


```

                CCCCCCCC      HH       HH       NN       NN       UU       UU       CCCCCCCC      BBBBBBBBBB
                CCCCCCCC      HH       HH       NN       NN       UU       UU       CCCCCCCC      BBBBBBBBBB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CC         HH       HH       NN       NN       UU       UU       CC         BB       BB
                CCCCCCCC      HH       HH       NN       NN       UU       UU       CCCCCCCC      BBBBBBBBBB
                CCCCCCCC      HH       HH       NN       NN       UU       UU       CCCCCCCC      BBBBBBBBBB
                .....
```

```

                LLLLLLLLLL      IIIIIII     SSSSSSSS
                LLLLLLLLLL      IIIIIII     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      IIIIIII     SSSSSSSS
                LLLLLLLLLL      IIIIIII     SSSSSSSS
```

```
0000 55 :  
0000 56 : ASSORTED MACROS USED IN FCP CODE  
0000 57 :  
0000 58 :  
0000 59 .MACRO SET_IPL LEVEL ; SET PROCESSOR IPL (DUMMY NOW)  
0000 60 .ENDM SET_IPL  
0000 61 :  
0000 62 : MACRO USED TO SIGNAL FATAL ERRORS (INTERNAL CONSISTENCY CHECKS).  
0000 63 :  
0000 64 .MACRO BUG_CHECK CODE, TYPE, MESSAGE  
0000 65 HALT ; SIMPLY CALL A HALT FOR NOW  
0000 66 .ENDM BUG_CHECK  
0000 67 :  
0000 68 : MACRO TO SIGNAL AN ERROR STATUS AND CONTINUE.  
0000 69 :  
0000 70 .MACRO ERROR CODE  
0000 71 MOVL #CODE, USER_STATUS  
0000 72 .ENDM ERROR  
0000 73 :  
0000 74 : MACRO TO SIGNAL AN ERROR STATUS AND EXIT.  
0000 75 :  
0000 76 .MACRO ERR_EXIT CODE  
0000 77 MOVZWL CODE, -(SP)  
0000 78 HALT ; UNTIL WE FIGURE THIS OUT  
0000 79 .ENDM ERR_EXIT  
0000 80 :  
0000 81 : TYPE CODES USED TO IDENTIFY BLOCKS BEING READ BY READ_BLOCK.  
0000 82 : NOTE THAT READ_BLOCK CONTAINS A TABLE INDEXED BY THESE CODES.  
0000 83 :  
00000000 0000 84 HEADER_TYPE = 0 ; FILE HEADER  
00000001 0000 85 BITMAP_TYPE = 1 ; STORAGE BITMAP  
00000002 0000 86 DIRECTORY_TYPE = 2 ; DIRECTORY BLOCK  
00000003 0000 87 INDEX_TYPE = 3 ; OTHER INDEX FILE BLOCKS  
0000 88 :  
0000 89 : TYPE CODES USED TO IDENTIFY BLOCKS OF MEMORY REQUESTED FROM THE  
0000 90 : ALLOCATOR. NOTE THAT THESE CODES INDEX INTO A TABLE IN ALLOCATE.  
0000 91 :  
00000000 0000 92 FCB_TYPE = 0 ; FILE CONTROL BLOCK  
00000001 0000 93 WCB_TYPE = 1 ; WINDOW BLOCK
```

```

0000 1      .TITLE  CHNUCB - GET ASSUGNED UCB ADDRESS OF CHANNEL
0000 2      .IDENT  'V04-000'
0000 3
0000 4
0000 5 *****
0000 6 *
0000 7 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 22 *  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0000 23 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28 ++
0000 29
0000 30 FACILITY:  F11ACP STRUCTURE LEVEL 1
0000 31
0000 32 ABSTRACT:
0000 33
0000 34 THIS ROUTINE RETURNS THE ADDRESS OF THE UCB ASSIGNED TO THE GIVEN
0000 35 CHANNEL.
0000 36
0000 37 ENVIRONMENT:
0000 38
0000 39 STARLET OPERATING SYSTEM, INCLUDING PRIVILEGED SYSTEM SERVICES
0000 40 AND INTERNAL EXEC ROUTINES. THIS ROUTINE MUST BE CALLED IN
0000 41 KERNEL MODE.
0000 42
0000 43 --
0000 44
0000 45 AUTHOR:  ANDREW C. GOLDSTEIN, CREATION DATE:  28-APR-1977  16:26
0000 46
0000 47 MODIFIED BY:
0000 48
0000 49 V02-000 ACG0167      Andrew C. Goldstein,  18-Apr-1980  13:40
0000 50 Previous revision history moved to MOUNT.REV
0000 51 **
0000 52
0000 53
0000 54 EQUATED SYMBOLS:
0000 55
00000004 0000 56 CHANNEL = 4 ; ADDRESS OF CHANNEL NUMBER ARG
0000 57

```

CHNUCB
V04-000

- GET ASSUGNED UCB ADDRESS OF CHANNEL^{F 4}

16-SEP-1984 00:59:24 VAX/VMS Macro V04-00
5-SEP-1984 02:03:26 [MOUNT.SRC]CHNUCB.MAR;1

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(1)

0000 58 \$CCBDEF

; DEFINE CHANNEL CONTROL BLOCK

CL
VC

.....

```

0000 60 :++
0000 61 :
0000 62 : FUNCTIONAL DESCRIPTION:
0000 63 :
0000 64 :     THIS ROUTINE RETURNS THE ADDRESS OF THE UCB ASSIGNED TO THE GIVEN
0000 65 :     CHANNEL.
0000 66 :
0000 67 : CALLING SEQUENCE:
0000 68 :     CALL     GET_CHANNELUCB (ARG1)
0000 69 :
0000 70 : INPUT PARAMETERS:
0000 71 :     ARG1: CHANNEL NUMBER
0000 72 :
0000 73 : IMPLICIT INPUTS:
0000 74 :     NONE
0000 75 :
0000 76 : OUTPUT PARAMETERS:
0000 77 :     NONE
0000 78 :
0000 79 : IMPLICIT OUTPUTS:
0000 80 :     NONE
0000 81 :
0000 82 : ROUTINE VALUE:
0000 83 :     NONE
0000 84 :
0000 85 : SIDE EFFECTS:
0000 86 :     NONE
0000 87 :
0000 88 :--
0000 89 :
00000000 90     .PSECT  $CODE$,NOWRT, LONG
0000 91
0000 92 GET_CHANNELUCB::
50 04 AC 003C 0000 93     .WORD  ^M<R2,R3,R4,R5>           ; SAVE REGISTERS
00000000'9F 16 0002 94     MOVL   CHANNEL(AP),R0           ; GET CHANNEL NUMBER
04 50 E8 0006 95     JSB    @#IOCSVERIFYCHAN       ; GET UCB WITH EXEC SUBROUTINE
50 61 D0 000C 96     BLBS   RO,10$                    ; BRANCH IF GOOD
0000 97     ERR_EXIT RO
0000 98 10$: MOVL   CCB$$_UCB(R1),R0         ; RETURN UCB ADDRESS AS VALUE
0000 99     RET
0017 100
0017 101
0017 102
0017 103     .END

```

```

BITMAP_TYPE = 00000001
CCBSL_UCB   = 00000000
CHANNEL     = 00000004
DIRECTORY_TYPE = 00000002
FCB_TYPE    = 00000000
GET_CHANNELUCB 00000000 RG 02
HEADER_TYPE  = 00000000
INDEX_TYPE   = 00000003
IOCSVERIFYCHAN ***** X 02
WCB_TYPE     = 00000001
    
```

 ! Psect synopsis !

| PSECT name | Allocation | PSECT No. | Attributes |
|------------|-----------------|-----------|---|
| . ABS | 00000000 (0.) | 00 (0.) | NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE |
| \$ABS\$ | 00000000 (0.) | 01 (1.) | NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE |
| \$CODE\$ | 00000017 (23.) | 02 (2.) | NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC LONG |

 ! Performance indicators !

| Phase | Page faults | CPU Time | Elapsed Time |
|------------------------|-------------|-------------|--------------|
| Initialization | 39 | 00:00:00.08 | 00:00:00.80 |
| Command processing | 128 | 00:00:00.70 | 00:00:03.66 |
| Pass 1 | 131 | 00:00:01.18 | 00:00:05.01 |
| Symbol table sort | 0 | 00:00:00.01 | 00:00:00.04 |
| Pass 2 | 42 | 00:00:00.52 | 00:00:02.39 |
| Symbol table output | 2 | 00:00:00.02 | 00:00:00.16 |
| Psect synopsis output | 2 | 00:00:00.02 | 00:00:00.07 |
| Cross-reference output | 0 | 00:00:00.00 | 00:00:00.00 |
| Assembler run totals | 347 | 00:00:02.53 | 00:00:12.13 |

The working set limit was 900 pages.
 3241 bytes (7 pages) of virtual memory were used to buffer the intermediate code.
 There were 10 pages of symbol table space allocated to hold 30 non-local and 1 local symbols.
 197 source lines were read in Pass 1, producing 13 object records in Pass 2.
 12 pages of virtual memory were used to define 11 macros.

 ! Macro library statistics !

| Macro library name | Macros defined |
|-------------------------------------|----------------|
| _\$255\$DUA28:[SYS.OBJ]LIB.MLB;1 | 1 |
| -\$255\$DUA28:[SYSLIB]STARLET.MLB;2 | 3 |
| TOTALS (all libraries) | 4 |

80 GETS were required to define 4 macros.
 There were no errors, warnings or information messages.

CHNUCB
VAX-11 Macro Run Statistics

- GET ASSUGNED UCB ADDRESS OF CHANNEL ^{I 4}

16-SEP-1984 00:59:24 VAX/VMS Macro V04-00
5-SEP-1984 02:03:26 [MOUNT.SRC]CHNUCB.MAR;1

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(2)

MACRO/LIS=LISS:CHNUCB/OBJ=OBJ\$:CHNUCB MSRC\$:FCPDEF/UPDATE=(ENH\$:FCPDEF)+MSRC\$:CHNUCB/UPDATE=(ENH\$:CHNUCB)+EXECMLS/LIB

CL
VO

