FORRTL

FILEID**FORENCOMF

```
FFFFFFFFFF   000000    RRRRRRRR   EEEEEEEEEE  NN      NN   CCCCCCCC    000000    MM      MM  FFFFFFFFFF
FFFFFFFFFF   000000    RRRRRRRR   EEEEEEEEEE  NN      NN   CCCCCCC     000000    MM      MM  FFFFFFFFFF
FF          00    00   RR     RR  EE          NN      NN  CC          00    00   MMMM  MMMM  FF
FF          00    00   RR     RR  EE          NN      NN  CC          00    00   MMMM  MMMM  FF
FF          00    00   RR     RR  EE          NNNN    NN  CC          00    00   MM MM MM MM  FF
FF          00    00   RR     RR  EE          NNNN    NN  CC          00    00   MM  MM  MM  FF
FFFFFFF     00    00   RRRRRRRR   EEEEEEE     NN NN   NN  CC          00    00   MM      MM  FFFFFFF
FFFFFFF     00    00   RRRRRRRR   EEEEEEE     NN  NN  NN  CC          00    00   MM      MM  FFFFFFF
FF          00    00   RR   RR    EE          NN   NNNN   CC          00    00   MM      MM  FF
FF          00    00   RR   RR    EE          NN   NNNN   CC          00    00   MM      MM  FF
FF          00    00   RR    RR   EE          NN    NN    CC          00    00   MM      MM  FF
FF          00    00   RR    RR   EE          NN    NN    CC          00    00   MM      MM  FF
FF          000000     RR     RR  EEEEEEEEEE  NN      NN   CCCCCCC     000000    MM      MM  FF
FF          000000     RR     RR  EEEEEEEEEE  NN      NN   CCCCCCC     000000    MM      MM  FF


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
```

```
0000     1                  .TITLE  FOR$ENCODE_MF - entry point for FORTRAN ENCODE FORMATTED
0000     2                  .IDENT  /1-011/          File: FORENCOMF.MAR  Edit: JAW1011
0000     3          ;
0000     4          ;****************************************************************************
0000     5          ;*                                                                         *
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0000    23          ;*                                                                         *
0000    24          ;*                                                                         *
0000    25          ;****************************************************************************
0000    26          ;
0000    27          ;
0000    28          ;++
0000    29          ; FACILITY: FORTRAN Support Library - user callable
0000    30          ;
0000    31          ; ABSTRACT:
0000    32          ;
0000    33          ;       This module contains the entry point for the FORTRAN
0000    34          ;       ENCODE FORMATTED I/O statement.  It is simply
0000    35          ;       a call to FOR$$IO_BEG with bits in R0 which describe the
0000    36          ;       parameter list.  FOR$$IO_BEG interprets the parameters.
0000    37          ;
0000    38          ; MAINTENANCE NOTE:
0000    39          ;       The transfer vector (RTLVECTOR+ALLGBL) must have the following:
0000    40          ;
0000    41          ;       .TRANSFER           FOR$ENCODE_MF
0000    42          ;       .MASK               FOR$$IO_BEG
0000    43          ;       BRW                 FOR$ENCODE_MF+2
0000    44          ;
0000    45          ;       This puts the correct mask in entry vector, that is FOR$$IO_BEG entry mask.
0000    46          ;       Furthermore this module must only use R0 and R1
0000    47          ;       since any other register might not be in the entry mask for FOR$$IO_BEG.
0000    48          ;
0000    49          ; ENVIRONMENT: User access mode; mixture of AST level or not
0000    50          ;
0000    51          ; AUTHOR:        Richard B. Grove, CREATION DATE: 28-May-78
0000    52          ;
0000    53          ; MODIFIED BY:
0000    54          ;       T. Hastings, 29-July-78
```

```
0000   56            .SBTTL  HISTORY        ; Detailed Current Edit History
0000   57
0000   58
0000   59 ; Edit History for Version 1
0000   60 ;
0000   61 ; 0-10  - Add comment about vectors.  TNH 23-June-78
0000   62 ; 0-12  - Pass arg in R0, not ROR, add comments.  TNH 29-July-78
0000   63 ; 1-001 - Update version number and copyright notice.  JBS 16-NOV-78
0000   64 ; 1-002 - Change statement type symbols to be LUB$K...  JBS 07-DEC-78
0000   65 ; 1-003 - Change statement type symbols to be ISB$K...  JBS 11-DEC-78
0000   66 ; 1-004 - Add "." to the PSECT directive.  JBS 22-DEC-78
0000   67 ; 1-005 - Add FOR$READ_KF, FOR$READ_KO, FOR$REWRITE_SF, FOR$REWRITE_SO,
0000   68 ;          FOR$READ_IF, FOR$READ_IO, FOR$WRITE_IF, FOR$WRITE_IO,
0000   69 ;          FOR$READ_KU, FOR$REWRITE_SU,
0000   70 ;          SBL 2-May-1979
0000   71 ; 1-006 - Remove all entry points that need object time formatting,
0000   72 ;          putting them in FOR$ENTRY_OBJ so that we can arrange to
0000   73 ;          load the format compiler only when it is needed.
0000   74 ;          JBS 26-JUN-1979
0000   75 ; 1-007 - Remove entry point FOR$ENCODE_MF; we will code a new module
0000   76 ;          for it and FOR$$IO_BEG, to see how much I/O initiation time
0000   77 ;          improves.  JBS 02-JUL-1979
0000   78 ; 1-008 - Do likewuse for FOR$READ_DU and FOR$WRITE_DU.  JBS 03-JUL-1979
0000   79 ; 1-009 - Remove all entry points except FOR$ENCODE_MF; each of the
0000   80 ;          others gets its own module so we can selectively load
0000   81 ;          the necessary UDF and REC modules.  JBS 09-JUL-1979
0000   82 ; 1-010 - New parameter format for FOR$$IO_BEG.  SBL 5-Dec-1979
0000   83 ; 1-011 - Change BRW FOR$$IO_BEG+2 to JMP G^FOR$$IO_BEG+2.  JAW 21-Feb-1981
```

FOR$ENCODE_MF
1-011

K 2
- entry point for FORTRAN ENCODE FORMATT 15-SEP-1984 23:51:30   VAX/VMS Macro V04-00   Page   3
DECLARATIONS   6-SEP-1984 10:55:00   [FORRTL.SRC]FORENCOMF.MAR;1   (3)

FOR
1-C

```
     0000      85              .SBTTL  DECLARATIONS
     0000      86
     0000      87 ;
     0000      88 ; INCLUDE FILES:
     0000      89 ;
     0000      90
     0000      91          $FORPAR                          ; Define inter-module FORTRAN symbols
     0000      92          $ISBDEF                          ; Define statement type symbols
     0000      93
     0000      94 ;
     0000      95 ; EXTERNAL SYMBOLS:
     0000      96 ;
     0000      97
     0000      98          .DSABL  GBL                      ; Declare all external symbols
     0000      99          .EXTRN  FOR$$IO_BEG              ; common I/O statement processing
     0000     100 ;+
     0000     101 ; The following references are to make sure the necessary UDF and REC
     0000     102 ; modules are loaded.  These are the routines which are called through
     0000     103 ; the dispatch tables in FOR$$DISPAT.
     0000     104 ;-
     0000     105          .EXTRN  FOR$$UDF_WF0, FOR$$UDF_WF1, FOR$$UDF_WF9
     0000     106          .EXTRN  FOR$$REC_WMF0, FOR$$REC_WMF1, FOR$$REC_WMF9
     0000     107
     0000     108 ;
     0000     109 ; MACROS:
     0000     110 ;
     0000     111 ;        NONE
     0000     112 ;
     0000     113 ; PSECT DECLARATIONS:
     0000     114 ;
     0000     115
 00000000     116          .PSECT  _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
     0000     117
     0000     118 ;
     0000     119 ; EQUATED SYMBOLS:
     0000     120 ;
     0000     121
     0000     122
     0000     123 ;
     0000     124 ; OWN STORAGE:
     0000     125 ;
     0000     126 ;        NONE
     0000     127 ;
```

L 2

```
                    0000   129            .SBTTL   FOR$ENCODE_MF - ENCODE formatted
                    0000   130
                    0000   131  ;++
                    0000   132  ; FUNCTIONAL DESCRIPTION:
                    0000   133  ;
                    0000   134  ;       Initialize the FORTRAN I/O system to perform
                    0000   135  ;       a ENCODE formatted I/O statement.
                    0000   136  ;
                    0000   137  ; CALLING SEQUENCE:
                    0000   138  ;
                    0000   139  ;       CALL FOR$ENCODE_MF (char_cnt.rlu.v, format_adr.mbu.ra, usr_buf_adr.wt.ra
                    0000   140  ;               [, err_adr.j.r [, end_adr.j.r]])
                    0000   141  ;
                    0000   142  ; INPUT PARAMETERS:
                    0000   143  ;
                    0000   144  ;       unit.rl.v               logical unit number
                    0000   145  ;       format_adr.mbu.ra        adr. of compiled format byte array
                    0000   146  ;       usr_buf_adr.wt.ra        adr. of user's buffer
                    0000   147  ;       [err_adr.j.r]           optional ERR= address
                    0000   148  ;       [end_adr.j.r]           optional END= address
                    0000   149  ;
                    0000   150  ; IMPLICIT INPUTS:
                    0000   151  ;
                    0000   152  ;       NONE except those used by FOR$$IO_BEG.
                    0000   153  ;
                    0000   154  ; OUTPUT PARAMETERS:
                    0000   155  ;
                    0000   156  ;       NONE
                    0000   157  ;
                    0000   158  ; IMPLICIT OUTPUTS:
                    0000   159  ;
                    0000   160  ;       NONE except those left by FOR$$IO_BEG.
                    0000   161  ;
                    0000   162  ; COMPLETION CODES:
                    0000   163  ;
                    0000   164  ;       NONE
                    0000   165  ;
                    0000   166  ; SIDE EFFECTS:
                    0000   167  ;
                    0000   168  ;       NONE except those of FOR$$IO_BEG.
                    0000   169  ;
                    0000   170  ;--
                    0000   171
            0000'   0000   172  FOR$ENCODE_MF:: .MASK    FOR$$IO_BEG
      50   0B   9A  0002   173            MOVZBL   #ISB$K_ST_TY_WMF, R0    ; Statement type
  00000002'GF  17  0005   174            JMP      G^FOR$$IO_BEG+2         ; branch past call mask
                    000B   175
                    000B   176
                    000B   177            .END
```

```
FOR$$IO_BEG                      ********   X   00
FOR$$REC_WMF0                    ********   X   00
FOR$$REC_WMF1                    ********   X   00
FOR$$REC_WMF9                    ********   X   00
FOR$$UDF_WF0                     ********   X   00
FOR$$UDF_WF1                     ********   X   00
FOR$$UDF_WF9                     ********   X   00
FOR$ENCODE_MF                    00000000  RG   01
ISB$K_ST_TY_WMF                = 0000000B
```

```
                           +-----------------+
                           ! Psect synopsis  !
                           +-----------------+

PSECT name              Allocation          PSECT No.  Attributes
----------              ----------          ---------  ----------
.  ABS  .               00000000  (    0.)  00 (  0.)  NOPIC  USR  CON  ABS  LCL  NOSHR  NOEXE  NORD  NOWRT  NOVEC  BYTE
_FOR$CODE               0000000B  (   11.)  01 (  1.)    PIC  USR  CON  REL  LCL    SHR    EXE    RD  NOWRT  NOVEC  LONG

                      +--------------------------+
                      ! Performance indicators !
                      +--------------------------+

Phase                 Page faults   CPU Time      Elapsed Time
-----                 -----------   --------      ------------
Initialization            31      00:00:00.08    00:00:00.80
Command processing       117      00:00:00.58    00:00:03.15
Pass 1                   124      00:00:01.27    00:00:04.84
Symbol table sort          0      00:00:00.19    00:00:00.28
Pass 2                    48      00:00:00.49    00:00:01.67
Symbol table output        3      00:00:00.02    00:00:00.02
Psect synopsis output      2      00:00:00.00    00:00:00.04
Cross-reference output     0      00:00:00.00    00:00:00.00
Assembler run totals     327      00:00:02.66    00:00:10.83
```

The working set limit was 900 pages.
6671 bytes (14 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.
177 source lines were read in Pass 1, producing 8 object records in Pass 2.
9 pages of virtual memory were used to define 2 macros.

```
                      +----------------------------+
                      ! Macro library statistics !
                      +----------------------------+

Macro library name                       Macros defined
------------------                       --------------
_$255$DUA28:[FORRTL.OBJ]FORRTL.MLB;1            2
_$255$DUA28:[SYSLIB]STARLET.MLB;2              0
TOTALS (all libraries)                         2
```

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:FORENCOMF/OBJ=OBJ$:FORENCOMF MSRC$:FORENCOMF/UPDATE=(ENH$:FORENCOMF)+LI

FORFIND
LIS

FORFMTINT
LIS

FOREXITHA
LIS

FORENODEF
LIS

FORENCOMF
LIS

FORIDATE
LIS

FORENDFIL
LIS

FORERRSNS
LIS

FOREXIT
LIS

FORERROR
LIS

FORFMTCP
LIS

FORENCOMO
LIS

FORINIDES
LIS