

```

NNN      NNN      EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  AAAAAAAAAAA  CCCCCCCCCCCC  PPPPPPPPPPPP
NNN      NNN      EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  AAAAAAAAAAA  CCCCCCCCCCCC  PPPPPPPPPPPP
NNN      NNN      EEEEEEEEEEEEEEE  TTTTTTTTTTTTTTT  AAAAAAAAAAA  CCCCCCCCCCCC  PPPPPPPPPPPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNNNNN   NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNNNNN   NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNNNNN   NNN      EEE              TTT              AAA              AAA  CCC              PPP      PPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCC              PPPPPPPPPPPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCC              PPPPPPPPPPPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCC              PPPPPPPPPPPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP
NNN      NNN      EEE              TTT              AAA              AAA  CCC              PPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCCCCCCCCCCC  PPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCCCCCCCCCCC  PPP
NNN      NNN      EEEEEEEEEEEEEEE  TTT              AAA              AAA  CCCCCCCCCCCC  PPP

```

NE
VO

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LL          IIIII
LL          IIIII
LL          II
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LL          II
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LL          II
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LL          II
LL          II
LL          II
LL          II
LLLLLLLLLLL IIIII
LLLLLLLLLLL IIIII
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SSSSSSSSS
SSSSSSSSS

```


(2) 49
(3) 85

DECLARATIONS
NETWORK OPERATOR MESSAGE FORMATTING

```
0000 1 .TITLE NETOPCOM - OPERATOR COMMUNICATIONS
0000 2 .IDENT 'V04-000'
0000 3 .DEFAULT DISPLACEMENT, LONG
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: NETWORK ACP
0000 31
0000 32 ABSTRACT:
0000 33 THIS MODULE IS USED TO SEND INFORMATIONAL MESSAGES TO THE NETWORK OPERATOR
0000 34
0000 35 ENVIRONMENT:
0000 36 MODE = EXEC
0000 37
0000 38 AUTHOR: SCOTT G. DAVIS, CREATION DATE: 13-APR-1980
0000 39
0000 40 MODIFIED BY:
0000 41
0000 42 V03-002 ADE0001 Alan D. Eldridge 19-Feb-1984
0000 43 Fix linkage truncation errors.
0000 44
0000 45 V001 TMH0001 Tim Halvorsen 13-Apr-1982
0000 46 Rewrite. Remove obsolete code.
0000 47 ---
```



```
0000 49 .SBTTL DECLARATIONS
0000 50 :
0000 51 : INCLUDE FILES:
0000 52 :
0000 53 $NDBDEF ; NETACP internal operator msg numbers
0000 54 $OPCDEF ; OPCOM message format
0000 55 $PCBDEF ; Process control block
0000 56 $PHDDEF ; Process header block
0000 57 :
0000 58 :
0000 59 : The messages sent by $SENDACC, $SENDERR, and $SENDOPR consist of
0000 60 : a common header followed by the user specified message. The
0000 61 : common header has the following format:
0000 62 :
0000 63 .WORD <message type>
0000 64 .WORD <reply mailbox channel #>
0000 65 .QUAD <sender's privilege mask>
0000 66 .LONG <sender's UIC>
0000 67 .BLKB <sender's USERNAME. 12 bytes, blank filled>
0000 68 .BLKB <sender's ACCOUNT. 8 bytes, blank filled>
0000 69 .BYTE <sender's base priority>
0000 70 .BYTE <unused>
0000 71 :
00000026 0000 72 SNDMSG_HDR = 38
0000 73 :
0000 74 :
0000 75 : OWN STORAGE:
0000 76 :
00000000 0000 77 .PSECT NET_PURE,NOWRT,NOEXE
0000 78 :
72 61 74 73 20 74 65 6E 43 45 44 00' 0000 79 START_MSG: .ASCIC /DECnet starting/
67 6E 69 74 000C
OF 0000
74 75 68 73 20 74 65 6E 43 45 44 00' 0010 80 SHUT_MSG: .ASCIC /DECnet shutting down/
6E 77 6F 64 20 67 6E 69 74 001C
14 0010
0025 81
0025 82
00000000 0000 83 .PSECT NET_CODE,NOWRT,EXE
```

```
0000 85 .SBTTL NETWORK OPERATOR MESSAGE FORMATTING
0000 86 :++
0000 87 : FUNCTIONAL DESCRIPTION:
0000 88 :
0000 89 : NET$OPCOM - FORMAT AND SEND OPERATOR MESSAGE
0000 90 :
0000 91 : CALLING SEQUENCE:
0000 92 :
0000 93 :     BSB     NET$OPCOM
0000 94 :
0000 95 : INPUT PARAMETERS:
0000 96 :
0000 97 :     R0 - Message code (NDB$C_MSG_xxx)
0000 98 :
0000 99 : SIDE EFFECTS:
0000 100 :
0000 101 :     MESSAGE SENT TO NETWORK OPERATOR
0000 102 :     R1,R2 - destroyed
0000 103 : --
0000 104 :
0000 105 NET$OPCOM::
0000 106     $DISPATCH R0,TYPE=B,<-
0000 107         <NDB$C_MSG_START,10$>,- ; Starting network
0000 108         <NDB$C_MSG_SHUT,20$>>; Shutting down network
0000 109     RSB ; If not recognized, ignore it
0000 110
51 00000000'EF 9E 0009 111 10$: MOVAB START_MSG,R1 ; Get startup message
0000 112 BRB 50$
51 00000010'EF 9E 0012 113 20$: MOVAB SHUT_MSG,R1 ; Get shutdown message
0000 114
0000 115 50$: PUSHR #^M<R2,R3,R4,R5,R6> ; Save registers
0000 116     MOVZBL (R1)+,R0 ; Make descriptor of message text
53 007C 8F BB 0019 117 ADDL3 #SNDMSG_HDR+OPC$L_MS_TEXT,R0,R3 ; Compute size of buffer needed
0000 118     SUBL R3,SP ; Allocate space for OPCOM message
0000 119     MOVL SP,R3 ; Point to buffer
0000 120     MOVQ R0,-(SP) ; Save descriptor of message text
0000 121 :
0000 122 : Prepare to send a message to the OPCOM mailbox. We must use the kernel
0000 123 : mode routine EXE$WRTMAILBOX rather than the $SNDOPR system service
0000 124 : because of some bad safety checks in the service which prevent it's use
0000 125 : from kernel mode.(it runs in EXEC mode, and makes sure that the buffer
0000 126 : isn't "less than" the executive mode stack, and of course, calling the
0000 127 : service from kernel mode means that it runs on the kernel stack instead).
0000 128 :
0000 129 : Build common SNDMSG mailbox header
0000 130 :
0000 131     MOVW #MSG$_OPRQST,(R3)+ ; INSERT MESSAGE TYPE
0000 132     CLRW (R3)+ ; INSERT REPLY MAILBOX CHANNEL NUMBER
56 00000000'GF D0 0034 133     MOVL G^CTL$GL_PCB,R6 ; GET ADDRESS OF PCB
0000 134     ASSUME PHD$Q_PRIVMSK EQ 0
0000 135     MOVQ @PCB$C_PHD(R6),(R3)+ ; INSERT PRIVILEGE MASK
0000 136     MOVL PCB$L_OIC(R6),(R3)+ ; INSERT UIC
63 00000000'GF 83 00BC C6 D0 003F 137     MOVCL #20,G^CTL$T_USERNAME,(R3) ; INSERT USER NAME AND ACCOUNT NAME
0000 138     SUBB3 PCB$B_PRI(R6),#31,(R3)+ ; INSERT BASE PRIORITY
0000 139     CLRB (R3)+ ; CLEAR SPARE BYTE
0000 140 :
0000 141 : Build OPCOM header
```


50	8E	7D	0053	142 ;	MOVQ	(SP)+,R0	; Restore descriptor of message text
			0053	143	ASSUME	OPC\$B_MS_TARGET EQ OPC\$B_MS_TYPE+1	; 3 bytes of operator mask
00004003	8F	D0	0056	144	MOVL	#OPC\$RQ-RQST!<OPC\$M-NM-NTWORK@8>,-	
	63		005C	146		OPC\$B_MS_TYPE(R3)	; Request type/opermask
08 A3	04 A3	D4	005D	147	CLRL	OPC\$L_MS-RQSTID(R3)	; No ID for message
	61 50	28	0060	148	MOVC	R0,(RT),OPC\$L_MS_TEXT(R3)	; Copy text into OPCOM message
	53 5E	C2	0065	149	SUBL	SP,R3	; Compute size of message
	54 5E	D0	0068	150	MOVL	SP,R4	; Set address of message
55	00000000'GF	9E	006B	151	MOVAB	G^YS\$GL OPRMBX,R5	; Get address of OPCOM mailbox UCB
	00000000'GF	16	0072	152	JSB	G^EXE\$WRTMAILBOX	; Send message to OPCOM mailbox
	5E 53	C0	0078	153	ADDL	R3,SP	; Deallocate message off stack
	007C 8F	BA	007B	154	POPR	#^M<R2,R3,R4,R5,R6>	; Restore registers
		05	007F	155	RSB		; DONE
			0080	156			
			0080	157	.END		

NETOPCOM
Symbol table

- OPERATOR COMMUNICATIONS

I 13

16-SEP-1984 01:27:10 VAX/VMS Macro V04-00
5-SEP-1984 02:21:29 [NETACP.SRC]NETOPCOM.MAR;1

Page 5
(3)

CTL\$GL PCB	*****	X	03
CTL\$T USERNAME	*****	X	03
EXE\$WRTMAILBOX	*****	X	03
MSG\$ OPRQST	*****	X	03
NDB\$C MSG_SHUT	= 00000002		
NDB\$C MSG_START	= 00000001		
NET\$OPCOM	00000000	RG	03
OPC\$B MS_TARGET	= 00000001		
OPC\$B MS_TYPE	= 00000000		
OPC\$L MS_RQSTID	= 00000004		
OPC\$L MS_TEXT	= 00000008		
OPC\$M NM_NETWORK	= 00000040		
OPC\$ RQ_RQST	= 00000003		
PCB\$B PRIB	= 0000002F		
PCB\$L PHD	= 0000006C		
PCB\$L UIC	= 000000BC		
PHD\$Q PRIVMSK	= 00000000		
SHUT MSG	00000010	R	02
SNDMSG HDR	= 00000026		
START MSG	00000000	R	02
SYSGE_OPRMBX	*****	X	03

+-----+
! Psect synopsis !
+-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$AB\$\$	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
NET_PURE	00000025 (37.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC BYTE
NET_CODE	00000080 (128.)	03 (3.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.06	00:00:00.48
Command processing	156	00:00:01.02	00:00:04.45
Pass 1	238	00:00:03.98	00:00:08.65
Symbol table sort	0	00:00:00.46	00:00:00.48
Pass 2	48	00:00:00.78	00:00:01.05
Symbol table output	4	00:00:00.04	00:00:00.04
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	479	00:00:06.37	00:00:15.17

The working set limit was 1200 pages.
19379 bytes (38 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 338 non-local and 8 local symbols.
157 source lines were read in Pass 1, producing 15 object records in Pass 2.
19 pages of virtual memory were used to define 17 macros.

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

Macro library name	Macros defined
-----	-----
-\$255\$DUA28:[SHRLIB]NMALIBRY.MLB;1	0
-\$255\$DUA28:[SHRLIB]EVCDEF.MLB;1	0
-\$255\$DUA28:[NETACP.OBJ]NETDRV.MLB;1	0
-\$255\$DUA28:[NETACP.OBJ]NET.MLB;1	0
-\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	2
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	5
TOTALS (all libraries)	9

457 GETS were required to define 9 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:NETOPCOM/OBJ=OBJ\$:NETOPCOM MSRC\$:NETOPCOM/UPDATE=(ENH\$:NETOPCOM)+EXECML\$/LIB+LIB\$:NET/LIB+LIB\$:NETDRV/LIB+SHRLIB\$:EVC

0278 AH-BT13A-SE
VAX/VMS V4.0

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