


```

000000  TTTTTTTTTT  SSSSSSSS  CCCCCCCC  VV      VV  TTTTTTTTTT  PPPPPPPP  FFFFFFFFFF
000000  TTTTTTTTTT  SSSSSSSS  CCCCCCCC  VV      VV  TTTTTTTTTT  PPPPPPPP  FFFFFFFFFF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
00      00    TT      SS      CC      VV      VV  TT      PP      PP  FF
000000  TT      SSSSSSSS  CCCCCCCC  VV      VV  TT      PP      PP  FF
000000  TT      SSSSSSSS  CCCCCCCC  VV      VV  TT      PP      PP  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
LLLLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLLLL  IIIIII  SSSSSSSS

```

(2)	50
(3)	63
(4)	98

HISTORY	; Detailed Current Edit History
DECLARATIONS	
OTSSCVTPF_R9	

```

0000 1      .TITLE  OTSSCVTPF_R9      Convert Packed to Floating
0000 2      .IDENT  /1-005/           ; File: OTSCVTPF.MAR Edit: PLL1005
0000 3
0000 4
0000 5 :*****
0000 6 :*
0000 7 :*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 20 :*  CORPORATION.
0000 21 :*
0000 22 :*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23 :*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28 :
0000 29 : FACILITY: LANGUAGE INDEPENDENT SUPPORT
0000 30 : ++
0000 31 : ABSTRACT:
0000 32 :   This module contains the routine that converts packed numbers
0000 33 :   to floating.
0000 34 :
0000 35 :
0000 36 : --
0000 37 :
0000 38 : VERSION: 1
0000 39 :
0000 40 : HISTORY:
0000 41 :
0000 42 : AUTHOR:
0000 43 :   Marty Jack, 14-Mar-1979
0000 44 :
0000 45 : MODIFIED BY:
0000 46 :
0000 47 :
0000 48 :

```

OT
SY
DS
DS
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PS
--
\$A
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80
Th
16
8

Ma
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_S
19
Th
MA

OTSSCVTPF_R9
1-005

```
0000 50      .SBTTL HISTORY          ; Detailed Current Edit History
0000 51
0000 52
0000 53 : Edit History for Version 1 of OTSCVTPF
0000 54 :
0000 55 : 1-001 - Original. MLJ 14-Mar-1979
0000 56 : 1-002 - Make external references explicit. RKR 17-JULY-1979
0000 57 : 1-003 - Change all refernces to FOR$CNV_IN_DEFG to OTSSCVT_T_D
0000 58 : RKR 27-SEPT-79
0000 59 : 1-004 - Cosmetic changes. RKR 18-OCT-79
0000 60 : 1-005 - Change source name to OTSS$ but retain old entry point name.
0000 61 : PLL 21-Jan-82
```

**

```
0000 63      .SBTTL  DECLARATIONS
0000 64
0000 65 :
0000 66 : INCLUDE FILES:
0000 67 :
0000 68      $DSCDEF
0000 69
0000 70 :
0000 71 : EXTERNAL SYMBOLS:
0000 72      .DSABL  GBL          ; Prevent undeclared symbols from being
0000 73                                ; automatically global
0000 74
0000 75      .EXTRN  OTSSCVT_T_D  ; D, E, F, G Conversion routine
0000 76 :
0000 77 :
0000 78 :
0000 79 : MACROS:
0000 80 :     NONE
0000 81 :
0000 82 :
0000 83 :
0000 84 : PSECT DECLARATIONS:
0000 85      .PSECT  _OTSSCODE    PIC, SHR, LONG, EXE, NOWRT,-
0000 86                                USR, CON, REL, LCL, RD
0000 87
0000 88 :
0000 89 : EQUATED SYMBOLS:
0000 90 :     NONE
0000 91 :
0000 92 :
0000 93 :
0000 94 : OWN STORAGE:
0000 95 :     NONE
0000 96 :
```

```

0000 98      .SBTTL OTSS$CVTPF_R9
0000 99
0000 100    :++
0000 101    : FUNCTIONAL DESCRIPTION:
0000 102    :
0000 103    :     Converts packed numbers to floating.
0000 104    :
0000 105    : CALLING SEQUENCE:
0000 106    :
0000 107    :     JSB OTSS$CVTPF_R9 (scale.rl.v, srclen.rl.v, src.rp.r, dst.wf.r)
0000 108    :
0000 109    :     Arguments are passed in R6, R7, R8 and R9.
0000 110    :
0000 111    : INPUT PARAMETERS:
0000 112    :
0000 113    :     SCALE.rl.v           The power of ten by which the internal
0000 114    :                          representation of the source must be
0000 115    :                          multiplied to scale the same as the
0000 116    :                          internal representation of the dest.
0000 117    :     SRCLEN.rl.v         The number of digits in the source
0000 118    :     SRC.rp.r           The number to be converted
0000 119    :
0000 120    : IMPLICIT INPUTS:
0000 121    :
0000 122    :     All of the trap bits in the PSL are assumed off.
0000 123    :
0000 124    : OUTPUT PARAMETERS:
0000 125    :
0000 126    :     DST.wf.r           The place to store the converted number
0000 127    :
0000 128    : IMPLICIT OUTPUTS:
0000 129    :
0000 130    :     NONE
0000 131    :
0000 132    : FUNCTION VALUE:
0000 133    :
0000 134    :     1 = SUCCESS, 0 = FAILURE
0000 135    :
0000 136    : SIDE EFFECTS:
0000 137    :
0000 138    :     Destroys registers R0 through R9.
0000 139    :
0000 140    :--
0000 141
0000 142
0000 143 OTSS$CVTPF_R9::
0000 144 COB$CVTPF_R9::
0000 145     SOBL2 #40,SP           ; Space for temp string and result
0003 146     CVTPS R7,(R8),#31,8(SP) ; Make a separate sign string
0009 147 :
0009 148 : Make a descriptor for the leading separate string.
0009 149 :
0009 150     PUSHL R3           ; Address = temp string
000B 151     MOVB #DSC$K_CLASS_S,-(SP) ; Class = static
000E 152     MOVB #DSC$K_DTYPE_T,-(SP) ; Data type = ASCII text
0011 153     MOVW #32,-(SP) ; Length = 32 bytes
0014 154 :

```

```

0014 155 : Now call the conversion routine.
0014 156 :
7E 56 CE 0014 157 MNEGL R6,-(SP) ; Scale factor
00 00 DD 0017 158 PUSHL #0 ; Digits in fraction
10 AE 9F 0019 159 PUSHAB 16(SP) ; Address of result area
OC AE 9F 001C 160 PUSHAB 12(SP) ; Address of descriptor
00000000'GF 04 FB 001F 161 CALLS #4,G^OTSSCVT_T_D ; Call the routine
OD 50 E9 0026 162 BLBC R0,Z$ ; Failure, must be overflow
69 08 AE 76 0029 163 CVTDF 8(SP),(R9) ; Store result
07 1D 002D 164 BVS 2$ ; Br if overflowed
50 01 D0 002F 165 MOVL #1,R0 ; Indicate success
5E 30 CO 0032 166 1$: ADDL2 #48,SP ; Delete stack temps
05 0035 167 RSB ; Return
0036 168 :
0036 169 : Come here on overflow to store the reserved operand.
0036 170 :
69 01 OF 78 0036 171 2$: ASHL #15,#1,(R9) ; Store reserved operand
50 D4 003A 172 CLRL R0 ; Indicate failure
F4 11 003C 173 BRB 1$ ; Delete stack temps and return
003E 174 :
003E 175 .END

```


OTSSCVTPF_R9
Symbol table

Convert Packed to Floating

E 2

16-SEP-1984 00:25:39 VAX/VMS Macro V04-00
6-SEP-1984 11:13:17 [LIBRTL.SRC]OTSCVTPF.MAR;1

Page 6
(4)

COBSCVTPF_R9
DSCSK_CLASS_S
DSCSK_DTYPE_T
OTSSCVTPF_R9
OTSSCVT_T_D

00000000 RG 02
= 00000001
= 0000000E
00000000 RG 02
***** X 00

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

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
_OTSSCODE	0000003E (62.)	02 (2.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

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

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.03	00:00:01.80
Command processing	108	00:00:00.33	00:00:02.19
Pass 1	130	00:00:01.07	00:00:05.22
Symbol table sort	0	00:00:00.11	00:00:00.34
Pass 2	43	00:00:00.32	00:00:01.22
Symbol table output	2	00:00:00.01	00:00:00.01
Psect synopsis output	3	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	317	00:00:01.88	00:00:10.79

The working set limit was 1050 pages.
8142 bytes (16 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 134 non-local and 2 local symbols.
175 source lines were read in Pass 1, producing 10 object records in Pass 2.
8 pages of virtual memory were used to define 7 macros.

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

Macro library name	Macros defined
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	4

190 GETS were required to define 4 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:OTSCVTPF/OBJ=OBJ\$:OTSCVTPF MSRC\$:OTSCVTPF/UPDATE=(ENH\$:OTSCVTPF)

