```
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSSSSS
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSSSSS
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSSSSS
RRR         RRR  MMMMMM   MMMMMM  SSS
RRR         RRR  MMMMMM   MMMMMM  SSS
RRR         RRR  MMMMMM   MMMMMM  SSS
RRR         RRR  MMM   MMM   MMM  SSS
RRR         RRR  MMM   MMM   MMM  SSS
RRR         RRR  MMM   MMM   MMM  SSS
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSS
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSS
RRRRRRRRRRRR     MMM         MMM     SSSSSSSSS
RRR   RRR        MMM         MMM              SSS
RRR   RRR        MMM         MMM              SSS
RRR   RRR        MMM         MMM              SSS
RRR      RRR     MMM         MMM              SSS
RRR      RRR     MMM         MMM              SSS
RRR      RRR     MMM         MMM              SSS
RRR         RRR  MMM         MMM  SSSSSSSSSSSS
RRR         RRR  MMM         MMM  SSSSSSSSSSSS
RRR         RRR  MMM         MMM  SSSSSSSSSSSS
```

```
_$2

Sym
---
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                                                    C  6
**FILE**ID**NTOSCNXAB


          NN      NN  TTTTTTTTTT    000000      SSSSSSSS    CCCCCCCC  NN      NN  XX      XX    AAAAAA    BBBBBBBB
          NN      NN  TTTTTTTTTT    000000      SSSSSSSS    CCCCCCCC  NN      NN  XX      XX    AAAAAA    BBBBBBBB
          NN      NN      TT      00      00  SS          CC          NN      NN  XX      XX  AA      AA  BB      BB
          NN      NN      TT      00      00  SS          CC          NN      NN  XX      XX  AA      AA  BB      BB
          NNNN    NN      TT      00    0000  SS          CC          NNNN    NN    XX  XX    AA      AA  BB      BB
          NNNN    NN      TT      00    0000  SS          CC          NNNN    NN    XX  XX    AA      AA  BB      BB
          NN  NN  NN      TT      00  00  00    SSSSSS    CC          NN  NN  NN      XX      AA      AA  BBBBBBBB
          NN  NN  NN      TT      00  00  00    SSSSSS    CC          NN  NN  NN      XX      AA      AA  BBBBBBBB
          NN    NNNN      TT      0000    00          SS  CC          NN    NNNN    XX  XX    AAAAAAAAAA  BB      BB
          NN    NNNN      TT      0000    00          SS  CC          NN    NNNN    XX  XX    AAAAAAAAAA  BB      BB
          NN      NN      TT      00      00          SS  CC          NN      NN  XX      XX  AA      AA  BB      BB      ....
          NN      NN      TT      00      00          SS  CC          NN      NN  XX      XX  AA      AA  BB      BB      ....
          NN      NN      TT        000000    SSSSSSSS      CCCCCCCC  NN      NN  XX      XX  AA      AA  BBBBBBBB        ....
          NN      NN      TT        000000    SSSSSSSS      CCCCCCCC  NN      NN  XX      XX  AA      AA  BBBBBBBB        ....


          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
```

NTO
VO4

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```
0000          $BEGIN  NTOSCNXAB,000,NF$NETWORK,<SCAN XAB CHAIN>
0000
0000
0000    ;
0000    ;****************************************************************************
0000    ;*                                                                          *
0000    ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
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0000    ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0000    ;*                                                                          *
0000    ;*                                                                          *
0000    ;****************************************************************************
0000    ;
0000
0000    ;++
0000    ; Facility: RMS
0000    ;
0000    ; Abstract:
0000    ;
0000    ;       This module contains routines that scan:
0000    ;       (1) the user XAB chain and examine FAL's capabilities to determine
0000    ;           which DAP Extended Attributes messages should be requested to be
0000    ;           returned by the remote FAL.
0000    ;       (2) the user Name Block and examine FAL's capabilities to determine
0000    ;           if a DAP (resultant) Name message should be requested to be
0000    ;           returned by the remote FAL.
0000    ;
0000    ; Environment: VAX/VMS, executive mode
0000    ;
0000    ; Author: James A. Krycka,       Creation Date:  05-JUN-1979
0000    ;
0000    ; Modified By:
0000    ;
0000    ;       V03-006 JAK0119         J A Krycka      16-JUL-1983
0000    ;               Scan the Journaling XAB and save the JOP field for use by
0000    ;               NT$CREATE.
0000    ;
0000    ;       V03-005 JAK0115         J A Krycka      29-JUN-1983
0000    ;               Support probe of extended Protection XAB.
0000    ;
0000    ;       V03-004 KRM0110         K Malik         23-May-1983
0000    ;               Update to support DAP V7.0 spec.
0000    ;
```

```
                                              0000    ;        V03-003 KPL0001         Peter Lieberwirth        23-May-1983
                                              0000    ;                Fix branch destinations that are out of range.
                                              0000    ;
                                              0000    ;        V03-002 KRM0050         K R Malik        02-Jun-1982
                                              0000    ;                Fix minor bug in NT$SCAN_NAMBLK.
                                              0000    ;
                                              0000    ;--
```

```
0000          .SBTTL  DECLARATIONS
0000
0000    ;
0000    ; Include Files:
0000    ;
0000
0000          $DAPCNFDEF                      ; Define DAP Configuration message
0000          $DAPACCDEF                      ; Define DAP Access message
0000          $FABDEF                         ; Define File Access Block symbols
0000          $IFBDEF                         ; Define IFAB symbols
0000          $NAMDEF                         ; Define Name Block symbols
0000          $NWADEF                         ; Define Network Work Area symbols
0000          $XABDEF                         ; Define symbols common to all XABs
0000          $XABALLDEF                      ; Define Allocation XAB symbols
0000          $XABDATDEF                      ; Define Date and Time XAB symbols
0000          $XABFHCDEF                      ; Define File Header Char symbols
0000          $XABKEYDEF                      ; Define Key Definition XAB symbols
0000          $XABPRODEF                      ; Define Protection XAB symbols
0000          $XABRDTDEF                      ; Define Revision Date/Time XAB symbols
0000          $XABSUMDEF                      ; Define Summary XAB symobls
0000    ;     $XABTRMDEF                      ; Define Terminal XAB symbols
0000    ;     $XABCXFDEF                      ; Define FAB Context XAB symbols
0000    ;     $XABCXRDEF                      ; Define RAB Context XAB symbols
0000          $XABJNLDEF                      ; Define Journal XAB symbols
0000
0000    ;
0000    ; Macros:
0000    ;
0000    ;     None
0000    ;
0000    ; Equated Symbols:
0000    ;
0000
0000          ASSUME  NWA$Q_FLG EQ 0
0000
0000    ;
0000    ; Own Storage:
0000    ;
0000    ;     None
0000    ;
```

```
0000              .SBTTL  NT$SCAN_XABCHN - SCAN XAB CHAIN
0000
0000      ;++
0000      ; NT$SCAN_XABCHN - scans the user XAB chain and examines FAL's capabilities
0000      ;       to determine which DAP Attributes and Extended Attributes messages to
0000      ;       request the remote FAL to return. It also verifies that all Allocation
0000      ;       XABs found are chained sequentially and that all Key Definition XABs
0000      ;       found are chained sequentially (i.e., they form sub-chains).
0000      ;
0000      ;       The message request mask is returned in R2.
0000      ;
0000      ; Calling Sequence:
0000      ;
0000      ;       BSBW    NT$SCAN_XABCHN
0000      ;
0000      ; Input Parameters:
0000      ;
0000      ;       R6      Close operation flag
0000      ;       R7      NWA (=DAP) address
0000      ;       R8      FAB address
0000      ;       R9      IFAB address
0000      ;       R10     IFAB/FWA address
0000      ;       R11     Impure Area address
0000      ;
0000      ; Implicit Inputs:
0000      ;
0000      ;       User ALL, DAT, FHC, JNL, KEY, PRO, RDT, and SUM XABs
0000      ;       DAP$Q_SYSCAP bits KEYXAB, ALLXAB, SUMXAB, TIMXAB, PROXAB,
0000      ;                         CHGTIMCLS, CHGPROCLS
0000      ;
0000      ; Output Parameters:
0000      ;
0000      ;       R0      Status code (RMS)
0000      ;       R1      Destroyed
0000      ;       R2      Message request mask
0000      ;       R3-R5   Destroyed
0000      ;
0000      ; Implicit Outputs:
0000      ;
0000      ;       NWA$B_ALLXABCNT
0000      ;       NWA$B_KEYXABCNT
0000      ;       NWA$W_JNLXABJOP
0000      ;       NWA$L_ALLXABADR
0000      ;       NWA$L_DATXABADR
0000      ;       NWA$L_FHCXABADR
0000      ;       NWA$L_KEYXABADR
0000      ;       NWA$L_PROXABADR
0000      ;       NWA$L_RDTXABADR
0000      ;       NWA$L_SUMXABADR
0000      ;
0000      ; Completion Codes:
0000      ;
0000      ;       Standard RMS completion codes
0000      ;
0000      ; Side Effects:
0000      ;
0000      ;       User XABs are probed for writeability.
```

```
                    0000  ;
                    0000  ;--
                    0000
                    0000  NT$SCAN_XABCHN::                              ; Entry point
                    0000          $ZERO_FILL-                           ; Zero XAB scan results block
                    0000                  DST=NWA$T_SCAN(R7)-           ;  Address of block
                    0000                  SIZE=#NWA$C_SCAN              ;  Length of block
                    000A                                                ; Zero R2 (request mask) as side effect
                    000A                                                ;  of executing a MOVC5 instruction
53     24 A8   D0   000A          MOVL    FAB$L_XAB(R8),R3              ; Get first XAB address in chain
          07   11   000E          BRB     CHKXAB                        ;
                    0010
                    0010  ;+
                    0010  ; Process next XAB in the chain.
                    0010  ;
                    0010  ; Note: XABs not supported by DECnet (if found in the XAB chain) will be
                    0010  ;       ignored.
                    0010  ;-
                    0010
                    0010          ASSUME  XAB$C_DAT EQ 18
                    0010          ASSUME  XAB$C_PRO EQ 19
                    0010          ASSUME  XAB$C_ALL EQ 20
                    0010          ASSUME  XAB$C_KEY EQ 21
                    0010          ASSUME  XAB$C_SUM EQ 22
                    0010          ASSUME  XAB$C_FHC EQ 29
                    0010          ASSUME  XAB$C_RDT EQ 30
                    0010  ;       ASSUME  XAB$C_TRM EQ 31               ; Not supported for network use
                    0010  ;       ASSUME  XAB$C_CXF EQ 32               ; Not supported for network use
                    0010  ;       ASSUME  XAB$C_CXR EQ 33               ; Not supported for network use
                    0010          ASSUME  XAB$C_JNL EQ 34               ; Not supported for network use
                    0010                                                ;  BUT will be processed to obtain
                    0010                                                ;  JOP field for use by NT$CREATE
                    0010
    54    53   D0   0010  NXTXAB: MOVL    R3,R4                         ; Save address of current XAB in chain
53     04 A3   D0   0013          MOVL    XAB$L_NXT(R3),R3              ; Get address of next XAB in chain
          30   13   0017  CHKXAB: BEQL    EXIT                          ; Branch if none
                    0019          IFNORD  #XAB$L_NXT+4,(R3),-           ; Probe for readability thru NXT field
                    0019                  ERRXAB,IFB$B_MODE(R9)         ;  of XAB and branch on failure
       ED AF   9F   0020          PUSHAB  B^NXTXAB                      ; Push return address on stack
                    0023          $CASEB  SELECTOR=XAB$B_COD(R3)-       ; Dispatch to routine to process:
                    0023                  BASE=#XAB$C_DAT-              ;
                    0023                  DISPL=<-                      ;
                    0023                          DATE_TIME-            ;  XABDAT
                    0023                          PROTECTION-           ;  XABPRO
                    0023                          ALLOCATION-           ;  XABALL
                    0023                          KEY_DEFINITION-       ;  XABKEY
                    0023                          SUMMARY-              ;  XABSUM
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          ERRCOD-               ;  Invalid XAB type
                    0023                          FILE_HEADER-          ;  XABFHC
                    0023                          REV_DATE_TIME-        ;  XABRDT
                    0023                          EXIT-                 ;  Ignore XABTRM
                    0023                          EXIT-                 ;  Ignore XABCXF
                    0023                                EXIT-                   ; Ignore XABCXR
                    0023                                JOURNALING-             ; XABJNL
                    0023                        >                               ;
                    0049
                    0049  ;+
                    0049  ; Exit paths.
                    0049  ;-
                    0049
                    0049  EXIT:     RMSSUC                                      ; Return success
               05   004C            RSB                                         ; Exit with RMS code in R0
          01   BA   004D  ERRCOD:   POPR    #^M<R0>                             ; Discard return address
                    004F            RMSERR  COD                                 ; Invalid XAB type code
          10   11   0054            BRB     SETSTV                              ;
          01   BA   0056  ERRIMX:   POPR    #^M<R0>                             ; Discard return address
                    0058            RMSERR  IMX                                 ; Duplicate XAB or XABs are not dense
          07   11   005D            BRB     SETSTV                              ;
          03   BA   005F  ERRXAB2:POPR      #^M<R0,R1>                          ; Discard return addresses
                    0061  ERRXAB:   RMSERR  XAB                                 ; XAB too short or not accessible
  0C A8   53   D0   0066  SETSTV:   MOVL    R3,FAB$L_STV(R8)                    ; Return XAB address in STV field
               05   006A            RSB                                         ; Exit with RMS code in R0
                    006B
                    006B  ;+
                    006B  ; This routine checks the control block for correct length and writeability.
                    006B  ;-
                    006B
                    006B  VALIDATE_XAB:                                         ; Entry point
50    01 A3    9A   006B            MOVZBL  XAB$B_BLN(R3),R0                    ; Get stated length of block
   51    50    D1   006F            CMPL    R0,R1                               ; Compare against expected length
         EB    1F   0072            BLSSU   ERRXAB2                             ; Branch if too small
                    0074            IFNOWRT R0,(R3),ERRXAB2,-                   ; Probe for writeability and branch on
                    0074                    IFB$B_MODE(R9)                      ;  failure
               05   007B            RSB                                         ; Exit
                    007C
                    007C  ;+
                    007C  ; This routine handles the Date and Time XAB.
                    007C  ;-
                    007C
                    007C  DATE_TIME:                                            ; Entry point
   51    24    9A   007C            MOVZBL  #XAB$C_DATLEN_V2,R1                 ; Get minimum (i.e., V2) length of XAB
         EA    10   007F            BSBB    VALIDATE_XAB                        ; Check length and accessibility
   0104 C7     D5   0081            TSTL    NWA$L_DATXABADR(R7)                 ; Declare error as this is a duplicate
         CF    12   0085            BNEQ    ERRIMX                              ;  XAB
0104 C7  53    D0   0087            MOVL    R3,NWA$L_DATXABADR(R7)              ; Save address of Date and Time XAB
         1A    E1   008C            BBC     #DAP$V_TIMXAB,-                     ; Branch if Date and Time message is
     07 28 A7       008E                    DAP$Q_SYSCAP(R7),10$                ;  not supported by partner
      04 56    E8   0091            BLBS    R6,10$                              ; This XAB is not an input on close
                    0094            $SETBIT #DAP$V_DSP_TIM,R2                   ; Update request mask
               05   0098  10$:      RSB                                         ; Exit
                    0099
                    0099  ;+
                    0099  ; This routine handles the Protection XAB.
                    0099  ;-
                    0099
                    0099  PROTECTION:                                           ; Entry point
   51    10    9A   0099            MOVZBL  #XAB$C_PROLEN_V3,R1                 ; Get minimum (i.e., V3) length of XAB
         CD    10   009C            BSBB    VALIDATE_XAB                        ; Check length and accessibility
   0110 C7     D5   009E            TSTL    NWA$L_PROXABADR(R7)                 ; Declare error as this is a duplicate
```

```
              B2  12  00A2                BNEQ    ERRIMX                  ;  XAB
     0110 C7  53  D0  00A4                MOVL    R3,NWA$L_PROXABADR(R7)  ; Save address of Protection XAB
              1B  E1  00A9                BBC     #DAP$V_PROXAB,-         ; Branch if Protection message is
        0C 28 A7      00AB                        DAP$Q_SYSCAP(R7),20$    ;  not supported by partner
           05 56  E9  00AE                BLBC    R6,10$                  ; An additional system capabilities
              2C  E1  00B1                BBC     #DAP$V_CHGPROCLS,-      ;  check is required if this is a
        04 28 A7      00B3                        DAP$Q_SYSCAP(R7),20$    ;  change operation
                      00B6  10$:          $SETBIT #DAP$V_DSP_PRO,R2       ; Update request mask
                  05  00BA  20$:          RSB                             ; Exit
                      00BB
                      00BB  ;+
                      00BB  ; This routine handles the Allocation XAB.
                      00BB  ;-
                      00BB
                      00BB  ALLOCATION:                                   ; Entry point
         51   20  9A  00BB                MOVZBL  #XAB$C_ALLLEN,R1        ; Get length of XAB
              AB  10  00BE                BSBB    VALIDATE_XAB            ; Check length and accessibility
        011C C7  96   00C0                INCB    NWA$B_ALLXABCNT(R7)     ; Increment XAB counter
   01   011C C7  91   00C4                CMPB    NWA$B_ALLXABCNT(R7),#1  ; Branch if this is first
              08  13  00C9                BEQL    10$                     ;  Allocation XAB in chain
         14   64  91  00CB                CMPB    XAB$B_COD(R4),#XAB$C_ALL; Check previous XAB in chain;
              11  13  00CE                BEQL    20$                     ;  it must also be an Allocation XAB
            FF83  31  00D0                BRW     ERRIMX                  ;  else this XAB is out of order
     0100 C7  53  D0  00D3  10$:          MOVL    R3,NWA$L_ALLXABADR(R7)  ; Save address of first Allocation XAB
              17  E1  00D8                BBC     #DAP$V_ALLXAB,-         ; Branch if Allocation message is
        04 28 A7      00DA                        DAP$Q_SYSCAP(R7),20$    ;  not supported by partner
                      00DD                $SETBIT #DAP$V_DSP_ALL,R2       ; Update request mask
                  05  00E1  20$:          RSB                             ; Exit
                      00E2
                      00E2  ;+
                      00E2  ; This routine handles the Key Definition XAB.
                      00E2  ;-
                      00E2
                      00E2  KEY_DEFINITION:                               ; Entry point
     51   40 8F   9A  00E2                MOVZBL  #XAB$C_KEYLEN_V2,R1     ; Get minimum (i.e., V2) length of XAB
            FF82  30  00E6                BSBW    VALIDATE_XAB            ; Check length and accessibility
        011D C7  96   00E9                INCB    NWA$B_KEYXABCNT(R7)     ; Increment XAB counter
   01   011D C7  91   00ED                CMPB    NWA$B_KEYXABCNT(R7),#1  ; Branch if this is first
              08  13  00F2                BEQL    10$                     ;  Key Definition XAB in chain
         15   64  91  00F4                CMPB    XAB$B_COD(R4),#XAB$C_KEY; Check previous XAB in chain;
              11  13  00F7                BEQL    20$                     ;  it must also be a Key Definition XAB
            FF5A  31  00F9                BRW     ERRIMX                  ;  else this XAB is out of order
     010C C7  53  D0  00FC  10$:          MOVL    R3,NWA$L_KEYXABADR(R7)  ; Save address of first Key Def XAB
              16  E1  0101                BBC     #DAP$V_KEYXAB,-         ; Branch if Key Definition message is
        04 28 A7      0103                        DAP$Q_SYSCAP(R7),20$    ;  not supported by partner
                      0106                $SETBIT #DAP$V_DSP_KEY,R2       ; Update request mask
                  05  010A  20$:          RSB                             ; Exit
                      010B
                      010B  ;+
                      010B  ; This routine handles the Summary XAB.
                      010B  ;-
                      010B
                      010B  SUMMARY:                                      ; Entry point
         51   0C  9A  010B                MOVZBL  #XAB$C_SUMLEN,R1        ; Get length of XAB
            FF5A  30  010E                BSBW    VALIDATE_XAB            ; Check length and accessibility
       0118 C7    D5  0111                TSTL    NWA$L_SUMXABADR(R7)     ; Declare error as this is a duplicate
              55  12  0115                BNEQ    ERRIMX1                 ;  XAB
```

```
0118 C7    53   D0  0117               MOVL    R3,NWA$L_SUMXABADR(R7)     ; Save address of Summary XAB
           18   E1  011C               BBC     #DAP$V_SUMXAB,-            ; Branch if Summary message is
   04 28 A7             011E                   DAP$Q_SYSCAP(R7),10$       ;  not supported by partner
                    0121               $SETBIT #DAP$V_DSP_SUM,R2          ; Update request mask
           05       0125   10$:        RSB                                ; Exit
                    0126
                    0126   ;+
                    0126   ; This routine handles the File Header Characteristics XAB.
                    0126   ;
                    0126   ; Note: The File Header Characteristics XAB is supported in DAP through the
                    0126   ;       DAP Attributes message. Thus there is no system capabilities check
                    0126   ;       associated with it.
                    0126   ;-
                    0126
                    0126   FILE_HEADER:                                   ; Entry point
     51    2C   9A  0126               MOVZBL  #XAB$C_FHCLEN,R1           ; Get length of XAB
         FF3F   30  0129               BSBW    VALIDATE_XAB               ; Check length and accessibility
   0108 C7      D5  012C               TSTL    NWA$L_FHCXABADR(R7)        ; Declare error as this is a duplicate
           3A   12  0130               BNEQ    ERRIMX1                    ;  XAB
0108 C7    53   D0  0132               MOVL    R3,NWA$L_FHCXABADR(R7)     ; Save address of File Header Char XAB
                    0137               $SETBIT #DAP$V_DSP_ATT,R2          ; Update request mask
           05       013B               RSB                                ; Exit
                    013C
                    013C   ;+
                    013C   ; This routine handles the Revision Date and Time XAB.
                    013C   ;
                    013C   ; Note: Both the Date and Time XAB and the Revision Date and Time XAB are
                    013C   ;       supported in DAP through the DAP Date and Time message.
                    013C   ;-
                    013C
                    013C   REV_DATE_TIME:                                 ; Entry point
     51    14   9A  013C               MOVZBL  #XAB$C_RDTLEN,R1           ; Get length of XAB
         FF29   30  013F               BSBW    VALIDATE_XAB               ; Check length and accessibility
   0114 C7      D5  0142               TSTL    NWA$L_RDTXABADR(R7)        ; Declare error as this is a duplicate
           24   12  0146               BNEQ    ERRIMX1                    ;  XAB
0114 C7    53   D0  0148               MOVL    R3,NWA$L_RDTXABADR(R7)     ; Save address of Rev Date and Time XAB
           1A   E1  014D               BBC     #DAP$V_TIMXAB,-            ; Branch if Date and Time message
   0C 28 A7             014F                   DAP$Q_SYSCAP(R7),20$       ;  not supported by partner
     05    56   E9  0152               BLBC    R6,10$                     ; An additional system capabilities
           2B   E1  0155               BBC     #DAP$V_CHGTIMCLS,-         ;  check is required if this is a
   04 28 A7             0157                   DAP$Q_SYSCAP(R7),20$       ;  change operation
                    015A   10$:        $SETBIT #DAP$V_DSP_TIM,R2          ; Update request mask
           05       015E   20$:        RSB                                ; Exit
                    015F
                    015F   ;+
                    015F   ; This routine handles the Journaling XAB.
                    015F   ;
                    015F   ; Note: This XAB is not supported for network use--it will be ignored unless
                    015F   ;       the journaling options field is non-zero on create. Consequently, this
                    015F   ;       routine saves the JOP field in the NWA for use by NT$CREATE.
                    015F   ;-
                    015F
                    015F   JOURNALING:                                    ; Entry point
     51    3C   9A  015F               MOVZBL  #XAB$C_JNLLEN,R1           ; Get length of XAB
         FF06   30  0162               BSBW    VALIDATE_XAB               ; Check length and accessibility
      08 A3     B0  0165               MOVW    XAB$W_JOP(R3),-            ; Save journaling options value in NWA
   011E C7              0168                   NWA$W_JNLXABJOP(R7)        ;
```

```
                 05  016B   392            RSB                             ; Exit
                     016C   393
           FEE7  31  016C   394 ERRIMX1:BRW      ERRIMX                    ; Branch aid
```

```
                     016F          .SBTTL  NT$SCAN_KEYXAB - SCAN KEY DEFINITION XAB
                     016F          .SBTTL  NT$SCAN_ALLXAB - SCAN ALLOCATION XAB
                     016F  ;++
                     016F  ; NT$SCAN_KEYXAB - scans a specific Key Definition XAB without scanning the
                     016F  ;       entire XAB chain.
                     016F  ; NT$SCAN_ALLXAB - scans a specific Allocation XAB without scanning the
                     016F  ;       entire XAB chain.
                     016F  ;
                     016F  ; Calling Sequence:
                     016F  ;
                     016F  ;       BSBW    NT$SCAN_KEYXAB
                     016F  ;       BSBW    NT$SCAN_ALLXAB
                     016F  ;
                     016F  ; Input Parameters:
                     016F  ;
                     016F  ;       R6      Allocation or Key Definition XAB address
                     016F  ;       R7      NWA (=DAP) address
                     016F  ;       R8      FAB address
                     016F  ;       R9      IFAB address
                     016F  ;       R10     IFAB/FWA address
                     016F  ;       R11     Impure Area address
                     016F  ;
                     016F  ; Implicit Inputs:
                     016F  ;
                     016F  ;       None
                     016F  ;
                     016F  ; Output Parameters:
                     016F  ;
                     016F  ;       R0      Status code (RMS)
                     016F  ;       R1      Destroyed
                     016F  ;       R3      Destroyed
                     016F  ;
                     016F  ; Implicit Outputs:
                     016F  ;
                     016F  ;       None
                     016F  ;
                     016F  ; Completion Codes:
                     016F  ;
                     016F  ;       Standard RMS Completion codes
                     016F  ;
                     016F  ; Side Effects:
                     016F  ;
                     016F  ;       User XAB is probed for writeability
                     016F  ;
                     016F  ;--
                     016F
                     016F  NT$SCAN_KEYXAB::                                ; Entry point
51    40 8F    9A    016F          MOVZBL  #XAB$C_KEYLEN_V2,R1             ; Get minimum (i.e., V2) length of XAB
         03    11    0173          BRB     COMMON_SCAN                     ; Join common code
                     0175  NT$SCAN_ALLXAB::                                ; Entry point
   51    20    9A    0175          MOVZBL  #XAB$C_ALLLEN,R1                ; Get length of XAB
                     0178  COMMON_SCAN:                                    ; Common code
   53    56    D0    0178          MOVL    R6,R3                           ; Get address of XAB to probe
                     017B          IFNORD  #XAB$L_NXT+4,(R3),-             ; Probe for readability thru NXT field
                     017B                  10$,IFB$B_MODE(R9)              ;  of XAB and branch on failure
50    01 A3    9A    0182          MOVZBL  XAB$B_BLN(R3),R0                ; Get stated length of block
   51    50    D1    0186          CMPL    R0,R1                           ; Compare against expected length
```

```
      0B    1F  0189            BLSSU   10$                           ; Branch if too small
                018B            IFNOWRT R0,(R3),10$,-                 ; Probe for writeability and branch on
                018B                    IFB$B_MODE(R9)                ;  failure
                0192            RMSSUC                                ; Return success
            05  0195            RSB                                   ; Exit
    FEC8    31  0196     10$:   BRW     ERRXAB                        ; Failure
```

```
                         0199         .SBTTL  NT$SCAN_NAMBLK - SCAN NAME BLOCK
                         0199
                         0199  ;++
                         0199  ; NT$SCAN_NAMBLK - scans the user Name Block and checks FAL's capabilities
                         0199  ;        to determine if a DAP (resultant) Name message should be requested
                         0199  ;        to be returned by the remote FAL.
                         0199  ;
                         0199  ;        An updated message request mask is returned in R2.
                         0199  ;
                         0199  ; Calling Sequence:
                         0199  ;
                         0199  ;        BSBW    NT$SCAN_NAMBLK
                         0199  ;
                         0199  ; Input Parameters:
                         0199  ;
                         0199  ;        R2      Message request mask
                         0199  ;        R7      NWA (=DAP) address
                         0199  ;        R8      FAB address
                         0199  ;        R9      IFAB address
                         0199  ;        R10     IFAB/FWA address
                         0199  ;        R11     Impure Area address
                         0199  ;
                         0199  ; Implicit Inputs:
                         0199  ;
                         0199  ;        User Name Block
                         0199  ;
                         0199  ; Output Parameters:
                         0199  ;
                         0199  ;        R0      Status code (RMS)
                         0199  ;        R1      Destroyed
                         0199  ;        R2      Updated message request mask
                         0199  ;
                         0199  ; Implicit Outputs:
                         0199  ;
                         0199  ;        None
                         0199  ;
                         0199  ; Completion Codes:
                         0199  ;
                         0199  ;        Standard RMS Completion codes
                         0199  ;
                         0199  ; Side Effects:
                         0199  ;
                         0199  ;        User Name Block is probed for writeability
                         0199  ;
                         0199  ;--
                         0199
                         0199  NT$SCAN_NAMBLK::                              ; Entry point
         00C0 8F   BB    0199          PUSHR   #^M<R6,R7>                    ; Save registers used
      57   28 A8   D0    019D          MOVL    FAB$L_NAM(R8),R7              ; Get Name block address
              19   13    01A1          BEQL    10$                           ; Branch if none
           FE5A'   30    01A3          BSBW    RM$CHKNAM                     ; Check Name block validity
           13 50   E9    01A6          BLBC    R0,10$                        ; Branch on error
           04 A7   D5    01A9          TSTL    NAM$L_RSA(R7)                 ; Check for resultant string address
              0E   13    01AC          BEQL    10$                           ; Branch if none
         00C0 8F   BA    01AE          POPR    #^M<R6,R7>                    ; Restore registers
              28   E1    01B2          BBC     #DAP$V_NAMMSG,-               ; Branch if partner does not support
        09 28 A7         01B4                  DAP$Q_SYSCAP(R7),20$          ;  Name message
```

```
                     01B7               $SETBIT #DAP$V_DSP_NAM,R2          ; Request Name message
                 05  01BB               RSB                                ; Exit
        00C0 8F  BA  01BC       10$:    POPR    #^M<R6,R7>                 ; Restore registers
                 05  01C0       20$:    RSB                                ; Exit
                     01C1
                     01C1               .END                               ; End of module
```

```
                                                             E  7
NTOSCNXAB                          SCAN XAB CHAIN                          16-SEP-1984 00:07:06  VAX/VMS Macro V04-00           Page  14
Symbol table                                                                5-SEP-1984 16:21:07  [RMS.SRC]NTOSCNXAB.MAR;1             (5)

$$.PSECT_EP                        = 00000000                  IFB$B_MODE                         = 0000000A
$$COUNT                            = 00000011                  JOURNALING                           0000015F R      01
$$RMSTEST                          = 0000001A                  KEY_DEFINITION                       000000E2 R      01
$$RMS_PBUGCHK                      = 00000010                  NAM$L_RSA                          = 00000004
$$RMS_TBUGCHK                      = 00000008                  NT$SCAN_ALLXAB                       00000175 RG     01
$$RMS_UMODE                        = 00000004                  NT$SCAN_KEYXAB                       0000016F RG     01
ALLOCATION                           000000BB R      01        NT$SCAN_NAMBLK                       00000199 RG     01
CHKXAB                               00000017 R      01        NT$SCAN_XABCHN                       00000000 RG     01
COMMON_SCAN                          00000178 R      01        NWA$B_ALLXABCNT                      0000011C
DAP$B_ACCFUNC                        00000040                  NWA$B_DAP_RAC                        000000C9
DAP$B_ACCOPT                         00000041                  NWA$B_FILESYS                        000000C5
DAP$B_DECVER                         00000047                  NWA$B_KEYXABCNT                      0000011D
DAP$B_ECONUM                         00000045                  NWA$B_NETSTRSIZ                      0000016F
DAP$B_FAC                            00000042                  NWA$B_NODBUFSIZ                      00000168
DAP$B_FILESYS                        00000043                  NWA$B_ORG                            000000C6
DAP$B_OSTYPE                         00000042                  NWA$B_OSTYPE                         000000C4
DAP$B_SHR                            00000043                  NWA$B_RFM                            000000C7
DAP$B_USRNUM                         00000046                  NWA$B_RMS_RAC                        000000C8
DAP$B_USRVER                         00000048                  NWA$C_BLN                            00000800
DAP$B_VERNUM                         00000044                  NWA$C_SCAN                         = 00000020
DAP$M_DSP_3NAM                     = 00000200                  NWA$K_BLN                            00000800
DAP$M_GET                          = 00000002                  NWA$L_ALLXABADR                      00000100
DAP$M_GO_NOGO                      = 00000010                  NWA$L_DATXABADR                      00000104
DAP$M_MSE                          = 00000010                  NWA$L_DEV                            000000C0
DAP$M_TMP1$                        = 000000C0                  NWA$L_FHCXABADR                      00000108
DAP$M_TMP2$                        = 0000FC00                  NWA$L_KEYXABADR                      0000010C
DAP$Q_FILESPEC                       00000044                  NWA$L_MSG_MASK                       000000D4
DAP$Q_PASSWORD                       00000050                  NWA$L_PROXABADR                      00000110
DAP$Q_SYSCAP                         00000028                  NWA$L_RDTXABADR                      00000114
DAP$V_ALLXAB                       = 00000017                  NWA$L_SAVE_FLGS                      00000128
DAP$V_CHGPROCLS                    = 0000002C                  NWA$L_SUMXABADR                      00000118
DAP$V_CHGTIMCLS                    = 0000002B                  NWA$L_THREAD                         000000FC
DAP$V_DSP_ALL                      = 00000002                  NWA$L_XLTATTR                        00000238
DAP$V_DSP_ATT                      = 00000000                  NWA$L_XLTBUFFLG                      0000022C
DAP$V_DSP_KEY                      = 00000001                  NWA$L_XLTCNT                         00000228
DAP$V_DSP_NAM                      = 00000008                  NWA$L_XLTMAXINDX                     00000234
DAP$V_DSP_PRO                      = 00000005                  NWA$L_XLTSIZ                         00000230
DAP$V_DSP_SUM                      = 00000003                  NWA$Q_ACS                            00000244
DAP$V_DSP_TIM                      = 00000004                  NWA$Q_BIGBUF                         00000170
DAP$V_KEYXAB                       = 00000016                  NWA$Q_BLD                            000000F0
DAP$V_NAMMSG                       = 00000028                  NWA$Q_FLG                            00000000
DAP$V_PROXAB                       = 0000001B                  NWA$Q_INODE                          0000025C
DAP$V_SUMXAB                       = 00000018                  NWA$Q_IOSB                           000000D8
DAP$V_TIMXAB                       = 0000001A                  NWA$Q_LNODE                          00000160
DAP$W_BUFSIZ                         00000040                  NWA$Q_LOGNAME                        0000023C
DAP$W_DISPLAY1                       0000004C                  NWA$Q_NCB                            00000264
DATE_TIME                            0000007C R      01        NWA$Q_RCV                            000000E0
ERRCOD                               0000004D R      01        NWA$Q_SAVE_DESC                      00000120
ERRIMX                               00000056 R      01        NWA$Q_XLTBUF1                        0000024C
ERRIMX1                              0000016C R      01        NWA$Q_XLTBUF2                        00000254
ERRXAB                               00000061 R      01        NWA$Q_XMT                            000000E8
ERRXAB2                              0000005F R      01        NWA$T_ACSBUF                         0000026C
EXIT                                 00000049 R      01        NWA$T_AUXBUF                         000005E0
FAB$L_NAM                          = 00000028                  NWA$T_DAP                            00000000
FAB$L_STV                          = 0000000C                  NWA$T_INODEBUF                       000004AC
FAB$L_XAB                          = 00000024                  NWA$T_ITM_ATTR                       00000200
FILE_HEADER                          00000126 R      01        NWA$T_ITM_END                        00000224
```

```
NTOSCNXAB                    SCAN XAB CHAIN                  16-SEP-1984 00:07:06  VAX/VMS Macro V04-00        Page  15
Symbol table                                                  5-SEP-1984 16:21:07  [RMS.SRC]NTOSCNXAB.MAR;1          (5)

NWA$T_ITM_LST                 00000200
NWA$T_ITM_MAXINDX             00000218
NWA$T_ITM_STRING              0000020C
NWA$T_NCBBUF                  0000052C
NWA$T_NODEBUF                 00000169
NWA$T_RCVBUF                  000001A0
NWA$T_SCAN                    00000100
NWA$T_TEMP                    00000120
NWA$T_XLTBUF1                 000002AC
NWA$T_XLTBUF2                 000003AC
NWA$T_XMTBUF                  000003C0
NWA$W_BUILD                   000000D2
NWA$W_DAPBUFSIZ               000000CA
NWA$W_DIR_OFF                 000000CC
NWA$W_DISPLAY                 000000D0
NWA$W_FIL_OFF                 000000CE
NWA$W_JNLXABJOP               0000011E
NXTXAB                        00000010 R      01
PROTECTION                    00000099 R      01
REV_DATE_TIME                 0000013C R      01
RMS$CHKNAM                    ********    X   01
RMS$_COD                      ********    X   01
RMS$_IMX                      ********    X   01
RMS$_XAB                      ********    X   01
SETSTV                        00000066 R      01
SUMMARY                       0000010B R      01
VALIDATE_XAB                  0000006B R      01
XAB$B_BLN                   = 00000001
XAB$B_COD                   = 00000000
XAB$C_ALL                   = 00000014
XAB$C_ALLLEN                = 00000020
XAB$C_DAT                   = 00000012
XAB$C_DATLEN_V2             = 00000024
XAB$C_FHC                   = 0000001D
XAB$C_FHCLEN                = 0000002C
XAB$C_JNL                   = 00000022
XAB$C_JNLLEN                = 0000003C
XAB$C_KEY                   = 00000015
XAB$C_KEYLEN_V2             = 00000040
XAB$C_PRO                   = 00000013
XAB$C_PROLEN_V3             = 00000010
XAB$C_RDT                   = 0000001E
XAB$C_RDTLEN                = 00000014
XAB$C_SUM                   = 00000016
XAB$C_SUMLEN                = 0000000C
XAB$L_NXT                   = 00000004
XAB$W_JOP                   = 00000008

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

PSECT name                   Allocation          PSECT No.  Attributes
----------                   ----------          ---------  ----------
.  ABS  .                    00000000  (    0.)  00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
NF$NETWORK                   000001C1  (  449.)  01 (  1.)    PIC   USR   CON   REL   GBL NOSHR   EXE   RD   NOWRT NOVEC BYTE
$ABS$                        00000800  ( 2048.)  02 (  2.)  NOPIC   USR   CON   ABS   LCL NOSHR   EXE   RD     WRT NOVEC BYTE
```

```
NTOSCNXAB                        SCAN XAB CHAIN                    16-SEP-1984 00:07:06  VAX/VMS Macro V04-00          Page  16
VAX-11 Macro Run Statistics                                         5-SEP-1984 16:21:07  [RMS.SRC]NTOSCNXAB.MAR;1            (5)

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

Phase                         Page faults    CPU Time         Elapsed Time
-----                         -----------    --------         ------------
Initialization                        32     00:00:00.08      00:00:01.05
Command processing                   143     00:00:00.80      00:00:04.52
Pass 1                               334     00:00:12.16      00:00:35.27
Symbol table sort                      0     00:00:01.49      00:00:03.11
Pass 2                               103     00:00:02.39      00:00:09.14
Symbol table output                   20     00:00:00.15      00:00:00.38
Psect synopsis output                  1     00:00:00.02      00:00:00.02
Cross-reference output                 0     00:00:00.00      00:00:00.00
Assembler run totals                 635     00:00:17.10      00:00:53.51

The working set limit was 1500 pages.
64416 bytes (126 pages) of virtual memory were used to buffer the intermediate code.
There were 60 pages of symbol table space allocated to hold 1101 non-local and 22 local symbols.
522 source lines were read in Pass 1, producing 14 object records in Pass 2.
34 pages of virtual memory were used to define 33 macros.

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

Macro library name                               Macros defined
------------------                               --------------
_$255$DUA28:[RMS.OBJ]RMS.MLB;1                               23
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                                2
_$255$DUA28:[SYSLIB]STARLET.MLB;2                             4
TOTALS (all libraries)                                       29

1326 GETS were required to define 29 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:NTOSCNXAB/OBJ=OBJ$:NTOSCNXAB MSRC$:NTOSCNXAB/UPDATE=(ENH$:NTOSCNXAB)+EXECML$/LIB+LIB$:RMS/LIB
```

0317 AH-BT13A-SE
VAX/VMS V4.0

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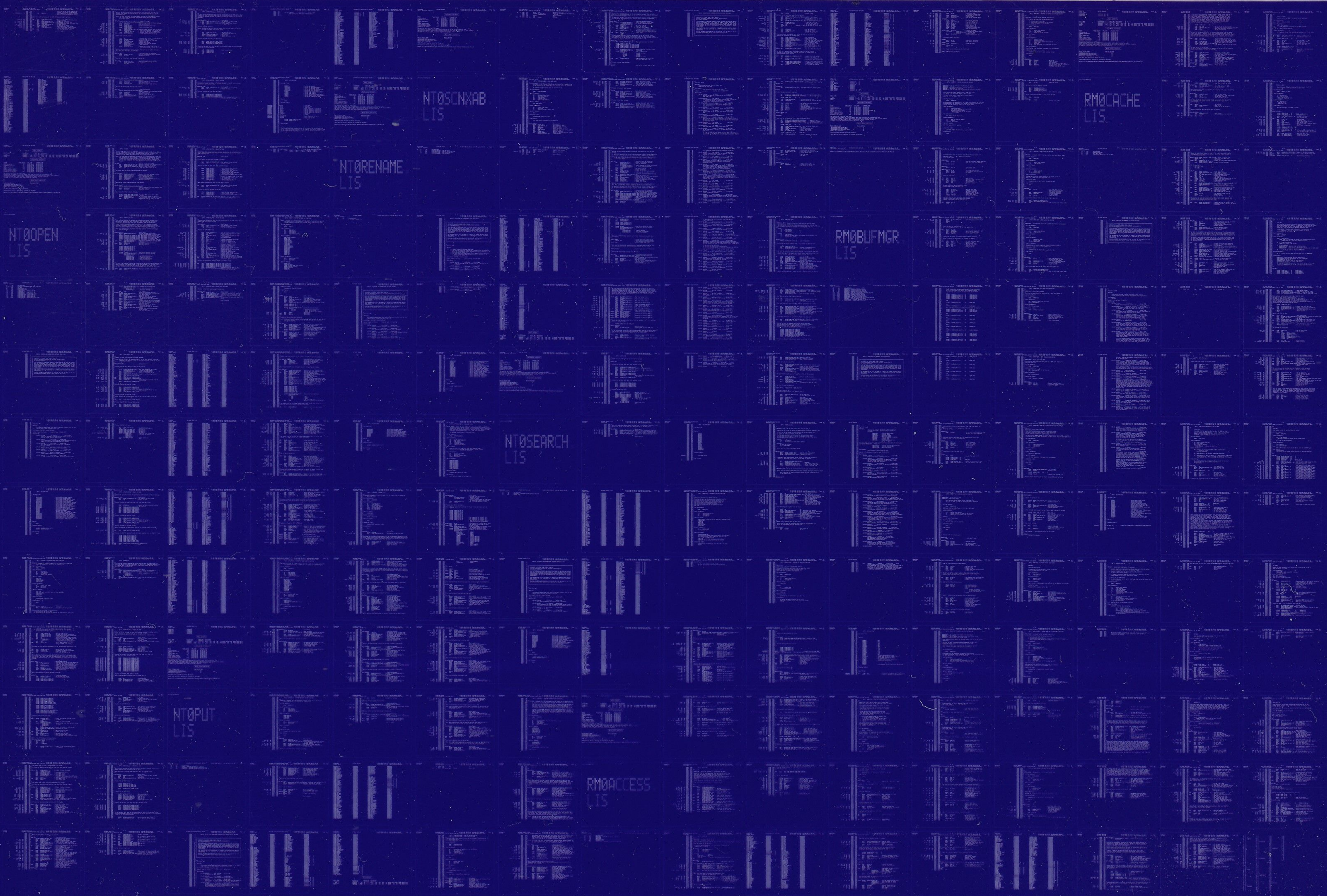

NT0SCNXAB
LIS

RM0CACHE
LIS

NT0RENAME
LIS

NT0OPEN
LIS

RM0BUFMGR
LIS

NT0SEARCH
LIS

NT0PUT
LIS

RM0ACCESS
LIS