


```

FFFFFFFFF  000000  RRRRRRRR  RRRRRRRR  AAAAAA  BBBB8888
FFFFFFFFF  000000  RRRRRRRR  RRRRRRRR  AAAAAA  BBBB8888
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FFFFFFFFF  00      00  RRRRRRRR  RRRRRRRR  AA      AA  BBBB8888
FFFFFFFFF  00      00  RRRRRRRR  RRRRRRRR  AA      AA  BBBB8888
FF         00      00  RR  RR    RR  RR    AAAA888888  BB      BB
FF         00      00  RR  RR    RR  RR    AAAA888888  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         00      00  RR      RR  RR      RR  AA      AA  BB      BB
FF         000000  RR      RR  RR      RR  AA      AA  BBBB8888
FF         000000  RR      RR  RR      RR  AA      AA  BBBB8888

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```

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

```

```

1 0001 0 %TITLE 'FOR$RAB - Return pointer to RAB of unit'
2 0002 0 MODULE FOR$RAB (
3 0003 0 IDENT = '1-002' ! File: FORRAB.B32 Edit: SBL1002
4 0004 0 ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1 *****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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19 0019 1 *
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24 0024 1 * DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
25 0025 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
26 0026 1 *
27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1
31 0031 1 ++
32 0032 1 FACILITY: FORTRAN Language Support
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 This module contains a procedure which returns a pointer to
37 0037 1 the RAB of a unit.
38 0038 1
39 0039 1 ENVIRONMENT: User mode - ASI reentrant
40 0040 1
41 0041 1 AUTHOR: Steven B. Lionel, CREATION DATE: 13-Jan-1982
42 0042 1
43 0043 1 MODIFIED BY:
44 0044 1
45 0045 1 1-001 - Original. SBL 13-Jan-1982
46 0046 1 1-002 - Use prologue file. SBL 1-Nov-1982
47 0047 1 --
48 0048 1

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```
50 0049 1 %SBTTL 'Declarations'  
51 0050 1  
52 0051 1 : PROLOGUE FILE:  
53 0052 1 :  
54 0053 1  
55 0054 1 REQUIRE 'RTLIN:FORPROLOG';           ! FOR$ definitions  
56 0120 1  
57 0121 1 :  
58 0122 1 : TABLE OF CONTENTS:  
59 0123 1 :  
60 0124 1  
61 0125 1 FORWARD ROUTINE  
62 0126 1 FOR$RAB;                           ! Return pointer to RAB  
63 0127 1  
64 0128 1 :  
65 0129 1 : MACROS:  
66 0130 1 :  
67 0131 1 :     NONE  
68 0132 1 :  
69 0133 1 : EQUATED SYMBOLS:  
70 0134 1 :  
71 0135 1 :     NONE  
72 0136 1 :  
73 0137 1 : FIELDS:  
74 0138 1 :  
75 0139 1 :     NONE  
76 0140 1 :  
77 0141 1 : OWN STORAGE:  
78 0142 1 :  
79 0143 1 :     NONE  
80 0144 1 :  
81 0145 1 : EXTERNAL REFERENCES:  
82 0146 1 :  
83 0147 1 :  
84 0148 1 EXTERNAL ROUTINE  
85 0149 1 FOR$$CB_FETCH: CALL CCB NOVALUE,     ! Get CCB of unit  
86 0150 1 FOR$$ERR_OPECLO: NOVALUE;           ! Error handler
```

```

88 0151 1 %SBTTL 'FOR$RAB - Return pointer to RAB of unit'
89 0152 1 GLOBAL ROUTINE FOR$RAB (
90 0153 1     LUN: REF VECTOR [, LONG]           ! Unit to return RAB of
91 0154 1     ) =
92 0155 1
93 0156 1  !+
94 0157 1  !+ FUNCTIONAL DESCRIPTION:
95 0158 1
96 0159 1     This procedure returns as its function value a pointer to
97 0160 1     the RAB of a FORTRAN LUN.
98 0161 1
99 0162 1  !+ CALLING SEQUENCE:
100 0163 1
101 0164 1     RAB-pointer.wa.v = FOR$RAB (LUN.rl.r)
102 0165 1
103 0166 1  !+ FORMAL PARAMETERS:
104 0167 1
105 0168 1     LUN - The logical unit number for which the address of the
106 0169 1     RAB is to be returned. Passed by reference.
107 0170 1
108 0171 1  !+ IMPLICIT INPUTS:
109 0172 1
110 0173 1     NONE
111 0174 1
112 0175 1  !+ IMPLICIT OUTPUTS:
113 0176 1
114 0177 1     NONE
115 0178 1
116 0179 1  !+ ROUTINE VALUE:
117 0180 1
118 0181 1     The address of the RAB for the unit, or zero if the unit is not
119 0182 1     a FORTRAN unit.
120 0183 1
121 0184 1  !+ SIDE EFFECTS:
122 0185 1
123 0186 1     NONE
124 0187 1
125 0188 1  !+
126 0189 1
127 0190 2     BEGIN
128 0191 2
129 0192 2     LOCAL
130 0193 2         UNWIND_ACTION: VOLATILE;
131 0194 2
132 0195 2     GLOBAL REGISTER
133 0196 2         CCB = 11: REF $FOR$CCB_DECL;
134 0197 2
135 0198 2     !+
136 0199 2     !+ Enable error handler. Specify no operation on an unwind.
137 0200 2     !-
138 0201 2
139 0202 2     ENABLE FOR$$ERR_OPECLO (UNWIND ACTION);
140 0203 2     UNWIND_ACTION = FOR$K_UNWINDNOP;
141 0204 2
142 0205 2     !+
143 0206 2     !+ Call FOR$$CB_FETCH to get the CCB of the LUN. It will signal
144 0207 2     ! an error if the LUN is invalid, and will place a zero in CCB if

```

FOR\$RAB
1-002

FOR\$RAB - Return pointer to RAB of unit
FOR\$RAB - Return pointer to RAB of unit

H 15
16-Sep-1984 00:41:58
14-Sep-1984 12:32:22

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

Page 4
(3)

```

: 145      0208 2      ! the unit is not owned by FORTRAN.
: 146      0209 ~~~~~
: 147      0210 ~~~~~
: 148      0211 ~~~~~
: 149      0212 ~~~~~
: 150      0213 ~~~~~
: 151      0214 ~~~~~
: 152      0215 1      END;

```

```

! RAB address is CCB address
! End of routine FOR$RAB

```

```

.TITLE FOR$RAB FOR$RAB - Return pointer to RAB of unit
.IDENT \1-002\

```

```

.EXTRN FOR$$CB_FETCH, FOR$$ERR_OPECLO

```

```

.PSECT _FOR$CODE, NOWRT, SHR, PIC, 2

```

```

.ENTRY FOR$RAB, Save R11
CLRL UNWIND_ACTION
MOVAL 1$, (FP)
MOVL #1, UNWIND_ACTION
PUSHL @LUN
CALLS #1, FOR$$CB_FETCH
MOVL CCB, R0
RET

```

```

.WORD Save nothing
MOVL 8(AP), R0
MOVL 4(R0), R0
PUSHAB UNWIND_ACTION
PUSHL #1
PUSHL SP
MOVQ 4(AP), -(SP)
CALLS #3, FOR$$ERR_OPECLO
RET

```

```

0800 00000
7E D4 00002
6D 0012 CF DE 00004
6E 01 D0 00009
00000000G 00 04 BC DD 0000C
50 01 FB 0000F
5B D0 00016
04 00019
0000 0001A 1$:
50 08 AC D0 0001C
50 04 A0 D0 00020
FC A0 9F 00024
01 DD 00027
5E DD 00029
00000000G 7E 04 AC 7D 0002B
00 03 FB 0002F
04 00036

```

```

: 0152
: 0190
: 0203
: 0211
: 0213
: 0215
: 0190
:
:
:

```

```

: Routine Size: 55 bytes, Routine Base: _FOR$CODE + 0000

```

```

: 153      0216 1 !<BLF/PAGE>

```

FOR\$RAB
1-002

FOR\$RAB - Return pointer to RAB of unit
FOR\$RAB - Return pointer to RAB of unit

I 15
16-Sep-1984 00:41:58 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:32:22 [FORRTL.SRC]FORRAB.B32;1

: 155 0217 1 END
: 156 0218 1
: 157 0219 0 ELUDOM

! End of module FOR\$RAB

PSECT SUMMARY

Name	Bytes	Attributes
_FOR\$CODE	55	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	0	0	581	00:01.1
_\$255\$DUA28:[FORRTL.OBJ]FORLIB.L32;1	711	179	25	52	00:00.6
_\$255\$DUA28:[FORRTL.OBJ]RTLLIB.L32;1	36	0	0	8	00:00.1

COMMAND QUALIFIERS

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

: Size: 55 code + 0 data bytes
 : Run Time: 00:04.4
 : Elapsed Time: 00:13.8
 : Lines/CPU Min: 2979
 : Lexemes/CPU-Min: 4136
 : Memory Used: 63 pages
 : Compilation Complete

The image displays a grid of approximately 12 columns and 10 rows of small, monospaced text screens. Each screen appears to be a terminal window showing the output of a specific program. The text is mostly illegible due to its small size and the low resolution of the scan. However, several program names are clearly visible in larger font sizes within the grid:

- FORRAB LIS (top right)
- FORREADDF LIS (middle right)
- FOROPNKEY LIS (middle right)
- FORPAUSE LIS (middle right)
- FORRANDOM LIS (middle right)
- FOROPEN LIS (middle left)
- FOROPENDE LIS (middle left)
- FORREADDO LIS (bottom right)

The overall appearance is that of a technical manual or a collection of program outputs for a VAX/VMS system.