


```

PPPPPPP      AAAAAA      SSSSSSSS      RRRRRRRR      EEEEEEEEEE      AAAAAA      RRRRRRRR      EEEEEEEEEE      GGGGGGGG
PPPPPPP      AAAAAA      SSSSSSSS      RRRRRRRR      EEEEEEEEEE      AAAAAA      RRRRRRRR      EEEEEEEEEE      GGGGGGGG
PP           PP   AA      AA      SS                RR      RR      EE                GG
PP           PP   AA      AA      SS                RR      RR      EE                GG
PP           PP   AA      AA      SS                RR      RR      EE                GG
PP           PP   AA      AA      SS                RR      RR      EE                GG
PPPPPPP      AA      AA      SSSSSS      RRRRRRRR      EEEEEEEE      RRRRRRRR      EEEEEEEE      GG
PPPPPPP      AA      AA      SSSSSS      RRRRRRRR      EEEEEEEE      RRRRRRRR      EEEEEEEE      GG
PP           AAAAAAAAAA      SS                RR      RR      EE                GG      GGGGGG
PP           AAAAAAAAAA      SS                RR      RR      EE                GG      GGGGGG
PP           AA      AA      SS                RR      RR      EE                GG      GG
PP           AA      AA      SS                RR      RR      EE                GG      GG
PP           AA      AA      SSSSSSSS      RR      RR      EEEEEEEEEE      AA      AA      RR      RR      EEEEEEEEEE      GGGGGG
PP           AA      AA      SSSSSSSS      RR      RR      EEEEEEEEEE      AA      AA      RR      RR      EEEEEEEEEE      GGGGGG

```

```

LL           IIIIIII      SSSSSSSS
LL           IIIIIII      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      IIIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIIII      SSSSSSSS

```

.....

.....

```

1 0001 0 MODULE PASSREAD_REAL_G ( %TITLE 'Read a G_floating value'
2 0002 0 -IDENT = '1-002' ! File: PASREAREG.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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24 0024 1 * SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. *
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 procedures which read a G_floating value
36 0036 1 from a textfile or a string.
37 0037 1
38 0038 1 ENVIRONMENT: User mode - AST reentrant
39 0039 1
40 0040 1 AUTHOR: Steven B. Lionel, CREATION DATE: 1-April-1981
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. SBL 1-April-1981
45 0045 1 1-002 - Use PASS$END_READ. SBL 26-May-1982
46 0046 1 --
47 0047 1

```

```
.. 49      0048 1 %SBTTL 'Declarations'
.. 50      0049 1
.. 51      0050 1 PROLOGUE DEFINITIONS:
.. 52      0051 1
.. 53      0052 1
.. 54      0053 1 REQUIRE 'RTLIN:PASPROLOG';           ! Externals, linkages, PSECTs, structures
.. 55      0117 1
.. 56      0118 1
.. 57      0119 1 TABLE OF CONTENTS:
.. 58      0120 1
.. 59      0121 1
.. 60      0122 1 FORWARD ROUTINE
.. 61      0123 1     PASSREAD_REAL_G: CALL_VAL01 NOVALUE,      ! Read from textfile
.. 62      0124 1     PASSREADV_REAL_G: CALL_VAL01 NOVALUE;  ! Read from string
.. 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
.. 80      0142 1
```

```

82 0143 1 %SBTTL 'PASSREAD REAL G - Read a G_floating value from textfile'
83 0144 1 GLOBAL ROUTINE PASSREAD_REAL_G (
84 0145 1     PFV: REF $PASSPFV_FILE_VARIABLE,           ! File variable
85 0146 1     ERROR:                                ! Error unwind address
86 0147 1     LO_RESULT,                            ! Low order part of result
87 0148 1     HI_RESULT                             ! High order part of result
88 0149 1     ) : CALL_VAL01 NOVALUE =
89 0150 1
90 0151 1 ++
91 0152 1 FUNCTIONAL DESCRIPTION:
92 0153 1
93 0154 1     This function reads a G_floating value from the specified textfile
94 0155 1     and returns it as the function value.
95 0156 1
96 0157 1 CALLING SEQUENCE:
97 0158 1
98 0159 1     Double.wg.v = PASSREAD_REAL_G (PFV.mr.r [, ERROR.ja.r])
99 0160 1
100 0161 1 FORMAL PARAMETERS:
101 0162 1
102 0163 1     PFV           - The Pascal File Variable (PFV) passed by reference.
103 0164 1                 The structure of the PFV is defined in PASPFV.REQ.
104 0165 1
105 0166 1     ERROR        - Optional. If specified, the address to unwind to
106 0167 1                 in case of an error.
107 0168 1
108 0169 1 IMPLICIT INPUTS:
109 0170 1
110 0171 1     NONE
111 0172 1
112 0173 1 IMPLICIT OUTPUTS:
113 0174 1
114 0175 1     NONE
115 0176 1
116 0177 1 ROUTINE VALUE:
117 0178 1
118 0179 1     The G_floating value of the number read.
119 0180 1
120 0181 1 SIDE EFFECTS:
121 0182 1
122 0183 1     If the file is the standard file INPUT or OUTPUT, it is implicitly opened.
123 0184 1
124 0185 1 SIGNALLED ERRORS:
125 0186 1
126 0187 1     INVSYNREA - invalid syntax for real value
127 0188 1     OUTRANTYP - 'string' is outside the range of type 'type'
128 0189 1
129 0190 1 --
130 0191 1
131 0192 2 BEGIN
132 0193 2
133 0194 2 LOCAL
134 0195 2     RESULT: VECTOR [2, LONG],           ! D_floating result value
135 0196 2     DESCR: BLOCK [8, BYTE],            ! Descriptor for convert
136 0197 2     FCB: REF $PASSFCB CONTROL_BLOCK, ! File Control block
137 0198 2     PFV_ADDR: VOLATILE,                 ! Enable argument
138 0199 2     UNWIND_ACT: VOLATILE,              ! Enable argument

```

```

: 139      0200      2      ERROR_ADDR: VOLATILE;          ! Enable argument
: 140      0201      2
: 141      0202      2      BUILTIN
: 142      0203      2      ACTUALCOUNT;          ! Count of arguments
: 143      0204      2
: 144      0205      2      ENABLE
: 145      0206      2      PASS$IO_HANDLER (PFV_ADDR, UNWIND_ACT, ERROR_ADDR);    ! Enable error handler
: 146      0207      2
: 147      0208      2      !+
: 148      0209      2      ! Get ERROR parameter, if present.
: 149      0210      2      !-
: 150      0211      2
: 151      0212      2      IF ACTUALCOUNT () GEQU 2
: 152      0213      2      THEN
: 153      0214      2      ERROR_ADDR = .ERROR;          ! Set unwind address
: 154      0215      2
: 155      0216      2      PFV_ADDR = PFV [PFV$R_PFV];          ! Set PFV address
: 156      0217      2
: 157      0218      2      !+
: 158      0219      2      ! Validate PFV and get PFV.
: 159      0220      2      !-
: 160      0221      2
: 161      0222      2      PASS$VALIDATE_PFV (PFV [PFV$R_PFV]; FCB);
: 162      0223      2
: 163      0224      2      !+
: 164      0225      2      ! Set unwind action to unlock file.
: 165      0226      2      !-
: 166      0227      2
: 167      0228      2      UNWIND_ACT = PASS$K_UNWIND_UNLOCK;
: 168      0229      2
: 169      0230      2      !+
: 170      0231      2      ! Do common initialization.
: 171      0232      2      !-
: 172      0233      2
: 173      0234      2      PASS$INIT_READ (PFV [PFV$R_PFV], FCB [FCB$R_FCB]; FCB);
: 174      0235      2
: 175      0236      2      !+
: 176      0237      2      ! Set up string descriptor for convert call.
: 177      0238      2      !-
: 178      0239      2
: 179      0240      2      DESCR [DSC$B_CLASS] = DSC$K_CLASS_S;
: 180      0241      2      DESCR [DSC$B_DTYPE] = DSC$K_DTYPE_T;
: 181      0242      2
: 182      0243      2      !+
: 183      0244      2      ! Call utility routine to find a string that looks like an real.
: 184      0245      2      ! If we can't find one, signal an error.
: 185      0246      2      !-
: 186      0247      2
: 187      0248      2      IF NOT PASS$GET_REAL (PFV [PFV$R_PFV], FCB [FCB$R_FCB];
: 188      0249      2      DESCR [DSC$A_POINTER], DESCR [DSC$W_LENGTH], FCB)
: 189      0250      2      THEN
: 190      0251      2      $PASSIO_ERROR (PASS_INVSYNREA,2,DESCR,.FCB [FCB$L_RECORD_NUMBER]);
: 191      0252      2
: 192      0253      2      !+
: 193      0254      2      ! Call convert routine. If it fails, signal an error.
: 194      0255      2      !-
: 195      0256      2

```

```

196 0257 2 IF NOT OTSSCVT_T_G (DESCR, RESULT)
197 0258 2 THEN
198 P 0259 2 SPASSIO_ERROR (PASS NOTVALTYP,3,DESCR,
199 0260 2 UPLIT BYTE (%CHARCOUNT('DOUBLE'),'DOUBLE'),
200 0261 2 .FCB [FCB$L_RECORD_NUMBER]);
201 0262 2
202 0263 2 !+
203 0264 2 ! Do end-of-READ processing.
204 0265 2 !-
205 0266 2
206 0267 2 PASS$END_READ (PFV [PFV$R_PFV], FCB [FCB$R_FCB]);
207 0268 2
208 0269 2 !+
209 0270 2 ! Return result.
210 0271 2 !-
211 0272 2
212 0273 2 LO_RESULT = .RESULT [0];
213 0274 2 HI_RESULT = .RESULT [1];
214 0275 2 RETURN;
215 0276 2
216 0277 1 END;

```

! End of routine PASS\$READ_REAL_G

				.TITLE	PASS\$READ_REAL_G Read a G_floating value	
				.IDENT	\1-002\	
				.PSECT	_PASS\$CODE,NOWRT, SHR, PIC,2	
45	4C	42	55 4F	06 00000 P.AAA:	.BYTE 6	
			44 00001		.ASCII \DOUBLE\	:
				.EXTRN	PASS\$READ_REAL_G	
				.EXTRN	PASS\$READ_REAL_G	
				.EXTRN	PASS\$IO_HANDLER	
				.EXTRN	PASS\$VACIDATE_PFV	
				.EXTRN	PASS\$INIT_READ, PASS\$GET_REAL	
				.EXTRN	PASS\$SIGNAL, PASS\$INVSYNREA	
				.EXTRN	OTSSCVT_T_G, PASS\$NOTVALTYP	
				.EXTRN	PASS\$END_READ	
				.ENTRY	PASS\$READ_REAL_G, Save R2,R3,R4,R5,R6,R7,R8,-;	0144
			03FC 0000		R9	
59	00000000G	00	9E 00002	MOVAB	PASS\$SIGNAL, R9	
5E		18	C2 00009	SUBL2	#24, SP	
		7E	D4 0000C	CLRL	ERROR_ADDR	0192
		AE	7C 0000E	CLRQ	UNWIND_ACT	
6D	0077	CF	DE 00011	MOVAL	4\$, (FP)	
02		6C	91 00016	CMPB	(AP), #2	0212
		04	1F 00019	BLSSU	1\$	
6E	08	AC	D0 0001B	MOVL	ERROR, ERROR_ADDR	0214
56	04	AC	D0 0001F	MOVL	PFV, R6	0216
08	AE	56	D0 00023	MOVL	R6, PFV_ADDR	
	00000000G	00	16 00027	JSB	PASS\$VACIDATE_PFV	0222
04	AE	01	D0 0002D	MOVL	#1, UNWIND_ACT	0228
	00000000G	00	16 00031	JSB	PASS\$INIT_READ	0234
0E	AE	8F	B0 00037	MOVW	#270, DESCR+2	0241
	00000000G	00	16 0003D	JSB	PASS\$GET_REAL	0249

10	AE	54	D0	00043	MOVL	R4, DESCR+4
OC	AE	55	B0	00047	MOVW	R5, DESCR
	10	50	E8	0004B	BLBS	R0, 2\$
		C8	A7	DD 0004E	PUSHL	-56(FCB)
		10	AE	9F 00051	PUSHAB	DESCR
			02	DD 00054	PUSHL	#2
	7E	00G	8F	9A 00056	MOVZBL	#PASSK_INVSYNREA, -(SP)
	69		04	FB 0005A	CALLS	#4, PASS\$\$SIGNAL
			04	0005D	RET	
		14	AE	9F 0005E	PUSHAB	RESULT
		10	AE	9F 00061	PUSHAB	DESCR
00000000G	00		02	FB 00064	CALLS	#2, OTS\$CVT_T_G
	13		50	E8 0006B	BLBS	R0, 3\$
		C8	A7	DD 0006E	PUSHL	-56(FCB)
		85	AF	9F 00071	PUSHAB	P.AAA
		14	AE	9F 00074	PUSHAB	DESCR
			03	DD 00077	PUSHL	#3
	7E	00G	8F	9A 00079	MOVZBL	#PASSK_NOTVALTYP, -(SP)
	69		05	FB 0007D	CALLS	#5, PASS\$\$SIGNAL
			04	00080	RET	
		00000000G	00	16 00081	JSB	PASS\$END_READ
	50		14	AE 7D 00087	MOVQ	RESULT, CO_RESULT
			04	0008B	RET	
			0000	0008C	.WORD	Save nothing
	50	08	AC	D0 0008E	MOVL	8(AP), R0
	50	04	A0	D0 00092	MOVL	4(R0), R0
		E4	A0	9F 00096	PUSHAB	ERROR_ADDR
		E8	A0	9F 00099	PUSHAB	UNWIND_ACT
		EC	A0	9F 0009C	PUSHAB	PFV_ADDR
			03	DD 0009F	PUSHL	#3
			5E	DD 000A1	PUSHL	SP
	7E	04	AC	7D 000A3	MOVQ	4(AP), -(SP)
00000000G	00		03	FB 000A7	CALLS	#3, PASS\$\$IO_HANDLER
			04	000AE	RET	

.....
 0251

 0257

 0261

 0267
 0273
 0277
 0192

: Routine Size: 175 bytes, Routine Base: _PASS\$CODE + 0007

: 217 0278 1
 : 218 0279 1 !<BLF/PAGE>


```

220 0280 1 %SBTTL 'PASS$READV_REAL_G- Read a G_floating from string'
221 0281 1 GLOBAL ROUTINE PASS$READV_REAL_G (
222 0282 1     LINE_DSC: REF VECTOR [, BYTE],           ! Line descriptor
223 0283 1     ERROR:                               ! Error unwind address
224 0284 1     LO_RESULT,                          ! Low order part of result
225 0285 1     HI_RESULT                            ! High order part of result
226 0286 1 ) : CACL_VAL01 NOVALUE =
227 0287 1
228 0288 1 ++
229 0289 1 FUNCTIONAL DESCRIPTION:
230 0290 1
231 0291 1     This function reads a G_floating from the specified string
232 0292 1     and returns it as the function value.
233 0293 1
234 0294 1 CALLING SEQUENCE:
235 0295 1
236 0296 1     Double.wg.v = PASS$READV_REAL_G (LINE_DSC.mq.r [, ERROR.ja.r])
237 0297 1
238 0298 1 FORMAL PARAMETERS:
239 0299 1
240 0300 1     LINE_DSC           - The string to read from, passed as a class S
241 0301 1                   (assumed) descriptor. The length and pointer
242 0302 1                   are updated to reflect the unread string.
243 0303 1
244 0304 1     ERROR             - Optional. If specified, the address to unwind to
245 0305 1                   in case of an error.
246 0306 1
247 0307 1 IMPLICIT INPUTS:
248 0308 1
249 0309 1     NONE
250 0310 1
251 0311 1 IMPLICIT OUTPUTS:
252 0312 1
253 0313 1     NONE
254 0314 1
255 0315 1 ROUTINE VALUE:
256 0316 1
257 0317 1     The value of the G_floating read.
258 0318 1
259 0319 1 SIDE EFFECTS:
260 0320 1
261 0321 1     NONE
262 0322 1
263 0323 1 SIGNALLED ERRORS:
264 0324 1
265 0325 1     NONE
266 0326 1
267 0327 1 --
268 0328 1
269 0329 2 BEGIN
270 0330 2
271 0331 2 LOCAL
272 0332 2     PFV: $PASS$PFV FILE VARIABLE,           ! Pascal File Variable
273 0333 2     ARG_LIST: VECTOR [2, LONG],          ! Argument list
274 0334 2     PFV_ADDR: VOLATILE,                  ! Enable argument
275 0335 2     UNWIND_ACT: VOLATILE,                ! Enable argument
276 0336 2     ERROR_ADDR: VOLATILE;                 ! Enable argument
    
```

```

277 0337 2
278 0338 2
279 0339 2 BUILTIN
      ACTUALCOUNT;           ! Count of arguments
280 0340 2
281 0341 2 ENABLE
282 0342 2 PASS$$IO_HANDLER (PFV_ADDR, UNWIND_ACT, ERROR_ADDR); ! Enable error handler
283 0343 2
284 0344 2 |
285 0345 2 | Get ERROR parameter, if present.
286 0346 2 |
287 0347 2
288 0348 2 IF ACTUALCOUNT () GEQU 2
289 0349 2 THEN
290 0350 2 ERROR_ADDR = .ERROR;           ! Set unwind address
291 0351 2
292 0352 2 PFV_ADDR = PFV [PFV$R_PFV];       ! Set PFV address
293 0353 2
294 0354 2 |
295 0355 2 | +
296 0356 2 | Set up ARG_LIST.
297 0357 2 |
298 0358 2 ARG_LIST [0] = 1;                   ! One argument
299 0359 2 ARG_LIST [1] = PFV [PFV$R_PFV];   ! PFV address
300 0360 2
301 0361 2 |
302 0362 2 | +
303 0363 2 | Call PASS$$DO_READV to do the work, giving it the address of
304 0364 2 | PASS$READ_REAL_G to call.
305 0365 2 |
306 0366 2 PASS$$DO_READV (PFV [PFV$R_PFV], LINE_DSC [0], ARG_LIST, PASS$READ_REAL_G;
307 0367 2 LO_RESULT, HI_RESULT);
308 0368 2
309 0369 2 RETURN;
310 0370 2
311 0371 1 END;

```

! End of routine PASS\$READV_REAL_G

```

                                .EXTRN  PASS$$DO_READV
                                .ENTRY   PASS$READV_REAL_G, Save R2,R3,R4,R6
5E                                20 C2 00002
                                7E D4 00005
                                04 AE 7C 00007
6D                                0030 CF DE 0000A
02                                6C 91 0000F
                                04 1F 00012
08                                08 AC D0 00014
OC                                14 AE 9E 00018 1$:
10                                AE 01 D0 0001D
                                AE 9E 00021
54                                FF27 CF 9E 00026
53                                0C AE 9E 0002B
56                                14 AE 9E 0002F
52                                04 AC D0 00033
                                00 16 00037
                                04 0003D
                                .ENTRY   PASS$READV_REAL_G, Save R2,R3,R4,R6
                                SUBL2    #32, SP
                                CLRL    ERROR_ADDR
                                CLRQ   UNWIND_ACT
                                MOVAL   2$, (FP)
                                CMPB   (AP), #2
                                BLSSU  1$
                                MOVL   ERROR, ERROR_ADDR
                                MOVAB  PFV, PFV_ADDR
                                MOVL   #1, ARG_LIST
                                MOVAB  PFV, ARG_LIST+4
                                MOVAB  PASS$READ_REAL_G, R4
                                MOVAB  ARG_LIST, R3
                                MOVAB  PFV, R6
                                MOVL   LINE_DSC, R2
                                JSB    PASS$$DO_READV
                                RET

```

S
R
L
M
C


```

PASSREAD_REAL_G Read a G_floating value          D 11
1-002          PAC$READV_REAL_G- Read a G_floating from string 16-Sep-1984 02:00:26  VAX-11 Bliss-32 V4.0-742
: 315          0374 1 END                          14-Sep-1984 12:51:49  [PASRTL.SRC]PASREAREG.B32;1
: 316          0375 1                               ! End of module PASSREAD_REAL_G
: 317          0376 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
_PASSCODE	279 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	6	0	581	00:01.1
_\$255\$DUA28:[PASRTL.OBJ]PASLIB.L32;1	427	100	23	33	00:00.4

COMMAND QUALIFIERS

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

```

: Size:          272 code + 7 data bytes
: Run Time:      00:07.3
: Elapsed Time: 00:29.0
: Lines/CPU Min: 3077
: Lexemes/CPU-Min: 13751
: Memory Used:  86 pages
: Compilation Complete

```

