


```

RRRRRRRR      PPPPPPPP      GGGGGGGG      IIIIII      000000      EEEEEEEEEE      XX      XX      CCCCCCCC      EEEEEEEEEE
RRRRRRRR      PPPPPPPP      GGGGGGGG      IIIIII      000000      EEEEEEEEEE      XX      XX      CCCCCCCC      EEEEEEEEEE
RR      RR      PP      PP      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      PP      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      PP      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      PP      GG      II      00      00      EE      XX      XX      CC      EE
RRRRRRRR      PPPPPPPP      GGGGGGGG      IIIIII      00      00      EE      XX      XX      CC      EE
RRRRRRRR      PPPPPPPP      GGGGGGGG      IIIIII      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GGGGGG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GGGGGG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      II      00      00      EE      XX      XX      CC      EE
RR      RR      PP      GG      GG      IIIIII      000000      EEEEEEEEEE      XX      XX      CCCCCCCC      EEEEEEEEEE
RR      RR      PP      GG      GG      IIIIII      000000      EEEEEEEEEE      XX      XX      CCCCCCCC      EEEEEEEEEE

```

```

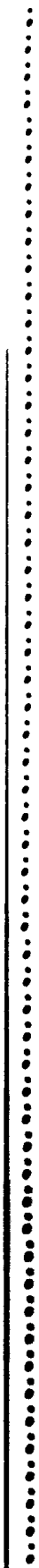
LL      IIIIII      SSSSSSSS
LL      IIIIII      SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIII      SSSSSSSS

```

```

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

```



```

1 0001 0 MODULE RPG$IOEXCEPTION( %TITLE, 'Signal I/O errors'
2 0002 0 IDENT = '1-003', ! file:RPGIOEXCE.B32 EDIT:DG1003
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1 ++
30 0030 1 FACILITY: RPGII SUPPORT
31 0031 1
32 0032 1 ABSTRACT:
33 0033 1
34 0034 1 This procedure is called to process a wide variety of I/O
35 0035 1 exceptions. It retrieves the file name string and signals the errors.
36 0036 1
37 0037 1
38 0038 1 ENVIRONMENT: Vax-11 User Mode
39 0039 1
40 0040 1 AUTHOR: Debess Grabazs, CREATION DATE: 18-Jan-1983
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. DG 18-Jan-1983
45 0045 1 1-002 - Reference to RPG$_INVDATTYP taken out.
46 0046 1 Reference to RMSS$_KRF changed to RMSS$_REF. DG 11-Jul-1983
47 0047 1 1-003 - Remove mapping of RMSS$_KEY to RPG specific error. DG 10-Aug-1983
48 0048 1 --
49 0049 1
50 0050 1 !<BLF/PAGE>

```

```

52 0051 1 %SBTTL 'Declarations'
53 0052 1 | +
54 0053 1 | PROLOGUE FILE:
55 0054 1 | -
56 0055 1 |
57 0056 1 REQUIRE 'RTLIN:RPGPROLOG';
58 0121 1 | Switches, PSECTs, macros,
59 0122 1 | Linkages and LIBRARYs
60 0123 1 | +
61 0124 1 | LINKAGES
62 0125 1 | NONE
63 0126 1 | -
64 0127 1 |
65 0128 1 | +
66 0129 1 | TABLE OF CONTENTS:
67 0130 1 | -
68 0131 1 |
69 0132 1 FORWARD ROUTINE
70 0133 1 RPG$IOEXCEPTION : NOVALUE ;
71 0134 1 |
72 0135 1 | +
73 0136 1 | INCLUDE FILES
74 0137 1 | NONE
75 0138 1 | -
76 0139 1 |
77 0140 1 | +
78 0141 1 | MACROS
79 0142 1 | -
80 0143 1 |
81 0144 1 MACRO
82 0145 1 RETRIEVE = 0,0,2,0%;
83 0146 1 |
84 0147 1 | +
85 0148 1 | EXTERNAL REFERENCES
86 0149 1 | -
87 0150 1 |
88 0151 1 EXTERNAL ROUTINE
89 0152 1 LIB$STOP:NOVALUE;
90 0153 1 | Signal fatal error
91 0154 1 EXTERNAL LITERAL
92 0155 1 RPG$_ENDOF_FIL,
93 0156 1 RPG$_EXTINDOFF,
94 0157 1 RPG$_FATINTERR,
95 0158 1 RPG$_FORFILE,
96 0159 1 RPG$_KEYNOTFND,
97 0160 1 RPG$_KEYNOTMAT,
98 0161 1 RPG$_NONASCKEY,
99 0162 1 RPG$_UPDNO_CUR;
100 0163 1 | End of file error
| File not open error
| Fatal internal error
| for file 'filename' error
| Key not found error
| Key doesn't match error
| Out of sequence error
| No current record error

```

```
0164 1 %SBTTL 'RPG$IOEXCEPTION - Signal I/O errors'
0165 1 GLOBAL ROUTINE RPG$IOEXCEPTION (
0166 1
0167 1          FLAGS:          BLOCK[BYTE],          ! Error value location indicator
0168 1          RAB:           REF BLOCK[BYTE]         ! Address of RAB
0169 1          ): NOVALUE=
0170 1
0171 1
0172 1
0173 1
0174 1
0175 1
0176 1
0177 1
0178 1
0179 1
0180 1
0181 1
0182 1
0183 1
0184 1
0185 1
0186 1
0187 1
0188 1
0189 1
0190 1
0191 1
0192 1
0193 1
0194 1
0195 1
0196 1
0197 1
0198 1
0199 1
0200 1
0201 1
0202 1
0203 1
0204 1
```

++

FUNCTIONAL DESCRIPTION:

This procedure is called to process a wide variety of I/O exceptions. It retrieves the file name string and signals the errors.

CALLING SEQUENCE:

CALL RPG\$IOEXCEPTION (flags.rl.v, rab.rr.r)

FORMAL PARAMETERS:

flags - Indication of where to retrieve the condition value

rab - Address of RAB

IMPLICIT INPUTS:

NONE

IMPLICIT OUTPUTS:

NONE

ROUTINE VALUE:

NONE

SIDE EFFECTS:

NONE

--

```

144 0205 2 BEGIN
145 0206 2
146 0207 2 LOCAL
147 0208 2 CONDITION, ! Longword RPG$ error number
148 0209 2 FAB: REF BLOCK[,BYTE], ! Address of FAB
149 0210 2 NAM: REF BLOCK[,BYTE], ! Address of NAM block-used to
150 0211 2 ! communicate optional filename
151 0212 2 ! related information.
152 0213 2 RMS_STS, ! RMS STS value
153 0214 2 RMS-STV, ! RMS STV value
154 0215 2 RSADESC: VECTOR[2]; ! Descriptor for RSA (resultant string area)
155 0216 2
156 0217 2 !+
157 0218 2 ! Ensure that the RMS structures are valid.
158 0219 2 !-
159 0220 2 IF .RAB EQL 0
160 0221 2 THEN
161 0222 2 LIB$STOP (RPG$_FATINTERR); ! Error if RAB addr = 0
162 0223 2
163 0224 2 FAB = .RAB[RAB$$_FAB]; ! Fetch FAB address
164 0225 2 IF .FAB EQL 0
165 0226 2 THEN
166 0227 2 LIB$STOP (RPG$_FATINTERR); ! Error if FAB addr = 0
167 0228 2
168 0229 2 NAM = .FAB[FAB$$_NAM]; ! Fetch addr of NAM block
169 0230 2 IF .NAM EQL 0
170 0231 2 THEN
171 0232 2 LIB$STOP (RPG$_FATINTERR); ! Error if addr of NAM block = 0
172 0233 2
173 0234 2 !+
174 0235 2 ! Fetch the address and length of the RSA as defined in the NAM block.
175 0236 2 ! If the length field is zero, then fetch the extended string length field.
176 0237 2 ! If that too has a zero length, then just use the FAB file name string
177 0238 2 ! name and string length.
178 0239 2 !-
179 0240 2
180 0241 2 RSADESC[0] = .NAM[NAM$$_RSL]; ! Resultant string length
181 0242 2 IF .RSADESC[0] EQL 0
182 0243 2 THEN
183 0244 2 BEGIN
184 0245 2
185 0246 2 RSADESC[0] = .NAM[NAM$$_ESL]; ! Expanded string length
186 0247 2 IF .RSADESC[0] EQL 0
187 0248 2 THEN
188 0249 2 BEGIN
189 0250 2
190 0251 2 RSADESC[0] = .FAB[FAB$$_DNS]; ! Default file spec string length
191 0252 2 RSADESC[1] = .FAB[FAB$$_DNA]; ! Default file spec string addr
192 0253 2
193 0254 2 END
194 0255 2 ELSE
195 0256 2 RSADESC[1] = .NAM[NAM$$_ESA]; ! Expanded string addr
196 0257 2
197 0258 2 END
198 0259 2 ELSE
199 0260 2 RSADESC[1] = .NAM[NAM$$_RSA]; ! Resultant string addr
200 0261 2

```

```

201 0262 2
202 0263 2
203 0264 2
204 0265 2
205 0266 2
206 0267 2
207 0268 2
208 0269 2
209 0270 2
210 0271 2
211 0272 2
212 0273 2
213 0274 3
214 0275 3
215 0276 3
216 0277 3
217 0278 3
218 0279 3
219 0280 3
220 0281 3
221 0282 4
222 0283 4
223 0284 4
224 0285 4
225 0286 4
226 0287 4
227 0288 4
228 0289 4
229 0290 4
230 0291 4
231 0292 4
232 0293 4
233 0294 4
234 0295 3
235 0296 4
236 0297 4
237 0298 4
238 0299 4
239 0300 4
240 0301 4
241 0302 4
242 0303 4
243 0304 4
244 0305 4
245 0306 4
246 0307 4
247 0308 4
248 0309 3
249 0310 3
250 0311 3
251 0312 3
252 0313 3
253 0314 4
254 0315 4
255 0316 4
256 0317 4
257 0318 4

!+
!- Case on retrieve indicator.
!-
CASE .FLAGS[RETRIEVE] FROM RPG$K_ERR_RAB TO RPG$K_ERR_FILE_CNTXT OF
  SET
    .JUTRANGE]: ! Invalid value
    LIB$STOP (RPG$FATINTERR);
  [RPG$K_ERR_RAB, RPG$K_ERR_FAB]: ! RMS RAB/FAB error
  BEGIN
    !+
    !- RMS error. Pick up the appropriate STS and STV.
    !-
    IF .FLAGS[RETRIEVE] EQL RPG$K_ERR_RAB ! Check specifically for RAB error
    THEN
      BEGIN
        !+
        !- Here we know that we have a RAB error.
        !-
        IF .RAB[RAB$S_STS] EQL 0 !\If status of RAB = 0
        THEN ! then signal a
          LIB$STOP (RPG$FATINTERR); !/fatal internal error.
          RMS_STS = .RAB[RAB$S_STS]; ! Load status code from RAB
          RMS_STV = .RAB[RAB$S_STV]; ! Load status value from RAB
        END
      ELSE
      BEGIN
        !+
        !- Here we know that we have a FAB error.
        !-
        IF .FAB[FAB$S_STS] EQL 0 !\If status of FAB = 0,
        THEN ! then signal a
          LIB$STOP (RPG$FATINTERR); !/fatal internal error.
          RMS_STS = .FAB[FAB$S_STS]; ! Load status code from FAB
          RMS_STV = .FAB[FAB$S_STV]; ! Load status value from FAB
        END;
      !+
      !- Map the STS value into the appropriate RPG file status.
      !-
      CONDITION = (SELECTONE .RMS_STS OF
        SET
          [RMS$_EOF]: RPG$_ENDOF_FIL;

```

```

: 258      0319  4      [RMS$_ISI]:      RPG$_EXTINDOFF;
: 259      0320  4
: 260      0321  4      [RMS$_REF]:      RPG$_KEYNOTMAT;
: 261      0322  4
: 262      0323  4      [RMS$_RNF]:      RPG$_KEYNOTFND;
: 263      0324  4
: 264      0325  4      [RMS$_SEQ]:      RPG$_NONASCKEY;
: 265      0326  4
: 266      0327  4      [RMS$_CUR]:      RPG$_UPDNO_CUR;
: 267      0328  4
: 268      0329  4      [OTHERWISE]:    0;
: 269      0330  4
: 270      0331  3      TES);
: 271      0332  3
: 272      0333  3      !+
: 273      0334  3      !- Signal the error.
: 274      0335  3
: 275      0336  3
: 276      0337  3      IF .CONDITION NEQ 0
: 277      0338  3      THEN
: 278      0339  3      LIB$STOP (.CONDITION, 0, RPG$_FORFILE, 1, RSADESC)
: 279      0340  3      ELSE
: 280      0341  3      LIB$STOP (.RMS_STS, .RMS_STV, RPG$_FORFILE, 1, RSADESC);
: 281      0342  3
: 282      0343  2      END;
: 283      0344  2
: 284      0345  2      [RPG$_ERR_FILE_CNTXT]:
: 285      0346  2
: 286      0347  2      !+
: 287      0348  2      !- Fetch condition value from the RPG$_CTX_ERROR field
: 288      0349  2      and signal the error.
: 289      0350  2
: 290      0351  2
: 291      0352  2      LIB$STOP (.RAB[RPG$_CTX_ERROR], 0, RPG$_FORFILE, 1, RSADESC);
: 292      0353  2
: 293      0354  2      TES;
: 294      0355  2
: 295      0356  1      END;

```

```

.TITLE  RPG$IOEXCEPTION Signal I/O errors
.IDENT  \1-003\

.EXTRN  LIB$STOP, RPG$_ENDOF_FIL
.EXTRN  RPG$_EXTINDOFF, RPG$_FATINTERR
.EXTRN  RPG$_FORFILE, RPG$_KEYNOTFND
.EXTRN  RPG$_KEYNOTMAT, RPG$_NONASCKEY
.EXTRN  RPG$_UPDNO_CUR

```

```

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

```

```

01FC 0000
58 0000C000G 8F D0 00002
57 00000000G 8F D0 00009
56 00000000G 00 9E 00010
5E          08 C2 00017
54          08 AC D0 0001A

```

```

.ENTRY  RPC$IOEXCEPTION, Save R2,R3,R4,R5,R6,R7,R8 : 0165
MOVL   #RPG$_FORFILE, R8
MOVL   #RPG$_FATINTERR, R7
MOVAB  LIB$STOP, R6
SUBL2  #8, SP
MOVL   RAB, R4 : 0220

```


			05	12	0001E	BNEQ	1\$				
			57	DD	00020	PUSHL	R7				0222
		66	01	FB	00022	CALLS	#1, LIB\$STOP				
		53	3C	A4	D0 00025	1\$:	MOVL	60(R4), FAB			0224
			05	12	00029	BNEQ	2\$				0225
			57	DD	0002B	PUSHL	R7				0227
		66	01	FB	0002D	CALLS	#1, LIB\$STOP				
		52	28	A3	D0 00030	2\$:	MOVL	40(FAB), NAM			0229
			05	12	00034	BNEQ	3\$				0230
			57	DD	00036	PUSHL	R7				0232
		66	01	FB	00038	CALLS	#1, LIB\$STOP				
		6E	03	A2	9A 0003B	3\$:	MOVZBL	3(NAM), RSADESC			0241
			18	12	0003F	BNEQ	5\$				0242
		6E	0B	A2	9A 00041	MOVZBL	11(NAM), RSADESC				0246
			0B	12	00045	BNEQ	4\$				0247
		6E	35	A3	9A 00047	MOVZBL	53(FAB), RSADESC				0251
		04	AE	30	A3	D0 0004B	MOVL	48(FAB), RSADESC+4			0252
				0C	11	00050	BRB	6\$			0247
		04	AE	0C	A2	D0 00052	4\$:	MOVL	12(NAM), RSADESC+4		0256
				05	11	00057	BRB	6\$			0242
		04	AE	04	A2	D0 00059	5\$:	MOVL	4(NAM), RSADESC+4		0260
55	04	AC	02	00	EF 0005E	6\$:	EXTZV	#0, #2, FLAGS, R5			0267
		00B8	01	55	CF 00064	CASEL	R5, #1, #2				
			00C	00C	00068	7\$:	.WORD	8\$-7\$, -			
								8\$-7\$, -			
								21\$-7\$			
								R7			0271
		66	01	FB	00070	CALLS	#1, LIB\$STOP				
				04	00073	RET					
01	04	AC	02	00	ED 00074	8\$:	CMPZV	#0, #2, FLAGS, #1			0280
				10	12	0007A	BNEQ	10\$			
				08	A4	D5 0007C	TSTL	8(R4)			0288
				05	12	0007F	BNEQ	9\$			
				57	DD	00081	PUSHL	R7			0290
		66	01	FB	00083	CALLS	#1, LIB\$STOP				
		51	08	A4	7D 00086	9\$:	MOVQ	8(R4), RMS_STS			0291
				0E	11	0008A	BRB	12\$			0280
				08	A3	D5 0008C	10\$:	TSTL	8(FAB)		0302
				05	12	0008F	BNEQ	11\$			
				57	DD	00091	PUSHL	R7			0304
		66	01	FB	00093	CALLS	#1, LIB\$STOP				
		51	08	A3	7D 00096	11\$:	MOVQ	8(FAB), RMS_STS			0305
		0001827A	8F	51	D1 0009A	12\$:	CML	RMS_STS, #98938			0317
				09	12	000A1	BNEQ	13\$			
		50	00000000G	8F	D0 000A3	MOVL	#RPG\$_ENDOF_FIL, CONDITION				
				5C	11	000AA	BRB	19\$			
		00018584	8F	51	D1 000AC	13\$:	CML	RMS_STS, #99716			0319
				09	12	000B3	BNEQ	14\$			
		50	00000000G	8F	D0 000B5	MOVL	#RPG\$_EXTINDOFF, CONDITION				
				4A	11	000BC	BRB	19\$			
		0001875C	8F	51	D1 000BE	14\$:	CML	RMS_STS, #100188			0321
				09	12	000C5	BNEQ	15\$			
		50	00000000G	8F	D0 000C7	MOVL	#RPG\$_KEYNOTMAT, CONDITION				
				38	11	000CE	BRB	19\$			
		000182B2	8F	51	D1 000D0	15\$:	CML	RMS_STS, #98994			0323
				09	12	000D7	BNEQ	16\$			
		50	00000000G	8F	D0 000D9	MOVL	#RPG\$_KEYNOTFND, CONDITION				

000186AC	8F	26 11 000E0	BRB	19\$		
		51 D1 000E2 16\$:	CMPL	RMS_STS, #100012		0325
	50 00000000G	09 12 000E9	BNEQ	17\$		
		8F D0 000EB	MOVL	#RPG\$_NONASCKEY, CONDITION		
000184B4	8F	14 11 000F2	BRB	19\$		
		51 D1 000F4 17\$:	CMPL	RMS_STS, #99508		0327
	50 00000000G	09 12 000FB	BNEQ	18\$		
		8F D0 000FD	MOVL	#RPG\$_UPDNO_CUR, CONDITION		
		02 11 00104	BRB	19\$		
		50 D4 00106 18\$:	CLRL	CONDITION		0329
		0C 13 00108 19\$:	BEQL	20\$		0337
		5E DD 0010A	PUSHL	SP		0339
		01 DD 0010C	PUSHL	#1		
		58 DD 0010E	PUSHL	R8		
		7E D4 00110	CLRL	-(SP)		
		50 DD 00112	PUSHL	CONDITION		
		15 11 00114	BRB	22\$		
		5E DD 00116 20\$:	PUSHL	SP		0341
		01 DD 00118	PUSHL	#1		
	0106	8F BB 0011A	PUSHR	#^M<R1,R2,R8>		
		0B 11 0011E	BRB	22\$		
		5E DD 00120 21\$:	PUSHL	SP		0352
		01 DD 00122	PUSHL	#1		
		58 DD 00124	PUSHL	R8		
		7E D4 00126	CLRL	-(SP)		
	F8	A4 DD 00128	PUSHL	-8(R4)		
	66	05 FB 0012B 22\$:	CALLS	#5, LIB\$STOP		
		04 0012E	RET			0356

: Routine Size: 303 bytes, Routine Base: _RPG\$CODE + U000

: 296 0357 1
 : 297 0358 0 END ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
_RPG\$CODE	303	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	18 0	581	00:01.0
_\$255\$DUA28:[RPGRTL.OBJ]RPGLIB.L32;1	54	4 7	9	00:00.1

RPG\$IOEXCEPTION Signal I/O errors
1-003 RPG\$IOEXCEPTION - Signal I/O errors

F 15
16-Sep-1984 02:16:13
14-Sep-1984 13:04:19

VAX-11 Bliss-32 V4.0-742
[RPGRTL.SRC]RPGIOEXCE.B32;1

Page 9
(4)

RF
1.

COMMAND QUALIFIERS

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

: Size: 303 code + 0 data bytes
: Run Time: 00:07.1
: Elapsed Time: 00:24.9
: Lines/CPU Min: 3038
: Lexemes/CPU-Min: 12857
: Memory Used: 92 pages
: Compilation Complete

