

[illegible]

[illegible]


```
1 0001 0 MODULE RPG$HANDLER ( %TITLE 'RPG error handler'
2 0002 0 IDENT = '1-003' ! FILE: RPGHANDLE.B32 EDIT:DG1003
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 ++
31 0031 1 FACILITY: RPGII SUPPORT
32 0032 1
33 0033 1 ABSTRACT: This procedure is the error handler for RPGII error
34 0034 1 conditions. It gets invoked as a result of a call
35 0035 1 to LIB$SIGNAL.
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 - Added conversion of COB$ error codes to RPG$ equivalents.
46 0046 1 DG 31-MAY-1983
47 0047 1 1-003 - Make sure conversion of error codes generated by COBOL to RPG$
48 0048 1 equivalents is only done when called by RPG$DSPLY. DG 12-OCT-1983
49 0049 1
50 0050 1 --
51 0051 1
52 0052 1 !<BLF/PAGE>
```

RPG\$HANDLER
1-003

RPG error handler
Declarations

D 14
16-Sep-1984 02:15:35
14-Sep-1984 13:04:18

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

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```

54 0053 1 %SBTTL 'Declarations'
55 0054 1 !+
56 0055 1 ! PROLOGUE FILE:
57 0056 1 !-
58 0057 1
59 0058 1 REQUIRE 'RTLIN:RPGPROLOG';           ! Switches, PSECTs, macros,
60 0123 1                                     ! linkages and LIBRARYs
61 0124 1
62 0125 1 !+
63 0126 1 ! LINKAGES
64 0127 1 !     NONE
65 0128 1 !-
66 0129 1
67 0130 1 !+
68 0131 1 ! TABLE OF CONTENTS:
69 0132 1 !-
70 0133 1
71 0134 1 FORWARD ROUTINE
72 0135 1     RPG$HANDLER ;
73 0136 1
74 0137 1 !+
75 0138 1 ! INCLUDE FILES
76 0139 1 !     NONE
77 0140 1 !-
78 0141 1
79 0142 1 !+
80 0143 1 ! MACROS
81 0144 1 !     NONE
82 0145 1 !-
83 0146 1
84 0147 1 !+
85 0148 1 ! EQUATED SYMBOLS
86 0149 1 !-
87 0150 1
88 0151 1 LITERAL
89 0152 1     CVTTP_OPCODE = %X'26';           ! Opcode value for CVTTP instruction
90 0153 1     CVTSP_OPCODE = %X'09';           ! Opcode value for CVTSP instruction
91 0154 1
92 0155 1 !+
93 0156 1 ! EXTERNAL REFERENCES
94 0157 1 !-
95 0158 1
96 0159 1 EXTERNAL ROUTINE
97 0160 1     LIB$SIGNAL ;                     ! Stop execution via signalling
98 0161 1
99 0162 1 EXTERNAL LITERAL
100 0163 1     COB$ _EOFON_ACC ;                ! EOF on ACCEPT
101 0164 1     COB$ _ERRDURACC ;                ! Error during ACCEPT
102 0165 1     COB$ _ERRDURDIS ;                ! Error during DISPLAY
103 0166 1     COB$ _INVARG ;                  ! Invalid argument
104 0167 1     RPG$ _ERRDURDSP ;                ! Error during DSPLY signal
105 0168 1     RPG$ _INVARG ;                  ! Invalid argument signal
106 0169 1     RPG$ _INVARRIND ;               ! Invalid array index signal
107 0170 1     RPG$ _INVNUMFLD ;               ! Invalid numeric field signal
108 0171 1
```


RPG\$HANDLER
1-003

RPG error handler
RPG\$HANDLER - RPG error handler

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[RPGRTL.SRC]RPGHANDLE.B32;1

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```

: 110 0172 1 %SBTTL 'RPG$HANDLER - RPG error handler'
: 111 0173 1 GLOBAL ROUTINE RPG$HANDLER(
: 112 0174 1 SIGNAL: REF BLOCK [,BYTE], ! Nature of the condition
: 113 0175 1 MECHANISM: REF BLOCK [,BYTE] ! State of process at time of signal
: 114 0176 1 )=
: 115 0177 1
: 116 0178 1 ++
: 117 0179 1
: 118 0180 1 FUNCTIONAL DESCRIPTION:
: 119 0181 1
: 120 0182 1 This routine is the error handler for RPGII error conditions.
: 121 0183 1 It gets invoked as a result of a call to LIB$SIGNAL.
: 122 0184 1
: 123 0185 1 CALLING SEQUENCE:
: 124 0186 1
: 125 0187 1 RPG$HANDLER (signal.rr.r, mechanism.rr.r)
: 126 0188 1
: 127 0189 1 FORMAL PARAMETERS:
: 128 0190 1
: 129 0191 1 signal Address of vector of longwords indicating
: 130 0192 1 the nature of condition.
: 131 0193 1
: 132 0194 1 mechanism Address of vector of longwords indicating
: 133 0195 1 the state of the process.
: 134 0196 1
: 135 0197 1 IMPLICIT INPUTS:
: 136 0198 1
: 137 0199 1 NONE
: 138 0200 1
: 139 0201 1 IMPLICIT OUTPUTS:
: 140 0202 1
: 141 0203 1 NONE
: 142 0204 1
: 143 0205 1 ROUTINE VALUE:
: 144 0206 1
: 145 0207 1 $$$_RESIGNAL
: 146 0208 1
: 147 0209 1 COMPLETION CODES:
: 148 0210 1
: 149 0211 1 NONE
: 150 0212 1
: 151 0213 1 SIDE EFFECTS:
: 152 0214 1
: 153 0215 1 NONE
: 154 0216 1
: 155 0217 1 NOTES:
: 156 0218 1
: 157 0219 1 The macro field references beginning with 'CHF' refer to
: 158 0220 1 condition handling argument list offsets.
: 159 0221 1
: 160 0222 1 --
```

RPG\$HANDLER
1-003

RPG error handler
RPG\$HANDLER - RPG error handler

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[RPGRTL.SRC]RPGHANDLE.B32;1

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```

162 0223 2 BEGIN
163 0224 2
164 0225 2 LOCAL
165 0226 2 CONDITION, ! Condition that was signalled
166 0227 2 USER_PC; ! Program counter where exception took
167 0228 2 ! place
168 0229 2
169 0230 2 !+
170 0231 2 ! Find out if it is a signal of interest.
171 0232 2 !-
172 0233 2
173 0234 2 CONDITION = .SIGNAL [CHF$SIG_NAME]; ! Fetch condition value from signal array
174 0235 2
175 0236 2 !+
176 0237 2 ! Select appropriate action based on which one we have.
177 0238 2 !-
178 0239 2
179 0240 2 SELECTONE .CONDITION OF
180 0241 2 SET
181 0242 2
182 0243 2 [SS$ROPRAND]: ! Was a SS$_ROPRAND
183 0244 2 BEGIN
184 0245 2
185 0246 2 !+
186 0247 2 ! Using the signal argument vector, extract
187 0248 2 ! the program counter at the time the
188 0249 2 ! SS$_ROPRAND occurred.
189 0250 2 !-
190 0251 2
191 0252 2 USER_PC = .SIGNAL [( .SIGNAL [CHF$SIG_ARGS] - 1 ) * %UPVAL, 0, %BPVAL, 0] ;
192 0253 2
193 0254 2 !+
194 0255 2 ! Check to see if a CVTTP or a CVTSP instruction
195 0256 2 ! was the generator of the signal. Note that the
196 0257 2 ! PC is pointing to the instruction that caused the
197 0258 2 ! fault.
198 0259 2 !-
199 0260 2
200 0261 2 IF ( ( .(USER_PC)<0,8> EQL CVTTP_OPCODE OR
201 0262 2 ( .(USER_PC)<0,8> EQL CVTSP_OPCODE )
202 0263 2 THEN
203 0264 2
204 0265 2 !+
205 0266 2 ! Set the first longword of the signal argument
206 0267 2 ! vector (the condition value field) to the
207 0268 2 ! condition being signalled. In this case, the
208 0269 2 ! condition is invalid decimal data.
209 0270 2 !-
210 0271 2
211 0272 2 SIGNAL [CHF$SIG_NAME] = RPG$_INVNUMFLD ;
212 0273 2
213 0274 2
214 0275 2 END ;
215 0276 2
216 0277 2 [SS$_SUBRNG]: ! Was a SS$_SUBRNG
217 0278 2 BEGIN
218 0279 2
```



```
219 0280
220 0281      + First make sure that the error occurred during a
221 0282      | call from RPG$DSPLY and not from a user subroutine
222 0283      -
223 0284
224 0285      IF .MECHANISM [CHF$L_MCH_DEPTH] EQL 0
225 0286      THEN
226 0287
227 0288      +
228 0289      | Set the first longword of the signal argument
229 0290      | vector (the condition value field) to the
230 0291      | condition being signalled. In this case, the
231 0292      | condition is subscript out of range.
232 0293      -
233 0294
234 0295      SIGNAL [CHF$L_SIG_NAME] = RPG$_INVARRIND; ! Set to RPG signal
235 0296
236 0297      END;
237 0298      [COB$_ERRDURACC,
238 0299      COB$_EOFON_ACC,
239 0300      COB$_ERRDURDIS]: ! Was an error during ACCEPT or DISPLAY
240 0301      BEGIN
241 0302
242 0303      +
243 0304      | Set the first longword of the signal argument
244 0305      | vector (the condition value field) to the
245 0306      | condition being signalled.
246 0307      -
247 0308
248 0309      SIGNAL [CHF$L_SIG_NAME] = RPG$_ERRDURDSP; ! Set to RPG signal
249 0310
250 0311      END;
251 0312      [COB$_INVARG]: ! Was a COB$_INVARG
252 0313      BEGIN
253 0314
254 0315      +
255 0316      | Set the first longword of the signal argument
256 0317      | vector (the condition value field) to the
257 0318      | condition being signalled.
258 0319      -
259 0320
260 0321      SIGNAL [CHF$L_SIG_NAME] = RPG$_INVARG; ! Set to RPG signal
261 0322
262 0323      END;
263 0324      [OTHERWISE]: ! No match occurred
264 0325      0; ! No change
265 0326
266 0327      TES;
267 0328
268 0329      +
269 0330      | Resignal the error with the signal name changed where
270 0331      | appropriate.
271 0332      -
272 0333
273 0334      RETURN SS$_RESIGNAL
274 0335
275 0336      END;
```

0173
0234
0243
0252
0261
0262
0272
0240
0277
0285
0295
0240
0298
0309
0240
0312
0321
0334
0336

```

: 276      0337 1
: 277      0338 1 END
: 278      0339 0 ELUDOM

```


RPG\$HANDLER
1-003

RPG error handler
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I 14
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PSECT SUMMARY

```
:
:      Name                Bytes                Attributes
:  _RPG$CODE              134  NOVEC,NOWRT, RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
```

Library Statistics

```
:
:      File                Total  Symbols  Percent  Pages  Processing
:                               Loaded  Time
:  $255$DUA28:[SYSLIB]STARLET.L32;1      9776      6      0      581      00:01.0
:  $255$DUA28:[RPGRTL.OBJ]RPGLIB.L32;1    54       0      0       9      00:00.1
```

COMMAND QUALIFIERS

```
:
:  BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LISS:RPGHANDLE/OBJ=OBJ$:RPGHANDLE MSRC$:RPGHANDLE/UPDATE=(ENH$:RPGHANDLE
:  )
```

```
: Size:          134 code + 0 data bytes
: Run Time:      00:04.7
: Elapsed Time:  00:18.1
: Lines/CPU Min: 4336
: Lexemes/CPU-Min: 8891
: Memory Used:  51 pages
: Compilation Complete
```


0331

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