



```

PPPPPPP      AAAAAA      SSSSSSSS      FFFFFFFF      IIIIII      NN      NN      DDDDDDDD      222222
PPPPPPP      AAAAAA      SSSSSSSS      FFFFFFFF      IIIIII      NN      NN      DDDDDDDD      222222
PP      PP      AA      AA      SS      FF      II      NN      NN      DD      DD      22      22
PP      PP      AA      AA      SS      FF      II      NN      NN      DD      DD      22      22
PP      PP      AA      AA      SS      FF      II      NNNN      NN      DD      DD      22      22
PP      PP      AA      AA      SS      FF      II      NNNN      NN      DD      DD      22      22
PPPPPPP      AA      AA      SSSSSS      FFFFFFFF      II      NN      NN      DD      DD      22      22
PPPPPPP      AA      AA      SSSSSS      FFFFFFFF      II      NN      NN      DD      DD      22      22
PP      AAAAAAAAAA      SS      FF      II      NN      NN      DD      DD      22      22
PP      AAAAAAAAAA      SS      FF      II      NN      NN      DD      DD      22      22
PP      AA      AA      SS      FF      II      NN      NN      DD      DD      22      22
PP      AA      AA      SS      FF      II      NN      NN      DD      DD      22      22
PP      AA      AA      SSSSSSSS      FF      IIIIII      NN      NN      DDDDDDDD      2222222222
PP      AA      AA      SSSSSSSS      FF      IIIIII      NN      NN      DDDDDDDD      2222222222

```

```

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 MODULE PASSFIND2 ( %TITLE 'FIND procedure'
2 0002 0 IDENT = '1-002' ! File: PASFIND2.B32 Edit: SBL1002
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1 ++
30 0030 1
31 0031 1 FACILITY: Pascal Language Support
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module contains PASSFIND2, which implements the
36 0036 1 VAX-11 Pascal FIND procedure.
37 0037 1
38 0038 1 ENVIRONMENT: User mode - AST reentrant
39 0039 1
40 0040 1 AUTHOR: Steven B. Lionel, CREATION DATE: 16-December-1981
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. SBL 16-December-1981
45 0045 1 1-002 - Store record length in length word for FILE OF VARYING.
46 0046 1 SBL 20-Oct-1982
47 0047 1 --
48 0048 1

```

```
50 0049 1 %SBTTL 'Declarations'  
51 0050 1  
52 0051 1 : PROLOGUE DEFINITIONS:  
53 0052 1 :  
54 0053 1  
55 0054 1 REQUIRE 'RTLIN:PASPROLOG';           ! Externals, linkages, PSECTs, structures  
56 0118 1  
57 0119 1  
58 0120 1 : TABLE OF CONTENTS:  
59 0121 1 :  
60 0122 1  
61 0123 1 FORWARD ROUTINE  
62 0124 1   PASS$FIND2: NOVALUE;           ! Do a FIND  
63 0125 1  
64 0126 1  
65 0127 1 : MACROS:  
66 0128 1  
67 0129 1   NONE  
68 0130 1  
69 0131 1 : EQUATED SYMBOLS:  
70 0132 1  
71 0133 1   NONE  
72 0134 1  
73 0135 1 : FIELDS:  
74 0136 1  
75 0137 1   NONE  
76 0138 1  
77 0139 1 : OWN STORAGE:  
78 0140 1  
79 0141 1   NONE
```

```

81 0142 1 %SBTTL 'PASSFIND2 - FIND procedure'
82 0143 1 GLOBAL ROUTINE PASSFIND2 (           : Do a FIND
83 0144 1     PFV: REF $PASSPFV FILE_VARIABLE, : File variable
84 0145 1     COMPONENT : REF VECTOR-[ , LONG], : Component number
85 0146 1     ERROR      : Unwind address if error
86 0147 1     ): NOVALUE =
87 0148 1
88 0149 1 ++
89 0150 1 FUNCTIONAL DESCRIPTION:
90 0151 1
91 0152 1     PASSFIND2 implements the VAX-11 Pascal FIND procedure. It
92 0153 1     finds the specified file component and places its contents in
93 0154 1     the file buffer.
94 0155 1
95 0156 1 CALLING SEQUENCE:
96 0157 1
97 0158 1     CALL PASSFIND2 (PFV.mr.r, COMPONENT.rlu.r [ , ERROR.j.r])
98 0159 1
99 0160 1 FORMAL PARAMETERS:
100 0161 1
101 0162 1     PFV           - The Pascal File Variable (PFV) passed by reference.
102 0163 1                The structure of the PFV is defined in PASPFV.REQ.
103 0164 1
104 0165 1     COMPONENT    - The number of the file component to read.
105 0166 1
106 0167 1     ERROR        - Optional. If specified, the address to unwind to
107 0168 1                if an error occurs.
108 0169 1
109 0170 1 IMPLICIT INPUTS:
110 0171 1
111 0172 1     NONE
112 0173 1
113 0174 1 IMPLICIT OUTPUTS:
114 0175 1
115 0176 1     NONE
116 0177 1
117 0178 1 ROUTINE VALUE:
118 0179 1
119 0180 1     NONE
120 0181 1
121 0182 1 SIDE EFFECTS:
122 0183 1
123 0184 1     Places file in Inspection mode
124 0185 1
125 0186 1 SIGNALLED ERRORS:
126 0187 1
127 0188 1     FILNOTOPE - File not open
128 0189 1     FILNOTDIR - File not opened for direct access
129 0190 1     FAIGETLOC - Failed to GET locked record
130 0191 1     ERRDURFIN - Error during FIND or FINDK
131 0192 1
132 0193 1 --
133 0194 1
134 0195 1 BEGIN
135 0196 2
136 0197 2
137 0198 2 LOCAL

```

```

138 0199 2      FCB: REF $PASSFCB_CONTROL_BLOCK,      : File control block
139 0200 2      GET_STATUS,                          ! Status from $GET
140 0201 2      PFV_ADDR: VOLATILE,                  : Enable argument
141 0202 2      UNWIND_ACT: VOLATILE,                 : Unwind action
142 0203 2      ERROR_ADDR: VOLATILE;                : Enable argument
143 0204 2
144 0205 2      BIND
145 0206 2      RAB = FCB: REF BLOCK [, BYTE];        ! RMS RAB
146 0207 2
147 0208 2      BUILTIN
148 0209 2      ACTUALCOUNT;
149 0210 2
150 0211 2      ENABLE
151 0212 2      PASS$IO_HANDLER (PFV_ADDR, UNWIND_ACT, ERROR_ADDR);
152 0213 2
153 0214 2      IF ACTUALCOUNT () GEQU 3
154 0215 2      THEN
155 0216 2      ERROR_ADDR = .ERROR;                  ! Set unwind address
156 0217 2
157 0218 2      !+
158 0219 2      ! Set PFV address enable argument.
159 0220 2      !-
160 0221 2
161 0222 2      PFV_ADDR = PFV [PFV$R_PFV];
162 0223 2
163 0224 2      !+
164 0225 2      ! Validate and lock PFV
165 0226 2      !-
166 0227 2
167 0228 2      PASS$VALIDATE_PFV (PFV [PFV$R_PFV]; FCB);
168 0229 2
169 0230 2      !+
170 0231 2      ! Set unwind action to unlock file.
171 0232 2      !-
172 0233 2
173 0234 2      UNWIND_ACT = PASS$K_UNWIND_UNLOCK;
174 0235 2
175 0236 2      !+
176 0237 2      ! Open file if it should be implicitly opened
177 0238 2      !-
178 0239 2
179 0240 2      IF NOT .PFV [PFV$V_VALID]
180 0241 2      THEN
181 0242 2      PASS$OPEN_IMPLICIT (PFV [PFV$R_PFV], FCB [FCB$R_FCB]; FCB);
182 0243 2
183 0244 2      !+
184 0245 2      ! Verify that the file is open.
185 0246 2      !-
186 0247 2
187 0248 2      IF NOT .PFV [PFV$V_OPEN]
188 0249 2      THEN
189 0250 2      $PASSIO_ERROR (PASS_FILNOTOPE,0);
190 0251 2
191 0252 2      !+
192 0253 2      ! Verify that the file is opened for direct access
193 0254 2      !-
194 0255 2

```

```

195 0256 2 IF NOT .FCB [FCBSV_DIRECT]
196 0257 2 THEN
197 0258 2 SPASSIO_ERROR (PASS_FILNOTDIR,0);
198 0259 2
199 0260 2 !+
200 0261 2 ! Assume that file buffer will be defined
201 0262 2 !-
202 0263 2
203 0264 2 PFV [PFVSV_DFB] = 1;
204 0265 2
205 0266 2 !+
206 0267 2 ! Get the record.
207 0268 2 !-
208 0269 2
209 0270 2 RAB [RABSB_RAC] = RABSC_KEY; ! Set "keyed" (direct) access
210 0271 2 RAB [RABSV_NLK] = 0; ! Turn off "no lock" bit
211 0272 2 FCB [FCBSL_COMPONENT] = .COMPONENT [0]; ! Set component number
212 0273 2 GET_STATUS = SPASSRMS_OP ($GET (RAB = RAB [0,0,0,0]));
213 0274 2
214 0275 2 !+
215 0276 2 ! If varying, put component length in first word of user buffer.
216 0277 2 ! Do this before we check for errors!
217 0278 2 !-
218 0279 2
219 0280 2 IF .FCB [FCBSV_VARYING]
220 0281 2 THEN
221 0282 2 (.PFV [PFVSA_BUFFER])<0,16,0> = .RAB [RAB$W_RSZ];
222 0283 2
223 0284 2 !+
224 0285 2 ! Check for errors.
225 0286 2 !-
226 0287 2
227 0288 2 IF NOT .GET_STATUS
228 0289 2 THEN
229 0290 2 BEGIN
230 0291 2 !+
231 0292 2 ! $GET failed. Determine if the error was "component not found"
232 0293 2 ! or another error. No error is signalled if component not found,
233 0294 2 ! but buffer is undefined.
234 0295 2 !-
235 0296 2
236 0297 2 PFV [PFVSV_DFB] = 0; ! Undefine file buffer
237 0298 2 IF .GET_STATUS EQL RMSS_RLK
238 0299 2 THEN
239 0300 2 SPASSIO_ERROR (PASS_FAIGETLOC) ! Failed to GET locked record
240 0301 2 ELSE IF (.GET_STATUS NEQU RMSS_EOF) AND (.GET_STATUS NEQU RMSS_RNF)
241 0302 2 THEN
242 0303 2 SPASSIO_ERROR (PASS_ERRDURFIN); ! Error during FIND
243 0304 2
244 0305 2 END;
245 0306 2
246 0307 2 !+
247 0308 2 ! Set inspection mode
248 0309 2 ! Indicate not at EOF
249 0310 2 ! Cancel previous LOCATE
250 0311 2 ! Indicate successful completion
251 0312 2 !-

```

```

: 252 0313 2
: 253 0314 2 FCB [FCB$V_INSPECTION] = 1;
: 254 0315 2 FCB [FCB$V_GENERATION] = 0;
: 255 0316 2 FCB [FCB$V_EOF] = 0;
: 256 0317 2 FCB [FCB$V_LOCATE] = 0;
: 257 0318 2 FCB [FCB$L_STATUS] = 0;
: 258 0319 2 PFV [PFV$V_LOCK] = 0;
: 259 0320 2
: 260 0321 2 RETURN;
: 261 0322 2
: 262 0323 1 END;

```

! End of routine PASSFIND2

```

.TITLE PASSFIND2 FIND procedure
.IDENT \1-002\

```

```

.EXTRN PASSFIND2, PASS$IO_HANDLER
.EXTRN PASS$VALIDATE PFV
.EXTRN PASS$OPEN IMPLICIT
.EXTRN PASS$SIGNAL, PASSK_FILNOTOPE
.EXTRN PASSK_FILNOTDIR
.EXTRN SY$GET, PASSK_FAIGETLOC
.EXTRN PASSK_ERRDURFIN

```

```

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

```

```

: 0143 .ENTRY PASSFIND2, Save R2,R3,R4,R5,R6,R7
: 0196 MOVAB PASS$SIGNAL, R5
: 0214 SUBL2 #8, SP
: 0222 CLRL ERROR_ADDR
: 0228 CLRQ UNWIND_ACT
: 0234 MOVAL 12$, (FP)
: 0240 CMPB (AP), #3
: 0242 BLSSU 1$
: 0248 MOVL ERROR, ERROR_ADDR
: 0250 MOVL PFV, R6
: 0256 MOVL R6, PFV_ADDR
: 0258 JSB PASS$VALIDATE PFV
: 0264 MOVL #1, UNWIND_ACT
: 0270 MOVAB 4(R6), R4
: 0271 BLBS 2(R4), 2$
: 0272 JSB PASS$OPEN_IMPLICIT
: 0273 BBS #29, (R4) - 3$
: 0274 CLRL -(SP)
: 0275 MOVZBL #PASSK_FILNOTOPE, -(SP)
: 0276 BRB 4$
: 0277 MOVAB -4(FCB), R3
: 0278 BBS #1, (R3), 5$
: 0279 CLRL -(SP)
: 0280 MOVZBL #PASSK_FILNOTDIR, -(SP)
: 0281 CALLS #2, PASS$SIGNAL
: 0282 RET
: 0283 BISB2 #2, 2(R4)
: 0284 MOVB #1, 30(FCB)
: 0285 BICB2 #16, 6(FCB)
: 0286 MOVL @COMPONENT, -40(FCB)
: 0287 PUSHL FCB

```



00000000G	00	01	FB	00070	CALLS	#1, SYSSGET	
	0D	50	E8	00077	BLBS	\$\$\$STATUS, 7\$	
0001825A	8F	50	D1	0007A	CMPL	\$\$\$STATUS, #98906	
	E7	04	12	00081	BNEQ	7\$	
	52	03	A3	00083	BLBS	3(R3), 6\$	
05	F8	50	D0	00087	7\$:	MOVL	\$\$\$STATUS, GET_STATUS
	00	02	E1	0008A	BBC	#2, -8(FCB), 8\$	0280
	B6	22	A7	0008F	MOVW	34(FCB), @0(R6)	0282
	2D	52	E8	00094	8\$:	BLBS	GET_STATUS, 11\$
	02	02	8A	00097	BICB2	#2, -2(R4)	0288
000182AA	8F	52	D1	0009B	CMPL	GET_STATUS, #98986	0297
	7E	06	12	000A2	BNEQ	9\$	0298
		00G	8F	9A	000A4	MOVZBL	#PASSK_FAIGETLOC, -(SP)
		16	11	000A8	BRB	10\$	0300
0001827A	8F	52	D1	000AA	9\$:	CMPL	GET_STATUS, #98938
		11	13	000B1	BEQL	11\$	0301
000182B2	8F	52	D1	000B3	CMPL	GET_STATUS, #98994	
	7E	08	13	000BA	BEQL	11\$	
	65	00G	8F	9A	000BC	MOVZBL	#PASSK_ERRDURFIN, -(SP)
		01	FB	000C0	10\$:	CALLS	#1, PASS\$\$SIGNAL
		04	000C3	RET			
	01	08	88	000C4	11\$:	BISB2	#8, 1(R3)
	01	8F	AA	000C8	BICW2	#304, 1(R3)	0314
		D4	A7	000CE	CLRL	-44(FCB)	0317
	03	80	8F	000D1	BICB2	#128, 3(R4)	0318
		04	000D6	RET			0319
		0000	000D7	12\$:	.WORD	Save nothing	0323
	50	08	AC	000D9	MOVL	8(AP), R0	0196
	50	04	A0	000DD	MOVL	4(R0), R0	
		F4	A0	000E1	PUSHAB	ERROR_ADDR	
		F8	A0	000E4	PUSHAB	UNWIND_ACT	
		FC	A0	000E7	PUSHAB	PFV_ADDR	
		03	DD	000EA	PUSHL	#3	
		5E	DD	000EC	PUSHL	SP	
	7E	04	AC	000EE	MOVQ	4(AP), -(SP)	
00000000G	00	03	FB	000F2	CALLS	#3, PASS\$\$IO_HANDLER	
		04	000F9	RET			

: Routine Size: 250 bytes, Routine Base: \_PASSCODE + 0000

: 263 0324 1  
: 264 0325 1 !<BLF/PAGE>

PASSFIND2 FIND procedure  
1-002 PASSFIND2 - FIND procedure

I 10  
16-Sep-1984 01:34:32 VAX-11 Bliss-32 V4.0-742  
14-Sep-1984 12:51:29 [PASRTL.SRC]PASFIND2.B32;1

Page 8  
(4)

: 266 0326 1 END  
: 267 0327 1  
: 268 0328 0 ELUDOM

. end of module PASSFIND2

PSECT SUMMARY

Name	Bytes	Attributes
_PASSCODE	250	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	12	0	581	00:01.0
_\$255\$DUA28:[PASRTL.OBJ]PASLIB.L32;1	427	94	22	33	00:00.4

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:PASFIND2/OBJ=OBJ\$:PASFIND2 MSRC\$:PASFIND2/UPDATE=(ENH\$:PASFIND2)

: Size: 250 code + 0 data bytes  
: Run Time: 00:07.5  
: Elapsed Time: 00:21.2  
: Lines/CPU Min: 2624  
: Lexemes/CPU-Min: 15832  
: Memory Used: 110 pages  
: Compilation Complete

