


```

FFFFFFFFF 000000 RRRRRRRR PPPPPPPP AAAAAA UU UU SSSSSSSS EEEEEEEEE
FFFFFFFFF 000000 RRRRRRRR PPPPPPPP AAAAAA UU UU SSSSSSSS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS SSSSSSSS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS SSSSSSSS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS SSSSSSSS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS SSSSSSSS EEEEEEEEE
FFFFFFFFF 00 00 RR RR RR RR RR RR AA AA UU UU SSSSSSSS EEEEEEEEE
FFFFFFFFF 00 00 RR RR RR RR RR RR AA AA UU UU SSSSSSSS EEEEEEEEE
FF 00 00 RR RR PP PP AAAAAAAAAA UU UU SS EEEEEEEEE
FF 00 00 RR RR PP PP AAAAAAAAAA UU UU SS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS EEEEEEEEE
FF 00 00 RR RR PP PP AA AA UU UU SS EEEEEEEEE
FF 000000 PP PP AA AA UUUUUUUUU SSSSSSSS EEEEEEEEE
FF 000000 PP PP AA AA UUUUUUUUU SSSSSSSS EEEEEEEEE

```

```

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
LLLLLLLLL IIIIII SSSSSSSS
LLLLLLLLL IIIIII SSSSSSSS

```

```

1 0001 0 MODULE FOR$PAUSE ( ! FORTRAN PAUSE statement
2 0002 0 IDENT = '1-003' ! File: FOR$PAUSE.B32 Edit DGP1003
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1
7 0007 1 *****
8 0008 1 *
9 0009 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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26 0026 1 *
27 0027 1 *
28 0028 1 *****
29 0029 1
30 0030 1
31 0031 1 **
32 0032 1 FACILITY: FORTRAN Support Library
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 FORTRAN PAUSE statement: Output optional string and hibernate
37 0037 1
38 0038 1 ENVIRONMENT: User Mode - AST re-entrant
39 0039 1
40 0040 1 AUTHOR: Thomas N. Hastings, CREATION DATE: 8-Aug-1977
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 Thomas N. Hastings, 8-Aug-1977: VERSION 0
45 0045 1 01 - original
46 0046 1 0-4 - Output FORTRAN PAUSE, if no arg. TNH 13-Dec-77.
47 0047 1 0-05 - Change to STARLET library. DGP 20-Apr-78
48 0048 1 0-06 - Change REQUIRE files for VAX system build. DGP 28-Apr-78
49 0049 1 0-07 - Change STARLET to RTLSTARLE to avoid conflicts. DGP 1-May-78
50 0050 1 0-08 - Use SYSSCLI to pause. TNH 7-Jun-78
51 0051 1 0-09 - Make PIC. TNH 30-June-78
52 0052 1 0-10 - Change file name to FOR$PAUSE.B32, and change the names of
53 0053 1 the REQUIRE file similarly. JBS 14-NOV-78
54 0054 1 1-001 - Update version number and copyright notice. JBS 16-NOV-78
55 0055 1 1-002 - Change REQUIRE file name from FORMAC to OTSMAC. JBS 06-DEC-78
56 0056 1 1-003 - Move ACTUALCOUNT into routine body and initialize class and d_type
57 0057 1 in the default descriptor. DGP 28-Oct-1981

```

FOR\$PAUSE
1-003

L 14
16-Sep-1984 00:41:26
14-Sep-1984 12:32:19

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

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: 58

0058 1 !--

```
60 0059 1 |
61 0060 1 | TABLE OF CONTENTS:
62 0061 1 |
63 0062 1 |
64 0063 1 | FORWARD ROUTINE
65 0064 1 |     FOR$PAUSE;           ! PAUSE statement
66 0065 1 |
67 0066 1 |
68 0067 1 | INCLUDE FILES:
69 0068 1 |
70 0069 1 | REQUIRE 'RTLIN:OTSMAC';   ! macros
71 0263 1 | REQUIRE 'RTLIN:RTLPSECT'; ! Define DECLARE_PSECTS macro
72 0358 1 | LIBRARY 'RTLSTARLE';     ! STARLET library for macros and symbols
73 0359 1 |
74 0360 1 | MACROS:
75 0361 1 |
76 0362 1 |
77 0363 1 |
78 0364 1 | EQUATED SYMBOLS:
79 0365 1 |
80 0366 1 |
81 0367 1 |
82 0368 1 | PSECT DECLARATIONS:
83 0369 1 |
84 0370 1 |
85 0371 1 |     DECLARE_PSECTS (FOR); ! declare PSECTS for FOR$ facility
86 0372 1 |
87 0373 1 |
88 0374 1 | OWN STORAGE:
89 0375 1 |
90 0376 1 |
91 0377 1 |
92 0378 1 | EXTERNAL REFERENCES:
93 0379 1 |
94 0380 1 |
95 0381 1 | EXTERNAL ROUTINE
96 0382 1 |     SY$CLI: ADDRESSING_MODE(GENERAL), ! Call command language interpreter (CLI)
97 0383 1 |     LIB$PUT_OUTPUT: NO$VALUE ADDRESSING_MODE(GENERAL); ! Output on device $OUTPUT
```

```

99      0384 1 GLOBAL ROUTINE FOR$PAUSE (      ! FORTRAN PAUSE statement
100     0385 1      MESSAGE)                ! Adr. of optional string descriptor to output
101     0386 1      =                        ! Value returned is $$SUSPND completion code
102     0387 1      ++
103     0388 1      FUNCTIONAL DESCRIPTION:
104     0389 1
105     0390 1          FORTRAN PAUSE outputs an optional string on device $OUTPUT
106     0391 1          and then calls CLI to pause which puts users back at command level.
107     0392 1          If no parameter is given, 'FORTRAN PAUSE' is output.
108     0393 1
109     0394 1      FORMAL PARAMETERS:
110     0395 1
111     0396 1          MESSAGE.rt.dx        ! Adr. of optional string descriptor to output
112     0397 1
113     0398 1      IMPLICIT INPUTS:
114     0399 1
115     0400 1          Logical device assignment for $OUTPUT (see LIB$PUT_OUTPUT)
116     0401 1
117     0402 1      IMPLICIT OUTPUTS:
118     0403 1
119     0404 1          NONE
120     0405 1
121     0406 1      COMPLETION CODES:
122     0407 1
123     0408 1          Operating system completion status on SYS$CLI directive
124     0409 1
125     0410 1      SIDE EFFECTS:
126     0411 1
127     0412 1          Outputs message on device $OUTPUT and calls SYS$CLI pause function.
128     0413 1
129     0414 1      --
130     0415 1
131     0416 2      BEGIN
132     0417 2
133     0418 2      BUILTIN
134     0419 2          ACTUALCOUNT;          ! Return the number of actual parameters
135     0420 2      LOCAL T,
136     0421 2          DESCR: DSC$DESCRIPTOR; ! descriptor (needed to be PIC)
137     0422 2
138     0423 2      IF ACTUALCOUNT() GEQ 1
139     0424 2      THEN
140     0425 2          LIB$PUT_OUTPUT (.MESSAGE)
141     0426 2      ELSE
142     0427 3          BEGIN
143     0428 3              DESCR[DSC$B_CLASS] = DSC$K_CLASS_S;
144     0429 3              DESCR[DSC$B_DTYPE] = DSC$K_DTYPE_T;
145     0430 3              DESCR[DSC$W_LENGTH] = 13;
146     0431 3              DESCR[DSC$A_POINTER] = UPLIT ('FORTRAN PAUSE');
147     0432 3              LIB$PUT_OUTPUT (DESCR);
148     0433 2          END;
149     0434 2
150     0435 2      T = CLISK_CLISERV + CLISK_PAUSE*256;
151     0436 2      RETURN SYS$CLI (T);;
152     0437 1      END;                      ! End of routine FOR$PAUSE

```

.TITLE FOR\$PAUSE

```

.IDENT \1-003\
.PSECT _FOR$CODE, NOWRT, SHR, PIC, 2
00 00 45 53 55 41 50 20 4E 41 52 54 52 4F 46 00000 P.AAA: .ASCII \FORTRAN ^AUSE\<0><0><0>
00 0000F
.EXTRN SYSS$CLI, LIB$PUT_OUTPUT
          0000 00000 .ENTRY FOR$PAUSE, Save nothing
          5E 0C C2 00002  SUBL2 #12, SP
          6C 95 00005  TSTB (AP)
          05 13 00007  BEQL 1$
          04 AC DD 00009  PUSHL MESSAGE
          10 11 0000C  BRB 2$
          04 AE 010E000D 8F D0 0000E 1$:  MOVL #17694733, DESCR
          08 AE D7 AF 9E 00016  MOVAB P.AAA, DESCR+4
          04 AE 9F 0001B  PUSHAB DESCR
00000000G 00 01 FB 0001E 2$:  CALLS #1, LIB$PUT_OUTPUT
          6E 0105 8F 3C 00025  MOVZWL #261, T
          00000000G 00 5E 5D 0002A  PUSHL SP
          01 FB 0002C  CALLS #1, SYSS$CLI
          04 00033  RET
: 0384
:
: 0423
:
: 0425
:
: 0430
: 0431
: 0432
:
: 0435
: 0436
: 0437

```

; Routine Size: 52 bytes, Routine Base: _FOR\$CODE + 0010

```

: 153          0438 1 END          ! End of module FOR$PAUSE
: 154          0439 0 FLUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
_FOR\$CODE	68	NOVEC, NOWRT, RD, EXE, SHR, LCL, REL, CON, PIC, ALIGN(2)

Library Statistics

File	Symbols		Pages Mapped	Processing Time
	Total	Loaded Percent		
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	8 0	581	00:01.0

FOR\$PAUSE
1-003

C 15
16-Sep-1984 00:41:26
14-Sep-1984 12:32:19

YAX-11 Bliss-32 V4.0-742
[FORRTL.SRC]FORPAUSE.B32;1

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FC
1-

COMMAND QUALIFIERS

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

: Size: 52 code + 16 data bytes
: Run Time: 00:04.6
: Elapsed Time: 00:13.8
: Lines/CPU Min: 5763
: Lexemes/CPU-Min: 21676
: Memory Used: 50 pages
: Compilation Complete

0182 AH-BT13A-SE
VAX/VMS V4.0

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The image displays a grid of 100 terminal windows, arranged in 10 rows and 10 columns. Each window shows the help text for a specific system utility. The utilities are organized alphabetically by name. The visible titles for the utilities are:

- FORAB LIS
- FORADD LIS
- FOROPEN LIS
- FOROPENDE LIS
- FOROPKEY LIS
- FORPAUSE LIS
- FORRANDOM LIS
- FORREAD LIS
- FORREADO LIS

Each window contains detailed instructions, including command-line options (e.g., /HELP, /NOHELP, /NOLOG, /NOLOGO, /NOLOGOFF, /NOLOGON, /NOLOGOFF, /NOLOGON, /NOLOGOFF, /NOLOGON), usage examples, and error messages. The text is rendered in a monospaced font typical of early computer terminals.