


```

CCCCCCCC  SSSSSSSS  PPPPPPPP  BBBB8888  RRRRRRRR  KK      KK  TTTTTTTTTT  HH      HH  RRRRRRRR
CCCCCCCC  SSSSSSSS  PPPPPPPP  BBBB8888  RRRRRRRR  KK      KK  TTTTTTTTTT  HH      HH  RRRRRRRR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CC         SS       PP      PP  BB      BB  RR      RR  KK      KK  TT      TT  HH      HH  RR      RR
CCCCCCCC  SSSSSSSS  PPPPPPPP  BBBB8888  RRRRRRRR  KK      KK  TTTTTTTTTT  HH      HH  RRRRRRRR
CCCCCCCC  SSSSSSSS  PPPPPPPP  BBBB8888  RRRRRRRR  KK      KK  TTTTTTTTTT  HH      HH  RRRRRRRR

```

```

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
LLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLL IIIIII  SSSSSSSS

```



```
0000 1 .TITLE CSPBRKTHRU
0000 2 .IDENT 'V04-000'
0000 3
0000 4 :*****
0000 5 :*
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0000 23 :*
0000 24 :*
0000 25 :*****
0000 26 :
0000 27 :++
0000 28 :
0000 29 : FACILITY: VMS Cluster Server Process
0000 30 :
0000 31 : ABSTRACT: Client support in CSP process for $BRKTHRU.
0000 32 :
0000 33 : AUTHOR: Jake VanNoy
0000 34 :
0000 35 : DATE: 22-APR-1983
0000 36 :
0000 37 : REVISION HISTORY:
0000 38 :
0000 39 : V03-003 ADE0001 Alan D. Eldridge 18-Jan-1984
0000 40 : Make call to $BRKTRHU asynchronous
0000 41 :
0000 42 : V03-002 JLV0298 Jake VanNoy 28-JUL-1983
0000 43 : Add $BRKDEF.
0000 44 :
0000 45 : V03-001 JLV0285 Jake VanNoy 28-JUL-1983
0000 46 : Make word values longwords before passing them to $BRKTHRU.
0000 47 :
0000 48 :--
```

CSPBRKTHRU
VG4-000

L 11

16-SEP-1984 01:11:47 VAX/VMS Macro V04-00 Page 2
5-SEP-1984 04:08:17 [SYSLOA.SRC]CSPBRKTHR.MAR;1 (2)

0000	50	\$BRKDEF
0000	51	\$CSDDEF
0000	52	

: Breakthru symbols
: CSP protocol offsets


```

0000 54
0000 55
0000 56 : R2 -> CSD from source
0000 57 :
0000 58
CSP$BRKTHRU:: ; Breakthru write routine
0000 59
0000 60
01FC 8F BB 0000 61 PUSHR #^M<R2,R3,R4,R5,R6,R7,R8>
0004 62
57 16 A2 DO 0004 63 MOVL CSD$L_SENDOFF(R2),R7 ; send data address
0008 64
58 5E DO 0008 65 MOVL SP,R8 ; Save SP
000B 66
00000800 8F CA 000B 67 BICL #BRK$M_CLUSTER,-
04 A7 0011 68 CSD$L_BRK_FLAGS(R7) ; Set no more cluster sends
0013 69
53 7E 7E 0013 70 MOVAQ -(SP),R3 ; allocate descriptor
63 1E A7 3C 0016 71 MOVZWL CSD$W_BRK_MSGLEN(R7),(R3) ; message length
04 A3 20 A7 9E 001A 72 MOVAB CSD$T_BRK_MSGBUF(R7),4(R3) ; and address
001F 73
54 7E 7E 001F 74 MOVAQ -(SP),R4 ; allocate descriptor
64 08 A7 9A 0022 75 MOVZBL CSD$T_BRK_SENDOFF(R7),(R4) ; message length
04 A4 09 A7 9E 0026 76 MOVAB CSD$T_BRK_SENDOFF+1(R7),4(R4) ; and address
002B 77
55 18 A7 3C 002B 78 MOVZWL CSD$W_BRK_SNDTYP(R7),R5 ; Send type
56 1A A7 3C 002F 79 MOVZWL CSD$W_BRK_REQID(R7),R6 ; Requestor ID
52 1C A7 3C 0033 80 MOVZWL CSD$W_BRK_TIMEOUT(R7),R2 ; time out value
0037 81
0037 82 $BRKTHRU S -
0037 83 MSGBUF = (R3),-
0037 84 FLAGS = CSD$L_BRK_FLAGS(R7),-
0037 85 CARCON = CSD$L_BRK_CARCON(R7),-
0037 86 TIMEOUT = R2,-
0037 87 REQID = R6,-
0037 88 SENDTO = (R4),-
0037 89 SNDTYP = R5,-
0037 90 ASTADR = CSP$$RESUME,-
0037 91 ASTPRM = CSP$GL_CURCTX
005D 92
5E 58 DO 005D 93 MOVL R8,SP ; Restore stack
01FC 8F BA 0060 94 POPR #^M<R2,R3,R4,R5,R6,R7,R8> ; Restore regs
07 50 E9 0064 95 BLBC R0,100$ ; If LBC, didn't queue request
00000000'EF 00 FB 0067 96 CALLS #0,CSP$$WAIT ; Else, wait for AST
006E 97
50 00000000'8F DO 006E 98 100$: MOVL #SS$_NORMAL,R0 ; Return success
05 0075 99 RSB ; Done
0076 100
0076 101 .END

```

```

$ST1 = 00000000
BRKSM_CLUSTER = 00000800
CDSL_BRK_CARCON = 00000000
CDSL_BRK_FLAGS = 00000004
CDSL_SENDOFF = 00000016
CDSL_BRK_MSGBUF = 00000020
CDSL_BRK_SENDOFF = 00000008
CDSL_BRK_MSGLEN = 0000001E
CDSL_BRK_REQID = 0000001A
CDSL_BRK_SNDTYP = 00000018
CDSL_BRK_TIMEOUT = 0000001C
CSP$$RESUME ***** X 01
CSP$$WAIT ***** X 01
CSP$BRKTHRU 00000000 RG 01
CSP$GL_CURCTX ***** X 01
SS$ NORMAL ***** X 01
SYS$BRKTHRU ***** 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
. BLANK :	00000076 (118.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE
\$AB\$\$	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	00:00:00.05	00:00:00.61
Command processing	112	00:00:00.42	00:00:04.84
Pass 1	151	00:00:01.43	00:00:06.94
Symbol table sort	0	00:00:00.09	00:00:00.09
Pass 2	35	00:00:00.32	00:00:01.22
Symbol table output	4	00:00:00.02	00:00:00.02
Psect synopsis output	0	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	334	00:00:02.35	00:00:13.74

The working set limit was 1200 pages.
 8791 bytes (18 pages) of virtual memory were used to buffer the intermediate code.
 There were 10 pages of symbol table space allocated to hold 135 non-local and 1 local symbols.
 101 source lines were read in Pass 1, producing 12 object records in Pass 2.
 14 pages of virtual memory were used to define 13 macros.

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

Macro library name	Macros defined
_\$255\$DUA28:[SYSLOA.OBJ]CLUSTER.MLB;1	1
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	0
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	9
TOTALS (all libraries)	10

251 GETS were required to define 10 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:CSPBRKTHR/OBJ=OBJ\$:CSPBRKTHR MSRC\$:CSPBRKTHR/UPDATE=(ENH\$:CSPBRKTHR)+EXECMLS/LIB+LIB\$:CLUSTER/LIB

0393 AH-BT13A-SE
VAX/VMS V4.0

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This image displays a grid of 150 terminal windows, arranged in 10 rows and 15 columns. Each window contains text-based data, likely representing system logs, utility outputs, or data listings. Several windows are highlighted with larger, bold text labels:

- CSPCALL LIS** (Row 2, Column 11)
- CSPUFMAS LIS** (Row 3, Column 15)
- CSP LIS** (Row 4, Column 8)
- CSPBKTHR LIS** (Row 6, Column 11)
- CONUTIL LIS** (Row 7, Column 5)
- CONSUBS LIS** (Row 8, Column 3)

The other windows in the grid contain smaller, less legible text, which appears to be a mix of system status reports, error messages, and data listings. The overall appearance is that of a multi-user terminal session on a VAX/VMS system.