DDDDDDDDDDD TTTTTTTTTTTTTTT SSSSSSSSSSS DDDDDDDDDDD TTTTTTTTTTTTTTT RRRRRRRRRRR
DDDDDDDDDDDD TTTTTTTTTTTTTTT SSSSSSSSSSSS DDDDDDDDDDDD TTTTTTTTTTTTTTT RRRRRRRRRRRR
DDDDDDDDDDDD TTTTTTTTTTTTTTT SSSSSSSSSSSS DDDDDDDDDDDD TTTTTTTTTTTTTTT RRRRRRRRRRRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSSSSSSSS DDD DDD TTT RRRRRRRRRRR
DDD DDD TTT SSSSSSSSS DDD DDD TTT RRRRRRRRRRR
DDD DDD TTT SSSSSSSSS DDD DDD TTT RRRRRRRRRRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDD DDD TTT SSS DDD DDD TTT RRR RRR
DDDDDDDDDDDD TTT SSSSSSSSSSS DDDDDDDDDDDD TTT RRR RRR
DDDDDDDDDDDD TTT SSSSSSSSSSS DDDDDDDDDDDD TTT RRR RRR
DDDDDDDDDDDD TTT SSSSSSSSSSS DDDDDDDDDDDD TTT RRR RRR

```
DDDDDDDD    TTTTTTTTTT    SSSSSSSS  TTTTTTTTTT  EEEEEEEEEE    SSSSSSSS  TTTTTTTTTT
DDDDDDDD    TTTTTTTTTT    SSSSSSSS  TTTTTTTTTT  EEEEEEEEEE    SSSSSSSS  TTTTTTTTTT
DD      DD      TT      SS            TT      EE            SS            TT
DD      DD      TT      SS            TT      EE            SS            TT
DD      DD      TT      SS            TT      EE            SS            TT
DD      DD      TT      SS            TT      EE            SS            TT
DD      DD      TT        SSSSSS      TT      EEEEEEEE        SSSSSS      TT
DD      DD      TT        SSSSSS      TT      EEEEEEEE        SSSSSS      TT
DD      DD      TT              SS    TT      EE                    SS    TT
DD      DD      TT              SS    TT      EE                    SS    TT
DD      DD      TT              SS    TT      EE                    SS    TT          ....
DD      DD      TT              SS    TT      EE                    SS    TT          ....
DDDDDDDD        TT      SSSSSSSS      TT      EEEEEEEEEE  SSSSSSSS      TT          ....
DDDDDDDD        TT      SSSSSSSS      TT      EEEEEEEEEE  SSSSSSSS      TT          ....

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
```

Table of contents

TS
V0

```
0000     1          .TITLE  TST$DTSTEST - DTS TEST ROUTINES
0000     2          .IDENT  'V04-000'
0000     3
0000     4 ;
0000     5 ;*****************************************************************************
0000     6 ;*                                                                           *
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0000    24 ;*                                                                           *
0000    25 ;*                                                                           *
0000    26 ;*****************************************************************************
0000    27 ;
0000    28
0000    29 ;++
0000    30 ; FACILITY: DTS/DTR DECNET TEST PACKAGE
0000    31 ;
0000    32 ; ABSTRACT:
0000    33 ;       THIS MODULE IMPLEMENTS THE CONNECT, DATA, DISCONNECT,
0000    34 ;       INTERRUPT, AND MISCELLANEOUS TEST SEQUENCES FOR DTS.
0000    35 ;
0000    36 ; ENVIRONMENT: DTS RUNS IN USER MODE AND REQUIRES NETWORK PRIVILEGE.
0000    37 ;
0000    38 ; AUTHOR: JAMES A. KRYCKA,      CREATION DATE: 11-AUG-77
0000    39 ;
0000    40 ; MODIFICATIONS:
0000    41 ;
0000    42 ;--
```

```
0000     44          .SBTTL  DECLARATIONS
0000     45
0000     46 ;
0000     47 ; INCLUDE FILES:
0000     48 ;
0000     49          $DTSDEF                             ;DTS ERROR MESSAGE MACROS
0000     50          CMDDEF                              ; DEFINE COMMAND LANGUAGE SYMBOLS
0000     51          EFNDEF                              ; DEFINE EFN'S AND FUNCTION CODES
0000     52          $MSGDEF                             ; DEFINE MAILBOX MESSAGE ID CODES
0000     53          .IIF NE K_LIST_MEB, .LIST MEB       ; DEFINED IN DTPREFIX.MAR
0000     54 ;
0000     55 ; MACROS:
0000     56 ;
0000     57 ;        NONE
0000     58 ;
0000     59 ; EQUATED SYMBOLS:
0000     60 ;
0000     61 ;        NONE
0000     62 ;
0000     63 ; OWN STORAGE:
0000     64 ;
0000     65 ;        NONE
```

```
                        67          .SBTTL  TST$CONN_DTS - CONNECT TEST
                        68          .PSECT  TST$CODE        NOWRT
                        69 ST::                                     ; SYMBOL FOR DEBUGGING PURPOSES
                        70
                        71 ;++
                        72 ; FUNCTIONAL DESCRIPTION:
                        73 ;
                        74 ;       NONE
                        75 ;
                        76 ; CALLING SEQUENCE:
                        77 ;
                        78 ;       BSB/JSB TST$CONN_DTS
                        79 ;
                        80 ; INPUT PARAMETERS:
                        81 ;
                        82 ;       R10     TEST TYPE
                        83 ;       R11     ADDRESS OF USERDATA COUNTED ASCII STRING
                        84 ;
                        85 ; IMPLICIT INPUTS:
                        86 ;
                        87 ;       TST$GT_USERDATA
                        88 ;
                        89 ; OUTPUT PARAMETERS:
                        90 ;
                        91 ;       R0      COMPLETION CODE
                        92 ;       R1      ADDRESS OF TEST ID STRING
                        93 ;       R2-R9   DESTROYED
                        94 ;
                        95 ; IMPLICIT OUTPUTS:
                        96 ;
                        97 ;       TST$GT_USERDATA UPDATED
                        98 ;
                        99 ; COMPLETION CODES:
                       100 ;
                       101 ;       R0      1 = SUCCESS; 0 = FAILURE
                       102 ;
                       103 ; SIDE EFFECTS:
                       104 ;
                       105 ;       NONE
                       106 ;
                       107 ;--
                       108
                       109 TST$CONN_DTS::                          ; CONTROL POINT
                       110
                       111 ;
                       112 ; FINISH BUILDING THE CONNECT TEST REQUEST IN THE USERDATA STRING.
                       113 ;
                       114 ; THE DTS/R CONTYPE FIELD VALUE IS DERIVED FROM BOTH THE /TYPE AND THE
                       115 ; /[NO]USERDATA QUALIFIER VALUES.
                       116 ;
                       117
    58  0000'CF   9A   118          MOVZBL  W^TST$GB_TYPE,R8        ; GET TYPE QUALIFIER VALUE
    59  0000'CF   9A   119          MOVZBL  W^TST$GB_RETURN,R9      ; GET RETURN QUALIFIER VALUE
    50  59    01   9C   120          ROTL    #1,R9,R0                ; CONTYPE = RETURN * 2 + TYPE
02  AB  58    50   81   121          ADDB3   R0,R8,2(R11)            ; UPDATE CONTYPE FIELD
        6B    02   90   122          MOVB    #2,(R11)                ; UPDATE USERDATA STRING LENGTH
                       123          $CASEB  SELECTOR=R9,DISPL=<-    ; CHECK RETURN OPTION:
```

```
                         0016   124                     CONN_TEST-                      ;  /NORETURN
                         0016   125                     CONN_TEST-                      ;  /RETURN=STANDARD
                         0016   126         >                                           ;  /RETURN=RECEIVED
            50   0000'CF   9A   001E   127         MOVZBL  W^TST$GT_CONN,R0            ; ADD TEXT TO USERDATA STRING
                    6B   50   80   0023   128         ADDB2   R0,(R11)                ; UPDATE USERDATA STRING LENGTH
      03 AB   0001'CF   50   28   0026   129         MOVC3   R0,W^TST$GT_CONN+1,3(R11) ; APPEND THE STRING
                               002D   130
                               002D   131 ;
                               002D   132 ; ENTER INTO NSP CONNECT SEQUENCE WITH DTR.
                               002D   133 ;
                               002D   134
                               002D   135 CONN_TEST:                                   ; START THE CONNECT TEST
                      040E     30   002D   136         BSBW    TST$STARTUP_DTR         ; INITIATE NSP CONNECT SEQUENCE
                    12 50      E9   0030   137         BLBC    R0,CONN_EXPECTED        ; WAS LINK ESTABLISHED?
                 52    04      D0   0033   138         MOVL    #EFN_K_DISC_ABRT,R2     ; YES, GET FUNCTION/INDEX CODE
                    54         D4   0036   139         CLRL    R4                      ; P2 = 0
                       FF:5'   30   0038   140         BSBW    TST$QIOW                ; DISCONNECT ABORT THE LINK
                               003B   141         CHECK_IOSB TST$GQ_LINKIOSB      ;MAKE SURE ABORT  COMPLETES
                               0045   142
                               0045   143 ;
                               0045   144 ; STORE THE EXPECTED CONNECT ACCEPT/REJECT CODE ON THE STACK AND BUILD
                               0045   145 ; THE EXPECTED RESPONSE COUNTED ASCII STRING IN TST$GT_USERDATA TO COMPARE
                               0045   146 ; AGAINST THE ACTUAL RESPONSE RECEIVED FROM DTR.
                               0045   147 ;
                               0045   148
                               0045   149 CONN_EXPECTED:                              ;
                               0045   150 5$:     $CASEB  SELECTOR=R9,DISPL=<-        ; CHECK USERDATA OPTION:
                               0045   151                 10$-                        ;  /NOUSERDATA
                               0045   152                 20$-                        ;  /USERDATA=STANDARD
                               0045   153                 CONN_RESPONSE-              ;  /USERDATA=RECEIVED
                               0045   154         >                                   ;
                         6B    94   004F   155 10$:     CLRB    (R11)                   ; ZERO USERDATA STRING LENGTH
                         0A    11   0051   156         BRB     CONN_RESPONSE           ; CONTINUE
                      6B       10   90   0053   157 20$:     MOVB    #16,(R11)           ; UPDATE USERDATA STRING LENGTH
      01 AB   0001'CF   10   28   0056   158         MOVC3   #16,W^TST$GT_STANDARD+1,1(R11) ; COPY STANDARD DATA PATTERN
                               005D   159
                               005D   160 ;
                               005D   161 ; CHECK ACTUAL RESPONSE FROM DTR AGAINST EXPECTED RESPONSE.
                               005D   162 ;
                               005D   163
                               005D   164 CONN_RESPONSE:                               ; INTERROGATE RESPONSE
                      2B 58    E8   005D   165         BLBS    R8,3$                   ;BR IF CONN ACCEPT EXPECTED
                   38    56    B1   0060   166         CMPW    R6,#MSG$_REJECT         ;WAS IT REJECTED?
                         09    13   0063   167         BEQLU   1$                      ;BR IF YES
            50   01F58003 8F    D0   0065   168         MOVL    #DTS$_CINBAD,R0         ;NOTE UNEXPECT ACCEPT
                         47    11   006C   169         BRB     CONN_FAILURE            ;FAIL TEST
                               006E   170 1$:
                      0004'CF  D5   006E   171         TSTL    W^TST$GQ_LINKIOSB+4     ;CHECK FOR DTR REJECT
                         1C    13   0072   172         BEQLU   10$                     ;YES,CHECK USER LENGTH
                0004'CF  09    D1   0074   173         CMPL    #9,W^TST$GQ_LINKIOSB+4  ;ALSO DTR REJECT
                         15    13   0079   174         BEQLU   10$                     ;CHECK USER DATA
                               007B   175 2$:
            50   01F5801B 8F    D0   007B   176         MOVL    #DTS$_CINREJ,R0         ;SYSTEM REJECTED CONNECT
                      0004'CF  D0   0082   177         MOVL    W^TST$GQ_LINKIOSB+4,-
                      0000'CF        0086   178                 W^TST$GL_FAOARG         ;SAVE NCP REASON
                         2A    11   0089   179         BRB     CONN_FAILURE            ;FAIL TEST
                               008B   180 3$:
```

```
                31   56   D1   008B   181           CMPL    R6,#MSG$_CONFIRM        ;CHECK IF CONN ACCEPTED
                     EB   12   008E   182           BNEQU   2$                      ;UNEXPECT REJECT
                67   6B   91   0090   183 10$:      CMPB    (R11),(R7)              ; COMPARE EXPECTED VS ACTUAL
                                0093   184                                           ;  USERDATA STRING LENGTH
                     09   13   0093   185           BEQLU   20$                     ; IS IS OK?
          50    01F58008 8F   D0   0095   186           MOVL    #DTS$_BADUSRLEN,R0      ;NOTE BAD LEN USER DATA
                     17   11   009C   187           BRB     CONN_FAILURE            ;
                50   6B   9A   009E   188 20$:      MOVZBL  (R11),R0                ; COMPARE EXPECTED VS ACTUAL
       01 A7     01 AB    50   29   00A1   189           CMPC3   R0,1(R11),1(R7)      ;  USERDATA STRING VALUE
                     09   13   00A7   190           BEQLU   CONN_SUCCESS            ; IS IT OK?
          50    01F58013 8F   D0   00A9   191           MOVL    #DTS$_BADUSRDAT,R0      ;NOTE BAD DATA
                     03   11   00B0   192           BRB     CONN_FAILURE            ;
                                00B2   193 CONN_SUCCESS:                             ; TEST WAS SUCCESSFUL
                50   01   D0   00B2   194           MOVL    #1,R0                   ; SET COMPLETION CODE TO SUCCESS
                                00B5   195 CONN_FAILURE:                             ; ENTER HERE IF TEST FAILED
           51    0000'CF   9E   00B5   196           MOVAB   W^TST$GT_CONN,R1        ; RETURN ADDRESS OF TEST ID STRING
                     05   00BA   197           RSB                             ; EXIT
```

```
                     00BB   199          .SBTTL  TST$DATA_DTS - DATA TEST
                000000BB    200          .PSECT  TST$CODE        NOWRT
                     00BB   201
                     00BB   202 ;++
                     00BB   203 ; FUNCTIONAL DESCRIPTION:
                     00BB   204 ;
                     00BB   205 ;       NONE
                     00BB   206 ;
                     00BB   207 ; CALLING SEQUENCE:
                     00BB   208 ;
                     00BB   209 ;       BSB/JSB TST$DATA_DTS
                     00BB   210 ;
                     00BB   211 ; INPUT PARAMETERS:
                     00BB   212 ;
                     00BB   213 ;       R10     TEST TYPE
                     00BB   214 ;       R11     ADDRESS OF USERDATA COUNTED ASCII STRING
                     00BB   215 ;
                     00BB   216 ; IMPLICIT INPUTS:
                     00BB   217 ;
                     00BB   218 ;       TST$GT_USERDATA
                     00BB   219 ;
                     00BB   220 ; OUTPUT PARAMETERS:
                     00BB   221 ;
                     00BB   222 ;       R0      COMPLETION CODE
                     00BB   223 ;       R1      ADDRESS OF TEST ID STRING
                     00BB   224 ;       R2-R9   DESTROYED
                     00BB   225 ;
                     00BB   226 ; IMPLICIT OUTPUTS:
                     00BB   227 ;
                     00BB   228 ;       TST$GT_USERDATA UPDATED
                     00BB   229 ;
                     00BB   230 ; COMPLETION CODES:
                     00BB   231 ;
                     00BB   232 ;       R0      1 = SUCCESS; 0 = FAILURE
                     00BB   233 ;
                     00BB   234 ; SIDE EFFECTS:
                     00BB   235 ;
                     00BB   236 ;       NONE
                     00BB   237 ;
                     00BB   238 ;--
                     00BB   239
                     00BB   240 TST$DATA_DTS::                          ; CONTROL POINT
                     00BB   241
                     00BB   242 ;
                     00BB   243 ;VERIFY MESSAGE SIZE FIELD
                     00BB   244 ;
                     00BB   245
          54 0000'CF 3C  00BB   246          MOVZWL  W^TST$GW_SIZE,R4        ;[TGD]VALUE OF SIZE FIELD
                     00C0   247          $CASEB SELECTOR=TST$GB_TYPE,DISPL=<-
                     00C0   248              40$-                        ;SINK TEST
                     00C0   249              10$-                        ;SEQUENCE TEST
                     00C0   250              20$-                        ;PATTERN TEST
                     00C0   251              40$-                        ;ECHO TEST
                     00C0   252                  >
                     00D0   253 10$:                                    ;MIN SIZE OF SEQUENCE TEST IS 4
                     00D0   254
          50 04 D0   00D0   255          MOVL    #4,R0
```

```
                03   11   00D3   256          BRB     30$                     ;GO TO COMMON CODE
                                   00D5   257
                                   00D5   258 20$:                             ;MIN SIZE OF PATT CHECK IS 5
          50    05   D0   00D5   259          MOVL    #5,R0
                                   00D8   260 30$:                             ;IF SIZE TOO SMALL THEN ERROR
          54    50   B1   00D8   261          CMPW    R0,R4
                06   15   00DB   262          BLEQ    40$                     ;IF /SIZE EXCEEDS MIN THEN OKAY
          50    02   D0   00DD   263          MOVL    #2,R0                   ;ERROR CODE
             011D   31   00E0   264          BRW     DATA_FAILURE            ;GO TO COMMON ERROR CODE
                                   00E3   265 40$:
                                   00E3   266 ;
                                   00E3   267 ; FINISH BUILDING THE DATA TEST REQUEST IN THE USERDATA STRING.
                                   00E3   268 ;
                                   00E3   269
       59    02 AB   DE   00E3   270          MOVAL   2(R11),R9               ; GET ADDRESS OF DTS/R DATATYPE FIELD
    89    0000'CF   90   00E7   271          MOVB    W^TST$GB_TYPE,(R9)+     ; UPDATE DATATYPE FIELD
    89    0000'CF   90   00EC   272          MOVB    W^TST$GB_FLOW,(R9)+     ; UPDATE FCOPT FIELD
    89    0000'CF   90   00F1   273          MOVB    W^TST$GB_RQUEUE,(R9)+   ; UPDATE DTS/R FCVAL FIELD
    89    0000'CF   90   00F6   274          MOVB    W^TST$GB_NAK,(R9)+      ; UPDATE NAKVAL FIELD
    89    0000'CF   90   00FB   275          MOVB    W^TST$GB_BACK,(R9)+     ; UPDATE BPVAL FIELD
    89    0000'CF   B0   0100   276          MOVW    W^TST$GW_SIZE,(R9)+     ; UPDATE MSGLEN FIELD
          68    08   90   0105   277          MOVB    #8,(R11)                ; UPDATE USERDATA STRING LENGTH
                                   0108   278
                                   0108   279 ;
                                   0108   280 ; ENTER INTO NSP CONNECT SEQUENCE WITH DTR.
                                   0108   281 ;
                                   0108   282
                                   0108   283 DATA_TEST:                       ; START THE DATA TEST
             0333   30   0108   284          BSBW    TST$STARTUP_DTR         ; INITIATE NSP CONNECT SEQUENCE
           11 50    E8   010B   285          BLBS    R0,DATA_INIT            ; WAS LINK ESTABLISHED?
 50  01F5801B 8F    D0   010E   286          MOVL    #DTS$_CINREJ,R0
          0004'CF   D0   0115   287          MOVL    W^TST$GQ_LINKIOSB+4,-
          0000'CF                0119   288                  W^TST$GL_FAOARG
             00E1   31   011C   289          BRW     DATA_FAILURE            ;
                                   011F   290
                                   011F   291 ;
                                   011F   292 ; DATA TEST INITIALIZATION
                                   011F   293 ;
                                   011F   294
                                   011F   295 DATA_INIT:                       ; CONTINUE
          0000'CF   7C   011F   296          CLRQ    W^TST$GL_XMITDATA       ; ZERO TRANSMIT AND RECEIVE
                                   0123   297                                  ;  MESSAGE COUNTERS
          0000'CF   7C   0123   298          CLRQ    W^TST$GL_XMITINTE       ; ZERO TRANSMIT AND RECEIVE
                                   0127   299                                  ;  INTERRUPT MESSAGE COUNTERS
    0000'CF    01   D0   0127   300          MOVL    #1,W^TST$GL_STATUS      ; SET AST STATUS CODE TO SUCCESS
          0000'CF   94   012C   301          CLRB    W^TST$GB_ASTFLAGS       ;NOTE TIMER RUNNING
00000000'EF   00000000'EF   DE   0130   302          MOVAL   TST$QB_QHEAD,TST$QB_QHEAD;INIT QUEUE HEAD
00000004'EF   00000000'EF   DE   013B   303          MOVAL   TST$QB_QHEAD,TST$QB_QHEAD+4
                                   0146   304
                                   0146   305 ;
                                   0146   306 ; PUT REPETITIONS OF THE STANDARD DATA PATTERN IN THE MESSAGE BUFFER
                                   0146   307 ; BEGINNING AT BUFFER+4.
                                   0146   308 ;
                                   0146   309
          53    0000'CF   9E   0146   310          MOVAB   W^TST$GB_XMITBUF,R3     ; GET ADDRESS OF MESSAGE
                83    01   D0   014B   311          MOVL    #1,(R3)+                ; INITIALIZE MESSAGE SEQUENCE NUMBER
          54    0000'CF   3C   014E   312          MOVZWL  W^TST$GW_SIZE,R4        ; GET MESSAGE SIZE
```

```
                04   54   B1  0153   313          CMPW    R4,#4                   ;ANY DATA IN MESSAGE?
                       06   15  0156   314          BLEQ    5$                      ;NO, JUST SEQUENCE
                54     04   C2  0158   315          SUBL2   #4,R4                   ; REDUCE SIZE ACCORDINGLY
                     FEA2'  30  015B   316          BSBW    TST$STANDARD            ; PUT STD DATA PATTERN IN BUFFER
                            015E   317
                            015E   318 5$:
                            015E   319 ;
                            015E   320 ; SET TIMER
                            015E   321 ;
                            015E   322
        0000'CF     0000'CF  DO  015E   323          MOVL    W^TST$GL_SECONDS,W^TST$GL_CLOCK ;SETUP COUNTDOWN LOCATION
                            0165   324          $SETIMR_S EFN=#EFN_K_TIMER-     ;
                            0165   325                    DAYTIM=W^TST$GQ_NANOSEC- ;
                            0165   326                    ASTADR=W^TST$TIMER_DTS  ;
                            0178   327          CHECK_SS                        ; CHECK STATUS CODE
                            017B   328
                            017B   329 ;
                            017B   330 ; TRANSMIT [AND RECEIVE] DATA MESSAGES UNTIL TIMER EXPIRES
                            017B   331 ;
                            017B   332
          03    02 AB   91  017B   333          CMPB    2(R11),#VAL_K_TYPE_ECHO ; SHOULD DTR ECHO MESSAGE?
                      10   12  017F   334          BNEQU   10$                     ; NO, CONTINUE
                52    07   D0  0181   335          MOVL    #EFN_K_RECV_DATA,R2     ; GET FUNCTION/INDEX CODE
             54   0000'CF   3C  0184   336          MOVZWL  W^TST$GW_SIZE,R4        ;SIZE OF DATA BUFFER
             55   0000'CF   9E  0189   337          MOVAB   W^TST$RECVAST_DTS,R5    ; GET ADDRESS OF AST ROUTINE
                   FE6F'    30  018E   338          BSBW    TST$QIOAST              ; START UP RECEIVE MESSAGE STREAM
                52    00   D0  0191   339 10$:     MOVL    #EFN_K_READ_MAIL,R2     ; GET FUNCTION/INDEX CODE
               54    00'8F   9A  0194   340          MOVZBL  #TST$K_MAILBUF,R4       ; GET MAILBOX BUFFER SIZE
             55   0000'CF   9E  0198   341          MOVAB   W^TST$MAILAST_DTS,R5    ; GET ADDRESS OF AST ROUTINE
                   FE6D'    30  019D   342          BSBW    TST$QIOAST              ; ISSUE READ TO MAILBOX
                52    05   D0  01A0   343          MOVL    #EFN_K_XMIT_DATA,R2     ; GET FUNCTION/INDEX CODE
             54   0000'CF   3C  01A3   344          MOVZWL  W^TST$GW_SIZE,R4        ; GET MESSAGE SIZE
             55   0000'CF   9E  01A8   345          MOVAB   W^TST$XMITAST_DTS,R5    ; GET ADDRESS OF AST ROUTINE
                   FE50'    30  01AD   346          BSBW    TST$QIOAST              ; START UP TRANSMIT MESSAGE STREAM
                            01B0   347
                            01B0   348 ;
                            01B0   349 ; WAIT EITHER FOR TIMER TO EXPIRE OR FOR LINK DISCONNECT
                            01B0   350 ;
                            01B0   351
                      07   11  01B0   352          BRB     30$                     ;CHECK FOR ASTS
                            01B2   353 20$:
                            01B2   354          $HIBER_S                        ;GO TO SLEEP TILL AN AST
                            01B9   355 30$:
            2B 0000'CF      E8  01B9   356          BLBS    W^TST$GB_ASTFLAGS,40$   ;JUMP IF TIMER EXPIRED
        50   00000000'FF    0F  01BE   357          REMQUE  @TST$QB_QHEAD,R0        ;DEQUEUE AN AST
                      EB   1D  01C5   358          BVS     20$                     ;NOTHING THERE ,SLEEP
                52  0000'C0   D0  01C7   359          MOVL    TST$QB_CODE(R0),R2              ;QIO FUNCTION/CODE
        54   C0000000'EF    3C  01CC   360          MOVZWL  TST$GW_SIZE,R4          ;SIZE FOR DATA MSG
                    52   00   D1  01D3   361          CMPL    #EFN_K_READ_MAIL,R2     ;HAS A MAIL READ EXPIRED?
                      04   12  01D6   362          BNEQU   35$                     ;NOPE A DATA AST
                  54    00'8F   9A  01D8   363          MOVZBL  #TST$K_MAILBUF,R4       ;USE MAIL BUFFER SIZE
                            01DC   364 35$:
                55  0000'C0   D0  01DC   365          MOVL    TST$QB_ASTADR(R0),R5    ;AST ADDRESS FOR QIO
                   FE1C'    30  01E1   366          BSBW    TST$QIOAST              ;DO QIO WITH AST
                            01E4   367          CHECK_SS                        ;MAKE SERVICE OKAY
                      D0   11  01E7   368          BRB     30$                     ;DEQUEUE ANOTHER
                            01E9   369 40$:
```

```
                52   03    D0  01E9   370          MOVL    #EFN_K_DISC_SYNC,R2     ; GET FUNCTION/INDEX CODE
                     54    D4  01EC   371          CLRL    R4                      ; P2 = 0
                   FE0F'   30  01EE   372          BSBW    TST$QIOW                ; DESTROY LINK WITH SYNC DISCONNECT
                                01F1   373          CHECK_IOSB TST$GQ_LINKIOSB      ;MAKE SURE DISCONNECT COMPLETES
                                01FB   374
                                01FB   375 ;
                                01FB   376 ; DATA TEST IS FINISHED
                                01FB   377 ;
                                01FB   378
          50   0000'CF    D0  01FB   379          MOVL    W^TST$GL_STATUS,R0      ; POST STATUS
                                0200   380 DATA_FAILURE:                        ; ENTER HERE IF TEST FAILED
          51   0000'CF    9E  0200   381          MOVAB   W^TST$GT_DATA,R1        ; RETURN ADDRESS OF TEST ID STRING
                          05  0205   382          RSB                             ; EXIT
```

```
                     0206   384          .SBTTL  TST$DISC_DTS - DISCONNECT TEST
                00000206   385          .PSECT  TST$CODE        NOWRT
                     0206   386
                     0206   387 ;++
                     0206   388 ; FUNCTIONAL DESCRIPTION:
                     0206   389 ;
                     0206   390 ;       NONE
                     0206   391 ;
                     0206   392 ; CALLING SEQUENCE:
                     0206   393 ;
                     0206   394 ;       BSB/JSB TST$DISC_DTS
                     0206   395 ;
                     0206   396 ; INPUT PARAMETERS:
                     0206   397 ;
                     0206   398 ;       R10     TEST TYPE
                     0206   399 ;       R11     ADDRESS OF USERDATA COUNTED ASCII STRING
                     0206   400 ;
                     0206   401 ; IMPLICIT INPUTS:
                     0206   402 ;
                     0206   403 ;       TST$GT_USERDATA
                     0206   404 ;
                     0206   405 ; OUTPUT PARAMETERS:
                     0206   406 ;
                     0206   407 ;       R0      COMPLETION CODE
                     0206   408 ;       R1      ADDRESS OF TEST ID STRING
                     0206   409 ;       R2-R9   DESTROYED
                     0206   410 ;
                     0206   411 ; IMPLICIT OUTPUTS:
                     0206   412 ;
                     0206   413 ;       TST$GT_USERDATA UPDATED
                     0206   414 ;
                     0206   415 ; COMPLETION CODES:
                     0206   416 ;
                     0206   417 ;       R0      1 = SUCCESS; 0 = FAILURE
                     0206   418 ;
                     0206   419 ; SIDE EFFECTS:
                     0206   420 ;
                     0206   421 ;       NONE
                     0206   422 ;
                     0206   423 ;--
                     0206   424
                     0206   425 TST$DISC_DTS::                          ; CONTROL POINT
                     0206   426
                     0206   427 ;
                     0206   428 ; FINISH BUILDING THE DISCONNECT TEST REQUEST IN THE USERDATA STRING.
                     0206   429 ;
                     0206   430 ; THE DTS/R DISTYPE FIELD VALUE IS DERIVED FROM BOTH THE /TYPE AND THE
                     0206   431 ; /[NO]USERDATA QUALIFIER VALUES.
                     0206   432 ;
                     0206   433
    58   0000'CF   9A 0206   434          MOVZBL  W^TST$GB_TYPE,R8        ; GET TYPE QUALIFIER VALUE
    59   0000'CF   9A 020B   435          MOVZBL  W^TST$GB_RETURN,R9      ; GET RETURN QUALIFIER VALUE
    50   59    01   9C 0210   436          ROTL    #1,R9,R0                ; CONTYPE = RETURN * 2 + TYPE
02 AB   58    50   81 0214   437          ADDB3   R0,R8,2(R11)            ; UPDATE DISTYPE FIELD
        6B    02   90 0219   438          MOVB    #2,(R11)                ; UPDATE USERDATA STRING LENGTH
                     021C   439          $CASEB  SELECTOR=R9,DISPL=<-    ; CHECK RETURN OPTION:
                     021C   440                  D!SC_TEST-              ;  /NORETURN
```

```
                                021C   441                  DISC_TEST-                      ;  /RETURN=STANDARD
                                021C   442                  >                               ;  /RETURN=RECEIVED
                     50   0000'CF   9A  0224   443          MOVZBL  W^TST$GT_DISC,R0        ; ADD TEXT TO USERDATA STRING
                          6B   50   80  0229   444          ADDB2   R0,(R11)                ; UPDATE USERDATA STRING LENGTH
                03 AB     0001'CF   50  022C   445          MOVC3   R0,W^TST$GT_DISC+1,3(R11) ; APPEND THE STRING
                                0233   446
                                0233   447 ;
                                0233   448 ; ENTER INTO NSP CONNECT SEQUENCE WITH DTR.
                                0233   449 ;
                                0233   450
                                0233   451 DISC_TEST:                                     ; START THE DISCONNECT TEST
                                  0208  30  0233   452          BSBW    TST$STARTUP_DTR         ; INITIATE NSP CONNECT SEQUENCE
                                 10 50  E8  0236   453          BLBS    R0,10$                  ; WAS LINK ESTABLISHED?
                           50   01F5801B 8F  D0  0239   454          MOVL    #DTS$_CINREJ,R0         ;NOTE REJECTION
                                0004'CF   D0  0240   455          MOVL    W^TST$GQ_LINKIOSB+4,-
                                0000'CF       0244   456                  W^TST$GL_FAOARG         ;NOTE ABORT REASON
                                    73   11  0247   457          BRB     DISC_FAILURE            ; NO, SOMETHING WENT WRONG
                                         0249   458
                                         0249   459 ;
                                         0249   460 ; WAIT FOR DTR TO DISCONNECT THE LINK
                                         0249   461 ;
                                         0249   462
                                52   00   D0  0249   463 10$:     MOVL    #EFN_K_READ_MAIL,R2     ; GET FUNCTION/INDEX CODE
                             54   00'8F   9A  024C   464          MOVZBL  #TST$K_MAILBUF,R4       ; GET MAILBOX BUFFER SIZE
                                FDAD'   30  0250   465          BSBW    TST$QIOW                ; WAIT FOR RESPONSE
                                FDAA'   30  0253   466          BSBW    TST$EXAM_MAIL           ; PARSE MAILBOX MESSAGE
                                52   04   D0  0256   467          MOVL    #EFN_K_DISC_ABRT,R2     ; GET FUNCTION/INDEX CODE
                                    54   D4  0259   468          CLRL    R4                      ; P2 = 0
                                FDA2'   30  025B   469          BSBW    TST$QIOW                ; DISCONNECT ABORT THE LINK
                                         025E   470          CHECK_IOSB TST$GQ_LINKIOSB      ;MAKE SURE ABORT COMPLETES
                                         0268   471
                                         0268   472 ;
                                         0268   473 ; STORE THE EXPECTED DISCONNECT SYNCHRONOUS/ABORT CODE ON THE STACK AND BUILD
                                         0268   474 ; THE EXPECTED RESPONSE COUNTED ASCII STRING IN TST$GT_USERDATA TO COMPARE
                                         0268   475 ; AGAINST THE ACTUAL RESPONSE RECEIVED FROM DTR.
                                         0268   476 ;
                                         0268   477
                                         0268   478 DISC_EXPECTED:                           ;
                             7E   33   B0  0268   479          MOVW    #MSG$_DISCON,-(SP)      ; ASSUME SYNCHRONOUS DISCONNECT
                                03 58  E9  026B   480          BLBC    R8,5$                   ; BRANCH IF SYNC DISC SPECIFIED
                             6E   30   B0  026E   481          MOVW    #MSG$_ABORT,(SP)        ; NO, DISC ABORT IS SPECIFIED
                                         0271   482 5$:      $CASEB  SELECTOR=R9,DISPL=<-    ; CHECK USERDATA OPTION:
                                         0271   483                  10$-                    ;  /NOUSERDATA
                                         0271   484                  20$-                    ;  /USERDATA=STANDARD
                                         0271   485                  DISC_RESPONSE-          ;  /USERDATA=RECEIVED
                                         0271   486          >                               ;
                                    6B   94  027B   487 10$:     CLRB    (R11)                   ; ZERO USERDATA STRING LENGTH
                                    0A   11  027D   488          BRB     DISC_RESPONSE           ; CONTINUE
                                6B  10   90  027F   489 20$:     MOVB    #16,(R11)               ; UPDATE USERDATA STRING LENGTH
                01 AB     0001'CF   10   28  0282   490          MOVC3   #16,W^TST$GT_STANDARD+1,1(R11) ; COPY STANDARD DATA PATTERN
                                         0289   491
                                         0289   492 ;
                                         0289   493 ; CHECK ACTUAL RESPONSE FROM DTR AGAINST EXPECTED RESPONSE
                                         0289   494 ;
                                         0289   495
                                         0289   496 DISC_RESPONSE:                          ; INTERROGATE RESPONSE
                             56   8E   B1  0289   497          CMPW    (SP)+,R6                ; COMPARE EXPECTED VS ACTUAL
```

```
                                 028C   498
                                                                        ;  RESPONSE FROM DTR
                          09     13     028C   499          BEQLU   10$                        ; IS IT OK?
              50  01F5802B   8F     D0     028E   500          MOVL    #DTS$_DISBAD,R0            ;NOTE WRONG KIND OF DISCONNECT
                          25     11     0295   501          BRB     DISC_FAILURE               ;
                      67  6B     91     0297   502 10$:     CMPB    (R11),(R7)                 ; COMPARE EXPECTED VS ACTUAL
                                 029A   503                                                    ;  USERDATA STRING LENGTH
                          09     13     029A   504          BEQLU   20$                        ; IS IS OK?
              50  01F5800B   8F     D0     029C   505          MOVL    #DTS$_BADUSRLEN,R0         ;INVALID USERDATA LENGTH
                          17     11     02A3   506          BRB     DISC_FAILURE               ;
                      50  6B     9A     02A5   507 20$:     MOVZBL  (R11),R0                   ; COMPARE EXPECTED VS ACTUAL
          01 A7   01 AB   50     29     02A8   508          CMPC3   R0,1(R11),1(R7)            ;  USERDATA STRING VALUE
                          09     13     02AE   509          BEQLU   DISC_SUCCESS               ; IS IT OK?
              50  01F58013   8F     D0     02B0   510          MOVL    #DTS$_BADUSRDAT,R0         ;INVALID USER DATA
                          03     11     02B7   511          BRB     DISC_FAILURE               ;
                                 02B9   512 DISC_SUCCESS:                                      ; TEST WAS SUCCESSFUL
                      50  01     D0     02B9   513          MOVL    #1,R0                      ; SET COMPLETION CODE TO SUCCESS
                                 02BC   514 DISC_FAILURE:                                      ; ENTER HERE IF TEST FAILED
                  51  0000'CF   9E     02BC   515          MOVAB   W^TST$GT_DISC,R1           ; RETURN ADDRESS OF TEST ID STRING
                                 05     02C1   516          RSB                                ; EXIT
```

```
                     02C2   518          .SBTTL  TST$INTE_DTS - INTERRUPT TEST
                     02C2   519          .PSECT  TST$CODE        NOWRT
                     02C2   520
                     02C2   521 ;++
                     02C2   522 ; FUNCTIONAL DES  'PTION:
                     02C2   523 ;
                     02C2   524 ;        NONE
                     02C2   525 ;
                     02C2   526 ; CALLING SEQUENCE:
                     02C2   527 ;
                     02C2   528 ;        BSB/JSB TST$INTE_DTS
                     02C2   529 ;
                     02C2   530 ; INPUT PARAMETERS:
                     02C2   531 ;
                     02C2   532 ;        R10     TEST TYPE
                     02C2   533 ;        R11     ADDRESS OF USERDATA COUNTED ASCII STRING
                     02C2   534 ;
                     02C2   535 ; IMPLICIT INPUTS:
                     02C2   536 ;
                     02C2   537 ;        TST$GT_USERDATA
                     02C2   538 ;
                     02C2   539 ; OUTPUT PARAMETERS:
                     02C2   540 ;
                     02C2   541 ;        R0      COMPLETION CODE
                     02C2   542 ;        R1      ADDRESS OF TEST ID STRING
                     02C2   543 ;        R2-R9   DESTROYED
                     02C2   544 ;
                     02C2   545 ; IMPLICIT OUTPUTS:
                     02C2   546 ;
                     02C2   547 ;        TST$GT_USERDATA UPDATED
                     02C2   548 ;
                     02C2   549 ; COMPLETION CODES:
                     02C2   550 ;
                     02C2   551 ;        R0      1 = SUCCESS; 0 = FAILURE
                     02C2   552 ;
                     02C2   553 ; SIDE EFFECTS:
                     02C2   554 ;
                     02C2   555 ;        NONE
                     02C2   556 ;
                     02C2   557 ;--
                     02C2   558
                     02C2   559 TST$INTE_DTS::                           ; CONTROL POINT
                     02C2   560
                     02C2   561 ;
                     02C2   562 ;VERIFY MESSAGE SIZE FIELD
                     02C2   563 ;
                     02C2   564
          54   0000'CF   3C  02C2   565          MOVZWL  W^TST$GW_SIZE,R4        ;[TGD]VALUE OF SIZE FIELD
                     02C7   566          $CASEB SELECTOR=TST$GB_TYPE,DISPL=<-
                     02C7   567              40$-                        ;SINK TEST
                     02C7   568              10$-                        ;SEQUENCE TEST
                     02C7   569              20$-                        ;PATTERN TEST
                     02C7   570              40$-                        ;ECHO TEST
                     02C7   571                  >
                     02D7   572 10$:                                     ;MIN SIZE OF SEQUENCE TEST IS 1
                     02D7   573
          50   04   D0  02D7   574          MOVL    #4,R0
```

```
                     03   11  02DA   575          BRB     30$                     ;GO TO COMMON CODE
                                 02DC   576
                                 02DC   577 20$:                                  ;MIN SIZE OF PATT CHECK IS 5
                50   05   D0  02DC   578          MOVL    #5,R0
                                 02DF   579 30$:                                  ;IF SIZE TOO SMALL THEN ERROR
                54   50   B1  02DF   580          CMPW    R0,R4
                     06   15  02E2   581          BLEQ    40$                     ;IF /SIZE EXCEEDS MIN THEN OKAY
                50   02   D0  02E4   582          MOVL    #2,R0                   ;ERROR CODE
                   00F1   31  02E7   583          BRW     INTE_FAILURE            ;GO TO COMMON ERROR CODE
                                 02EA   584 40$:
                                 02EA   585 ;
                                 02EA   586 ; FINISH BUILDING THE INTERRUPT TEST REQUEST IN THE USERDATA STRING.
                                 02EA   587 ;
                                 02EA   588
          02 AB   0000'CF   90  02EA   589          MOVB    W^TST$GB_TYPE,2(R11)    ; UPDATE INTTYPE FIELD
          03 AB   0000'CF   90  02F0   590          MOVB    W^TST$GB_RQUEUE,3(R11)  ; UPDATE INTFC FIELD
                  6B   03   90  02F6   591          MOVB    #3,(R11)                ; UPDATE USERDATA STRING LENGTH
                                 02F9   592
                                 02F9   593 ;
                                 02F9   594 ; ENTER INTO NSP CONNECT SEQUENCE WITH DTR.
                                 02F9   595 ;
                                 02F9   596
                                 02F9   597 INTE_TEST:                            ; START THE INTE TEST
                     0142   30   02F9   598          BSBW    TST$STARTUP_DTR         ; INITIATE NSP CONNECT SEQUENCE
                   11 50    E8  02FC   599          BLBS    R0,INTE_INIT            ; WAS LINK ESTABLISHED?
          50   01F58018 8F    D0  02FF   600          MOVL    #DTS$_CINREJ,R0         ;NOTE ABORTED CONNECT
                   0004'CF   D0  0306   601          MOVL    W^TST$GQ_LINKIOSB+4,-
                   0000'CF         030A   602                  W^TST$GL_FAOARG ;NOTE REASON
                      00CB   31  030D   603          BRW     INTE_FAILURE
                                 0310   604
                                 0310   605 ;
                                 0310   606 ; INTERRUPT TEST INITIALIZATION
                                 0310   607 ;
                                 0310   608
                                 0310   609 INTE_INIT:                            ; CONTINUE
                   0000'CF   7C  0310   610          CLRQ    W^TST$GL_XMITDATA       ; ZERO TRANSMIT AND RECEIVE
                                 0314   611                                          ;  MESSAGE COUNTERS
                   0000'CF   7C  0314   612          CLRQ    W^TST$GL_XMITINTE       ; ZERO TRANSMIT AND RECEIVE
                                 0318   613                                          ;  INTERRUPT MESSAGE COUNTERS
              0000'CF    01   D0  0318   614          MOVL    #1,W^TST$GL_STATUS      ; SET AST STATUS CODE TO SUCCESS
                   0000'CF   94  031D   615          CLRB    W^TST$GB_ASTFLAGS       ;NOTE TIMER RUNNING
00000000'EF    00000000'EF    DE  0321   616          MOVAL   TST$QB_QHEAD,TST$QB_QHEAD;INIT QUEUE HEAD
00000004'EF    00000000'EF    DE  032C   617          MOVAL   TST$QB_QHEAD,TST$QB_QHEAD+4
                                 0337   618
                                 0337   619 ;
                                 0337   620 ; PUT REPETITIONS OF THE STANDARD DATA PATTERN IN THE MESSAGE BUFFER
                                 0337   621 ; BEGINNING AT BUFFER+4.
                                 0337   622 ;
                                 0337   623
              53   0000'CF   9E  0337   624          MOVAB   W^TST$GB_INTEBUF,R3     ; GET ADDRESS OF MESSAGE
                   83   01   D0  033C   625          MOVL    #1,(R3)+                ; INITIALIZE MESSAGE SEQUENCE NUMBER
              54   0000'CF   3C  033F   626          MOVZWL  W^TST$GW_SIZE,R4        ; GET MESSAGE SIZE
                   04   54   B1  0344   627          CMPW    R4,#4                   ;[TGD]ANY DAT IN MESSAGE
                        06   15  0347   628          BLEQ    10$                     ;NOPE DONT FILL BUFFER
                   54   04   C2  0349   629          SUBL2   #4,R4                   ; REDUCE SIZE ACCORDINGLY
                      FCB1'   30  034C   630          BSBW    TST$STANDARD            ; PUT STD DATA PATTERN IN BUFFER
                                 034F   631
```

```
                        034F    632 10$:
                        034F    633 ;
                        034F    634 ; SET TIMER
                        034F    635 ;
                        034F    636
    0000'CF   0000'CF   DO  034F    637         MOVL    W^TST$GL_SECONDS,W^TST$GL_CLOCK ;SETUP COUNTDOWN LOCATION
                        0356    638         $SETIMR_S EFN=#EFN_K_TIMER-     ;
                        0356    639                 DAYTIM=W^TST$GQ_NANOSEC-    ;
                        0356    640                 ASTADR=W^TST$TIMER_DTS  ;
                        0369    641         CHECK_SS                        ; CHECK STATUS CODE
                        036C    642
                        036C    643 ;
                        036C    644 ; TRANSMIT [AND RECEIVE] INTERRUPT MESSAGES UNTIL TIMER EXPIRES
                        036C    645 ;
                        036C    646
        52    00    DO  036C    647         MOVL    #EFN_K_READ_MAIL,R2     ; GET FUNCTION/INDEX CODE
    54    00'8F     9A  036F    648         MOVZBL  #TST$K_MAILBUF,R4       ; GET MAILBOX BUFFER SIZE
55  0000'CF       9E  0373    649         MOVAB   W^TST$MAILAST_DTS,R5    ; GET ADDRESS OF AST ROUTINE
          FC85'     30  0378    650         BSBW    TST$QIOAST              ; ISSUE READ TO MAILBOX
        52    06    DO  037B    651         MOVL    #EFN_K_XMIT_INTE,R2     ; GET FUNCTION/INDEX CODE
54  0000'CF         3C  037E    652         MOVZWL  W^TST$GW_SIZE,R4        ; GET MESSAGE SIZE
55  0000'CF         9E  0383    653         MOVAB   W^TST$INTEAST_DTS,R5    ; GET ADDRESS OF AST ROUTINE
          FC75'     30  0388    654         BSBW    TST$QIOAST              ; START UP TRANSMIT MESSAGE STREAM
                        038B    655
                        038B    656 ;
                        038B    657 ; WAIT EITHER FOR TIMER TO EXPIRE OR FOR LINK DISCONNECT
                        038B    658 ;
                        038B    659
                        038B    660
            07  11      038B    661         BRB     30$                     ;CHECK FOR ASTS
                        038D    662 20$:
                        038D    663         $HIBER_S                        ;GO TO SLEEP TILL AN AST
                        0394    664 30$:
      2B 0000'CF    E8  0394    665         BLBS    W^TST$GB_ASTFLAGS,40$   ;JUMP IF T'MER EXPIRED
50  00000000'FF       0F  0399    666         REMQUE  @TST$QB_QHEAD,R0        ;DEQUEUE AN AST
              EB    1D  03A0    667         BVS     20$                     ;NOTHING THERE ,SLEEP
    52  0000'C0       DO  03A2    668         MOVL    TST$QB_CODE(R0),R2              ;QIO FUNCTION/CODE
54  00000000'EF       3C  03A7    669         MOVZWL  TST$GW_SIZE,R4          ;SIZE FOR DATA MSG
        52    00    D1  03AE    670         CMPL    #EFN_K_READ_MAIL,R2     ;HAS A MAIL READ EXPIRED?
              04    12  03B1    671         BNEQU   35$                     ;NOPE A DATA AST
      54    00'8F     9A  03B3    672         MOVZBL  #TST$K_MAILBUF,R4       ;USE MAIL BUFFER SIZE
                        03B7    673 35$:
    55  0000'C0       DO  03B7    674         MOVL    TST$QB_ASTADR(R0),R5    ;AST ADDRESS FOR QIO
          FC41'     30  03BC    675         BSBW    TST$QIOAST              ;DO QIO WITH AST
                        03BF    676         CHECK_SS                        ;MAKE SERVICE OKAY
            D0  11      03C2    677         BRB     30$                     ;DEQUEUE ANOTHER
                        03C4    678 40$:
        52    03    DO  03C4    679         MOVL    #EFN_K_DISC_SYNC,R2     ; GET FUNCTION/INDEX CODE
              54    D4  03C7    680         CLRL    R4                      ; P2 = 0
          FC34'     30  03C9    681         BSBW    TST$QIOW                ; DESTROY LINK WITH SYNC DISCONNECT
                        03CC    682         CHECK_IOSB TST$GQ_LINKIOSB      ;MAKE SURE DISCONNECT SUCCEEDS
                        03D6    683
                        03D6    684 ;
                        03D6    685 ; INTERRUPT TEST IS FINISHED
                        03D6    686 ;
                        03D6    687
    50  0000'CF       DO  03D6    688         MOVL    W^TST$GL_STATUS,R0      ; POST STATUS
```

```
                     03DB   689 INTE_FAILURE:                          ; ENTER HERE IF TEST FAILED
            51 0000'CF 9E 03DB   690          MOVAB   W^TST$GT_INTE,R1  ; RETURN ADDRESS OF TEST ID STRING
               05 03E0   691          RSB                               ; EXIT
```

```
                     03E1   693          .SBTTL  TST$MISC_DTS - MISCELLANEOUS TEST
                0000 03E1   694          .PSECT  TST$CODE        NOWRT
                     03E1   695
                     03E1   696 ;++
                     03E1   697 ; FUNCTIONAL DESCRIPTION:
                     03E1   698 ;
                     03E1   699 ;       NONE
                     03E1   700 ;
                     03E1   701 ; CALLING SEQUENCE:
                     03E1   702 ;
                     03E1   703 ;       BSB/JSB TST$MISC_DTS
                     03E1   704 ;
                     03E1   705 ; INPUT PARAMETERS:
                     03E1   706 ;
                     03E1   707 ;       R10     TEST TYPE
                     03E1   708 ;       R11     ADDRESS OF USERDATA COUNTED ASCII STRING
                     03E1   709 ;
                     03E1   710 ; IMPLICIT INPUTS:
                     03E1   711 ;
                     03E1   712 ;       TST$GT_USERDATA
                     03E1   713 ;
                     03E1   714 ; OUTPUT PARAMETERS:
                     03E1   715 ;
                     03E1   716 ;       R0      COMPLETION CODE
                     03E1   717 ;       R1      ADDRESS OF TEST ID STRING
                     03E1   718 ;       R2-R9   DESTROYED
                     03E1   719 ;
                     03E1   720 ; IMPLICIT OUTPUTS:
                     03E1   721 ;
                     03E1   722 ;       TST$GT_USERDATA UPDATED
                     03E1   723 ;
                     03E1   724 ; COMPLETION CODES:
                     03E1   725 ;
                     03E1   726 ; SIDE EFFECTS:
                     03E1   727 ;
                     03E1   728 ; SIDE EFFECTS:
                     03E1   729 ;
                     03E1   730 ;       NONE
                     03E1   731 ;
                     03E1   732 ;--
                     03E1   733
                     03E1   734 TST$MISC_DTS::                          ; CONTROL POINT
          0051    31 03E1   735          BRW     MISC_SUCCESS            ;
                     03E4   736
                     03E4   737 ;
                     03E4   738 ; FINISH BUILDING THE MISCELLANEOUS TEST REQUEST IN THE USERDATA STRING.
                     03E4   739 ;
                     03E4   740
02 AB     0000'CF    90 03E4   741          MOVB    W^TST$GB_TYPE,2(R11)    ; UPDATE MISCTYPE FIELD
          6B   02    D0 03EA   742          MOVL    #2,(R11)                ; UPDATE USERDATA STRING LENGTH
                     03ED   743
                     03ED   744 ;
                     03ED   745 ; ENTER INTO NSP CONNECT SEQUENCE WITH DTR.
                     03ED   746 ;
                     03ED   747
                     03ED   748 MISC_TEST:                              ; START THE DATA TEST
          004E    30 03ED   749          BSBW    TST$STARTUP_DTR         ; INITIATE NSP CONNECT SEQUENCE
```

```
                     03 50   E8  03F0    750          BLBS    R0,5$                   ; WAS LINK ESTABLISHED?
                      0042   31  03F3    751          BRW     MISC_FAILURE            ; NO, SOMETHING WENT WRONG
                             03F6    752
                             03F6    753 5$:      $CASEB  SELECTOR=R10,DISPL=<-   ; START THE MISCELLANEOUS TEST
                             03F6    754                  10$-                    ;  ILLEGAL NODE NAME
                             03F6    755                  20$-                    ;  NON-EXISTANT OBJECTTYPE
                             03F6    756                  30$-                    ;  LOGICAL LINK ADDRESS
                             03F6    757                  >                       ;
                7E   0000'CF   7D    0400    758 10$:     MOVQ    W^TST$GT_NODENAME,-(SP) ; SAVE NODENAME
0000'CF    3A4C4147 454C4C49 8F    7D    0405    759          MOVQ    #^A/ILLEGAL:/,W^TST$GT_NODENAME ; ONLY ONE COLON
                        20   10    0412    760          BSBB    MISC_COMMON             ; COMMON CODE
                0000'CF   8E    7D    0414    761          MOVQ    (SP)+,W^TST$GT_NODENAME ; RESTORE NODENAME
                        1A   11    0419    762          BRB     MISC_SUCCESS            ; FINISHED
                7E   0000'CF   B0    041B    763 20$:     MOVW    W^TST$GT_OBJTYPE,-(SP)  ; SAVE OBJECTTYPE
             0000'CF   3935 8F    B0    0420    764          MOVW    #^A/59/,W^TST$GT_OBJTYPE ; UNKNOWN OBJECTTYPE
                        0B   10    0427    765          BSBB    MISC_COMMON             ; COMMON CODE
                0000'CF   8E    B0    0429    766          MOVW    (SP)+,W^TST$GT_OBJTYPE  ; RESTORE OBJECTTYPE
                        05   11    042E    767          BRB     MISC_SUCCESS            ; FINISHED
                        02   10    0430    768 30$:     BSBB    MISC_COMMON             ; COMMON CODE
                        01   11    0432    769          BRB     MISC_SUCCESS            ; FINISHED
                             0434    770 MISC_COMMON:                             ;
                        05   0434    771          RSB                             ; EXIT
                             0435    772 MISC_SUCCESS:                            ; TEST WAS SUCCESSFUL
                     50 01   D0    0435    773          MOVL    #1,R0                   ; SET COMPLETION CODE TO SUCCESS
                             0438    774 MISC_FAILURE:                            ; ENTER HERE IF TEST FAILED
                51   0000'CF   9E    0438    775          MOVAB   W^TST$GT_MISC,R1        ; RETURN ADDRESS OF TEST ID STRING
                        05   043D    776          RSB                             ; EXIT
```

```
                     043E   778          .SBTTL  TST$STARTUP_DTR - DTS/DTR INITIALIZATION
                0000043E    779          .PSECT  TST$CODE        NOWRT
                     043E   780
                     043E   781 ;++
                     043E   782 ; FUNCTIONAL DESCRIPTION:
                     043E   783 ;
                     043E   784 ;       NONE
                     043E   785 ;
                     043E   786 ; CALLING SEQUENCE:
                     043E   787 ;
                     043E   788 ;       BSB/JSB TST$STARTUP_DTR
                     043E   789 ;
                     043E   790 ; INPUT PARAMETERS:
                     043E   791 ;
                     043E   792 ;       NONE
                     043E   793 ;
                     043E   794 ; IMPLICIT INPUTS:
                     043E   795 ;
                     043E   796 ;       TST$GT_NODENAME - COUNTED ASCII STRING OF NODENAME
                     043E   797 ;       TST$GT_OBJTYPE  - COUNTED ASCII STRING OF NSP OBJECT TYPE
                     043E   798 ;       TST$GT_USERDATA - COUNTED ASCII STRING OF NSP USERDATA
                     043E   799 ;                         CONTAINING TEST REQUEST PARAMETERS FOR DTR
                     043E   800 ;
                     043E   801 ; OUTPUT PARAMETERS:
                     043E   802 ;
                     043E   803 ;       R0      COMPLETION CODE
                     043E   804 ;       R6      MAILBOX MESSAGE CODE
                     043E   805 ;       R7      ADDRESS OF RECEIVED MAILBOX DATA LESS HEADER STORED AS A
                     043E   806 ;               COUNTED ASCII STRING
                     043E   807 ;
                     043E   808 ; IMPLICIT OUTPUTS:
                     043E   809 ;
                     043E   810 ;       TST$GQ_ACCESS   - QIO ACCESS DESCRIPTOR BLOCK
                     043E   811 ;       TST$GB_NCB      - CONSTRUCTED NETWORK CONNECT BLOCK
                     043E   812 ;       TST$GW_MAILCODE - MAILBOX MESSAGE CODE
                     043E   813 ;       TST$GW_DEV_UNIT - DEVICE UNIT NUMBER
                     043E   814 ;       TST$GT_DEV_NAME - DEVICE NAME STORED AS A COUNTED STRING
                     043E   815 ;       TST$GT_MAILDATA - DATA FIELD OF MAILBOX MESSAGE STORED AS A
                     043E   816 ;                         COUNTED STRING
                     043E   817 ;
                     043E   818 ; COMPLETION CODES:
                     043E   819 ;
                     043E   820 ;       R0      1 = LINK WAS ESTABLISHED; 0 = LINK WAS NOT ESTABLISHED
                     043E   821 ;
                     043E   822 ; SIDE EFFECTS:
                     043E   823 ;
                     043E   824 ;       NONE
                     043E   825 ;
                     043E   826 ;--
                     043E   827
                     043E   828 TST$STARTUP_DTR::                            ; CONTROL POINT
           3C   BB   043E   829          PUSHR   #^M<R2,R3,R4,R5>          ; SAVE REGISTERS
56   0000'CF   DE   0440   830          MOVAL   W^TST$GQ_ACCESS,R6        ; GET ADDRESS OF QIO ACCESS
                     0445   831                                            ; DESCRIPTOR BLOCK
53   0000'CF   DE   0445   832          MOVAL   W^TST$GB_NCB,R3           ; GET ADDRESS OF NCB BUFFER
  04 A6   53   D0   044A   833          MOVL    R3,4(R6)                  ; UPDATE ACCESS DESCRIPTOR BLOCK
50   0000'CF   9A   044E   834          MOVZBL  W^TST$GT_NODENAME,R0      ; COPY NODENAME INTO NCB
```

```
                63    0001'CF    50    28  0453    835          MOVC3   R0,W^TST$GT_NODENAME+1,(R3) ; SOURCE IS COUNTED ASCII STRING
                      83    3A3A 8F    B0  0459    836          MOVW    #^A\::\,(R3)+               ; APPEND DELIMITER
                            83    22    90  045E    837          MOVB    #^A\"\,(R3)+                ; APPEND LEADING QUOTE
                      50    0000'CF    9A  0461    838          MOVZBL  W^TST$GT_OBJTYPE,R0         ; COPY OBJECTTYPE INTO NCB
                63    0001'CF    50    28  0466    839          MOVC3   R0,W^TST$GT_OBJTYPE+1,(R3)  ; SOURCE IS COUNTED ASCII STRING
                            83    2F    90  046C    840          MOVB    #^A\/\,(R3)+                ; APPEND DELIMITER
                                  83    B4  046F    841          CLRW    (R3)+                       ; ZERO NETACP LINK INDEX
                      50    0000'CF    9A  0471    842          MOVZBL  W^TST$GT_USERDATA,R0        ; COPY USERDATA STRING TO NCB
                                  50    D6  0476    843          INCL    R0                          ;  (INCLUDING THE COUNT)
                63    0000'CF    50    28  0478    844          MOVC3   R0,W^TST$GT_USERDATA,(R3)   ; SOURCE IS COUNTED ASCII STRING
                            83    22    90  047E    845          MOVB    #^A\"\,(R3)+                ; APPEND TRAILING QUOTE
                  66    53    04 A6    C3  0481    846          SUBL3   4(R6),R3,(R6)               ; CALCULATE AND STORE LENGTH OF NCB
                                              0486    847
                                              0486    848 ;
                                              0486    849 ; ISSUE THE NSP CONNECT INITIATE REQUEST TO ACTIVATE DTR
                                              0486    850 ;
                                              0486    851
                                              0486    852          $CANCEL_S CHAN=W^TST$GW_MAILCHAN        ;CANCEL ANY MAILBOX READS
                                              0492    853          CHECK_SS
                                 FB68'        30  0495    854          BSBW    TST$FLUSH_MAIL             ;CLEAN OUT ANYTHING IN MAILBOX
                                52    01      D0  0498    855          MOVL    #EFN_K_CONN_INIT,R2        ; GET FUNCTION/INDEX CODE
                                54    56      D0  049B    856          MOVL    R6,R4                      ; P2 = ADDRESS OF ACCESS DESC BLOCK
                                   FB5F'      30  049E    857          BSBW    TST$QIOW                   ; ISSUE CONNECT INITIATE
                                              04A1    858          CHECK_IOSB TST$GQ_LINKIOSB         ;MAKE SURE CONNECT SENT OKAY
                                              04AB    859
                                              04AB    860 ;
                                              04AB    861 ; DETERMINE WHETHER LINK HAS BEEN ESTABLISHED OR NOT.
                                              04AB    862 ;
                                              04AB    863
                              52    00        D0  04AB    864          MOVL    #EFN_K_READ_MAIL,R2        ; GET FUNCTION/INDEX CODE
                        54    00'8F          9A  04AE    865          MOVZBL  #TST$K_MAILBUF,R4          ; GET MAILBOX BUFFER SIZE
                              FB4B'          30  04B2    866          BSBW    TST$QIOW                   ; WAIT FOR RESPONSE
                              FB48'          30  04B5    867          BSBW    TST$EXAM_MAIL              ; PARSE MAILBOX MESSAGE
                                 50          D4  04B8    868          CLRL    R0                         ; SET COMPLETION CODE TO FAILURE
                              31    56       B1  04BA    869          CMPW    R6,#MSG$_CONFIRM           ; IS LINK ESTABLISHED?
                                    02       12  04BD    870          BNEQU   10$                        ; NO
                                    50       D6  04BF    871          INCL    R0                         ; YES, SET COMP CODE TO SUCCESS
                                    3C       BA  04C1    872 10$:     POPR    #^M<R2,R3,R4,R5>           ; RESTORE REGISTERS
                                             05  04C3    873          RSB                                ; EXIT
                                                 04C4    874          .END
```

```
$$COUNT             =  00000003
$$T1                =  00000000
CONN_EXPECTED          00000045  R     02
CONN_FAILURE           000000B5  R     02
CONN_RESPONSE          0000005D  R     02
CONN_SUCCESS           000000B2  R     02
CONN_TEST              0000002D  R     02
DATA_FAILURE           00000200  R     02
DATA_INIT              0000011F  R     02
DATA_TEST              00000108  R     02
DISC_EXPECTED          00000268  R     02
DISC_FAILURE           000002BC  R     02
DISC_RESPONSE          00000289  R     02
DISC_SUCCESS           000002B9  R     02
DISC_TEST              00000233  R     02
DTS$_BADUSRDAT      =  01F58013
DTS$_BADUSRLEN      =  01F5800B
DTS$_CINBAD         =  01F58003
DTS$_CINREJ         =  01F5801B
DTS$_DISBAD         =  01F5802B
EFN_K_CONN_INIT     =  00000001
EFN_K_DISC_ABRT     =  00000004
EFN_K_DISC_SYNC     =  00000003
EFN_K_READ_MAIL     =  00000000
EFN_K_RECV_DATA     =  00000007
EFN_K_TIMER         =  00000008
EFN_K_XMIT_DATA     =  00000005
EFN_K_XMIT_INTE     =  00000006
INTE_FAILURE           000003DB  R     02
INTE_INIT              00000310  R     02
INTE_TEST              000002F9  R     02
K_LIST_MEB          =  00000000
MISC_COMMON            00000434  R     02
MISC_FAILURE           00000438  R     02
MISC_SUCCESS           00000435  R     02
MISC_TEST              000003ED  R     02
MSG$_ABORT          =  00000030
MSG$_CONFIRM        =  00000031
MSG$_DISCON         =  00000033
MSG$_REJECT         =  00000038
ST                     00000000  RG    02
SYS$CANCEL             ********   GX   02
SYS$HIBER              ********   GX   02
SYS$SETIMR             ********   GX   02
TST$CHECK_IOSB         ********    X   02
TST$CHECK_SS           ********    X   02
TST$CONN_DTS           00000000  RG    02
TST$DATA_DTS           000000BB  RG    02
TST$DISC_DTS           00000206  RG    02
TST$EXAM_MAIL          ********    X   02
TST$FLUSH_MAIL         ********    X   02
TST$GB_ASTFLAGS        ********    X   02
TST$GB_BACK            ********    X   02
TST$GB_FLOW            ********    X   02
TST$GB_INTEBUF         ********    X   02
TST$GB_NAK             ********    X   02
TST$GB_NCB             ********    X   02
TST$GB_RETURN          ********    X   02
TST$GB_RQUEUE          ********    X   02
TST$GB_TYPE            ********    X   02
TST$GB_XMITBUF         ********    X   02
TST$GL_CLOCK           ********    X   02
TST$GL_FAOARG          ********    X   02
TST$GL_SECONDS         ********    X   02
TST$GL_STATUS          ********    X   02
TST$GL_XMITDATA        ********    X   02
TST$GL_XMITINTE        ********    X   02
TST$GQ_ACCESS          ********    X   02
TST$GQ_LINKIOSB        ********    X   02
TST$GQ_NANOSEC         ********    X   02
TST$GT_CONN            ********    X   02
TST$GT_DATA            ********    X   02
TST$GT_DISC            ********    X   02
TST$GT_INTE            ********    X   02
TST$GT_MISC            ********    X   02
TST$GT_NODENAME        ********    X   02
TST$GT_OBJTYPE         ********    X   02
TST$GT_STANDARD        ********    X   02
TST$GT_USERDATA        ********    X   02
TST$GW_MAILCHAN        ********    X   02
TST$GW_SIZE            ********    X   02
TST$INTEAST_DTS        ********    X   02
TST$INTE_DTS           000002C2  RG    02
TST$K_MAILBUF          ********     X  02
TST$MAILAST_DTS        ********     X  02
TST$MISC_DTS           000003E1  RG    02
TST$QB_ASTADR          ********     X  02
TST$QB_CODE            ********     X  02
TST$QB_QHEAD           ********     X  02
TST$QIOAST             ********     X  02
TST$QIOW               ********     X  02
TST$RECVAST_DTS        ********     X  02
TST$STANDARD           ********     X  02
TST$STARTUP_DTR        0000043E  RG    02
TST$TIMER_DTS          ********     X  02
TST$XMITAST_DTS        ********     X  02
VAL_K_BACK_NO       =  00000000
VAL_K_DISP_NO       =  00000000
VAL_K_FLOW_MESS     =  00000002
VAL_K_NAK_NO        =  00000000
VAL_K_PRIV_NO       =  00000000
VAL_K_RETU_NO       =  00000000
VAL_K_STAT_YES      =  00000001
VAL_K_TYPE_ABRT     =  00000001
VAL_K_TYPE_ACCE     =  00000001
VAL_K_TYPE_ECHO     =  00000003
VAL_K_TYPE_NAME     =  00000000
VAL_K_TYPE_SINK     =  00000000
```

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
TST$CODE	000004C4 (1220.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	34	00:00:00.09	00:00:00.67
Command processing	108	00:00:00.56	00:00:02.95
Pass 1	234	00:00:06.49	00:00:16.35
Symbol table sort	0	00:00:00.28	00:00:00.35
Pass 2	161	00:00:02.37	00:00:05.25
Symbol table output	9	00:00:00.08	00:00:00.35
Psect synopsis output	2	00:00:00.03	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	550	00:00:09.91	00:00:25.96

The working set limit was 1200 pages.
32578 bytes (64 pages) of virtual memory were used to buffer the intermediate code.
There were 20 pages of symbol table space allocated to hold 234 non-local and 45 local symbols.
936 source lines were read in Pass 1, producing 22 object records in Pass 2.
28 pages of virtual memory were used to define 24 macros.

Macro library statistics

Macro library name	Macros defined
_255DUA28:[DTSDTR.OBJ]DTSDTR.MLB;1	7
_255DUA28:[SYSLIB]STARLET.MLB;2	11
TOTALS (all libraries)	18

339 GETS were required to define 18 macros.

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:DTSTEST/OBJ=OBJ$:DTSTEST MSRC$:DTPREFIX/UPDATE=(ENH$:DTPREFIX)+MSRC$:DTSTEST/UPDATE=(ENH$:DTSTEST)
```

DTSMAIN
LIS

DUMP
LIS

DUMPFILE
LIS

DTSMSG
LIS

DTSPARSE
LIS

DTRTEST
LIS

DUMPFAOLN
LIS

DUMPREQ

DUMP

DUMP
MAP

DUMPHEADE
LIS

DTSAST
LIS

DTSTEST
LIS