUF (I)
        IF ((C .NE. BLANK) .AND.
     1      (C .NE. TAB)) GOTO 20
10      CONTINUE
20      NEXTNB = K
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes							
0	$CODE	79	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
2	$LOCAL	8	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	3986									

ENTRY POINTS

Address	Type	Name
0-00000000	I*2	NEXTNB

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
2-00000000	I*2	C	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
2-00000002	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
2-00000004	I*2	K	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
AP-00000004@	I*2	P	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662   I*2   BLINCR       162   (81)
 6-0000017E   I*2   BLSSIZ        20   (10)
 9-000003D8   I*2   BVALUE       162   (81)
 6-000000EA   I*2   BYTSIZ        20   (10)
 6-000001B4   I*2   COMGBL        12   (6)
 6-000000C4   I*2   COMMAS         4   (2)
 6-00000112   I*2   CONBAS        20   (10)
 6-00000126   I*2   CONINC        20   (10)
 9-0000012C   I*2   CONPRE        32   (16)
 9-0000014C   I*2   CONTAG        32   (16)
 9-000007A6   I*2   CONTEX       198   (9, 11)
 6-000001D6   I*2   CPAREN         4   (2)
 6-000001D0   I*2   CPRCOM         6   (3)
 9-00000170   I*2   CVALUE       162   (81)
 6-0000004C   I*2   DEFEND        20   (10)
 6-00000022   I*2   DEFINI        20   (10)
 6-000001DE   I*2   DOLBIT        26   (13)
 6-000001F8   I*2   DOLBYT        28   (14)
 6-00000036   I*2   DOLDEF        12   (6)
 6-00000214   I*2   DOLFLD        24   (12)
 6-00000016   I*2   DOLGBL        12   (6)
 6-00000234   I*2   DOLLAR         4   (2)
 6-00000090   I*2   DOLVLD        18   (9)
 6-000000DE   I*2   DOTBLK        12   (6)
 6-00000042   I*2   DOTEQS        10   (5)
 6-00000000   I*2   DOTMAC        22   (11)
 6-00000060   I*2   ENDMAC        18   (9)
 6-000000B2   I*2   EQULST        18   (9)
 6-00000102   I*2   EQUTAB        12   (6)
 6-0000007E   I*2   EXCLSP        14   (7)
 6-00000230   I*2   EXPCLO         4   (2)
 6-0000022C   I*2   EXPOPN         4   (2)
 9-000000B8   I*2   FLDNAM        72   (36)
 6-000001B0   I*2   HYPHEN         4   (2)
10-00000000   I*2   INBUF        166   (83)
 6-000000C8   I*2   LANHYP         6   (3)
 3-00000000   L*1   LINE         133   (133)
 6-0000013A   I*2   LITTAB        18   (9)
 6-0000015A   I*2   MACTAB        16   (8)
10-000000AA   I*2   MARBUF       240   (120)
 9-000005C0   I*2   MRBASE       162   (81)
 9-00000704   I*2   MRINCR       162   (81)
 9-00000336   I*2   MVALUE       162   (81)
 3-0000010A   L*1   NAME          32   (32)
 7-00000000   I*2   NEGSGN         4   (2)
 3-0000012A   L*1   NUMSTR       133   (133)
 6-000001DA   I*2   OASIGN         4   (2)
 6-0000016A   I*2   OFFSET        20   (10)
 6-000001A2   I*2   ONESHF         6   (3)
 6-0000010E   I*2   OPAREN         4   (2)
 9-000002CE   I*2   OSBNAM        32   (16)
 9-000002EE   I*2   OTGNAM        32   (16)
 9-0000030E   I*2   OUNTYP        32   (16)
 6-0000019A   I*2   PCTSEM         8   (4)
 3-00000085   L*1   PREFIX       133   (133)
 9-00000052   I*2   PRENAM        32   (16)
 6-000000D4   I*2   RANHYP         6   (3)
```

```
  9-0000021A  I*2  RSTLIN        180  (90)
  6-00000154  I*2  SEMSPC          6  (3)
  6-000000FE  I*2  SPCSTG          4  (2)
  6-000001A8  I*2  SPHYSP          8  (4)
  9-00000092  I*2  STRSTG         32  (16)
  6-00000072  I*2  SUFDEF          8  (4)
  9-00000072  I*2  SUFNAM         32  (16)
  6-0000014C  I*2  TABEQS          8  (4)
  6-000000CE  I*2  TABLAN          6  (3)
  6-000001CA  I*2  TABOPR          6  (3)
  6-000001C0  I*2  TABPRN         10  (5)
  6-000000AC  I*2  TABRAN          6  (3)
  6-0000008C  I*2  TABSTG          4  (2)
  9-00000100  I*2  TAGNAM         32  (16)
  9-0000047A  I*2  TMPVAL        162  (81)
  9-00000000  I*2  TOKSTG         80  (40)
  6-00000238  I*2  UNDVLD         18  (9)
  6-0000007A  I*2  UNITYP          4  (2)
  6-00000192  I*2  ZEROSG          4  (2)
  6-000000A2  I*2  ZRLAHY         10  (5)

LABELS

  Address     Label       Address     Label

    **        10          0-0000004A  20
```

```
C
C       Version V02-001
C
C***********************************************************************
C*                                                                     *
C*   COPYRIGHT (c) 1980                                                *
C*   BY DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS.                  *
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C*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.           *
C*                                                                     *
C***********************************************************************
C
        SUBROUTINE REAREND
C
        INCLUDE 'SRC$:MDL32CMN.CMN'
        LOGICAL*1 GETIDENT,IDENT,UNBLNK,GETMARLIN

        GOTO 100

90      CALL PUTLINE(LINE(1),LINELEN)
100     IF (GETMARLIN().EQ..FALSE.) GOTO 2000
        IF (UNBLNK().EQ.';') GOTO 90
        IF (GETIDENT().EQ..FALSE.) GOTO 90
        IF (IDENT('$DEFINI',NAME).EQ..FALSE.) GOTO 90

        CALL DEFINIF
        GOTO 90

2000    CONTINUE
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	77	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	8	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	40	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG

Total Space Allocated 4024

ENTRY POINTS

Address	Type	Name
0-00000000		REAREND

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	B[illegible]IBUF	240	(120)

```
  9-00000662  I*2   BLINCR         162  (81)
  6-0000017E  I*2   BLSSIZ          20  (10)
  9-000003D8  I*2   BVALUE         162  (81)
  6-000000EA  I*2   BYTSIZ          20  (10)
  6-000001B4  I*2   COMGBL          12  (6)
  6-000000C4  I*2   COMMAS           4  (2)
  6-00000112  I*2   CONBAS          20  (10)
  6-00000126  I*2   CONINC          20  (10)
  9-0000012C  I*2   CONPRE          32  (16)
  9-0000014C  I*2   CONTAG          32  (16)
  9-000007A6  I*2   CONTEX         198  (9, 11)
  6-000001D6  I*2   CPAREN           4  (2)
  6-000001D0  I*2   CPRCOM           6  (3)
  9-00000170  I*2   CVALUE         162  (81)
  6-0000004C  I*2   DEFEND          20  (10)
  6-00000022  I*2   DEFINI          20  (10)
  6-000001DE  I*2   DOLBIT          26  (13)
  6-000001F8  I*2   DOLBYT          28  (14)
  6-00000036  I*2   DOLDEF          12  (6)
  6-00000214  I*2   DOLFLD          24  (12)
  6-00000016  I*2   DOLGBL          12  (6)
  6-00000234  I*2   DOLLAR           4  (2)
  6-00000090  I*2   DOLVLD          18  (9)
  6-000000DE  I*2   DOTBLK          12  (6)
  6-00000042  I*2   DOTEQS          10  (5)
  6-00000000  I*2   DOTMAC          22  (11)
  6-00000060  I*2   ENDMAC          18  (9)
  6-000000B2  I*2   EQULST          18  (9)
  6-00000102  I*2   EQUTAB          12  (6)
  6-0000007E  I*2   EXCLSP          14  (7)
  6-00000230  I*2   EXPCLO           4  (2)
  6-0000022C  I*2   EXPOPN           4  (2)
  9-000000B8  I*2   FLDNAM          72  (36)
  6-000001B0  I*2   HYPHEN           4  (2)
 10-00000000  I*2   INBUF          166  (83)
  6-000000C8  I*2   LANHYP           6  (3)
  3-00000000  L*1   LINE           133  (133)
  6-0000013A  I*2   LITTAB          18  (9)
  6-0000015A  I*2   MACTAB          16  (8)
 10-000000AA  I*2   MARBUF         240  (120)
  9-000005C0  I*2   MRBASE         162  (81)
  9-00000704  I*2   MRINCR         162  (81)
  9-00000336  I*2   MVALUE         162  (81)
  3-0000010A  L*1   NAME            32  (32)
  7-00000000  I*2   NEGSGN           4  (2)
  3-0000012A  L*1   NUMSTR         133  (133)
  6-000001DA  I*2   OASIGN           4  (2)
  6-0000016A  I*2   OFFSET          20  (10)
  6-000001A2  I*2   ONESHF           6  (3)
  6-0000010E  I*2   OPAREN           4  (2)
  9-000002CE  I*2   OSBNAM          32  (16)
  9-000002EE  I*2   OTGNAM          32  (16)
  9-0000030E  I*2   OUNTYP          32  (16)
  6-0000019A  I*2   PCTSEM           8  (4)
  3-00000085  L*1   PREFIX         133  (133)
  9-00000052  I*2   PRENAM          32  (16)
  6-000000D4  I*2   RANHYP           6  (3)
```

```
9-0000021A  I*2  RSTLIN     180  (90)
6-00000154  I*2  SEMSPC       6  (3)
6-000000FE  I*2  SPCSTG       4  (2)
6-000001A8  I*2  SPHYSP       8  (4)
9-00000092  I*2  STRSTG      32  (16)
6-00000072  I*2  SUFDEF       8  (4)
9-00000072  I*2  SUFNAM      32  (16)
6-0000014C  I*2  TABEQS       8  (4)
6-000000CE  I*2  TABLAN       6  (3)
6-000001CA  I*2  TABOPR       6  (3)
6-000001C0  I*2  TABPRN      10  (5)
6-000000AC  I*2  TABRAN       6  (3)
6-0000008C  I*2  TABSTG       4  (2)
9-00000100  I*2  TAGNAM      32  (16)
9-0000047A  I*2  TMPVAL     162  (81)
9-00000000  I*2  TOKSTG      80  (40)
6-00000238  I*2  UNDVLD      18  (9)
6-0000007A  I*2  UNITYP       4  (2)
6-00000192  I*2  ZEROSG       4  (2)
6-000000A2  I*2  ZRLAHY      10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label
0-0000000B	90	0-00000012	100	0-0000004C	2000

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	DEFINIF	L*1	GETIDENT	L*1	GETMARLIN	L*1	IDENT		PUTLINE	L*1	UNBLNK

```
      SUBROUTINE CONCAT(STRNG2,STRNG1,STRNG3)
      INCLUDE 'SRC$:MDL32CMN.CMN'
      LOGICAL*1 STRNG1(*),STRNG2(*),STRNG3(*),STRNG4(132)
      DO 100 I=1,131
      STRNG4(I)=STRNG2(I)
      IF (STRNG4(I).EQ.0) GOTO 200
100   CONTINUE
      CALL ERRORF(2,TOOLONG)
      GOTO 600
200   DO 300 I=1,131
      STRNG3(I)=STRNG1(I)
      IF (STRNG3(I).EQ.0) GOTO 400
300   CONTINUE
      CALL ERRORF(2,TOOLONG)
      GOTO 600
400   DO 500 J=1,131
      STRNG3(I-1+J)=STRNG4(J)
      IF (STRNG3(I-1+J).EQ.0) GOTO 600
500   CONTINUE
      CALL ERRORF(2,TOOLONG)
600   RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	176	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	4	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	212	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4291	

ENTRY POINTS

Address	Type	Name
0-00000000		CONCAT

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000084	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000088	I*2	J
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	2-00000086	I*2	TOOLONG	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	ENULST	18	(9)

```
  6-00000102   I*2   EQUTAB               12   (6)
  6-0000007E   I*2   EXCLSP               14   (7)
  6-00000230   I*2   EXPCLO                4   (2)
  6-0000022C   I*2   EXPOPN                4   (2)
  9-000000B8   I*2   FLDNAM               72   (36)
  6-000001B0   I*2   HYPHEN                4   (2)
 10-00000000   I*2   INBUF               166   (83)
  6-000000C8   I*2   LANHYP                6   (3)
  3-00000000   L*1   LINE                133   (133)
  6-0000013A   I*2   LITTAB               18   (9)
  6-0000015A   I*2   MACTAB               16   (8)
 10-000000AA   I*2   MARBUF              240   (120)
  9-000005C0   I*2   MRBASE              162   (81)
  9-00000704   I*2   MRINCR              162   (81)
  9-00000336   I*2   MVALUE              162   (81)
  3-0000010A   L*1   NAME                 32   (32)
  7-00000000   I*2   NEGSGN                4   (2)
  3-0000012A   L*1   NUMSTR              133   (133)
  6-000001DA   I*2   OASIGN                4   (2)
  6-0000016A   I*2   OFFSET               20   (10)
  6-000001A2   I*2   ONESHF                6   (3)
  6-0000010E   I*2   OPAREN                4   (2)
  9-000002CE   I*2   OSBNAM               32   (16)
  9-000002EE   I*2   OTGNAM               32   (16)
  9-0000030E   I*2   OUNTYP               32   (16)
  6-0000019A   I*2   PCTSEM                8   (4)
  3-00000085   L*1   PREFIX              133   (133)
  9-00000052   I*2   PRENAM               32   (16)
  6-000000D4   I*2   RANHYP                6   (3)
  9-0000021A   I*2   RSTLIN              180   (90)
  6-00000154   I*2   SEMSPC                6   (3)
  6-000000FE   I*2   SPCSTG                4   (2)
  6-000001A8   I*2   SPHYSP                8   (4)
 AP-00000008@  L*1   STRNG1               **   (*)
 AP-00000004@  L*1   STRNG2               **   (*)
 AP-0000000C@  L*1   STRNG3               **   (*)
  2-00000000   L*1   STRNG4              132   (132)
  9-00000092   I*2   STRSTG               32   (16)
  6-00000072   I*2   SUFDEF                8   (4)
  9-00000072   I*2   SUFNAM               32   (16)
  6-0000014C   I*2   TABEQS                8   (4)
  6-000000CE   I*2   TABLAN                6   (3)
  6-000001CA   I*2   TABOPR                6   (3)
  6-000001C0   I*2   TABPRN               10   (5)
  6-000000AC   I*2   TABRAN                6   (3)
  6-0000008C   I*2   TABSTG                4   (2)
  9-00000100   I*2   TAGNAM               32   (16)
  9-0000047A   I*2   TMPVAL              162   (81)
  9-00000000   I*2   TOKSTG               80   (40)
  6-00000238   I*2   UNDVLD               18   (9)
  6-0000007A   I*2   UNITYP                4   (2)
  6-00000192   I*2   ZEROSG                4   (2)
  6-000000A2   I*2   ZRLAHY               10   (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
**	100	0-00000052	200	**	300	0-0000007C	400	**	500	0-000000AF	600

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
	ERRORF

```
              INTEGER FUNCTION LENGTH(STRNG)
              INCLUDE 'SRC$:MDL32CMN.CMN'
              LOGICAL*1 STRNG(*)
              DO 100 LENGTH=1,132
              IF (STRNG(LENGTH).EQ.0) GOTO 200
      100     CONTINUE
              CALL ERRORF(2,TOOLONG)
      200     LENGTH=LENGTH-1
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	62	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	4	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	36	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4001									

ENTRY POINTS

Address	Type	Name
0-00000000	I*2	LENGTH

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ

9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	2-00000000	I*2	TOOLONG
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)

```
  9-00000336  I*2  MVALUE        162  (81)
  3-0000010A  L*1  NAME           32  (32)
  7-00000000  I*2  NEGSGN          4  (2)
  3-0000012A  L*1  NUMSTR        133  (133)
  6-000001DA  I*2  OASIGN          4  (2)
  6-0000016A  I*2  OFFSET         20  (10)
  6-000001A2  I*2  ONESHF          6  (3)
  6-0000010E  I*2  OPAREN          4  (2)
  9-000002CE  I*2  OSBNAM         32  (16)
  9-000002EE  I*2  OTGNAM         32  (16)
  9-0000030E  I*2  OUNTYP         32  (16)
  6-0000019A  I*2  PCTSEM          8  (4)
  3-00000085  L*1  PREFIX        133  (133)
  9-00000052  I*2  PRENAM         32  (16)
  6-000000D4  I*2  RANHYP          6  (3)
  9-0000021A  I*2  RSTLIN        180  (90)
  6-00000154  I*2  SEMSPC          6  (3)
  6-000000FE  I*2  SPCSTG          4  (2)
  6-000001A8  I*2  SPHYSP          8  (4)
 AP-00000004@ L*1  STRNG          **  (*)
  9-00000092  I*2  STRSTG         32  (16)
  6-00000072  I*2  SUFDEF          8  (4)
  9-00000072  I*2  SUFNAM         32  (16)
  6-0000014C  I*2  TABEQS          8  (4)
  6-000000CE  I*2  TABLAN          6  (3)
  6-000001CA  I*2  TABOPR          6  (3)
  6-000001C0  I*2  TABPRN         10  (5)
  6-000000AC  I*2  TABRAN          6  (3)
  6-0000008C  I*2  TABSTG          4  (2)
  9-00000100  I*2  TAGNAM         32  (16)
  9-0000047A  I*2  TMPVAL        162  (81)
  9-00000000  I*2  TOKSTG         80  (40)
  6-00000238  I*2  UNDVLD         18  (9)
  6-0000007A  I*2  UNITYP          4  (2)
  6-00000192  I*2  ZEROSG          4  (2)
  6-000000A2  I*2  ZRLAHY         10  (5)
```

LABELS

```
    Address     Label        Address     Label

      **        100        0-00000036    200
```

FUNCTIONS AND SUBROUTINES REFERENCED

```
  Type  Name

        ERRORF
```

```
      SUBROUTINE MOVNAM(STRNG1,STRNG2)
      INCLUDE 'SRC$:MDL32CMN.CMN'
      LOGICAL*1 STRNG1(*),STRNG2(*)
      DO 100 I=1,132
      STRNG2(I)=STRNG1(I)
      IF (STRNG2(I).EQ.0) GOTO 200
100   CONTINUE
      CALL ERRORF(2,TOOLONG)
200   RETURN
      END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	72	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	4	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	56	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4031									

ENTRY POINTS

Address	Type	Name
0-00000000		MOVNAM

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS

9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
2-00000002	I*2	TOOLONG	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)

```
  9-00000336  I*2  MVALUE        162  (81)
  3-0000010A  L*1  NAME           32  (32)
  7-00000000  I*2  NEGSGN          4  (2)
  3-0000012A  L*1  NUMSTR        133  (133)
  6-000001DA  I*2  OASIGN          4  (2)
  6-0000016A  I*2  OFFSET         20  (10)
  6-000001A2  I*2  ONESHF          6  (3)
  6-0000010E  I*2  OPAREN          4  (2)
  9-000002CE  I*2  OSBNAM         32  (16)
  9-000002EE  I*2  OTGNAM         32  (16)
  9-0000030E  I*2  OUNTYP         32  (16)
  6-0000019A  I*2  PCTSEM          8  (4)
  3-00000085  L*1  PREFIX        133  (133)
  9-00000052  I*2  PRENAM         32  (16)
  6-000000D4  I*2  RANHYP          6  (3)
  9-0000021A  I*2  RSTLIN        180  (90)
  6-00000154  I*2  SEMSPC          6  (3)
  6-000000FE  I*2  SPCSTG          4  (2)
  6-000001A8  I*2  SPHYSP          8  (4)
 AP-00000004@ L*1  STRNG1         **  (*)
 AP-00000008@ L*1  STRNG2         **  (*)
  9-00000092  I*2  STRSTG         32  (16)
  6-00000072  I*2  SUFDEF          8  (4)
  9-00000072  I*2  SUFNAM         32  (16)
  6-0000014C  I*2  TABEQS          8  (4)
  6-000000CE  I*2  TABLAN          6  (3)
  6-000001CA  I*2  TABOPR          6  (3)
  6-000001C0  I*2  TABPRN         10  (5)
  6-000000AC  I*2  TABRAN          6  (3)
  6-0000008C  I*2  TABSTG          4  (2)
  9-00000100  I*2  TAGNAM         32  (16)
  9-0000047A  I*2  TMPVAL        162  (81)
  9-00000000  I*2  TOKSTG         80  (40)
  6-00000238  I*2  UNDVLD         18  (9)
  6-0000007A  I*2  UNITYP          4  (2)
  6-00000192  I*2  ZEROSG          4  (2)
  6-000000A2  I*2  ZRLAHY         10  (5)
```

LABELS

Address	Label	Address	Label
**	100	0-00000047	200

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name
	ERRORF

000
000
000
000
000
000
000
000
000
001
001

PRO

0
2

ENT

0

VAR

2

ARR

AP
AP

LAB

```
            FUNCTION GETNUM(FAILMODE)
            INCLUDE 'SRC$:MDL32CMN.CMN'
            LOGICAL*1 GETNUM,GETVAL
            BYTE BINOPS(8)
            DATA BINOPS/'+','-','*','/','&','!','\','@'/
            GETNUM=.FALSE.
            NUM=0
            BEGCOL=COL
            IF (GETVAL().EQ..FALSE.) GOTO 300
            GETNUM=.TRUE.
            NUM=BINVAL
     100    DO 200 I=1,8
            IF (LINE(COL).EQ.BINOPS(I)) GOTO 400
     200    CONTINUE
     300    RETURN
     400    COL=COL+1
            IF (GETVAL().EQ..TRUE.) GOTO 500
            IF (FAILMODE.EQ.0) CALL ERRORF(3,MISSINGVALUE)
            GETNUM=.FALSE.
            COL=BEGCOL
            GOTO 300
     500    GOTO (610,620,630,640,650,660,670,680),I
     610    NUM=NUM+BINVAL
            GOTO 100
     620    NUM=NUM-BINVAL
            GOTO 100
     630    NUM=NUM*BINVAL
            GOTO 100
     640    NUM=NUM/BINVAL
            GOTO 100
     650    NUM=NUM.AND.BINVAL
            GOTO 100
     660    NUM=NUM.OR.BINVAL
            GOTO 100
     670    NUM=NUM.XOR.BINVAL
            GOTO 100
     680    NUM=NUM*2**BINVAL
            GOTO 100
            END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	276	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	4	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	36	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4215									

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	GETNUM

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
2-00000008	I*2	BEGCOL	4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS
9-00000332	I*2	BLFOFS	12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT
9-0000012A	I*2	BOFSET	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
AP-00000004@	I*2	FAILMODE	5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN
9-000000B4	I*2	FSIZ	2-0000000A	I*2	I	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN
10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN
9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR
10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	2-0000000C	I*2	MISSINGVALUE	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
2-00000000	L*1	BINOPS	8	(8)

9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)

```
    9-00000052  I*2  PRENAM        32  (16)
    6-000000D4  I*2  RANHYP         6  (3)
    9-0000021A  I*2  RSTLIN       180  (90)
    6-00000154  I*2  SEMSPC         6  (3)
    6-000000FE  I*2  SPCSTG         4  (2)
    6-000001A8  I*2  SPHYSP         8  (4)
    9-00000092  I*2  STRSTG        32  (16)
    6-00000072  I*2  SUFDEF         8  (4)
    9-00000072  I*2  SUFNAM        32  (16)
    6-0000014C  I*2  TABEQS         8  (4)
    6-000000CE  I*2  TABLAN         6  (3)
    6-000001CA  I*2  TABOPR         6  (3)
    6-000001C0  I*2  TABPRN        10  (5)
    6-000000AC  I*2  TABRAN         6  (3)
    6-0000008C  I*2  TABSTG         4  (2)
    9-00000100  I*2  TAGNAM        32  (16)
    9-0000047A  I*2  TMPVAL       162  (81)
    9-00000000  I*2  TOKSTG        80  (40)
    6-00000238  I*2  UNDVLD        18  (9)
    6-0000007A  I*2  UNITYP         4  (2)
    6-00000192  I*2  ZEROSG         4  (2)
    6-000000A2  I*2  ZRLAHY        10  (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000034	100	**	200	0-00000056	300	0-0000005B	400	0-00000086	500	0-0000009B	610
0-000000A8	620	0-000000B6	630	0-000000C4	640	0-000000D2	650	0-000000E3	660	0-000000F1	670
0-000000FF	680										

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name
	ERRORF	L*1	GETVAL

```
              LOGICAL FUNCTION GETVAL*1
              INCLUDE 'SRC$:MDL32CMN.CMN'
              LOGICAL*1 UNBLNK,TMP
              SIGN=0
              BINVAL=0
              GETVAL=.FALSE.
              IF (UNBLNK().NE.'-') GOTO 100
              SIGN=1
              COL=COL+1
      100     IF (UNBLNK().NE.'+') GOTO 110
              COL=COL+1
              GOTO 100
      110     IF (LINE(COL).NE.'^') GOTO 180
              IF (LINE(COL+1).NE.'X') GOTO 180
              DO 150 COL=COL+2,132
              TMP=LINE(COL)
              IF ((TMP.LE.'9').AND.(TMP.GE.'0')) GOTO 130
              IF ((TMP.GT.'F').OR.(TMP.LT.'A')) GOTO 400
              TMP=TMP-'A'+'9'+1
      130     GETVAL=.TRUE.
              BINVAL=BINVAL*16+(TMP-'0')
      150     CONTINUE
              GOTO 300
      180     DO 200 COL=COL,132
              IF (LINE(COL).LT.'0') GOTO 400
              IF (LINE(COL).GT.'9') GOTO 400
              GETVAL=.TRUE.
              BINVAL=BINVAL*10+(LINE(COL)-'0')
      200     CONTINUE
      300     CALL ERRORF(4,TOOLONG)
              GETVAL=.FALSE.
      400     IF (SIGN.EQ.1) BINVAL=-BINVAL
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	311	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	4	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	28	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	13	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4241	

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	GETVAL

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000007	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000B	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ
9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	2-00000000	I*2	SIGN	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	L*1	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
2-00000002	I*2	TOOLONG	12-00000009	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662   I*2   BLINCR          162  (81)
 6-0000017E   I*2   BLSSIZ           20  (10)
 9-000003D8   I*2   BVALUE          162  (81)
 6-000000EA   I*2   BYTSIZ           20  (10)
 6-000001B4   I*2   COMGBL           12  (6)
 6-000000C4   I*2   COMMAS            4  (2)
 6-00000112   I*2   CONBAS           20  (10)
 6-00000126   I*2   CONINC           20  (10)
 9-0000012C   I*2   CONPRE           32  (16)
 9-0000014C   I*2   CONTAG           32  (16)
 9-000007A6   I*2   CONTEX          198  (9, 11)
 6-000001D6   I*2   CPAREN            4  (2)
 6-000001D0   I*2   CPRCOM            6  (3)
 9-00000170   I*2   CVALUE          162  (81)
 6-0000004C   I*2   DEFEND           20  (10)
 6-00000022   I*2   DEFINI           20  (10)
 6-000001DE   I*2   DOLBIT           26  (13)
 6-000001F8   I*2   DOLBYT           28  (14)
 6-00000036   I*2   DOLDEF           12  (6)
 6-00000214   I*2   DOLFLD           24  (12)
 6-00000016   I*2   DOLGBL           12  (6)
 6-00000234   I*2   DOLLAR            4  (2)
 6-00000090   I*2   DOLVLD           18  (9)
 6-000000DE   I*2   DOTBLK           12  (6)
 6-00000042   I*2   DOTEQS           10  (5)
 6-00000000   I*2   DOTMAC           22  (11)
 6-00000060   I*2   ENDMAC           18  (9)
 6-000000B2   I*2   EQULST           18  (9)
 6-00000102   I*2   EQUTAB           12  (6)
 6-0000007E   I*2   EXCLSP           14  (7)
 6-00000230   I*2   EXPCLO            4  (2)
 6-0000022C   I*2   EXPOPN            4  (2)
 9-000000B8   I*2   FLDNAM           72  (36)
 6-000001B0   I*2   HYPHEN            4  (2)
10-00000000   I*2   INBUF           166  (83)
 6-000000C8   I*2   LANHYP            6  (3)
 3-00000000   L*1   LINE            133  (133)
 6-0000013A   I*2   LITTAB           18  (9)
 6-0000015A   I*2   MACTAB           16  (8)
10-000000AA   I*2   MARBUF          240  (120)
 9-000005C0   I*2   MRBASE          162  (81)
 9-00000704   I*2   MRINCR          162  (81)
 9-00000336   I*2   MVALUE          162  (81)
 3-0000010A   L*1   NAME             32  (32)
 7-00000000   I*2   NEGSGN            4  (2)
 3-0000012A   L*1   NUMSTR          133  (133)
 6-000001DA   I*2   OASIGN            4  (2)
 6-0000016A   I*2   OFFSET           20  (10)
 6-000001A2   I*2   ONESHF            6  (3)
 6-0000010E   I*2   OPAREN            4  (2)
 9-000002CE   I*2   OSBNAM           32  (16)
 9-000002EE   I*2   OTGNAM           32  (16)
 9-0000030E   I*2   OUNTYP           32  (16)
 6-0000019A   I*2   PCTSEM            8  (4)
 3-00000085   L*1   PREFIX          133  (133)
 9-00000052   I*2   PRENAM           32  (16)
 6-000000D4   I*2   RANHYP            6  (3)
```

9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-0000002B	100	0-00000043	110	0-000000AB	130	**	150	0-000000CC	180	**	200
0-00000116	300	0-00000121	400								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name
	ERRORF	L*1	UNBLNK

```
        LOGICAL FUNCTION GETIDENT*1
        INCLUDE 'SRC$:MDL32CMN.CMN'
        LOGICAL*1 UNBLNK,IDENT
        I=1
        GETIDENT=.FALSE.
        IF (UNBLNK().EQ.';') GOTO 400
        DO 200 COL=COL,132
        IF (LINE(COL).EQ.'.') GOTO 100
        IF (LINE(COL).EQ.'$') GOTO 100
        IF (LINE(COL).EQ.'_') GOTO 100
        IF ((LINE(COL).GE.'A').AND.(LINE(COL).LE.'Z')) GOTO 100
        IF ((LINE(COL).GE.'a').AND.(LINE(COL).LE.'z')) GOTO 100
        IF (GETIDENT.EQ..FALSE.) GOTO 400
        IF ((LINE(COL).LT.'0').OR.(LINE(COL).GT.'9')) GOTO 400
100     GETIDENT=.TRUE.
        IF (I.GE.32) GOTO 200
        NAME(I)=LINE(COL)
        I=I+1
200     CONTINUE
        CALL ERRORF(4,TOOLONG)
400     CONTINUE
        NAME(I)=0
C       TYPE 99,(NAME(K),K=1,LENGTH(NAME))
C99     FORMAT(' ID=',32A1)
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	205	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	4	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	28	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4136	

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	GETIDENT

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000002	I*2	I
2-00000000	L*1	IDENT	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	2-00000004	I*2	TOOLONG	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK
9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)

```
 6-00000234   I*2   DOLLAR        4   (2)
 6-00000090   I*2   DOLVLD       18   (9)
 6-000000DE   I*2   DOTBLK       12   (6)
 6-00000042   I*2   DOTEQS       10   (5)
 6-00000000   I*2   DOTMAC       22   (11)
 6-00000060   I*2   ENDMAC       18   (9)
 6-000000B2   I*2   EQULST       18   (9)
 6-00000102   I*2   EQUTAB       12   (6)
 6-0000007E   I*2   EXCLSP       14   (7)
 6-00000230   I*2   EXPCLO        4   (2)
 6-0000022C   I*2   EXPOPN        4   (2)
 9-000000B8   I*2   FLDNAM       72   (36)
 6-000001B0   I*2   HYPHEN        4   (2)
10-00000000   I*2   INBUF       166   (83)
 6-000000C8   I*2   LANHYP        6   (3)
 3-00000000   L*1   LINE        133   (133)
 6-0000013A   I*2   LITTAB       18   (9)
 6-0000015A   I*2   MACTAB       16   (8)
10-000000AA   I*2   MARBUF      240   (120)
 9-000005C0   I*2   MRBASE      162   (81)
 9-00000704   I*2   MRINCR      162   (81)
 9-00000336   I*2   MVALUE      162   (81)
 3-0000010A   L*1   NAME         32   (32)
 7-00000000   I*2   NEGSGN        4   (2)
 3-0000012A   L*1   NUMSTR      133   (133)
 6-000001DA   I*2   OASIGN        4   (2)
 6-0000016A   I*2   OFFSET       20   (10)
 6-000001A2   I*2   ONESHF        6   (3)
 6-0000010E   I*2   OPAREN        4   (2)
 9-000002CE   I*2   OSBNAM       32   (16)
 9-000002EE   I*2   OTGNAM       32   (16)
 9-0000030E   I*2   OUNTYP       32   (16)
 6-0000019A   I*2   PCTSEM        8   (4)
 3-00000085   L*1   PREFIX      133   (133)
 9-00000052   I*2   PRENAM       32   (16)
 6-000000D4   I*2   RANHYP        6   (3)
 9-0000021A   I*2   RSTLIN      180   (90)
 6-00000154   I*2   SEMSPC        6   (3)
 6-000000FE   I*2   SPCSTG        4   (2)
 6-000001A8   I*2   SPHYSP        8   (4)
 9-00000092   I*2   STRSTG       32   (16)
 6-00000072   I*2   SUFDEF        8   (4)
 9-00000072   I*2   SUFNAM       32   (16)
 6-0000014C   I*2   TABEQS        8   (4)
 6-000000CE   I*2   TABLAN        6   (3)
 6-000001CA   I*2   TABOPR        6   (3)
 6-000001C0   I*2   TABPRN       10   (5)
 6-000000AC   I*2   TABRAN        6   (3)
 6-0000008C   I*2   TABSTG        4   (2)
 9-00000100   I*2   TAGNAM       32   (16)
 9-0000047A   I*2   TMPVAL      162   (81)
 9-00000000   I*2   TOKSTG       80   (40)
 6-00000238   I*2   UNDVLD       18   (9)
 6-0000007A   I*2   UNITYP        4   (2)
 6-00000192   I*2   ZEROSG        4   (2)
 6-000000A2   I*2   ZRLAHY       10   (5)
```

LABELS

Address	Label	Address	Label	Address	Label
0-00000084	100	0-000000A9	200	0-000000BD	400

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name
	ERRORF	L*1	UNBLNK

```
        LOGICAL FUNCTION IDENT*1(STRNG1,STRNG2)
        LOGICAL*1 STRNG1(*),STRNG2(*)
        IDENT=.FALSE.
        DO 100 I=1,132
        IF (STRNG1(I).EQ.0.AND.STRNG2(I).EQ.0) GOTO 200
        IF (STRNG1(I).NE.STRNG2(I)) GOTO 300
100     CONTINUE
200     IDENT=.TRUE.
300     RETURN
        END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 $CODE	85	PIC CON REL LCL SHR EXE RD NOWRT LONG
2 $LOCAL	44	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	129	

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	IDENT

VARIABLES

Address	Type	Name
2-00000000	I*2	I

ARRAYS

Address	Type	Name	Bytes	Dimensions
AP-00000004@	L*1	STRNG1	**	(*)
AP-00000008@	L*1	STRNG2	**	(*)

LABELS

Address	Label	Address	Label	Address	Label
**	100	0-0000004C	200	0-00000050	300

```
              LOGICAL FUNCTION UNBLNK*1
              INCLUDE 'SRC$:MDL32CMN.CMN'
              IF (COL.GT.132) GOTO 150
              DO 100 COL=COL,132
              IF (LINE(COL).GE."11.AND.LINE(COL).LE."14) GOTO 100
              IF (LINE(COL).NE.' ') GOTO 200
      100     CONTINUE
      150     COL=133
      200     UNBLNK=LINE(COL)
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	90	PIC CON REL LCL SHR EXE RD NOWRT LONG
2	$LOCAL	4	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	3993	

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	UNBLNK

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP
10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ

9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)

9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label
0-0000003C	100	0-00000045	150	0-0000004A	200

```
              LOGICAL*1 FUNCTION GETMARLIN
              INCLUDE 'SRC$:MDL32CMN.CMN'
              GETMARLIN=.FALSE.
              LINE(1)=';'
              COL=1
              READ(MAR,99,END=100) LINELEN,(LINE(K),K=1,132)
      99      FORMAT(Q,132A1)
              GETMARLIN=.TRUE.
      100     CONTINUE
              LINE(133)=';'
      C       TYPE 98,(LINE(K),K=1,133)
      C98     FORMAT(1X,72A1/1X,72A1)
              RETURN
              END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	121	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	7	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	4	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	4031									

ENTRY POINTS

Address	Type	Name
0-00000000	L*1	GETMARLIN

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	12-00000000	I*2	INP

10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-00000000	I*2	K	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK
9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)

```
  6-0000015A  I*2  MACTAB        16  (8)
 10-000000AA  I*2  MARBUF       240  (120)
  9-000005C0  I*2  MRBASE       162  (81)
  9-00000704  I*2  MRINCR       162  (81)
  9-00000336  I*2  MVALUE       162  (81)
  3-0000010A  L*1  NAME          32  (32)
  7-00000000  I*2  NEGSGN         4  (2)
  3-0000012A  L*1  NUMSTR       133  (133)
  6-000001DA  I*2  OASIGN         4  (2)
  6-0000016A  I*2  OFFSET        20  (10)
  6-000001A2  I*2  ONESHF         6  (3)
  6-0000010E  I*2  OPAREN         4  (2)
  9-000002CE  I*2  OSBNAM        32  (16)
  9-000002EE  I*2  OTGNAM        32  (16)
  9-0000030E  I*2  OUNTYP        32  (16)
  6-0000019A  I*2  PCTSEM         8  (4)
  3-00000085  L*1  PREFIX       133  (133)
  9-00000052  I*2  PRENAM        32  (16)
  6-000000D4  I*2  RANHYP         6  (3)
  9-0000021A  I*2  RSTLIN       180  (90)
  6-00000154  I*2  SEMSPC         6  (3)
  6-000000FE  I*2  SPCSTG         4  (2)
  6-000001A8  I*2  SPHYSP         8  (4)
  9-00000092  I*2  STRSTG        32  (16)
  6-00000072  I*2  SUFDEF         8  (4)
  9-00000072  I*2  SUFNAM        32  (16)
  6-0000014C  I*2  TABEQS         8  (4)
  6-000000CE  I*2  TABLAN         6  (3)
  6-000001CA  I*2  TABOPR         6  (3)
  6-000001C0  I*2  TABPRN        10  (5)
  6-000000AC  I*2  TABRAN         6  (3)
  6-0000008C  I*2  TABSTG         4  (2)
  9-00000100  I*2  TAGNAM        32  (16)
  9-0000047A  I*2  TMPVAL       162  (81)
  9-00000000  I*2  TOKSTG        80  (40)
  6-00000238  I*2  UNDVLD        18  (9)
  6-0000007A  I*2  UNITYP         4  (2)
  6-00000192  I*2  ZEROSG         4  (2)
  6-000000A2  I*2  ZRLAHY        10  (5)
```

LABELS

```
   Address    Label      Address    Label

 1-00000000   99'      0-0000006D   100
```

```

        SUBROUTINE ERRORF(MSGID)
        INCLUDE 'SRC$:MDL32CMN.CMN'
C OUTPUT CONTENTS OF 'LINE' VIA PRINT
C AND ERROR MESSAGE
        TYPE 99
99      FORMAT('$%MDLFIXUP-E-')
        GOTO (1,2,3,4,5,6),MSGID
        TYPE 1000
        GOTO 200
1000    FORMAT('+error in error processing')
1       TYPE 101
        GOTO 200
101     FORMAT('+syntax error')
2       TYPE 102
        GOTO 200
102     FORMAT('+symbol or string too long')
3       TYPE 103
        GOTO 200
103     FORMAT('+missing value')
4       TYPE 104
        GOTO 200
104     FORMAT('+line too long')
5       TYPE 105
        GOTO 200
105     FORMAT('+missing close angle bracket')
6       TYPE 106
        GOTO 200
106     FORMAT('+missing E (end) statement')
200     CONTINUE
        TYPE 98,(LINE(I),I=1,LINELEN)
98      FORMAT(1X,<LINELEN>A1)
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	302	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	194	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	4	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	4399	

ENTRY POINTS

Address	Type	Name
0-00000000		ERRORF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	2-00000000	I*2	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
9-0000086E	I*2	MNGCNT	AP-00000004@	I*2	MSGID	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)

```
 9-00000662  I*2  BLINCR   162  (81)
 6-0000017E  I*2  BLSSIZ    20  (10)
 9-000003D8  I*2  BVALUE   162  (81)
 6-000000EA  I*2  BYTSIZ    20  (10)
 6-000001B4  I*2  COMGBL    12  (6)
 6-000000C4  I*2  COMMAS     4  (2)
 6-00000112  I*2  CONBAS    20  (10)
 6-00000126  I*2  CONINC    20  (10)
 9-0000012C  I*2  CONPRE    32  (16)
 9-0000014C  I*2  CONTAG    32  (16)
 9-000007A6  I*2  CONTEX   198  (9, 11)
 6-000001D6  I*2  CPAREN     4  (2)
 6-000001D0  I*2  CPRCOM     6  (3)
 9-00000170  I*2  CVALUE   162  (81)
 6-0000004C  I*2  DEFEND    20  (10)
 6-00000022  I*2  DEFINI    20  (10)
 6-000001DE  I*2  DOLBIT    26  (13)
 6-000001F8  I*2  DOLBYT    28  (14)
 6-00000036  I*2  DOLDEF    12  (6)
 6-00000214  I*2  DOLFLD    24  (12)
 6-00000016  I*2  DOLGBL    12  (6)
 6-00000234  I*2  DOLLAR     4  (2)
 6-00000090  I*2  DOLVLD    18  (9)
 6-000000DE  I*2  DOTBLK    12  (6)
 6-00000042  I*2  DOTEQS    10  (5)
 6-00000000  I*2  DOTMAC    22  (11)
 6-00000060  I*2  ENDMAC    18  (9)
 6-000000B2  I*2  EQULST    18  (9)
 6-00000102  I*2  EQUTAB    12  (6)
 6-0000007E  I*2  EXCLSP    14  (7)
 6-00000230  I*2  EXPCLO     4  (2)
 6-0000022C  I*2  EXPOPN     4  (2)
 9-000000B8  I*2  FLDNAM    72  (36)
 6-000001B0  I*2  HYPHEN     4  (2)
10-00000000  I*2  INBUF    166  (83)
 6-000000C8  I*2  LANHYP     6  (3)
 3-00000000  L*1  LINE     133  (133)
 6-0000013A  I*2  LITTAB    18  (9)
 6-0000015A  I*2  MACTAB    16  (8)
10-000000AA  I*2  MARBUF   240  (120)
 9-000005C0  I*2  MRBASE   162  (81)
 9-00000704  I*2  MRINCR   162  (81)
 9-00000336  I*2  MVALUE   162  (81)
 3-0000010A  L*1  NAME      32  (32)
 7-00000000  I*2  NEGSGN     4  (2)
 3-0000012A  L*1  NUMSTR   133  (133)
 6-000001DA  I*2  OASIGN     4  (2)
 6-0000016A  I*2  OFFSET    20  (10)
 6-000001A2  I*2  ONESHF     6  (3)
 6-0000010E  I*2  OPAREN     4  (2)
 9-000002CE  I*2  OSBNAM    32  (16)
 9-000002EE  I*2  OTGNAM    32  (16)
 9-0000030E  I*2  OUNTYP    32  (16)
 6-0000019A  I*2  PCTSEM     8  (4)
 3-00000085  L*1  PREFIX   133  (133)
 9-00000052  I*2  PRENAM    32  (16)
 6-000000D4  I*2  RANHYP     6  (3)
```

```
9-0000021A  I*2  RSTLIN   180  (90)
6-00000154  I*2  SEMSPC     6   (3)
6-000000FE  I*2  SPCSTG     4   (2)
6-000001A8  I*2  SPHYSP     8   (4)
9-00000092  I*2  STRSTG    32  (16)
6-00000072  I*2  SUFDEF     8   (4)
9-00000072  I*2  SUFNAM    32  (16)
6-0000014C  I*2  TABEQS     8   (4)
6-000000CE  I*2  TABLAN     6   (3)
6-000001CA  I*2  TABOPR     6   (3)
6-000001C0  I*2  TABPRN    10   (5)
6-000000AC  I*2  TABRAN     6   (3)
6-0000008C  I*2  TABSTG     4   (2)
9-00000100  I*2  TAGNAM    32  (16)
9-0000047A  I*2  TMPVAL   162  (81)
9-00000000  I*2  TOKSTG    80  (40)
6-00000238  I*2  UNDVLD    18   (9)
6-0000007A  I*2  UNITYP     4   (2)
6-00000192  I*2  ZEROSG     4   (2)
6-000000A2  I*2  ZRLAHY    10   (5)
```

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-0000004B	1	0-00000064	2	0-0000007D	3	0-00000096	4	0-000000AF	5	0-000000C8	6
1-000000B8	98'	1-00000000	99'	1-0000002D	101'	1-0000003D	102'	1-0000005A	103'	1-0000006B	104'
1-0000007C	105'	1-0000009B	106'	0-000000E1	200	1-00000010	1000'				

```

      SUBROUTINE VIELDF
C     ROUTINE TO HANDLE MDL VIELD SYNTAX

      INCLUDE 'SRC$:MDL32CMN.CMN'
      LOGICAL*1 GETIDENT,UNBLNK,GETNUM,IDENT,GETMARLIN
      BYTE TAB5(6),EQULINE(132),SAVENAME(32)
      DATA TAB5/9,9,9,9,9,0/

      PREFIX(1)=NAME(1)
      PREFIX(2)=0
      IF (GETIDENT().EQ..FALSE.) GOTO 2000
      CALL CONCAT(PREFIX,NAME,PREFIX)
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      BIT=0
      IF (GETNUM(0)) BIT=NUM
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      IF (UNBLNK().NE.'<') GOTO 2000
      COL=COL+1
      IF (UNBLNK().NE.'-') GOTO 2000
      COL=COL+1
      IF (UNBLNK().EQ.';') GOTO 700
2000  CALL ERRORF(1,SYNTAX)
700   IF (GETMARLIN().NE..TRUE.) GOTO 1500
      IF (UNBLNK().EQ.'>') GOTO 1600
      IF (UNBLNK().EQ.'-') THEN
          COL=COL+1
          IF (UNBLNK().NE.';') GOTO 2000
          LINE(LINELEN+1)=0
          CALL CONCAT(LINE(COL),TAB5,EQULINE)
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
          GOTO 700
      ENDIF
      IF (UNBLNK().NE.'<') GOTO 2000
      COL=COL+1
C
C SET UP COMMENT COPY FOR SPACE HOLDER DEFINITION
C
      CALL MOVNAM(TAB5(2),EQULINE)
      VFORM=0
      IF (GETIDENT().NE..TRUE.) GOTO 900
      VFORM=1
      CALL CONCAT('V_',PREFIX,EQULINE)
      CALL MOVNAM(NAME,SAVENAME)
      CALL CONCAT(SAVENAME,EQULINE,EQULINE)
      CALL CONCAT(EQULINE,' $EQU      ',EQULINE)
      CALL CONCAT(TAB5(5),EQULINE,EQULINE)
      BINVAL=BIT
      CALL MAKENUM(BINVAL)
      CALL CONCAT(NUMSTR,EQULINE,EQULINE)
900   SIZE=1
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      IF (GETNUM(0)) SIZE=NUM
      IF (UNBLNK().NE.',') GOTO 2000
```

```
          COL=COL+1
          MASKFORM=0
          IF (GETIDENT().NE..TRUE.) GOTO 950
          IF (IDENT('M',NAME).NE..TRUE.) GOTO 2000
          IF (VFORM.EQ.1) MASKFORM=1
    950   IF (UNBLNK().NE.'>') GOTO 2000
          COL=COL+1
          IF (UNBLNK().NE.'-') GOTO 2000
          COL=COL+1
          IF (UNBLNK().NE.';') GOTO 2000
          LINE(LINELEN+1)=0
          IF (COL.LT.LINELEN) THEN
              CALL CONCAT(TAB5(4),EQULINE,EQULINE)
              CALL CONCAT(LINE(COL),EQULINE,EQULINE)
          ENDIF
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
          IF (MASKFORM.EQ.0) GOTO 960
          CALL CONCAT('M_',PREFIX,EQULINE)
          CALL CONCAT(SAVENAME,EQULINE,EQULINE)
          CALL CONCAT(EQULINE,' $EQU      ',EQULINE)
          CALL CONCAT(TAB5(5),EQULINE,EQULINE)
          BINVAL=SIZE                              !TO FORCE 32 BIT CALC
          BINVAL=ISHFT(1,BINVAL)
          IF (BINVAL.EQ.'80000000'X) THEN
            BINVAL='7FFFFFFF'X                     !AVOID INTEGER OVERFLOW
           ELSE
            BINVAL=BINVAL-1
          ENDIF
          CALL MAKENUM(ISHFT(BINVAL,BIT))
          CALL CONCAT(NUMSTR,EQULINE,EQULINE)
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
    960   IF (SIZE.EQ.1) GOTO 980
          IF (VFORM.EQ.0) GOTO 980
          CALL CONCAT('S_',PREFIX,EQULINE)
          CALL CONCAT(SAVENAME,EQULINE,EQULINE)
          CALL CONCAT(EQULINE,' $EQU      ',EQULINE)
          CALL CONCAT(TAB5(5),EQULINE,EQULINE)
          BINVAL=SIZE
          CALL MAKENUM(BINVAL)
          CALL CONCAT(NUMSTR,EQULINE,EQULINE)
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
    980   BIT=BIT+SIZE
          GOTO 700

   1500   CALL ERRORF(5,NOCLOSEANGLE)
   1600   RETURN
          END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	890	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	30	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	544	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	5363									

ENTRY POINTS

Address	Type	Name
0-00000000		VIELDF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	2-000000AA	I*2	BIT	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS
9-00000332	I*2	BLFOFS	12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT
9-0000012A	I*2	BOFSET	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL
11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT
5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	9-0000051C	I*2	LASLIN
9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR
9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS
2-000000B2	I*2	MASKFORM	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	2-000000B4	I*2	NOCLOSEANGLE
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	2-000000B0	I*2	SIZE	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	2-000000AC	I*2	SYNTAX	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	2-000000AE	I*2	VFORM
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)

```
10-0000019C   I*2   BLIBUF         240   (120)
 9-00000662   I*2   BLINCR         162   (81)
 6-0000017E   I*2   BLSSIZ          20   (10)
 9-000003D8   I*2   BVALUE         162   (81)
 6-000000EA   I*2   BYTSIZ          20   (10)
 6-000001B4   I*2   COMGBL          12   (6)
 6-000000C4   I*2   COMMAS           4   (2)
 6-00000112   I*2   CONBAS          20   (10)
 6-00000126   I*2   CONINC          20   (10)
 9-0000012C   I*2   CONPRE          32   (16)
 9-0000014C   I*2   CONTAG          32   (16)
 9-000007A6   I*2   CONTEX         198   (9, 11)
 6-000001D6   I*2   CPAREN           4   (2)
 6-000001D0   I*2   CPRCOM           6   (3)
 9-00000170   I*2   CVALUE         162   (81)
 6-0000004C   I*2   DEFEND          20   (10)
 6-00000022   I*2   DEFINI          20   (10)
 6-000001DE   I*2   DOLBIT          26   (13)
 6-000001F8   I*2   DOLBYT          28   (14)
 6-00000036   I*2   DOLDEF          12   (6)
 6-00000214   I*2   DOLFLD          24   (12)
 6-00000016   I*2   DOLGBL          12   (6)
 6-00000234   I*2   DOLLAR           4   (2)
 6-00000090   I*2   DOLVLD          18   (9)
 6-000000DE   I*2   DOTBLK          12   (6)
 6-00000042   I*2   DOTEQS          10   (5)
 6-00000000   I*2   DOTMAC          22   (11)
 6-00000060   I*2   ENDMAC          18   (9)
 2-00000006   L*1   EQULINE        132   (132)
 6-000000B2   I*2   EQULST          18   (9)
 6-00000102   I*2   EQUTAB          12   (6)
 6-0000007E   I*2   EXCLSP          14   (7)
 6-00000230   I*2   EXPCLO           4   (2)
 6-0000022C   I*2   EXPOPN           4   (2)
 9-000000B8   I*2   FLDNAM          72   (36)
 6-000001B0   I*2   HYPHEN           4   (2)
10-00000000   I*2   INBUF          166   (83)
 6-000000C8   I*2   LANHYP           6   (3)
 3-00000000   L*1   LINE           133   (133)
 6-0000013A   I*2   LITTAB          18   (9)
 6-0000015A   I*2   MACTAB          16   (8)
10-000000AA   I*2   MARBUF         240   (120)
 9-000005C0   I*2   MRBASE         162   (81)
 9-00000704   I*2   MRINCR         162   (81)
 9-00000336   I*2   MVALUE         162   (81)
 3-0000010A   L*1   NAME            32   (32)
 7-00000000   I*2   NEGSGN           4   (2)
 3-0000012A   L*1   NUMSTR         133   (133)
 6-000001DA   I*2   OASIGN           4   (2)
 6-0000016A   I*2   OFFSET          20   (10)
 6-000001A2   I*2   ONESHF           6   (3)
 6-0000010E   I*2   OPAREN           4   (2)
 9-000002CE   I*2   OSBNAM          32   (16)
 9-000002EE   I*2   OTGNAM          32   (16)
 9-0000030E   I*2   OUNTYP          32   (16)
 6-0000019A   I*2   PCTSEM           8   (4)
 3-00000085   L*1   PREFIX         133   (133)
```

9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
2-0000008A	L*1	SAVENAME	32	(32)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
2-00000000	L*1	TABS	6	(6)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000096	700	0-0000017F	900	0-000001DE	950	0-00000308	960	0-00000368	980	0-00000370	1500
0-00000379	1600	0-0000008E	2000								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	CONCAT		ERRORF	L*1	GETIDENT	L*1	GETMARLIN	L*1	GETNUM	L*1	IDENT
I*2	LENGTH		MAKENUM		MOVNAM		PUTLINE	L*1	UNBLNK		

```
      SUBROUTINE DEFINIF
      INCLUDE 'SRC$:MDL32CMN.CMN'
      LOGICAL*1 GETIDENT,UNBLNK,GETNUM,IDENT,GETMARLIN

      BYTE TAB3(4),DEFSYM(133),COMMENT(133)
      DATA TAB3/9,9,9,0/

      PREFIX(1)=0
      DEFFLAG=0

90    CALL PUTLINE(LINE,LINELEN)
100   IF (GETMARLIN().EQ..FALSE.) GOTO 3000
C
C  PROCESS $DEFINI INPUT.
C
      IF (UNBLNK().EQ.';') GOTO 90
      IF (GETIDENT().EQ..FALSE.) GOTO 90
      IF (IDENT('$EQU',NAME).EQ..TRUE.) GOTO 90
      IF (IDENT('$DEF',NAME).EQ..TRUE.) GOTO 200
      IF (IDENT('$VIELD',NAME).EQ..TRUE.) GOTO 300
      IF (IDENT('_VIELD',NAME).EQ..TRUE.) GOTO 300
      IF (IDENT('$EQULST',NAME).EQ..TRUE.) GOTO 400
      IF (IDENT('$DEFEND',NAME).EQ..TRUE.) THEN
          IF (DEFFLAG.EQ.1) THEN
              IF (COMMENTSIZE.GT.0) THEN
                  CALL CONCAT(TAB3,DEFSYM,DEFSYM)
                  CALL CONCAT(COMMENT,DEFSYM,DEFSYM)
              ENDIF
              CALL PUTLINE(DEFSYM,LENGTH(DEFSYM))
          ENDIF
      RETURN
      ENDIF
C
C CHECK FOR .=NN SYNTAX
C
      IF (IDENT('.',NAME).EQ..TRUE.) THEN
          IF (DEFFLAG.EQ.1) THEN
              IF (COMMENTSIZE.GT.0) THEN
                  CALL CONCAT(TAB3,DEFSYM,DEFSYM)
                  CALL CONCAT(COMMENT,DEFSYM,DEFSYM)
              ENDIF
              CALL PUTLINE(DEFSYM,LENGTH(DEFSYM))
          ENDIF
      DEFFLAG=0
      GOTO 90
      ENDIF
C
C NOW FINALLY HANDLE .BLKX DIRECTIVE MERGING
C
      IF ((IDENT('.BLKL',NAME).EQ..FALSE.).AND.
     1   (IDENT('.BLKB',NAME).EQ..FALSE.).AND.
     2   (IDENT('.BLKW',NAME).EQ..FALSE.).AND.
     3   (IDENT('.BLKQ',NAME).EQ..FALSE.)) GOTO 2000
      IF (DEFFLAG.EQ.0) GOTO 90
      CALL MOVNAM(NAME,PREFIX)
      NUM=1
```

```
        IF (UNBLNK().EQ.';') GOTO 150
        IF (GETNUM(0).EQ..FALSE.) GOTO 2000
        IF (UNBLNK().NE.';') GOTO 2000
150     CALL CONCAT(9,DEFSYM,DEFSYM)
        CALL CONCAT(PREFIX,DEFSYM,DEFSYM)
        IF (NUM.NE.1) THEN
            CALL CONCAT(9,DEFSYM,DEFSYM)
            CALL MAKENUM(NUM)
            CALL CONCAT(NUMSTR,DEFSYM,DEFSYM)
        ENDIF
        IF (COMMENTSIZE.NE.0) THEN
            CALL CONCAT(9,DEFSYM,DEFSYM)
            IF (NUM.EQ.1) CALL CONCAT(9,DEFSYM,DEFSYM)
            CALL CONCAT(COMMENT,DEFSYM,DEFSYM)
        ENDIF
        CALL PUTLINE(DEFSYM,LENGTH(DEFSYM))
        DEFFLAG=0
        GOTO 100

200     IF (DEFFLAG.EQ.1) THEN
            IF (COMMENTSIZE.GT.0) THEN
                CALL CONCAT(TAB3,DEFSYM,DEFSYM)
                CALL CONCAT(COMMENT,DEFSYM,DEFSYM)
            ENDIF
            CALL PUTLINE(DEFSYM,LENGTH(DEFSYM))
        ENDIF
        DEFFLAG=0
        IF (GETIDENT().EQ..FALSE.) GOTO 2000
        CALL MOVNAM(NAME,DEFSYM)
        CALL CONCAT(DEFSYM,' $DEF        ',DEFSYM)
        IF (UNBLNK().NE.';') GOTO 2000
        DEFFLAG=1
        COMMENT(1)=0
        IF (COL.LT.LINELEN) THEN
          LINE(LINELEN+1)=0
          CALL MOVNAM(LINE(COL),COMMENT)
        ENDIF
        COMMENTSIZE=LENGTH(COMMENT)
        GOTO 100

300     CALL VIELDF
        GOTO 100

400     CONTINUE
        CALL EQULSTF
        GOTO 100
C THE FOLLOWING CODE WILL SUPPRESS EQULST PROCESSING
C       CALL PUTLINE(LINE,LINELEN)
C       IF (GETMARLIN().NE..TRUE.) GOTO 2000
C       IF (UNBLNK().EQ.'>') GOTO 90
C       GOTO 400

2000    CALL ERRORF(1,SYNTAX)
        GOTO 90
3000    CALL ERRORF(6,MISSINGE)
        RETURN
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes								
0	$CODE	746	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1	$PDATA	89	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2	$LOCAL	728	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3	TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4	VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5	LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6	STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7	MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8	CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9	PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10	FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11	SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12	LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
	Total Space Allocated	5462									

ENTRY POINTS

Address	Type	Name
0-00000000		DEFINIF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	2-00000110	I*2	COMMENTSIZE
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	2-0000010E	I*2	DEFFLAG	5-00000014	L*2	ENDEXP
5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR
5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN
9-000000B4	I*2	FSIZ	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	2-00000114	I*2	MISSINGE	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT
4-00000000	I*4	NUM	9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL
5-00000006	L*2	STROK	2-00000112	I*2	SYNTAX	11-00000002	I*2	TAB	12-00000006	I*2	TMP
5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY
5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET
9-00000128	I*2	VSIZ									

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)

```
10-0000019C   I*2   BLIBUF      240   (120)
 9-00000662   I*2   BLINCR      162   (81)
 6-0000017E   I*2   BLSSIZ       20   (10)
 9-000003D8   I*2   BVALUE      162   (81)
 6-000000EA   I*2   BYTSIZ       20   (10)
 6-000001B4   I*2   COMGBL       12   (6)
 6-000000C4   I*2   COMMAS        4   (2)
 2-00000089   L*1   COMMENT     133   (133)
 6-00000112   I*2   CONBAS       20   (10)
 6-00000126   I*2   CONINC       20   (10)
 9-0000012C   I*2   CONPRE       32   (16)
 9-0000014C   I*2   CONTAG       32   (16)
 9-000007A6   I*2   CONTEX      198   (9, 11)
 6-000001D6   I*2   CPAREN        4   (2)
 6-000001D0   I*2   CPRCOM        6   (3)
 9-00000170   I*2   CVALUE      162   (81)
 6-0000004C   I*2   DEFEND       20   (10)
 6-00000022   I*2   DEFINI       20   (10)
 2-00000004   L*1   DEFSYM      133   (133)
 6-000001DE   I*2   DOLBIT       26   (13)
 6-000001F8   I*2   DOLBYT       28   (14)
 6-00000036   I*2   DOLDEF       12   (6)
 6-00000214   I*2   DOLFLD       24   (12)
 6-00000016   I*2   DOLGBL       12   (6)
 6-00000234   I*2   DOLLAR        4   (2)
 6-00000090   I*2   DOLVLD       18   (9)
 6-000000DE   I*2   DOTBLK       12   (6)
 6-00000042   I*2   DOTEQS       10   (5)
 6-00000000   I*2   DOTMAC       22   (11)
 6-00000060   I*2   ENDMAC       18   (9)
 6-000000B2   I*2   EQULST       18   (9)
 6-00000102   I*2   EQUTAB       12   (6)
 6-0000007E   I*2   EXCLSP       14   (7)
 6-00000230   I*2   EXPCLO        4   (2)
 6-0000022C   I*2   EXPOPN        4   (2)
 9-000000B8   I*2   FLDNAM       72   (36)
 6-000001B0   I*2   HYPHEN        4   (2)
10-00000000   I*2   INBUF       166   (83)
 6-000000C8   I*2   LANHYP        6   (3)
 3-00000000   L*1   LINE        133   (133)
 6-0000013A   I*2   LITTAB       18   (9)
 6-0000015A   I*2   MACTAB       16   (8)
10-000000AA   I*2   MARBUF      240   (120)
 9-000005C0   I*2   MRBASE      162   (81)
 9-00000704   I*2   MRINCR      162   (81)
 9-00000336   I*2   MVALUE      162   (81)
 3-0000010A   L*1   NAME         32   (32)
 7-00000000   I*2   NEGSGN        4   (2)
 3-0000012A   L*1   NUMSTR      133   (133)
 6-000001DA   I*2   OASIGN        4   (2)
 6-0000016A   I*2   OFFSET       20   (10)
 6-000001A2   I*2   ONESHF        6   (3)
 6-0000010E   I*2   OPAREN        4   (2)
 9-000002CE   I*2   OSBNAM       32   (16)
 9-000002EE   I*2   OTGNAM       32   (16)
 9-0000030E   I*2   OUNTYP       32   (16)
 6-0000019A   I*2   PCTSEM        8   (4)
```

3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
2-00000000	L*1	TAB3	4	(4)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
0-00000012	90	0-00000019	100	0-0000019D	150	0-00000217	200	0-000002C0	300	0-000002CA	400
0-000002D4	2000	0-000002E0	3000								

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
	CONCAT		EQULSTF		ERRORF	L*1	GETIDENT	L*1	GETMARLIN	L*1	GETNUM
L*1	IDENT	I*2	LENGTH		MAKENUM		MOVNAM		PUTLINE	L*1	UNBLNK
	VIELDF										

```
        SUBROUTINE PUTLINE(STRING,LENGTH)
        BYTE STRING(*)
        J=LENGTH
        DO 100 J=J,1,-1
        IF (STRING(J).NE.' ') GOTO 200
  100   CONTINUE
        WRITE(8, 98)
  98    FORMAT()
        RETURN
  200   WRITE(8, 99) (STRING(I),I=1,J)
  99    FORMAT(<J>A1)
        END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	147	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	9	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	24	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
	Total Space Allocated	180	

ENTRY POINTS

Address	Type	Name
0-00000000		PUTLINE

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name
2-00000002	I*2	I	2-00000000	I*2	J	AP-00000008@	I*2	LENGTH

ARRAYS

Address	Type	Name	Bytes	Dimensions
AP-00000004@	L*1	STRING	**	(*)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label
1-00000000	98'	1-00000001	99'	**	100	0-0000004D	200

```
              SUBROUTINE MAKENUM(I)
              INCLUDE 'SRC$:MDL32CMN.CMN'

              INTEGER*4 I
              BYTE STRING(12)

              IF ((I.GT.256).OR.(I.LT.0)) THEN
                 CALL MOVNAM('<^X',NUMSTR)
                 ENCODE(11,98,STRING) I
               ELSE
                 NUMSTR(1)=0
                 ENCODE(11,99,STRING) I
              ENDIF
              STRING(12)=0
              DO 100 J=1,11
              IF (STRING(J).NE.' ') GOTO 200
       100    CONTINUE
       200    CALL CONCAT(STRING(J),NUMSTR,NUMSTR)

       98     FORMAT(Z10,'>')
       99     FORMAT(I11)

              END
```

PROGRAM SECTIONS

Name	Bytes	Attributes								
0 $CODE	154	PIC	CON	REL	LCL	SHR	EXE	RD	NOWRT	LONG
1 $PDATA	13	PIC	CON	REL	LCL	SHR	NOEXE	RD	NOWRT	LONG
2 $LOCAL	52	PIC	CON	REL	LCL	NOSHR	NOEXE	RD	WRT	LONG
3 TEXT	431	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
4 VARS	12	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
5 LOG	30	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
6 STGS	586	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
7 MORSTG	4	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
8 CHECKS	2	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
9 PARSE	2160	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
10 FILES	654	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
11 SPCHR	6	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
12 LUNS	14	PIC	OVR	REL	GBL	SHR	NOEXE	RD	WRT	LONG
Total Space Allocated	4118									

ENTRY POINTS

Address	Type	Name
0-00000000		MAKENUM

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS	9-00000332	I*2	BLFOFS
12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT	9-0000012A	I*2	BOFSET
9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL	5-00000016	L*2	CONEXP
8-00000000	I*2	DEBUG	5-00000014	L*2	ENDEXP	5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH
12-00000008	I*2	ERR	5-00000002	L*2	ERROR	5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS
9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN	9-000000B4	I*2	FSIZ	AP-00000004@	I*4	I
12-00000000	I*2	INP	10-000000A8	I*2	INPLIN	10-000000A6	I*2	INPTR	2-0000000C	I*2	J
9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ	4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP
9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ	12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR
12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT	9-0000086C	I*2	NEGCNT	4-00000000	I*4	NUM
9-00000334	I*2	OBBITS	9-0000032E	I*2	OFSIZ	9-00000330	I*2	OUNSIZ	5-00000018	L*2	POSOFF
5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	5-00000004	L*2	STGEQL	5-00000006	L*2	STROK
11-00000002	I*2	TAB	12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT
9-00000050	I*2	TOKTYP	12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ
5-0000000A	L*2	VMASK	9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ			

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
6-000000B2	I*2	EQULST	18	(9)

6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)
6-000001A2	I*2	ONESHF	6	(3)
6-0000010E	I*2	OPAREN	4	(2)
9-000002CE	I*2	OSBNAM	32	(16)
9-000002EE	I*2	OTGNAM	32	(16)
9-0000030E	I*2	OUNTYP	32	(16)
6-0000019A	I*2	PCTSEM	8	(4)
3-00000085	L*1	PREFIX	133	(133)
9-00000052	I*2	PRENAM	32	(16)
6-000000D4	I*2	RANHYP	6	(3)
9-0000021A	I*2	RSTLIN	180	(90)
6-00000154	I*2	SEMSPC	6	(3)
6-000000FE	I*2	SPCSTG	4	(2)
6-000001A8	I*2	SPHYSP	8	(4)
2-00000000	L*1	STRING	12	(12)
9-00000092	I*2	STRSTG	32	(16)
6-00000072	I*2	SUFDEF	8	(4)
9-00000072	I*2	SUFNAM	32	(16)
6-0000014C	I*2	TABEQS	8	(4)
6-000000CE	I*2	TABLAN	6	(3)
6-000001CA	I*2	TABOPR	6	(3)
6-000001C0	I*2	TABPRN	10	(5)
6-000000AC	I*2	TABRAN	6	(3)
6-0000008C	I*2	TABSTG	4	(2)
9-00000100	I*2	TAGNAM	32	(16)
9-0000047A	I*2	TMPVAL	162	(81)
9-00000000	I*2	TOKSTG	80	(40)
6-00000238	I*2	UNDVLD	18	(9)
6-0000007A	I*2	UNITYP	4	(2)
6-00000192	I*2	ZEROSG	4	(2)
6-000000A2	I*2	ZRLAHY	10	(5)

LABELS

Address	Label	Address	Label	Address	Label	Address	Label
1-00000004	98'	1-0000000A	99'	**	100	0-00000087	200

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name
	CONCAT		MOVNAM

```
      SUBROUTINE EQULSTF
C     ROUTINE TO HANDLE MDL EQULST SYNTAX

      INCLUDE 'SRC$:MDL32CMN.CMN'
      LOGICAL*1 GETIDENT,UNBLNK,GETNUM,IDENT,GETMARLIN
      BYTE TAB5(6),EQULINE(132),SAVENAME(32)
      DATA TAB5/9,9,9,9,9,0/
      DATA KNOWNVAL/0/
      INTEGER*4 STARTVAL,INCRVAL

      IF (GETIDENT().EQ..FALSE.) GOTO 2000
      CALL MOVNAM(NAME,PREFIX)
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      IF (GETIDENT().EQ..FALSE.) GOTO 2000
      IF (IDENT(NAME,'$GBL').NE..TRUE.) GOTO 2000
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      IF (GETNUM(0).EQ..FALSE.) THEN
          IF (UNBLNK().EQ.','.AND.KNOWNVAL.EQ.1) GOTO 500
          KNOWNVAL=0
          CALL PUTLINE(LINE,LINELEN)
400       IF (GETMARLIN().NE..TRUE.) GOTO 2000
          CALL PUTLINE(LINE,LINELEN)
          IF (UNBLNK().NE.'>') GOTO 400
          RETURN
      END IF
      KNOWNVAL=1
      STARTVAL=NUM
500   IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      INCRVAL=1
      IF (GETNUM(0)) INCRVAL=NUM
      IF (UNBLNK().NE.',') GOTO 2000
      COL=COL+1
      IF (UNBLNK().NE.'<') GOTO 2000
      COL=COL+1
      IF (UNBLNK().NE.'-') GOTO 2000
      COL=COL+1
      IF (UNBLNK().EQ.';') GOTO 750
2000  CALL ERRORF(1,SYNTAX)
700   IF (GETMARLIN().NE..TRUE.) GOTO 1500
      IF (UNBLNK().EQ.'>') GOTO 1600
      IF (UNBLNK().EQ.'-') THEN
          COL=COL+1
          IF (UNBLNK().NE.';') GOTO 2000
750       IF (COL.GE.LINELEN) GOTO 700
          LINE(LINELEN+1)=0
          CALL CONCAT(LINE(COL),TAB5,EQULINE)
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
          GOTO 700
      ENDIF
      IF (UNBLNK().NE.'<') GOTO 2000
      COL=COL+1
      IF (GETIDENT().NE..TRUE.) GOTO 2000
      IF (UNBLNK().NE.',') GOTO 900
```

```
              COL=COL+1
              IF (GETNUM(1)) THEN
                BINVAL=NUM
                GOTO 950
              ENDIF
      C
      C COME HERE IF EQUATE VALUE IS NOT CALCUABLE- THIS CAN BE CAUSED BY THE USE
      C OF SYMBOLS IN THE VALUE EXPRESSION OR THE USE OF CONTINUATION LINES IN THE
      C VALUE EXPRESSION
      C
      C NOW WE CAN ATTEMPT TO FIND THE END OF THIS EXPRESSION BY PAIRING '<' AND '>'
      C
              OPENCNT=0
              OUTFLG=0
      800     BEGCOL=COL
              DO 850 COL=COL,132
              IF (UNBLNK().EQ.'<') THEN
                OPENCNT=OPENCNT+1
                GOTO 850
              ENDIF
              IF (UNBLNK().EQ.'>') THEN
                OPENCNT=OPENCNT-1
                IF (OPENCNT.EQ.-1) GOTO 875
                GOTO 850
              ENDIF
              IF (UNBLNK().EQ.';') THEN
                IF (OUTFLG.EQ.0) THEN
                  CALL CONCAT(NAME,PREFIX,EQULINE)
                  CALL CONCAT(EQULINE,' $EQU  ',EQULINE)
                  CALL CONCAT(TAB5(5),EQULINE,EQULINE)
                  LINE(LINELEN+1)=0
                  CALL CONCAT(LINE(BEGCOL),EQULINE,EQULINE)
                  CALL PUTLINE(EQULINE,LENGTH(EQULINE))
                  OUTFLG=1
                ELSE
                  CALL PUTLINE(LINE,LINELEN)
                ENDIF
                IF (GETMARLIN().NE..TRUE.) GOTO 1500
                GOTO 800
              ENDIF
      850     CONTINUE
              GOTO 2000
      875     ENDCOL=COL
              COL=COL+1
              IF (UNBLNK().NE.'-') GOTO 2000
              COL=COL+1
              IF (UNBLNK().NE.';') GOTO 2000
              IF (OUTFLG.EQ.0) THEN
                CALL CONCAT(NAME,PREFIX,EQULINE)
                CALL CONCAT(EQULINE,' $EQU    ',EQULINE)
                CALL CONCAT(TAB5(5),EQULINE,EQULINE)
              ELSE
                EQULINE(1)=0
              ENDIF
              LINE(ENDCOL)=0
              CALL CONCAT(LINE(BEGCOL),EQULINE,EQULINE)
              LINE(LINELEN+1)=0
```

```
          IF (COL.LT.LINELEN) THEN
             CALL CONCAT(TAB5(5),EQULINE,EQULINE)
             CALL CONCAT(LINE(COL),EQULINE,EQULINE)
          ENDIF
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
          GOTO 700

  900     BINVAL=STARTVAL
          STARTVAL=STARTVAL+INCRVAL
  950     IF (UNBLNK().NE.'>') GOTO 2000
          COL=COL+1
          IF (UNBLNK().NE.'-') GOTO 2000
          COL=COL+1
          IF (UNBLNK().NE.';') GOTO 2000
          CALL CONCAT(NAME,PREFIX,EQULINE)
          CALL CONCAT(EQULINE,' $EQU      ',EQULINE)
          CALL CONCAT(TAB5(5),EQULINE,EQULINE)
          CALL MAKENUM(BINVAL)
          CALL CONCAT(NUMSTR,EQULINE,EQULINE)
          LINE(LINELEN+1)=0
          IF (COL.LT.LINELEN) THEN
             CALL CONCAT(TAB5(4),EQULINE,EQULINE)
             CALL CONCAT(LINE(COL),EQULINE,EQULINE)
          ENDIF
          CALL PUTLINE(EQULINE,LENGTH(EQULINE))
          GOTO 700

  1500    CALL ERRORF(5,NOCLOSEANGLE)
  1600    RETURN
          END
```

PROGRAM SECTIONS

	Name	Bytes	Attributes
0	$CODE	1168	PIC CON REL LCL SHR EXE RD NOWRT LONG
1	$PDATA	24	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2	$LOCAL	464	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
3	TEXT	431	PIC OVR REL GBL SHR NOEXE RD WRT LONG
4	VARS	12	PIC OVR REL GBL SHR NOEXE RD WRT LONG
5	LOG	30	PIC OVR REL GBL SHR NOEXE RD WRT LONG
6	STGS	586	PIC OVR REL GBL SHR NOEXE RD WRT LONG
7	MORSTG	4	PIC OVR REL GBL SHR NOEXE RD WRT LONG
8	CHECKS	2	PIC OVR REL GBL SHR NOEXE RD WRT LONG
9	PARSE	2160	PIC OVR REL GBL SHR NOEXE RD WRT LONG
10	FILES	654	PIC OVR REL GBL SHR NOEXE RD WRT LONG
11	SPCHR	6	PIC OVR REL GBL SHR NOEXE RD WRT LONG
12	LUNS	14	PIC OVR REL GBL SHR NOEXE RD WRT LONG
	Total Space Allocated	5555	

ENTRY POINTS

Address	Type	Name
0-00000000		EQULSTF

VARIABLES

Address	Type	Name	Address	Type	Name	Address	Type	Name	Address	Type	Name
2-000000B2	I*2	BEGCOL	4-00000006	I*4	BINVAL	11-00000000	I*2	BLANK	9-00000212	I*2	BLBITS
9-00000332	I*2	BLFOFS	12-00000002	I*2	BLI	10-0000028C	I*2	BLIPTR	5-00000012	L*2	BLKOUT
9-0000012A	I*2	BOFSET	9-0000016C	I*2	CBASE	9-0000016E	I*2	CINCR	4-00000004	I*2	COL
5-00000016	L*2	CONEXP	8-00000000	I*2	DEBUG	2-000000B4	I*2	ENDCOL	5-00000014	L*2	ENDEXP
5-00000000	L*2	ENDFIL	11-00000004	I*2	EOLCH	12-00000008	I*2	ERR	5-00000002	L*2	ERROR
5-0000000E	L*2	ERROUT	5-00000010	L*2	FLDLAS	9-00000122	I*2	FOFSET	9-000000B6	I*2	FSIGN
9-000000B4	I*2	FSIZ	2-000000BC	I*4	INCRVAL	12-00000000	I*2	INP	10-000000A8	I*2	INPLIN
10-000000A6	I*2	INPTR	2-000000AA	I*2	KNOWNVAL	9-0000051C	I*2	LASLIN	9-00000216	I*2	LFDSIZ
4-0000000A	I*2	LINELEN	9-00000126	I*2	LINTYP	9-00000218	I*2	LPTR	9-00000214	I*2	LSBSIZ
12-00000004	I*2	MAR	10-0000019A	I*2	MARPTR	12-0000000C	I*2	MAS	9-0000086E	I*2	MNGCNT
9-0000086C	I*2	NEGCNT	2-000000B6	I*2	NOCLOSEANGLE	4-00000000	I*4	NUM	9-00000334	I*2	OBBITS
9-0000032E	I*2	OFSIZ	2-000000AE	I*2	OPENCNT	9-00000330	I*2	OUNSIZ	2-000000B0	I*2	OUTFLG
5-00000018	L*2	POSOFF	5-0000000C	L*2	SMASK	9-00000120	I*2	SOFSET	2-000000B8	I*4	STARTVAL
5-00000004	L*2	STGEQL	5-00000006	L*2	STROK	2-000000AC	I*2	SYNTAX	11-00000002	I*2	TAB
12-00000006	I*2	TMP	5-0000001C	L*2	TMPIN	5-0000001A	L*2	TMPOUT	9-00000050	I*2	TOKTYP
12-0000000A	I*2	TTY	5-00000008	L*2	UNDOK	9-000000B2	I*2	UNISIZ	5-0000000A	L*2	VMASK
9-00000124	I*2	VOFSET	9-00000128	I*2	VSIZ						

ARRAYS

Address	Type	Name	Bytes	Dimensions
6-000000DA	I*2	AMASK	4	(2)
6-00000196	I*2	ASIGN	4	(2)
9-0000051E	I*2	BLBASE	162	(81)
10-0000019C	I*2	BLIBUF	240	(120)
9-00000662	I*2	BLINCR	162	(81)
6-0000017E	I*2	BLSSIZ	20	(10)
9-000003D8	I*2	BVALUE	162	(81)
6-000000EA	I*2	BYTSIZ	20	(10)
6-000001B4	I*2	COMGBL	12	(6)
6-000000C4	I*2	COMMAS	4	(2)
6-00000112	I*2	CONBAS	20	(10)
6-00000126	I*2	CONINC	20	(10)
9-0000012C	I*2	CONPRE	32	(16)
9-0000014C	I*2	CONTAG	32	(16)
9-000007A6	I*2	CONTEX	198	(9, 11)
6-000001D6	I*2	CPAREN	4	(2)
6-000001D0	I*2	CPRCOM	6	(3)
9-00000170	I*2	CVALUE	162	(81)
6-0000004C	I*2	DEFEND	20	(10)
6-00000022	I*2	DEFINI	20	(10)
6-000001DE	I*2	DOLBIT	26	(13)
6-000001F8	I*2	DOLBYT	28	(14)
6-00000036	I*2	DOLDEF	12	(6)
6-00000214	I*2	DOLFLD	24	(12)
6-00000016	I*2	DOLGBL	12	(6)
6-00000234	I*2	DOLLAR	4	(2)
6-00000090	I*2	DOLVLD	18	(9)
6-000000DE	I*2	DOTBLK	12	(6)
6-00000042	I*2	DOTEQS	10	(5)
6-00000000	I*2	DOTMAC	22	(11)
6-00000060	I*2	ENDMAC	18	(9)
2-00000006	L*1	EQULINE	132	(132)
6-000000B2	I*2	EQULST	18	(9)
6-00000102	I*2	EQUTAB	12	(6)
6-0000007E	I*2	EXCLSP	14	(7)
6-00000230	I*2	EXPCLO	4	(2)
6-0000022C	I*2	EXPOPN	4	(2)
9-000000B8	I*2	FLDNAM	72	(36)
6-000001B0	I*2	HYPHEN	4	(2)
10-00000000	I*2	INBUF	166	(83)
6-000000C8	I*2	LANHYP	6	(3)
3-00000000	L*1	LINE	133	(133)
6-0000013A	I*2	LITTAB	18	(9)
6-0000015A	I*2	MACTAB	16	(8)
10-000000AA	I*2	MARBUF	240	(120)
9-000005C0	I*2	MRBASE	162	(81)
9-00000704	I*2	MRINCR	162	(81)
9-00000336	I*2	MVALUE	162	(81)
3-0000010A	L*1	NAME	32	(32)
7-00000000	I*2	NEGSGN	4	(2)
3-0000012A	L*1	NUMSTR	133	(133)
6-000001DA	I*2	OASIGN	4	(2)
6-0000016A	I*2	OFFSET	20	(10)

```
  6-000001A2   I*2   ONESHF             6   (3)
  6-0000010E   I*2   OPAREN             4   (2)
  9-000002CE   I*2   OSBNAM            32   (16)
  9-000002EE   I*2   OTGNAM            32   (16)
  9-0000030E   I*2   OUNTYP            32   (16)
  6-0000019A   I*2   PCTSEM             8   (4)
  3-00000085   L*1   PREFIX           133   (133)
  9-00000052   I*2   PRENAM            32   (16)
  6-000000D4   I*2   RANHYP             6   (3)
  9-0000021A   I*2   RSTLIN           180   (90)
  2-0000008A   L*1   SAVENAME          32   (32)
  6-00000154   I*2   SEMSPC             6   (3)
  6-000000FE   I*2   SPCSTG             4   (2)
  6-000001A8   I*2   SPHYSP             8   (4)
  9-00000092   I*2   STRSTG            32   (16)
  6-00000072   I*2   SUFDEF             8   (4)
  9-00000072   I*2   SUFNAM            32   (16)
  2-00000000   L*1   TAB5               6   (6)
  6-0000014C   I*2   TABEQS             8   (4)
  6-000000CE   I*2   TABLAN             6   (3)
  6-000001CA   I*2   TABOPR             6   (3)
  6-000001C0   I*2   TABPRN            10   (5)
  6-000000AC   I*2   TABRAN             6   (3)
  6-0000008C   I*2   TABSTG             4   (2)
  9-00000100   I*2   TAGNAM            32   (16)
  9-0000047A   I*2   TMPVAL           162   (81)
  9-00000000   I*2   TOKSTG            80   (40)
  6-00000238   I*2   UNDVLD            18   (9)
  6-0000007A   I*2   UNITYP             4   (2)
  6-00000192   I*2   ZEROSG             4   (2)
  6-000000A2   I*2   ZRLAHY            10   (5)

LABELS

    Address    Label        Address    Label        Address    Label        Address    Label        Address    Label        Address    Label

  0-00000094  400        0-000000C4  500        0-00000133  700        0-00000172  750        0-0000021C  800        0-000002EE  850
  0-000002FD  875        0-000003C4  900        0-000003CF  950        0-00000486  1500       0-0000048F  1600       0-0000012B  2000

FUNCTIONS AND SUBROUTINES REFERENCED

  Type  Name            Type  Name            Type  Name            Type  Name            Type  Name            Type  Name

        CONCAT                ERRORF          L*1   GETIDENT        L*1   GETMARLIN       L*1   GETNUM          L*1   IDENT
  I*2   LENGTH                MAKENUM               MOVNAM                PUTLINE         L*1   UNBLNK
```

COMMAND QUALIFIERS

```
  FORTRAN /NOI4/LIS=LIS$:MDL32/OBJ=OBJ$:MDL32 MSRC$:MDL32

  /CHECK=(NOBOUNDS,OVERFLOW,NOUNDERFLOW)
  /DEBUG=(NOSYMBOLS,TRACEBACK)
  /STANDARD=(NOSYNTAX,NOSOURCE_FORM)
  /SHOW=(NOPREPROCESSOR,NOINCLUDE,MAP)
  /F77  /NOG_FLOATING  /NOI4  /OPTIMIZE  /WARNINGS  /NOD_LINES  /NOCROSS_REFERENCE  /NOMACHINE_CODE  /CONTINUATIONS=19
```

COMPILATION STATISTICS

```
  Run Time:           138.40 seconds
  Elapsed Time:       285.71 seconds
  Page Faults:        330
  Dynamic Memory:     288 pages
```

0234 AH-BT13A-SE
VAX/VMS V4.0

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MDL32
LIS

0235 AH-BT13A-SE
VAX/VMS V4.0

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MIRROR

MMGADJWSL
LIS

MIRROR
MAP

MMGTST

MMGADJWSL
MAP

MMGCRTDEL
MAP

MIRROR
LIS

MMGEXPCNT
MAP

MMGNSPWSL
MAP

MMGXQUOTA
MAP

MMGCRDLSP
MAP

MMGCRTFIL
MAP

MMGLKWULW
MAP

MMGSETPRT
MAP