
SSSSSSSSSSS DDDDDDDDDDD AAAAAAAAA
SSSSSSSSSSS DDDDDDDDDDD AAAAAAAAA
SSSSSSSSSSS DDDDDDDDDDD AAAAAAAAA
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SSS DDD DDD AAA AAA
SSSSSSSSSSS DDDDDDDDDDD AAA AAA
SSSSSSSSSSS DDDDDDDDDDD AAA AAA
SSSSSSSSSSS DDDDDDDDDDD AAA AAA

FILEID**HANDLER


```
HH      HH    AAAAAA    NN      NN  DDDDDDDD    LL          EEEEEEEEEE  RRRRRRRR
HH      HH    AAAAAA    NN      NN  DDDDDDDD    LL          EEEEEEEEEE  RRRRRRRR
HH      HH  AA      AA  NN      NN  DD      DD  LL          EE          RR      RR
HH      HH  AA      AA  NN      NN  DD      DD  LL          EE          RR      RR
HH      HH  AA      AA  NNNN    NN  DD      DD  LL          EE          RR      RR
HH      HH  AA      AA  NNNN    NN  DD      DD  LL          EE          RR      RR
HHHHHHHHHH  AA      AA  NN  NN  NN  DD      DD  LL          EEEEEEEE    RRRRRRRR
HHHHHHHHHH  AA      AA  NN  NN  NN  DD      DD  LL          EEEEEEEE    RRRRRRRR
HH      HH  AAAAAAAAAA  NN    NNNN  DD      DD  LL          EE          RR  RR
HH      HH  AAAAAAAAAA  NN    NNNN  DD      DD  LL          EE          RR  RR
HH      HH  AA      AA  NN      NN  DD      DD  LL          EE          RR    RR        ....
HH      HH  AA      AA  NN      NN  DD      DD  LL          EE          RR    RR        ....
HH      HH  AA      AA  NN      NN  DDDDDDDD    LLLLLLLLLL  EEEEEEEEEE  RR      RR      ....
HH      HH  AA      AA  NN      NN  DDDDDDDD    LLLLLLLLLL  EEEEEEEEEE  RR      RR      ....

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
```

Table of contents

```
0000     1          .TITLE  HANDLER EXCEPTION HANDLER
0000     2          .SBTTL  COPYRIGHT NOTICE
0000     3          .IDENT  'V04-000'
0000     4 ;
0000     5 ;**********************************************************************
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0000    25 ;*                                                                    *
0000    26 ;**********************************************************************
0000    27 ;
```

```
0000     29          .SBTTL  PROGRAM DESCRIPTION
0000     30 ;++
0000     31 ;   FACILITY
0000     32 ;
0000     33 ;       SYSTEM DUMP ANALYZER
0000     34 ;
0000     35 ;   ABSTRACT
0000     36 ;
0000     37 ;       THIS MODULE CONTAINS THE EXCEPTION HANDLER
0000     38 ;       FOR THE DUMP ANALYZER PROGRAM.  IT OUTPUTS
0000     39 ;       AN ERROR MESSAGE IF THE HANDLER WAS SIGNALED
0000     40 ;       FROM WITHIN THE PROGRAM.
0000     41 ;
0000     42 ;   ENVIRONMENT
0000     43 ;
0000     44 ;       NATIVE MODE, USER MODE
0000     45 ;
0000     46 ;   AUTHOR
0000     47 ;
0000     48 ;       TIM HALVORSEN, JULY 1978
0000     49 ;
0000     50 ;   MODIFIED BY
0000     51 ;
0000     52 ;       V004    TMH0004         Tim Halvorsen   04-Nov-1981
0000     53 ;               Fix handler to re-add the count of two (for the PC/PSL)
0000     54 ;               back to the signal vector, so that a resignal after the
0000     55 ;               PUTMSG doesn't screw up a later handler.
0000     56 ;
0000     57 ;       V003    MTR0001         Mike Rhodes     19-Jun-1981
0000     58 ;               A.  Check for internally signalled conditions, and act upon
0000     59 ;               them appropriately.
0000     60 ;
0000     61 ;                       B.      1.  Remove $SDAMSGDEF macro references.
0000     62 ;
0000     63 ;                               2.  Remove MSG macro and its associated MSG_TABLE.
0000     64 ;
0000     65 ;                               3.  Remove CMD_HANDLER entry point and code.
0000     66 ;
0000     67 ;                               4.  Remove private table search code, which now allows
0000     68 ;                               for uniform condition handling of all signals.
0000     69 ;
0000     70 ;       V002    TMH0002         Tim Halvorsen   07-Feb-1981
0000     71 ;               Do not convert unknown errors to fatals.
0000     72 ;               Add NOINSTRAN for instruction decode.
0000     73 ;
0000     74 ;       V001    TMH0001         Tim Halvorsen   19-Jan-1981
0000     75 ;               Add SPTNOTFND and modify SHORTDUMP to include the number
0000     76 ;               of blocks desired.  Make fatal errors return the error
0000     77 ;               status code in the final image R0.
0000     78 ;--
```

```
                        .SBTTL  DECLARATIONS
                ;
                ; SYMBOL DEFINTIONS
                ;
                $CHFDEF                 ; CONDITION HANDLING DEFINITIONS
                $STSDEF                 ; CONDITION VALUE FIELDS
```

```
                                0000     87          .SBTTL  HANDLER -- EXCEPTION HANDLER
                                0000     88 ;---
                                0000     89 ;
                                0000     90 ;       HANDLER
                                0000     91 ;
                                0000     92 ;       THIS EXCEPTION HANDLER IS RESPONSIBLE FOR TRAPPING
                                0000     93 ;       CONDITIONS SIGNALED WITHIN THE PROGRAM AND OUTPUTING
                                0000     94 ;       THE APPROPRIATE ERROR MESSAGE.
                                0000     95 ;
                                0000     96 ;   INPUTS:
                                0000     97 ;
                                0000     98 ;       4(AP) = POINTER TO SIGNAL ARGUMENTS
                                0000     99 ;       8(AP) = POINTER TO MECHANISM ARGUMENTS
                                0000    100 ;
                                0000    101 ;   OUTPUTS:
                                0000    102 ;
                                0000    103 ;       ERROR MESSAGE TO THE OUTPUT DEVICE
                                0000    104 ;
                                0000    105 ;---
                                0000    106
                                0000    107 HANDLER::
                         003C   0000    108          .WORD   ^M<R2,R3,R4,R5>
                                0002    109 ;
                                0002    110 ;       Check for INTERNALLY signalled conditions, upon receipt of one
                                0002    111 ;       unwind to the appropriate command level.
                                0002    112 ;
                    52   04 AC   7D   0002    113          MOVQ    4(AP),R2                ; GET ADDRESSES OF ARRAYS
                    55   04 A2   D0   0006    114          MOVL    CHF$L_SIG_NAME(R2),R5   ; FIND OUT IF ITS AN INTERNAL SIGNAL
               55   00000000'8F   D1   000A    115          CMPL    #MSG$_BACKUP,R5         ; BACK UP 1 COMMAND LEVEL
                              4E   13   0011    116          BEQL    25$
               55   00000000'8F   D1   0013    117          CMPL    #MSG$_EXITCMD,R5        ; ABORT COMMAND AND ERASE SCREEN
                              45   13   001A    118          BEQL    25$
               55   00000000'8F   D1   001C    119          CMPL    #MSG$_EOF,R5            ; INTERNAL END OF FILE SIGNAL
                              3C   13   0023    120          BEQL    25$
                                   0025    121
                                   0025    122 ;
                                   0025    123 ; MESSAGES ARE WRITTEN USING $PUTMSG
                                   0025    124 ;
               55   00000000'8F   D1   0025    125 80$:     CMPL    #SS$_UNWIND,R5          ; ARE WE UNWINDING?
                              3D   13   002C    126          BEQL    30$                     ; IF SO, SIMPLY RESIGNAL
                         62   02   C2   002E    127          SUBL    #2,CHF$L_SIG_ARGS(R2)   ; SUBTRACT PC,PSL FROM MESSAGE VECTOR
                                   0031    128          $PUTMSG_S MSGVEC=(R2)           ; OUTPUT THE MESSAGE
                         62   02   C0   0040    129          ADDL    #2,CHF$L_SIG_ARGS(R2)   ; RESTORE PC,PSL TO MESSAGE VECTOR
                    00 04 A2   1C   E2   0043    130          BBSS    #STS$V_INHIB_MSG,CHF$L_SIG_NAME(R2),15$ ; MARK MESSAGE OUTPUT
                                   0048    131 ;
                                   0048    132 ; ON WARNINGS, SIMPLY CONTINUE EXECUTION AT THE POINT OF THE SIGNAL
                                   0048    133 ;
               50   04 A2   03   00   EF   0048    134 15$:     EXTZV   #STS$V_SEVERITY,#STS$S_SEVERITY, -
                                   004E    135                      CHF$L_SIG_NAME(R2),R0   ; EXTRACT SEVERITY CODE
                         00   50   D1   004E    136          CMPL    R0,#STS$K_WARNING       ; CHECK IF ONLY WARNING
                              05   12   0051    137          BNEQ    20$                     ; BRANCH IF ERROR
                         50   00'8F   9A   0053    138          MOVZBL  #SS$_CONTINUE,R0        ; INDICATE TO CONTINUE
                                   04   0057    139          RET
                                   0058    140 ;
                                   0058    141 ; ON ERRORS, SET SUCCESS IN CALLER'S R0 AND UNWIND TO ESTABLISHER.
                                   0058    142 ;
                         02   50   D1   0058    143 20$:     CMPL    R0,#STS$K_ERROR         ; CHECK IF ERROR
```

```
                                                 I  3
                    0E   12  005B   144          BNEQ    30$                             ; BRANCH IF FATAL
            0C A3   01   D0  005D   145          MOVL    #1,CHF$L_MCH_SAVR0(R3)          ; SUCCESS AFTER UNWIND
                    7E   7C  0061   146 25$:     CLRQ    -(SP)                           ; GO BACK TO ESTABLISHER
00000000'GF     02   FB  0063   147          CALLS   #2,G^SYS$UNWIND                 ; UNWIND CALL FRAMES
                         04  006A   148          RET                                     ; RETURN TO ESTABLISHER
                             006B   149 ;
                             006B   150 ; ON FATALS, RESIGNAL THE CONDITION SO THAT THE IMAGE IS ABORTED
                             006B   151 ;
     50   0000'8F    3C  006B   152 30$:     MOVZWL  #SS$_RESIGNAL,R0                ; RESIGNAL CONDITION
                         04  0070   153          RET
```

```
                        0071    155
                        0071    156          .END
```

```
CHF$L_MCH_SAVRO= 0000000C
CHF$L_SIG_ARGS = 00000000
CHF$L_SIG_NAME = 00000004
HANDLER          00000000 RG    01
MSG$_BACKUP      ********   X   01
MSG$_EOF         ********   X   01
MSG$_EXITCMD     ********   X   01
SS$_CONTINUE     ********   X   01
SS$_RESIGNAL     ********   X   01
SS$_UNWIND       ********   X   01
STS$K_ERROR    = 00000002
STS$K_WARNING  = 00000000
STS$S_SEVERITY = 00000003
STS$V_INHIB_MSG= 0000001C
STS$V_SEVERITY = 00000000
SYS$PUTMSG       ********  GX   01
SYS$UNWIND       ********   X   01
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
. BLANK .	00000071 (113.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE
ABS	00000000 (0.)	02 (2.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.03	00:00:02.20
Command processing	107	00:00:00.46	00:00:03.61
Pass 1	140	00:00:00.87	00:00:08.69
Symbol table sort	0	00:00:00.02	00:00:00.47
Pass 2	48	00:00:00.27	00:00:01.21
Symbol table output	3	00:00:00.02	00:00:00.02
Psect synopsis output	1	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	330	00:00:01.69	00:00:16.45

The working set limit was 1200 pages.
5106 bytes (10 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 54 non-local and 5 local symbols.
156 source lines were read in Pass 1, producing 12 object records in Pass 2.
11 pages of virtual memory were used to define 10 macros.

```
                                  +----------------------------+
                                  ! Macro library statistics !
                                  +----------------------------+

Macro library name                 Macros defined
------------------                 --------------
_$255$DUA28:[SDA.OBJ]SDALIB.MLB;1             0
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                0
_$255$DUA28:[SYSLIB]STARLET.MLB;2             7
TOTALS (all libraries)                        7

123 GETS were required to define 7 macros

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:HANDLER/OBJ=OBJ$:HANDLER MSRC$:HANDLER/UPDATE=(ENH$:HANDLER)+EXECML$/LIB+LIB$:SDALIB/LIB
```

HANDLER
LIS

MAPPING
LIS

DUMP
LIS

MAIN
LIS

EXAMPSL
LIS

MMG
LIS

INDEX
LIS

LOCK
LIS

PARSE
LIS