


```

NN      NN      TTTTTTTTTT      000000      DDDDDDDD      IIIIII      SSSSSSSS      PPPPPPPP      LL      YY      YY
NN      NN      TTTTTTTTTT      000000      DDDDDDDD      IIIIII      SSSSSSSS      PPPPPPPP      LL      YY      YY
NN      NN      TT      00      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NN      TT      00      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NNNN    NN      TT      00      0000      DD      DD      II      SS      PP      PP      LL      YY      YY
NNNN    NN      TT      00      0000      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NN      NN      TT      00      00      00      DD      DD      II      SSSSSS      PPPPPPPP      LL      YY      YY
NN      NN      NN      TT      00      00      00      DD      DD      II      SSSSSS      PPPPPPPP      LL      YY      YY
NN      NNNN     TT      0000      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NNNN     TT      0000      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NN      TT      00      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NN      TT      00      00      DD      DD      II      SS      PP      PP      LL      YY      YY
NN      NN      TT      00      000000      DDDDDDDD      IIIIII      SSSSSSSS      PP      LL      YY      YY
NN      NN      TT      000000      DDDDDDDD      IIIIII      SSSSSSSS      PP      LL      YY      YY

```

```

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
LLLLLLLLLLLL      IIIIII      SSSSSSSS
LLLLLLLLLLLL      IIIIII      SSSSSSSS

```

(2) 64
(3) 94

DECLARATIONS
NT\$DISPLAY - PERFORM NETWORK DISPLAY FUNCTION

```

0000 1          $BEGIN NTODISPLY,000,NF$NETWORK,<NETWORK DISPLAY>
0000 2
0000 3
0000 4
0000 5 :*****
0000 6 :*
0000 7 :*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 9 :*  ALL RIGHTS RESERVED.
0000 10 :*
0000 11 :*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
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0000 20 :*  CORPORATION.
0000 21 :*
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: RMS
0000 31 :
0000 32 : Abstract:
0000 33 :
0000 34 :     This module communicates with the file access listener at the remote
0000 35 :     node to display attributes of the specified file.
0000 36 :
0000 37 : Environment: VAX/VMS, executive mode
0000 38 :
0000 39 : Author: James A. Krycka,      Creation Date: 01-JUN-1981
0000 40 :
0000 41 : Modified By:
0000 42 :
0000 43 :     V03-003 JAK0134      J A Krycka      04-MAR-1984
0000 44 :     Correction to V03-001 to properly handle the receipt of a DAP
0000 45 :     Attributes message without a Name message in the sequence.
0000 46 :
0000 47 :     V03-002 JAK0130      J A Krycka      06-JAN-1984
0000 48 :     Return alternate success of RMS$ OK_NOP if remote system does
0000 49 :     not support the DAP DISPLAY function instead of an RMS$_SUPPORT
0000 50 :     error.
0000 51 :
0000 52 :     V03-001 KRM0094      K Malik        29-MAR-1983
0000 53 :     Request Resultant Name message and fill in user Name block
0000 54 :     (if appropriate).
0000 55 :
0000 56 :     V02-003 JAK0066      J A Krycka      07-OCT-1981
0000 57 :     Reject $DISPLAY request while in file transfer mode.

```

0000 58 :
0000 59 :
0000 60 :
0000 61 :
0000 62 :--

V02-002 JAK0063 J A Krycka 17-AUG-1981
Add support for the Revision Date and Time XAB.

```
0000 64 .SBTTL DECLARATIONS
0000 65
0000 66 :
0000 67 : Include Files:
0000 68 :
0000 69 :
0000 70 $DAPPLGDEF : Define DAP prologue symbols
0000 71 $DAPHDRDEF : Define DAP message header
0000 72 $DAPCNFDEF : Define DAP Configuration message
0000 73 $DAPACCDEF : Define DAP Access message
0000 74 $DAPCTLDEF : Define DAP Control message
0000 75 $IFBDEF : Define IFAB symbols
0000 76 $NWADEF : Define Network Work Area symbols
0000 77
0000 78 :
0000 79 : Macros:
0000 80 :
0000 81 : None
0000 82 :
0000 83 : Equated Symbols:
0000 84 :
0000 85 :
0000 86 ASSUME DAP$Q_DCODE_FLG EQ 0
0000 87
0000 88 :
0000 89 : Own Storage:
0000 90 :
0000 91 : None
0000 92 :
```

```

0000 94 .SBTTL NT$DISPLAY - PERFORM NETWORK DISPLAY FUNCTION
0000 95
0000 96 :++
0000 97 : NT$DISPLAY - engages in a DAP dialogue with the remote FAL to display
0000 98 : attributes of the specified file according to the XABs chained to the
0000 99 : FAB.
0000 100 :
0000 101 : Calling Sequence:
0000 102 :
0000 103 : BSBW NT$DISPLAY
0000 104 :
0000 105 : Input Parameters:
0000 106 :
0000 107 : R8 FAB address
0000 108 : R9 IFAB address
0000 109 : R10 IFAB address
0000 110 : R11 Impure Area address
0000 111 :
0000 112 : Implicit Inputs:
0000 113 :
0000 114 : User FAB
0000 115 : DAP$Q_SYSCAP
0000 116 : N$WASV_FTM_RETRV
0000 117 : N$WASV_FTM_STORE
0000 118 :
0000 119 : Output Parameters:
0000 120 :
0000 121 : R0 Status code (RMS)
0000 122 : R1-R7 Destroyed
0000 123 : AP Destroyed
0000 124 :
0000 125 : Implicit Outputs:
0000 126 :
0000 127 : User ALL, DAT, FHC, KEY, PRO, RDT, SUM XABs
0000 128 : User NAM (resultant name string)
0000 129 :
0000 130 : Completion Codes:
0000 131 :
0000 132 : Standard RMS completion codes
0000 133 :
0000 134 : Side Effects:
0000 135 :
0000 136 : None
0000 137 :
0000 138 : --
000C 139
0000 140 NT$DISPLAY:: : Entry point
0000 141 $STSTPT NTDISPLAY :
57 3C A9 D0 0006 142 MOVL IFBSL NWA PTR(R9),R7 : Get address of NWA (and DAP)
10 28 A7 E1 000A 143 BBC #DAP$Q_DISPLAY,- : Branch if remote FAL does not support
67 1A E0 000F 144 DAP$Q_SYSCAP(R7),ALTSUC : display attributes function
67 06 E0 0012 145 BBS #N$WASV_FTM_RETRV,(R7),- : Branch if file transfer mode retrieval
67 1B E0 0013 146 ERRFTM : in progress
02 0016 147 BBS #N$WASV_FTM_STORE,(R7),- : Branch if file transfer mode storage
0C 11 0017 148 ERRFTM : in progress
0019 0017 149 BRB BUILD_MASK : Proceed
0019 150 ERRFTM: RMSERR FTM : Declare file transfer mode error

```

```

05 001E 151          RSB          : Exit with RMS code in R0
    001F 152  ALTSUC: RMSERR  OK_NOP : Return alternate success code
05 0024 153          RSB          : Exit with RMS code in R0
    0025 154
    0025 155 :+
    0025 156 : Build display field request mask which will be used in the Control message
    0025 157 : to request that optional DAP messages be returned by FAL. For $DISPLAY these
    0025 158 : are the ATT, ALL, KEY, PRO, SUM, and TIM messages. (Note that the Attributes
    0025 159 : message will supply information to update the FHCXAB).
    0025 160 :-
    0025 161 :-
    0025 162
    0025 163 BUILD_MASK:          : Build N$ASW_DISPLAY
    56  D4 0025 164          CLRL   R6          : Indicate this is not a close operation
    FFD6' 30 0027 165          BSBW   NT$SCAN_XABCHN : Scan user XAB chain and check FAL's
    03 50  E8 002A 166          BLBS   R0,5$      : capabilities; request mask put in R2
    0085 31 002D 168          BRW    FAIL        : Branch on success
20 00C6 C7 91 0030 169 5$:    CMPB   N$ASB_ORG(R7),#N$ASK_IDX: Branch (failed to complete scan)
    03 13 0035 170          BEQL   10$         : Branch if IDX organization
    52 0A  AA 0037 171          BICW2 #<<DAP$M_DSP_SUM>!-- : Ignore these XABs in chain
    003A 172          <DAP$M_DSP_KEY>!--
    003A 173          0>,R2
    FFC3' 30 003A 174 10$:    BSBW   NT$SCAN_NAMBLK : Scan user NAM block and check
    75 50  E9 003D 175          BLBC   R0,FAIL   : FAL's capabilities; update
    0040 176          request mask
00D0 C7 52  B0 0040 177          MOVW   R2,N$ASW_DISPLAY(R7) : Save request mask
    6B 13 0045 178          BEQL   SUC         : Exit if there are no XABs to fill
    0047 179
    0047 180 :+
    0047 181 : Build and send DAP Control message to partner.
    0047 182 :-
    0047 183
    0047 184 SEND_CTL:          : (required message sequence)
    50 04  D0 004B 185          $SETBIT #N$ASV_LAST_MSG,(R7) : Declare this last message to block
    FFAF' 30 004E 187          MOVL   #DAP$K_CTL_MSG,R0 : Get message type value
    85 10  90 0051 188          BSBW   NT$BUICD_HEAD : Construct message header
    85 20  90 0054 189          MOVB   #DAP$K_DISPLAY,(R5)+ : Store CTLFUNC field
51 00D0 C7 3C 0057 190          MOVB   #DAP$M_DISPLAY2,(R5)+ : Store CTLMENU field
    FFA1' 30 005C 191          MOVZWL N$ASW_DISPLAY(R7),R1 : Get request mask
    FF9E' 30 005F 192          BSBW   NT$CVT_BN4_EXT : Store DISPLAY as an extensible field
    FF9B' 30 0062 193          BSBW   NT$BUICD_TAIL : Finish building message
    4D 50  E9 0065 194          BSBW   NT$TRANSMIT : Send Control message to FAL
    0068 195          BLBC   R0,FAIL : Branch on failure
    0068 196 :+
    0068 197 : Receive DAP Attributes message from partner and update the user FHCXAB.
    0068 198 :-
    0068 199
    0068 200 RECV_ATT:          : (optional--must be requested)
    00D0 00  E1 0068 201          BBC    #DAP$V_DSP_ATT,- : Branch if Attributes message was not
    006A 202          N$ASW_DISPLAY(R7),- : requested
    006D 203          RECV_EXT_ATT
    006E 204          $SETBIT #DAP$K_ATT_MSG,DAP$M_MASK(R7)
    0073 205          : Expect response of Attributes message
    FF8A' 30 0073 206          BSBW   NT$RECEIVE : Get reply from FAL
    3C 50  E9 0076 207          BLBC   R0,FAIL : Branch on failure

```



```

FF84' 30 0079 208          BSBW  NTSUPDATE_FHC          ; Update user FHCXAB
      007C 209
      007C 210 :+
      007C 211 : Receive DAP Extended Attributes messages from partner and update the user
      007C 212 : ALL, DAT, KEY, PRO, RDT, and SUM XABs.
      007C 213 :-
      007C 214
      007C 215 RECV_EXT_ATT:          ; (optional--must be requested)
FF81' 30 007C 216          BSBW  NTSRECV_EXT_ATT        ; Process Extended Attributes messages
33 50  E9 007F 217          BLBC  RO,FAIL              ; Branch on failure
      0082 218
      0082 219 :+
      0082 220 : Receive DAP Resultant Name message from partner.
      0082 221 :-
      0082 222
      0082 223 RECV_NAME:          ; (optional--must be requested)
      0082 224          BBC      #DAP$V_DSP_NAM,-        ; Branch if Name message was not
00D0 08  E1 0082 225          NWSW_DISP[AY(R7),-        ; requested
      C7 0084 226          RECV_ACK
      1F 0087 227          $SETBIT #DAP$K_NAM_MSG,DAP$L_MSG_MASK(R7)
      0088 228          ; Expect response of Name message
      008D 229          BSBW  NTSRECEIVE                ; Get reply from FAL
      FF70' 30 008D 229          BLBC  RO,FAIL              ; Branch on failure
22 50  E9 0090 230          MOVL  IFB$F_FWA_PTR(R9),R10   ; Get FWA address (NT$DECODE_NAM needs
5A 38 A9  D0 0093 231          BSBW  NTSDECODE_NAM        ; it) & process resultant name string
      FF66' 30 0097 232          BSBW  RMSFILLNAM          ; Fill in user NAM block (destroys R7)
      FF63' 30 009A 233          BLBC  RO,FAIL              ; Branch on failure
15 50  E9 009D 234          MOVL  IFB$L_NWA_PTR(R9),R7    ; Restore NWA address
57 3C A9  D0 00A0 235          MOVL  R9,R10              ; Restore IFAB address
      SA 59  D0 00A4 236          ;
      00A7 237
      00A7 238 :+
      00A7 239 : Receive DAP Acknowledge message from partner.
      00A7 240 :-
      00A7 241
      00A7 242 RECV_ACK:          ; (required message)
      00A7 243          $SETBIT #DAP$K_ACK_MSG,DAP$L_MSG_MASK(R7)
      00AC 244          ; Expect response of Acknowledge message
      FF51' 30 00AC 245          BSBW  NTSRECEIVE                ; Get reply from FAL
03 50  E9 00AF 246          BLBC  RO,FAIL              ; Branch on failure
      00B2 247 SUC:  RMSSUC          ; Return success
      05 00B5 248 FAIL: RSB          ; Exit with RMS code in R0
      00B6 249
      00B6 250          .END          ; End of module

```

SS.PSECT_EP = 0C000000
SSRMSTEST = 0000001A
SSRMS_PBUGCHK = 00000010
SSRMS_TBUGCHK = 00000008
SSRMS_UMODE = 0C000004
ALTSUC = 0000001F R 01
BUILD_MASK = 00000025 R 01
DAPSB_ACCFUNC = 00000040
DAPSB_ACCOPT = 00000041
DAPSB_BITCNT = 00000035
DAPSB_BLKCNT = 00000056
DAPSB_CTLFUNC = 00000040
DAPSB_DCODE_FID = 00000019
DAPSB_DCODE_MAC = 0000001B
DAPSB_DCODE_MSG = 0000001A
DAPSB_DECVER = 00000047
DAPSB_ECONUM = 00000045
DAPSB_FAC = 00000042
DAPSB_FILESYS = 00000043
DAPSB_FLAGS = 00000031
DAPSB_KRF = 00000047
DAPSB_LEN256 = 00000034
DAPSB_LENGTH = 00000033
DAPSB_OSTYPE = 00000042
DAPSB_RAC = 00000046
DAPSB_SHR = 00000043
DAPSB_STREAMID = 00000032
DAPSB_TYPE = 00000030
DAPSB_USRNUM = 00000046
DAPSB_USRVER = 00000048
DAPSB_VERNUM = 00000044
DAPSB_X_FIELD = 00000024
DAPSC_BCN = 000000C0
DAPSK_ACF_MSG = 00000006
DAPSK_ATT_MSG = 00000002
DAPSK_BLN = 000000C0
DAPSK_CTL_MSG = 00000004
DAPSK_DISPLAY = 00000010
DAPSK_NAM_MSG = 0000000F
DAPSK_SEQ_ACC = 00000000
DAPSL_CMWA = 00000030
DAPSL_CRC_RSLT = 00000020
DAPSL_DCODE_STS = 00000018
DAPSL_MSG_MASK = 0000001C
DAPSL_ROP = 00000050
DAPSL_SSPWA = 00000080
DAPSL_TEMP = 00000090
DAPSM_BITCNT = 00000008
DAPSM_BLKCNT = 00000040
DAPSM_DISPLAY2 = 00000020
DAPSM_DSP_3NAM = 00000200
DAPSM_DSP_KEY = 00000002
DAPSM_DSP_SUM = 00000008
DAPSM_GET = 00000002
DAPSM_GO_NOGO = 00000010
DAPSM_MSE = 00000010
DAPSM_SEGMENT = 00000040

DAPSM_TMP1\$ = 00000008
DAPSM_TMP2\$ = FFF80000
DAPSQ_DCODE_FLG = 00000000
DAPSQ_FILESPEC = 00000044
DAPSQ_KEY = 00000048
DAPSQ_MSG_BUF1 = 00000008
DAPSQ_MSG_BUF2 = 00000010
DAPSQ_PASSWORD = 00000050
DAPSQ_SYSCAP = 00000028
DAPSQ_SYSPEC = 00000038
DAPSV_DISPLAY = 00000011
DAPSV_DSP_ATT = 00000000
DAPSV_DSP_NAM = 00000008
DAPSW_BUF51Z = 00000040
DAPSW_CTLMENU = 00000044
DAPSW_DISPLAY1 = 0000004C
DAPSW_DISPLAY2 = 00000054
DAPSW_PARTNER = 00000006
DAPSW_VERSION = 00000004
ERRFTM = 00000019 R 01
FAIL = 000000B5 R 01
IFBSL_FWA_PTR = 00000038
IFBSL_NWA_PTR = 0000003C
NT\$BUILD_READ = ***** X 01
NT\$BUILD_TAIL = ***** X 01
NT\$CVT_BN4_EXT = ***** X 01
NT\$DECODE_NAM = ***** X 01
NT\$DISPLAY = 00000000 RG 01
NT\$RECEIVE = ***** X 01
NT\$RECV_EXT_ATT = ***** X 01
NT\$SCAN_NAMBLK = ***** X 01
NT\$SCAN_XABCHN = ***** X 01
NT\$TRANSMIT = ***** X 01
NT\$UPDATE_FHC = ***** X 01
NWSB_ALL_XABCNT = 0000011C
NWSB_DAP_RAC = 000000C9
NWSB_FILESYS = 000000C5
NWSB_KEY_XABCNT = 0000011D
NWSB_NETSTRS1Z = 0000016F
NWSB_NODBUFS1Z = 00000168
NWSB_ORG = 000000C6
NWSB_OSTYPE = 000000C4
NWSB_RFM = 000000C7
NWSB_RMS_RAC = 000000C8
NWSB_BLN = 00000800
NWSK_BLN = 00000800
NWSK_IDX = 00000020
NWSL_ALL_XABADR = 00000100
NWSL_DAT_XABADR = 00000104
NWSL_DEV = 000000C0
NWSL_FHC_XABADR = 00000108
NWSL_KEY_XABADR = 0000010C
NWSL_MSG_MASK = 000000D4
NWSL_PROXABADR = 00000110
NWSL_RDT_XABADR = 00000114
NWSL_SAVE_FLGS = 00000128
NWSL_SUM_XABADR = 00000118

! Psect synopsis !

| PSECT name | Allocation | PSECT No. | Attributes |
|------------|-------------------|-----------|---|
| . ABS | 00000000 (0.) | 00 (0.) | NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE |
| NFSNETWORK | 000000B6 (182.) | 01 (1.) | PIC USR CON REL GBL NOSHR EXE RD NOWRT NOVEC BYTE |
| %ABSS | 00000800 (2048.) | 02 (2.) | NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE |

! Performance indicators !

| Phase | Page faults | CPU Time | Elapsed Time |
|------------------------|-------------|-------------|--------------|
| Initialization | 32 | 00:00:00.09 | 00:00:00.96 |
| Command processing | 125 | 00:00:00.60 | 00:00:03.08 |
| Pass 1 | 237 | 00:00:07.93 | 00:00:21.49 |
| Symbol table sort | 0 | 00:00:00.95 | 00:00:01.29 |
| Pass 2 | 59 | 00:00:01.37 | 00:00:03.93 |
| Symbol table output | 21 | 00:00:00.16 | 00:00:00.27 |
| 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 | 478 | 00:00:11.12 | 00:00:31.08 |

The working set limit was 1350 pages.
37804 bytes (74 pages) of virtual memory were used to buffer the intermediate code.
There were 40 pages of symbol table space allocated to hold 665 non-local and 6 local symbols.
250 source lines were read in Pass 1, producing 13 object records in Pass 2.
22 pages of virtual memory were used to define 21 macros.

! Macro library statistics !

| Macro library name | Macros defined |
|-------------------------------------|----------------|
| -\$255\$DUA28:[RMS.OBJ]RMS.MLB;1 | 13 |
| -\$255\$DUA28:[SYSLIB]STARLET.MLB;2 | 4 |
| TOTALS (all libraries) | 17 |

895 GETS were required to define 17 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS\$:NTODISPLY/OBJ=OBJ\$:NTODISPLY MSRC\$:NTODISPLY/UPDATE=(ENH\$:NTODISPLY)+LIB\$:RMS/LIB

The image displays a grid of 120 small terminal window screenshots, arranged in 10 rows and 12 columns. Each window shows a different command or utility being executed in the VAX/VMS environment. The text within the windows is mostly illegible due to the small size and low resolution, but several windows contain clearly visible labels for their respective utilities:

- NT0DAPRMS LIS
- NT0GET LIS
- NT0NWASET LIS
- NT0EXTEND LIS
- NT0ENCODE LIS
- NT0ERASE LIS
- NT0DISCON LIS
- NT0DISPLY LIS
- NT0MISC LIS