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FFFFFFFFF 000000 RRRRRRRR IIIIII NN NN IIIIII UU UU NN NN DDDDDDDD
FFFFFFFFF 000000 RRRRRRRR IIIIII NN NN IIIIII UU UU NN NN DDDDDDDD
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FF 00 00 RR RR RR II NN NN II UU UU NN NN DD DD
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FF 000000 RR RR IIIIII NN NN IIIIII UUUUUUUUU NN NN DDDDDDDD
FF 000000 RR RR IIIIII NN NN IIIIII UUUUUUUUU NN NN DDDDDDDD

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LL IIIIII SSSSSSSS
LL IIIIII SSSSSSSS
LL II SS
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```
0001 0 %TITLE 'FOR$INIUND - Initialize Fortran underflow handling'  
0002 0 MODULE FOR$INIUND (  
0003 0 IDENT = '1-001' ! File: FORINIUND.B32 Edit: JAW1001  
0004 0 ) =  
0005 1 BEGIN  
0006 1 **  
0007 1  
0008 1 *****  
0009 1 *  
0010 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *  
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0027 1 *  
0028 1 *  
0029 1 *****  
0030 1  
0031 1  
0032 1 FACILITY: Fortran Support Library  
0033 1  
0034 1 ABSTRACT:  
0035 1  
0036 1 This module contains a condition handler for floating underflow  
0037 1 exceptions, an exit handler to report the number of underflows  
0038 1 at image exit, and an initialization procedure which establishes  
0039 1 the condition handler for Fortran main programs.  
0040 1  
0041 1 ENVIRONMENT: Runs at any access mode - AST reentrant  
0042 1  
0043 1 AUTHOR: John A. Wheeler, CREATION DATE: 21-Aug-1981  
0044 1  
0045 1 MODIFIED BY:  
0046 1  
0047 1 1-001 - Original. JAW 21-Aug-1981  
0048 1 --  
0049 1
```

```
51 0050 1 %SBTTL 'Declarations'
52 0051 1
53 0052 1 : SWITCHES:
54 0053 1 :
55 0054 1
56 0055 1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
57 0056 1
58 0057 1 :
59 0058 1 : LINKAGES:
60 0059 1 :
61 0060 1 : NONE
62 0061 1 :
63 0062 1 : TABLE OF CONTENTS:
64 0063 1 :
65 0064 1
66 0065 1 FORWARD ROUTINE
67 0066 1 FOR$INIT_UNDER;
68 0067 1
69 0068 1 :
70 0069 1 : INCLUDE FILES:
71 0070 1 :
72 0071 1
73 0072 1 REQUIRE 'RTLIN:RTLPSECT';
74 0167 1
75 0168 1 :
76 0169 1 : MACROS:
77 0170 1 :
78 0171 1 : NONE
79 0172 1 :
80 0173 1 : EQUATED SYMBOLS:
81 0174 1 :
82 0175 1 : NONE
83 0176 1 :
84 0177 1 : FIELDS:
85 0178 1 :
86 0179 1 : NONE
87 0180 1 :
88 0181 1 : PSECTS:
89 0182 1 :
90 0183 1
91 0184 1 PSECT
92 0185 1 PLIT = LIB$INITIALIZD ( READ, NOWRITE, NOEXECUTE, NOSHARE, NOPIC,
93 0186 1 CONCATENATE, GLOBAL, ALIGN (2), ADDRESSING_MODE (GENERAL) );
94 0187 1
95 0188 1 !+
96 0189 1 !+ Make LIB$INITIALIZD psect contribution so LIB$INITIALIZE procedure
97 0190 1 !+ will call FOR$INIT_UNDER, which will establish FOR$UNDERFLOW HANDLER
98 0191 1 !+ as default handler and make coroutine call back. LIB$INITIALIZD is
99 0192 1 !+ used so that FOR$INIT_UNDER will be called before COM_STARTUP, whose
100 0193 1 !+ address is in LIB$INITIALIZE psect.
101 0194 1 !-
102 0195 1
103 0196 1 BIND
104 0197 1 VECT = UPLIT (FOR$INIT_UNDER);
105 0198 1
106 0199 1 !+
107 0200 1 !+ Now declare usual PSECTS
```

FORSINIUND  
1-001

FORSINIUND - Initialize Fortran underflow handl  
Declarations

E 1  
16-Sep-1984 00:26:58  
14-Sep-1984 12:32:01

VAX-11 Bliss-32 V4.0-742  
[FORRTL.SRC]FORINIUND.B32;1

Page 3  
(2)

```

: 108      0201  1  !-
: 109      0202  1
: 110      0203  1  DECLARE_PSECTS (FOR);           ! Declare PSECTS for FOR$ facility
: 111      0204  1
: 112      0205  1  !
: 113      0206  1  ! OWN STORAGE:
: 114      0207  1  !
: 115      0208  1  !     NONE
: 116      0209  1  !
: 117      0210  1  ! EXTERNAL REFERENCES:
: 118      0211  1  !
: 119      0212  1  !
: 120      0213  1  ! EXTERNAL ROUTINE
: 121      0214  1  !     LIB$INITIALIZE,
: 122      0215  1  !     FOR$UNDERFLOW_HANDLER;
: 123      0216  1
: 124      0217  1  !
```



```

:                                     .TITLE FOR$INIUND FOR$INIUND - Initialize Fortran unde
:                                     rflow handl
:                                     .IDENT \1-001\
:                                     .PSECT LIB$INITIALIZD_,NOWRT,NOEXE,  GBL,2
:                                     00000000' 00000 P.AAA: .ADDRESS FOR$INIT_UNDER
:                                     VECT=
:                                     .EXTRN LIB$INITIALIZE, FOR$UNDERFLOW_HANDLER
:                                     .PSECT _FOR$CODE,NOWRT,  SHR, PIC,2
:                                     .ENTRY FOR$INIT_UNDER, Save nothing
:                                     MOVAL 1$, (FP)
:                                     CALLS #0, @CO_ROUT_INIT
:                                     RET
:                                     .WORD Save nothing
:                                     CLRL -(SP)
:                                     PUSHL SP
:                                     MOVQ 4(AP), -(SP)
:                                     CALLS #3, FOR$UNDERFLOW_HANDLER
:                                     RET
:                                     : 0219
:                                     : 0263
:                                     : 0272
:                                     : 0274
:                                     : 0263
:
:                                     04 6D 0006 CF DE 00002
:                                     00 FB 00007
:                                     04 0000B
:                                     0000 0000C 1$:
:                                     7E D4 0000E
:                                     5E DD 00010
:                                     AC 7D 00012
:                                     03 FB 00016
:                                     04 0001D
:
:                                     00000000G 7E 04 00

```

; Routine Size: 30 bytes, Routine Base: \_FOR\$CODE + 0000

```

: 183 0275 1
: 184 0276 1 END
: 185 0277 0 ELUDOM
:                                     ! End of module FOR$INIUND

```

PSECT SUMMARY

Name	Bytes	Attributes
LIB\$INITIALIZD_	4	NOVEC,NOWRT, RD ,NOEXE,NOSHR, GBL, REL, CON,NOPIC,ALIGN(2)
_FOR\$CODE	30	NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:FORINIUND/OBJ=OBJ\$:FORINIUND MSRC\$:FORINIUND/UPDATE=(ENH\$:FORINIUND)

; Size. 30 code + 4 data bytes

FOR\$INIUND  
1-001

FOR\$INIUND - Initialize Fortran underflow handl<sup>H 1</sup>  
FOR\$INIT\_UNDER - Initialize underflow handling

16-Sep-1984 00:26:58

VAX-11 Bliss-32 V4.0-742

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F  
1

: Run Time: 00:02.0  
: Elapsed Time: 00:07.4  
: Lines/CPU Min: 8436  
: Lexemes/CPU-Min: 18761  
: Memory Used: 17 pages  
: Compilation Complete



FORINTLND LIS

FORMSG LIS

FORIOBEG LIS

FORTOEND LIS

FORLEX LIS

FORMLTAB LIS

FORINQUIR LIS

FORIOELEM LIS

FORIDATE LIS

FORLIB LIS