

HHH	HHH	LLL	DDDDDDDDDDDDDD	
HHH	HHH	LLL	DDDDDDDDDDDDDD	
HHH	HHH	LLL	DDDDDDDDDDDDDD	
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHHHHHHHHHHHHHHHHH	LLL	DDD	DDD	
HHHHHHHHHHHHHHHHHH	LLL	DDD	DDD	
HHHHHHHHHHHHHHHHHH	LLL	DDD	DDD	
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLL	DDD	DDD
HHH	HHH	LLLLLLLLLLLLLLLL	DDDDDDDDDDDDDD	
HHH	HHH	LLLLLLLLLLLLLLLL	DDDDDDDDDDDDDD	
HHH	HHH	LLLLLLLLLLLLLLLL	DDDDDDDDDDDDDD	

```
HH      HH  LL      DDDDDDDD      IIIIII      000000
HH      HH  LL      DDDDDDDD      IIIIII      000000
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HHHHHHHHHH  LL      DD          DD      II      00      00
HHHHHHHHHH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DD          DD      II      00      00
HH      HH  LL      DDDDDDDD      IIIIII      000000
HH      HH  LL      DDDDDDDD      IIIIII      000000
```

```
....
....
....
....
```

```
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
```


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DECLARATIONS

```
0000 1      .TITLE  HLDIO - HLD I/O ROUTINES
0000 2      .IDENT  'V04-000'
0000 3
0000 4
0000 5 *****
0000 6
0000 7      *
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0000 25     *
0000 26     *****
0000 27
0000 28
0000 29     ++
0000 30     FACILITY: DECNET HOST LOADER (HLD)
0000 31
0000 32     ABSTRACT:
0000 33
0000 34     THIS MODULE IS RESPONSIBLE FOR RECEIVING AND TRANSMITTING
0000 35     OVER THE LOGICAL LINK TO SLD AND FOR PERFORMING DISK BLOCK
0000 36     READS AND WRITES.
0000 37
0000 38     ENVIRONMENT:
0000 39
0000 40     THE HLD IMAGE EXECUTES IN THE CONTEXT OF A PROCESS CREATED BY
0000 41     NETACP. IT RUNS IN USER MODE AND REQUIRES NETWORK PRIVILEGE.
0000 42
0000 43     AUTHOR: SCOTT G. DAVIS,          CREATION DATE: 11-MAY-79
0000 44
0000 45     MODIFICATIONS:
0000 46
0000 47     --
0000 48     .SBTTL  DECLARATIONS
0000 49
0000 50
0000 51     INCLUDE FILES:
0000 52
0000 53
0000 54     MACROS:
0000 55
0000 56     NONE
0000 57
```



```
0000 58 : EQUATED SYMBOLS:
0000 59 :
0000 60 :     NONE
0000 61 :
0000 62 : OWN STORAGE:
0000 63 :
0000 64 :     NONE
0000 65 :     .PSECT  HLD$CODE          NOSHR,EXE,RD,NOWRT
0000 66 :
0000 67 : ++
0000 68 : FUNCTIONAL DESCRIPTION:
0000 69 :
0000 70 :     HLD$RECEIVE ISSUES A QIO READ REQUEST WITH AN AST ON THE
0000 71 :     SPECIFIED LINK TO OBTAIN THE NEXT MESSAGE FROM THE OTHER NODE.
0000 72 :
0000 73 : CALLING SEQUENCE:
0000 74 :
0000 75 :     BSB/JSB HLD$RECEIVE
0000 76 :
0000 77 : INPUT PARAMETERS:
0000 78 :
0000 79 :     HLD$GW_IOFUNC - I/O FUNCTION CODE
0000 80 :     HLD$GL_IOPARAM1 - ADDRESS OF I/O P1
0000 81 :     HLD$GL_IOPARAM2 - I/O P2
0000 82 :
0000 83 : IMPLICIT INPUTS:
0000 84 :
0000 85 :     NONE
0000 86 :
0000 87 : OUTPUT PARAMETERS:
0000 88 :
0000 89 :     NONE
0000 90 :
0000 91 : IMPLICIT OUTPUTS:
0000 92 :
0000 93 :     NONE
0000 94 :
0000 95 : COMPLETION CODES:
0000 96 :
0000 97 :     WHATEVER $QIO SAYS
0000 98 :
0000 99 : SIDE EFFECTS:
0000 100 :
0000 101 :     NONE
0000 102 :
0000 103 : --
0000 104 :
0000 105 HLD$NET_IO::
0000 106     $QIOW_S -
0000 107     CHAN= W^HLD$GW_LNKCHN- ; ISSUE THE RECEIVE REQUEST
0000 108     FUNC= W^HLD$GW_IOFUNC- ;
0000 109     IOSB= W^HLD$GL_LNKIOSB- ;
0000 110     P1= @W^HLD$GL_IOPARAM1-
0000 111     P2= W^HLD$GL_IOPARAM2
0000 112     BSBH HLD$CHECK_SS ; CHECK THE SYSTEM SERVICE STATUS
0000 113     MOVZWL W^HLD$GL_LNKIOSB,R0 ; NOW CHECK THE IOSB
0000 114 ; FALL THROUGH TO CHECK IT

50      05      10 0025
0000'CF 3C 0027
002C 002C
```

```

002C 115
002C 116
002C 117 :++
002C 118 : FUNCTIONAL DESCRIPTION:
002C 119 :
002C 120 : HLD$CHECK_SS CHECKS THE STATUS CODE IN R0 FOLLOWING A CALL TO A
002C 121 : SYSTEM SERVICE. IF FAILURE IS INDICATED, THE IMAGE IS TERMINATED
002C 122 : WITH R0 AS THE EXIT COMPLETION CODE.
002C 123 :
002C 124 : CALLING SEQUENCE:
002C 125 :
002C 126 : BSB/JSB HLD$CHECK_SS
002C 127 :
002C 128 : INPUT PARAMETERS:
002C 129 :
002C 130 : R0 SYSTEM SERVICE STATUS CODE
002C 131 :
002C 132 : SIDE EFFECTS:
002C 133 :
002C 134 : IF THE SYSTEM SERVICE INDICATES FAILURE, THE IMAGE IS TERMINATED
002C 135 : WITH R0 AS THE EXIT COMPLETION CODE.
002C 136 :
002C 137 :
002C 138 :--
002C 139 :
002C 140 HLD$CHECK_SS:: : CONTROL POINT
03 50 E8 002C 141 B[BS R0,10$ : IF LBS OK
FFCE' 31 002F 142 BRW HLD$EXIT_TO_VMS : ERROR
05 0032 143 10$: :
0032 144 RSB : RETURN

```



```
0033 146 :++
0033 147 : FUNCTIONAL DESCRIPTION:
0033 148 :
0033 149 : HLD$RMS_OPEN - OPEN A FILE
0033 150 : HLD$RMS_CONNECT - CONNECT TO A RECORD STREAM
0033 151 :
0033 152 : CALLING SEQUENCE:
0033 153 :
0033 154 :     BCB/JSB HLD$RMS_OPEN/CONNECT
0033 155 :
0033 156 : INPUT PARAMETERS:
0033 157 :
0033 158 :     RO - FAB ADDRESS (OPEN) OR RAB ADDRESS (CONNECT)
0033 159 :
0033 160 : IMPLICIT INPUTS:
0033 161 :
0033 162 :     NONE
0033 163 :
0033 164 : OUTPUT PARAMETERS:
0033 165 :
0033 166 :     NONE
0033 167 :
0033 168 : IMPLICIT OUTPUTS:
0033 169 :
0033 170 :     NONE
0033 171 :
0033 172 : COMPLETION CODES:
0033 173 :
0033 174 :     NONE
0033 175 :
0033 176 : SIDE EFFECTS:
0033 177 :
0033 178 :     NONE
0033 179 :
0033 180 :--
0033 181 :
0033 182 HLD$RMS_CONNECT::
23 11 0033 183     $CONNECT          RAB=RO          : CONNECT THE STREAM
0033 184     BRB          HLD$CHECK_RMS      : CHECK OPERATION AND RETURN
0033 185
0033 186 HLD$RMS_OPEN::
18 11 0033 187     $OPEN          FAB=RO          : OPEN THE FILE
0047 188     BRB          HLD$CHECK_RMS      : CHECK OPERATION AND RETURN
```



```
0049 190 :++
0049 191 : FUNCTIONAL DESCRIPTION:
0049 192 :
0049 193 : HLD$DISK_READ - READ A BLOCK FROM THE TASK FILE
0049 194 : HLD$DISK_WRITE - WRITE A BLOCK TO THE TASK FILE
0049 195 :
0049 196 : CALLING SEQUENCE:
0049 197 :
0049 198 :     BSB/JSB HLD$DISK_READ/WRITE
0049 199 :
0049 200 : INPUT PARAMETERS:
0049 201 :
0049 202 :     NONE
0049 203 :
0049 204 : IMPLICIT INPUTS:
0049 205 :
0049 206 :     NONE
0049 207 :
0049 208 : OUTPUT PARAMETERS:
0049 209 :
0049 210 :     NONE
0049 211 :
0049 212 : IMPLICIT OUTPUTS:
0049 213 :
0049 214 :     NONE
0049 215 :
0049 216 : COMPLETION CODES:
0049 217 :
0049 218 :     NONE
0049 219 :
0049 220 : SIDE EFFECTS:
0049 221 :
0049 222 :     NONE
0049 223 :
0049 224 : --
0049 225 :
0049 226 HLD$DISK_WRITE::
0049 227     $WRITE  RAB=W^HLD$TSKRAB      : WRITE THE BLOCK
OB 11 0054 228     BRB    HLD$CHECK_RMS    : CHECK OPERATION AND RETURN
0056 229
0056 230 HLD$DISK_READ::
0056 231     $READ   RAB=W^HLD$TSKRAB      : READ THE BLOCK
0061 232                                     : FALL THROUGH TO CHECK RMS OPERATION
0061 233
0061 234 :++
0061 235 : FUNCTIONAL DESCRIPTION:
0061 236 :
0061 237 :     HLD$CHECK_RMS CHECKS THE COMPLETION CODE IN R0 FOLLOWING A CALL
0061 238 :     TO RMS. IF FAILURE (EXCEPT END-OF-FILE) IS INDICATED, THE IMAGE
0061 239 :     IS TERMINATED WITH R0 AS THE EXIT COMPLETION CODE.
0061 240 :
0061 241 : CALLING SEQUENCE:
0061 242 :
0061 243 :     BSB/JSB HLD$CHECK_RMS
0061 244 :
0061 245 : INPUT PARAMETERS:
0061 246 :
```



```

0061 247 :      R0      RMS COMPLETION CODE
0061 248 :
0061 249 :      IMPLICIT INPUTS:
0061 250 :
0061 251 :      NONE
0061 252 :
0061 253 :      OUTPUT PARAMETERS:
0061 254 :
0061 255 :      R1      COMPLETION CODE
0061 256 :
0061 257 :      IMPLICIT OUTPUTS:
0061 258 :
0061 259 :      NONE
0061 260 :
0061 261 :      COMPLETION CODES:
0061 262 :
0061 263 :      R1      0 = RMS COMPLETION CODE IS END-OF-FILE (RMS$_EOF)
0061 264 :      1 = SUCCESS
0061 265 :
0061 266 :      SIDE EFFECTS:
0061 267 :
0061 268 :      IF THE RMS COMPLETION CODE INDICATES FAILURE (EXCEPT END-OF-FILE),
0061 269 :      THE IMAGE IS TERMINATED WITH R0 AS THE EXIT COMPLETION CODE.
0061 270 :
0061 271 :      --
0061 272 :
0061 273 :      HLD$CHECK RMS::
0061 274 :      MOVL      #1,R1
0061 275 :      BLBS      R0,20$
0061 276 :      CMPW      R0,#<RMS$_EOF&^XFFFF>
0061 277 :      BNEQU     30$
0061 278 :      CLRL      R1
0061 279 :      RSB      20$:
0061 280 :      BRW      30$:
0061 281 :      HLD$EXIT_TO_VMS
0061 282 :      .END

51 01 D0 0061 274
09 50 E8 0064 275
0000'8F 50 B1 0067 276
03 12 006C 277
51 D4 006E 278
FF8C' 05 0070 279
31 0071 280
0074 281
0074 282

```

```

; CONTROL POINT
; SET RETURN CODE TO SUCCESS
; WAS RMS FUNCTION SUCCESSFUL?
; NO, CHECK FOR END-OF-FILE
; IF NEQU ERROR
; INDICATE END-OF-FILE CONDITION
; EXIT
; ERROR

```


HLDIO
Symbol table

- HLD I/O ROUTINES

E 3

16-SEP-1984 01:41:12 VAX/VMS Macro V04-00
5-SEP-1984 01:28:25 [HLD.SRC]HLDIO.MAR;1

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```

$$TMP1      = 00000001
$$TMP2      = 000000CF
$$T1        = 00000001
HLD$CHECK_RMS 00000061 RG 01
HLD$CHECK_SS  0000002C RG 01
HLD$DISK_READ 00000056 RG 01
HLD$DISK_WRITE 00000049 RG 01
HLD$EXIT_TO_VMS ***** X 01
HLD$GL_IOPARAM1 ***** X 01
HLD$GL_IOPARAM2 ***** X 01
HLD$GQ_LNKIOSB ***** X 01
HLD$GW_IOFUNC ***** X 01
HLD$GW_LNKCHN ***** X 01
HLD$NET_IO    00000000 RG 01
HLD$RMS_CONNECT 00000033 RG 01
HLD$RMS_OPEN   0000003E RG 01
HLD$TSKRAB     ***** X 01
RMS$ EOF       ***** X 01
SYSS$CONNECT   ***** GX 01
SYSS$OPEN      ***** GX 01
SYSS$QIOW      ***** GX 01
SYSS$READ      ***** GX 01
SYSS$WRITE     ***** GX 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
HLD\$CODE	00000074 (116.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.09	00:00:00.89
Command processing	119	00:00:00.69	00:00:05.91
Pass 1	131	00:00:01.31	00:00:08.38
Symbol table sort	0	00:00:00.01	00:00:00.01
Pass 2	60	00:00:00.62	00:00:02.38
Symbol table output	3	00:00:00.03	00:00:00.03
Psect synopsis output	1	00:00:00.01	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	346	00:00:02.77	00:00:17.62

The working set limit was 900 pages.
5070 bytes (10 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 23 non-local and 3 local symbols.
282 source lines were read in Pass 1, producing 11 object records in Pass 2.
10 pages of virtual memory were used to define 9 macros.

! Macro library statistics !

Macro library name	Macros defined
-----	-----
\$255\$DUA28:[HLD.OBJ]HLD.MLB;1	0
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	9
TOTALS (all libraries)	9

106 GETS were required to define 9 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:HLDIO/OBJ=OBJ\$:HLDIO MSRC\$:HLDIO/UPDATE=(ENH\$:HLDIO)+LIB\$:HLD/LIB

0186 AH-BT13A-SE
VAX/VMS V4.0

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