


```

PPPPPPPP      AAAAAA      SSSSSSSS  UU      UU  PPPPPPPP  DDDDDDDD      AAAAAA      TTTTTTTTTT  EEEEEEEEEE
PPPPPPPP      AAAAAA      SSSSSSSS  UU      UU  PPPPPPPP  DDDDDDDD      AAAAAA      TTTTTTTTTT  EEEEEEEEEE
PP      PP  AA      AA  SS      UU      UU  PP      PP  DD      DD  AA      AA  TT      EE
PP      PP  AA      AA  SS      UU      UU  PP      PP  DD      DD  AA      AA  TT      EE
PP      PP  AA      AA  SS      UU      UU  PP      PP  DD      DD  AA      AA  TT      EE
PP      PP  AA      AA  SS      UU      UU  PP      PP  DD      DD  AA      AA  TT      EE
PPPPPPPP      AA      AA  SSSSSS  UU      UU  PPPPPPPP  DD      DD  AA      AA  TT      EE
PPPPPPPP      AA      AA  SSSSSS  UU      UU  PPPPPPPP  DD      DD  AA      AA  TT      EE
PP      AAAAAAAAAA      SS      UU      UU  PP      DD      DD  AAAAAAAAAA  TT      EE
PP      AAAAAAAAAA      SS      UU      UU  PP      DD      DD  AAAAAAAAAA  TT      EE
PP      AA      AA  SS      UU      UU  PP      DD      DD  AA      AA  TT      EE
PP      AA      AA  SS      UU      UU  PP      DD      DD  AA      AA  TT      EE
PP      AA      AA  SSSSSSSS  UUUUUUUUUU  PP      DDDDDDDD  AA      AA  TT      EE
PP      AA      AA  SSSSSSSS  UUUUUUUUUU  PP      DDDDDDDD  AA      AA  TT      EE

```

```

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

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.....
.....
.....
.....

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```

1 0001 0 MODULE PASSUPDATE ( %TITLE 'UPDATE procedure'
2 0002 0 IDENT = '1-004' ! File: PASUPDATE.B32 Edit: SBL1004
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 PASSUPDATE, which implements the
36 0036 1 VAX-11 Pascal UPDATE procedure.
37 0037 1
38 0038 1 ENVIRONMENT: User mode - AST reentrant
39 0039 1
40 0040 1 AUTHOR: Steven B. Lionel, CREATION DATE: 29-January-1982
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. SBL 29-January-1982
45 0045 1 1-002 - Set RBF and RSZ before doing $UPDATE. Check linelimit.
46 0046 1 SBL 28-Oct-1982
47 0047 1 1-003 - Don't check linelimit, since a new record is not being added
48 0048 1 to the file. SBL 8-Nov-1982
49 0049 1 1-004 - Allow UPDATE of sequential organization files, as long as they
50 0050 1 are opened for direct access (fixed-length records). SBL 24-feb-1984
51 0051 1 --
52 0052 1

```

```

: 54 0053 1 %SBTTL 'Declarations'
: 55 0054 1
: 56 0055 1 : PROLOGUE DEFINITIONS:
: 57 0056 1 :
: 58 0057 1
: 59 0058 1 REQUIRE 'RTLIN:PASPROLOG'; . Externals, Linkages, PSECTs, structures
: 60 0122 1
: 61 0123 1
: 62 0124 1 : TABLE OF CONTENTS:
: 63 0125 1 :
: 64 0126 1
: 65 0127 1 FORWARD ROUTINE
: 66 0128 1 PASSUPDATE: NOVALUE; ! Do an UPDATE
: 67 0129 1
: 68 0130 1
: 69 0131 1 : MACROS:
: 70 0132 1
: 71 0133 1 : NONE
: 72 0134 1
: 73 0135 1 : EQUATED SYMBOLS:
: 74 0136 1
: 75 0137 1 : NONE
: 76 0138 1
: 77 0139 1 : FIELDS:
: 78 0140 1
: 79 0141 1 : NONE
: 80 0142 1
: 81 0143 1 : OWN STORAGE:
: 82 0144 1
: 83 0145 1 : NONE

```

```

85 0146 1 %SBTTL 'PASSUPDATE - UPDATE procedure'
86 0147 1 GLOBAL ROUTINE PASSUPDATE (
87 0148 1   PFV: REF $PASSPFV_FILE_VARIABLE,           ! File variable
88 0149 1   ERROR                                     ! Unwind address if error
89 0150 1   ): NOVALUE =
90 0151 1
91 0152 1 ++
92 0153 1 FUNCTIONAL DESCRIPTION:
93 0154 1
94 0155 1   PASSUPDATE implements the VAX-11 Pascal UPDATE procedure. It
95 0156 1   updates the current file component with the contents of the
96 0157 1   file buffer.
97 0158 1
98 0159 1 CALLING SEQUENCE:
99 0160 1
100 0161 1   CALL PASSUPDATE (PFV.mr.r [, ERROR.j.r])
101 0162 1
102 0163 1 FORMAL PARAMETERS:
103 0164 1
104 0165 1   PFV           - The Pascal File Variable (PFV) passed by reference.
105 0166 1   The structure of the PFV is defined in PASPFV.REQ.
106 0167 1
107 0168 1   ERROR        - Optional. If specified, the address to unwind to
108 0169 1   if an error occurs.
109 0170 1
110 0171 1 IMPLICIT INPUTS:
111 0172 1
112 0173 1   NONE
113 0174 1
114 0175 1 IMPLICIT OUTPUTS:
115 0176 1
116 0177 1   NONE
117 0178 1
118 0179 1 ROUTINE VALUE:
119 0180 1
120 0181 1   NONE
121 0182 1
122 0183 1 SIDE EFFECTS:
123 0184 1
124 0185 1   NONE
125 0186 1
126 0187 1 SIGNALLED ERRORS:
127 0188 1
128 0189 1   FILNOTOPE - File not open
129 0190 1   FILNOTINS - File is not in Inspection mode
130 0191 1   FILNOTDIR - file is not opened for direct access
131 0192 1   FILNOTKEY - file is not opened for keyed access
132 0193 1   CURCOMUND - current component is undefined
133 0194 1   KEYCHANOT - key value change is not allowed
134 0195 1   KEYDUPNOT - key value duplication is not allowed
135 0196 1   ERRDURUPD - Error during UPDATE
136 0197 1
137 0198 1
138 0199 1 --
139 0200 1
140 0201 2   BEGIN
141 0202 2

```

```

142 0203 2 LOCAL
143 0204 2 FCB: REF $PASSFCB_CONTROL_BLOCK, ! File Control Block
144 0205 2 FAB: REF BLOCK [, BYTE], ! RMS FAB
145 0206 2 STATUS, ! Status from $UPDATE
146 0207 2 PFV_ADDR: VOLATILE, ! Enable argument
147 0208 2 UNWIND_ACT: VOLATILE, ! Enable argument
148 0209 2 ERROR_ADDR: VOLATILE; ! Enable argument
149 0210 2
150 0211 2 BIND
151 0212 2 RAB = FCB REF BLOCK [, BYTE]; ! RMS RAB
152 0213 2
153 0214 2 BUILTIN
154 0215 2 ACTUALCOUNT;
155 0216 2
156 0217 2 ENABLE
157 0218 2 PASS$IO_HANDLER (PFV_ADDR, UNWIND_ACT, ERROR_ADDR);
158 0219 2
159 0220 2 IF ACTUALCOUNT () GEQU 2
160 0221 2 THEN
161 0222 2 ERROR_ADDR = .ERROR; ! Set unwind address
162 0223 2
163 0224 2 !+
164 0225 2 ! Set PFV address enable argument.
165 0226 2 !-
166 0227 2
167 0228 2 PFV_ADDR = PFV [PFV$R_PFV];
168 0229 2
169 0230 2 !+
170 0231 2 ! Validate and lock PFV
171 0232 2 !-
172 0233 2
173 0234 2 PASS$VALIDATE_PFV (PFV [PFV$R_PFV]; FCB);
174 0235 2
175 0236 2 !+
176 0237 2 ! Set unwind action to unlock file.
177 0238 2 !-
178 0239 2
179 0240 2 UNWIND_ACT = PASS$K_UNWIND_UNLOCK;
180 0241 2
181 0242 2 !+
182 0243 2 ! Open file if it should be implicitly opened.
183 0244 2 !-
184 0245 2
185 0246 2 IF NOT .PFV [PFV$V_VALID]
186 0247 2 THEN
187 0248 2 PASS$OPEN_IMPLICIT (PFV [PFV$R_PFV], FCB [FCB$R_FCB]; FCB);
188 0249 2
189 0250 2 !+
190 0251 2 ! Verify that the file is open.
191 0252 2 !-
192 0253 2
193 0254 2 IF NOT .PFV [PFV$V_OPEN]
194 0255 2 THEN
195 0256 2 $PASSIO_ERROR (PASS_FILNOTOPE,0);
196 0257 2
197 0258 2 !+
198 0259 2 ! Verify that the file is in Inspection mode.

```

```

199 0260 2  !-
200 0261 2
201 0262 2  IF NOT .FCB [FCBSV_INSPECTION]
202 0263 2  THEN
203 0264 2  $PASSIO_ERROR (PASS_FILNOTINS,0);
204 0265 2
205 0266 2  !+
206 0267 2  ! Verify that the file was opened either direct or keyed.
207 0268 2  !-
208 0269 2
209 0270 2  FAB = .RAB [RAB$L_FAB];
210 0271 2  IF .FCB [FCBSV_SEQUENTIAL] ! Neither DIRECT nor KEYED
211 0272 2  THEN
212 0273 2  IF .FAB [FAB$B_ORG] NEQ FAB$C_IDX ! Not indexed?
213 0274 2  THEN
214 0275 3  $PASSIO_ERROR (PASS_FILNOTDIR,0)
215 0276 2  ELSE ! Must be INDEXED
216 0277 2  $PASSIO_ERROR (PASS_FILNOTKEY,0);
217 0278 2
218 0279 2  !+
219 0280 2  ! Set RSZ appropriately.
220 0281 2  !-
221 0282 2
222 0283 2  IF .FCB [FCBSV_VARYING]
223 0284 2  THEN
224 0285 2  RAB [RAB$W_RSZ] = .(.PFV [PFV$A_BUFFER])<0,16,0>
225 0286 2  ELSE
226 0287 2  RAB [RAB$W_RSZ] = .RAB [RAB$W_USZ];
227 0288 2
228 0289 2  RAB [RAB$L_RBF] = .RAB [RAB$L_UBF];
229 0290 2
230 0291 2  !+
231 0292 2  ! Do the $UPDATE to update the current component.
232 0293 2  !-
233 0294 2
234 0295 2  STATUS = $PASSRMS_OP ($UPDATE (RAB=.RAB));
235 0296 2  IF NOT .STATUS
236 0297 2  THEN
237 0298 2  !+
238 0299 2  ! $UPDATE failed. Give specific or generic error as appropriate.
239 0300 2  !-
240 0301 2
241 0302 2  SELECTONE .STATUS OF
242 0303 2  SET
243 0304 2
244 0305 2  [RMSS_CUR]:
245 0306 2  $PASSIO_ERROR (PASS_CURCOMUND); ! Current component undefined
246 0307 2
247 0308 2  [RMSS_CHG]:
248 0309 2  $PASSIO_ERROR (PASS_KEYCHANOT); ! Key value change not allowed
249 0310 2
250 0311 2  [RMSS_DUP]:
251 0312 2  $PASSIO_ERROR (PASS_KEYDUPNOT); ! Key value duplication not allowed
252 0313 2
253 0314 2  [OTHERWISE]:
254 0315 2  $PASSIO_ERROR (PASS_ERRDURUPD); ! Error during UPDATE
255 0316 2

```

```

: 256 0317 2      TES;
: 257 0318 2
: 258 0319 2      !+
: 259 0320 2      !  Undefine file buffer
: 260 0321 2      !  Cancel previous LOCATE
: 261 0322 2      !  Indicate successful operation
: 262 0323 2      !  Unlock the file
: 263 0324 2      !-
: 264 0325 2
: 265 0326 2      FCB [FCB$SL_STATUS] = 0;
: 266 0327 2      FCB [FCB$V_LOCATE] = 0;
: 267 0328 2      PFV [PFV$V_DFB] = 0;
: 268 0329 2      PFV [PFV$V_LOCK] = 0;
: 269 0330 2
: 270 0331 2      RETURN;
: 271 0332 2
: 272 0333 1      END;

```

! End of routine PASSUPDATE

```

.TITLE PASSUPDATE UPDATE procedure
.IDENT \1-004\

```

```

.EXTRN PASSUPDATE, PASS$IO_HANDLER
.EXTRN PASS$VALIDATE PFV
.EXTRN PASS$OPEN IMPLICIT
.EXTRN PASS$SIGNAL, PASSK_FILNOTOPE
.EXTRN PASSK_FILNOTINS
.EXTRN PASSK_FILNOTDIR
.EXTRN PASSK_FILNOTKEY
.EXTRN SYSSUPDATE, PASSK_CURCOMUND
.EXTRN PASSK_KEYCHANOT
.EXTRN PASSK_KEYDUPNOT
.EXTRN PASSK_ERRDURUPD

```

```

.PSECT _PASSCODE, NOWRT, SHR, PIC, 2

```

```

.ENTRY PASSUPDATE, Save R2,R3,R6,R7      : 0147
MOVAB PASS$SIGNAL, F3
SUBL2 #8, SP
CLRL ERROR_ADDR      : 0201
CLRQ UNWIND_ACT
MOVAL 17$, (FP)
CMPB (AP), #2      : 0220
BLSSU 1$
MOVL ERROR, ERROR_ADDR      : 0222
MOVL PFV, R6      : 0228
MOVL R6, PFV_ADDR
JSB PASS$VALIDATE PFV      : 0234
MOVL #1, UNWIND_ACT      : 0240
BLBS 6(R6), 2$      : 0246
JSB PASS$OPEN_IMPLICIT      : 0248
BBS #5, 7(R6), 3$      : 0254
CLRL -(SP)      : 0256
MOVZBL #PASSK_FILNOTOPE, -(SP)
BRB 6$
BBS #3, -3(FCB), 4$      : 0262
CLRL -(SP)      : 0264

```


		7E	00G	8F 9A 0004F	MOVZBL	#PASSK_FILNOTINS, -(SP)	
				1C 11 00053	BRB	6\$	
		50	3C	A7 D0 00055 4\$:	MOVL	60(FCB), FAB	0270
		18	FC	A7 E9 00059	BLBC	-4(FCB), 7\$	0271
		20	1D	A0 91 0005D	CMPB	29(FAB), #32	0273
				08 13 00061	BEQL	5\$	
				7E D4 00063	CLRL	-(SP)	0275
		7E	00G	8F 9A 00065	MOVZBL	#PASSK_FILNOTDIR, -(SP)	
				06 11 00069	BRB	6\$	
				7E D4 0006B 5\$:	CLRL	-(SP)	0277
		7E	00G	8F 9A 0006D	MOVZBL	#PASSK_FILNOTKEY, -(SP)	
		63		02 FB 00071 6\$:	CALLS	#2, PASS\$SIGNAL	
				04 00074	RET		
07	F8	A7		02 E1 00075 7\$:	BBC	#2, -8(FCB), 8\$	0283
	22	A7	00	B6 B0 0007A	MOVW	20(R6), 34(FCB)	0285
				05 11 0007F	BRB	9\$	
	22	A7	20	A7 B0 00081 8\$:	MOVW	32(FCB), 34(FCB)	0287
	28	A7	24	A7 D0 00086 9\$:	MOVL	36(FCB), 40(FCB)	0289
				57 DD 0008B 10\$:	PUSHL	FCB	0295
00000000G		00		01 FB 0008D	CALLS	#1, SYSSUPDATE	
		0D		50 E8 00094	BLBS	\$\$\$STATUS, 11\$	
0001825A		8F		50 D1 00097	CMPB	\$\$\$STATUS, #98906	
				04 12 0009E	BNEQ	11\$	
	E7		FF	A7 E8 000A0	BLBS	-1(FCB), 10\$	
	52			50 D0 000A4 11\$:	MOVL	\$\$\$STATUS, STATUS	
	35			52 E8 000A7	BLBS	STATUS, 16\$	0296
000184B4		8F		52 D1 000AA	CMPB	STATUS, #99508	0305
				06 12 000B1	BNEQ	12\$	
	7E		00G	8F 9A 000B3	MOVZBL	#PASSK_CURCOMUND, -(SP)	0306
				22 11 000B7	BRB	15\$	
0001849C		8F		52 D1 000B9 12\$:	CMPB	STATUS, #99484	0308
				06 12 000C0	BNEQ	13\$	
	7E		00G	8F 9A 000C2	MOVZBL	#PASSK_KEYCHANOT, -(SP)	0309
				13 11 000C6	BRB	15\$	
000184EC		8F		52 D1 000C8 13\$:	CMPB	STATUS, #99564	0311
				06 12 000CF	BNEQ	14\$	
	7E		00G	8F 9A 000D1	MOVZBL	#PASSK_KEYDUPNOT, -(SP)	0312
				04 11 000D5	BRB	15\$	
	7E		00G	8F 9A 000D7 14\$:	MOVZBL	#PASSK_ERRDURUPD, -(SP)	0315
	63			01 FB 000DB 15\$:	CALLS	#1, PASS\$SIGNAL	
				04 000DE	RET		
			D4	A7 D4 000DF 16\$:	CLRL	-44(FCB)	0326
	FE	A7		01 8A 000E2	BICB2	#1, -2(FCB)	0327
	06	A6	8002	8F AA 000E6	BICW2	#32770, 6(R6)	0329
				04 000EC	RET		0333
				0000 000ED 17\$:	.WORD	Save nothing	0201
	50		08	AC D0 000EF	MOVL	8(AP), R0	
	50		04	A0 D0 000F3	MOVL	4(R0), R0	
			F4	A0 9F 000F7	PUSHAB	ERROR_ADDR	
			F8	A0 9F 000FA	PUSHAB	UNWIND_ACT	
			FC	A0 9F 000FD	PUSHAB	PFV_ADDR	
				03 DD 00100	PUSHL	#3	
				5E DD 00102	PUSHL	SP	
00000000G		7E	04	AC 7D 00104	MOVQ	4(AP), -(SP)	
		00		03 FB 00108	CALLS	#3, PASS\$IO_HANDLER	
				04 0010F	RET		

PASSUPDATE
1-004

UPDATE procedure
PASSUPDATE - UPDATE procedure

G 8
16-Sep-1984 02:12:11
14-Sep-1984 12:51:59

VAX-11 Bliss-32 V4.0-742
[PASRTL.SRC]PASUPDATE.B32;1

Page 8
(3)

PA
1-

: Routine Size: 272 bytes, Routine Base: _PASSCODE + 0000

: 273 0334 1
: 274 0335 1 !<BLF/PAGE>

PASSUPDATE UPDATE procedure
1-004 PASSUPDATE - UPDATE procedure

H 8
16-Sep-1984 02:12:11 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:51:59 [PASRTL.SRC]PASUPDATE.B32;1

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(4)

PA
1-

: 276 0336 1 END
: 277 0337 1
: 278 0338 0 ELUDOM

' End of module PASSUPDATE

PSECT SUMMARY

Name Bytes Attributes
:_PASSCODE 272 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	15	0	581	00:01.0
_\$255\$DUA28:[PASRTL.OBJ]PASLIB.L32;1	427	98	22	33	00:00.5

COMMAND QUALIFIERS

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

: Size: 272 code + 0 data bytes
: Run Time: 00:08.2
: Elapsed Time: 00:23.5
: Lines/CPU Min: 2485
: Lexemes/CPU-Min: 17941
: Memory Used: 118 pages
: Compilation Complete

