```
 SSSSSSSS   YY     YY   SSSSSSSS   SSSSSSSS   CCCCCCC  HH     HH   EEEEEEEEEE  VV        VV  TTTTTTTTTT
 SSSSSSSS   YY     YY   SSSSSSSS   SSSSSSSS   CCCCCCC  HH     HH   EEEEEEEEEE  VV        VV  TTTTTTTTTT
 SS         YY     YY   SS         SS         CC       HH     HH   EE           VV      VV       TT
 SS         YY     YY   SS         SS         CC       HH     HH   EE           VV      VV       TT
 SS           YY  YY    SS         SS         CC       HH     HH   EE           VV      VV       TT
 SS           YY  YY    SS         SS         CC       HH     HH   EE            VV    VV         TT
 SSSSSS         YY      SSSSSS     SSSSSS     CC       HHHHHHHHHH  EEEEEEEE      VV    VV         TT
 SSSSSS         YY      SSSSSS     SSSSSS     CC       HHHHHHHHHH  EEEEEEEE      VV    VV         TT
     SS         YY          SS         SS     CC       HH     HH   EE            VV    VV         TT
     SS         YY          SS         SS     CC       HH     HH   EE             VV  VV          TT
     SS         YY          SS         SS     CC       HH     HH   EE             VV  VV          TT
     SS         YY          SS         SS     CC       HH     HH   EE              VVVV           TT
 SSSSSSSS       YY      SSSSSSSS   SSSSSSSS   CCCCCCC  HH     HH   EEEEEEEEEE       VV            TT
 SSSSSSSS       YY      SSSSSSSS   SSSSSSSS   CCCCCCC  HH     HH   EEEEEEEEEE       VV            TT


 LL            IIIIII   SSSSSSSS
 LL            IIIIII   SSSSSSSS
 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
```

```
0000      1                    .TITLE  SYSSCHEVT - SYSTEM SERVICES TO SCHEDULE EVENTS
0000      2                    .IDENT  'V04-000'
0000      3
0000      4        ;
0000      5        ;***************************************************************************
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0000     25        ;*                                                                         *
0000     26        ;***************************************************************************
0000     27        ;
0000     28        ; D. N. CUTLER 4-OCT-76
0000     29        ;
0000     30        ;
0000     31        ;       V02-004 MLJ41905        Martin L. Jack  31-Jan-1982
0000     32        ;               Record in TQE whether the expiration time was specified as an
0000     33        ;               absolute or delta time.  This now affects processing in the
0000     34        ;               $SETTIM service.
0000     35        ;
0000     36        ;       03      RIH0033         R. I. HUSTVEDT  18-OCT-1979
0000     37        ;               MOVE TQCNT FROM PCB TO JIB.
0000     38        ;
0000     39        ;
0000     40        ;       02      RIH23909        R. I. HUSTVEDT  14-MAY-1979
0000     41        ;               Remove superfluous branch after SCH$CLREF due to change in
0000     42        ;               interface to SCH$CLREF.
0000     43        ;
0000     44        ; SYSTEM SERVICES TO SCHEDULE EVENTS
0000     45        ;
0000     46        ;       SCHEDULE WAKEUP
0000     47        ;       SET TIMER
0000     48        ;
0000     49        ; MACRO LIBRARY CALLS
0000     50        ;
0000     51
0000     52                    $ACBDEF                         ;DEFINE ACB OFFSETS
0000     53                    $IPLDEF                         ;DEFINE INTERRUPT PRIORITY LEVELS
0000     54                    $JIBDEF                         ;DEFINE JIB OFFSETS
0000     55                    $PCBDEF                         ;DEFINE PCB OFFSETS
0000     56                    $PRDEF                          ;DEFINE PROCESSOR REGISTERS
0000     57                    $PSLDEF                         ;DEFINE PROCESSOR STATUS FIELDS
```

SYSSCHEVT         - SYSTEM SERVICES TO SCHEDULE EVENTS $\overset{2}{\text{B}}$    16-SEP-1984 02:30:03   VAX/VMS Macro V04-00     Page   2       SYS
V04-000                                                5-SEP-1984 03:56:51   [SYS.SRC]SYSSCHEVT.MAR;1       (1)      VAX

MAC

```
                  0000    58        $RSNDEF                              ;DEFINE RESOURCE WAIT NUMBERS
                  0000    59        $SSDEF                               ;DEFINE SYSTEM STATUS VALUES
                  0000    60        $TQEDEF                              ;DEFINE TQE OFFSETS
                  0000    61
                  0000    62 ;
                  0000    63 ; LOCAL SYMBOLS
                  0000    64 ;
                  0000    65 ; ARGUMENT LIST OFFSET DEFINITIONS FOR SCHEDULE WAKEUP
                  0000    66 ;
                  0000    67
00000004          0000    68 PIDADR=4                                   ;ADDRESS OF PROCESS IDENTIFICATION
00000008          0000    69 LOGNAM=8                                   ;ADDRESS OF PROCESS NAME STRING DESCRIPTOR
0000000C          0000    70 WKDAYTIM=12                                ;ADDRESS OF DELTA TIME TO EXPIRATION
00000010          0000    71 WKREPTIM=16                                ;ADDRESS OF DELTA TIME TO REPEAT EXPIRATION
                  0000    72
                  0000    73 ;
                  0000    74 ; ARGUMENT LIST OFFSET DEFINITIONS FOR SET TIMER
                  0000    75 ;
                  0000    76
00000004          0000    77 EFN=4                                      ;EVENT FLAG NUMBER
00000008          0000    78 TMDAYTIM=8                                 ;ADDRESS OF DELTA TIME TO EXPIRATION
0000000C          0000    79 ASTADR=12                                  ;ADDRESS OF AST ROUTINE
00000010          0000    80 REQIDT=16                                  ;REQUEST IDENTIFICATION
```

```
                        0000      82              .SBTTL   SCHEDULE WAKEUP
                        0000      83      ;+
                        0000      84      ; EXE$SCHDWK - SCHEDULE WAKEUP
                        0000      85      ;
                        0000      86      ; THIS SERVICE PROVIDES THE CAPABILITY TO SCHEDULE A WAKE UP FOR A PROCESS
                        0000      87      ; THAT WILL OCCUR AT A SPECIFIED TIME AND OPTIONALLY BE REPEATED AT A FIXED
                        0000      88      ; INTERVAL.
                        0000      89      ;
                        0000      90      ; INPUTS:
                        0000      91      ;
                        0000      92      ;       PIDADR(AP) = ADDRESS OF PROCESS IDENTIFICATION.
                        0000      93      ;       LOGNAM(AP) = ADDRESS OF PROCESS NAME STRING DESCRIPTOR.
                        0000      94      ;       WKDAYTIM(AP) = ADDRESS OF DELTA TIME TO EXPIRATION.
                        0000      95      ;       WKREPTIM(AP) = ADDRESS OF DELTA TIME TO REPEAT EXPIRATION.
                        0000      96      ;
                        0000      97      ;       R4 = CURRENT PROCESS PCB ADDRESS.
                        0000      98      ;
                        0000      99      ; OUTPUTS:
                        0000     100      ;
                        0000     101      ;       R0 LOW BIT CLEAR INDICATES FAILURE TO SCHEDULE WAKE UP REQUEST.
                        0000     102      ;
                        0000     103      ;               R0 = SS$_ACCVIO - EXPIRATION TIME, DELTA REPEAT TIME, PROCESS
                        0000     104      ;                       NAME STRING, OR PROCESS NAME STRING DESCRIPTOR
                        0000     105      ;                       CANNOT BE READ BY CALLING ACCESS MODE, OR PROCESS
                        0000     106      ;                       IDENTIFICATION CANNOT BE WRITTEN BY CALLING ACCESS
                        0000     107      ;                       MODE.
                        0000     108      ;
                        0000     109      ;               R0 = SS$_EXQUOTA - PROCESS HAS INSUFFICIENT AST QUOTA
                        0000     110      ;                       REMAINING TO SCHEDULE WAKE UP.
                        0000     111      ;
                        0000     112      ;               R0 = SS$_INSFMEM - SUFFICIENT SYSTEM DYNAMIC MEMORY DOES NOT
                        0000     113      ;                       EXIST TO ALLOCATE  IME QUEUE ENTRY AND IMPLICIT
                        0000     114      ;                       RESOURCE WAIT IS NOT ENABLED.
                        0000     115      ;
                        0000     116      ;               R0 = SS$_IVLOGNAM - ZERO OR GREATER THAN MAXIMUM LENGTH
                        0000     117      ;                       PROCESS NAME STRING SPECIFIED.
                        0000     118      ;
                        0000     119      ;               R0 = SS$_IVTIME - POSITIVE DELTA REPEAT TIME SPECIFIED.
                        0000     120      ;
                        0000     121      ;               R0 = SS$_NONEXPR - NONEXISTENT PROCESS OR INVALID PROCESS
                        0000     122      ;                       IDENTIFICATION SPECIFIED.
                        0000     123      ;
                        0000     124      ;               R0 = SS$_NOPRIV - PROCESS DOES NOT HAVE PRIVILEGE TO WAKE
                        0000     125      ;                       SPECIFIED PROCESS.
                        0000     126      ;
                        0000     127      ;       R0 LOW BIT SET INDICATES SUCCESSFUL COMPLETION.
                        0000     128      ;
                        0000     129      ;               R0 = SS$_NORMAL - NORMAL COMPLETION.
                        0000     130      ;-
                        0000     131      ;
                        0000     132              .ENABL   LSB
                 03FC   0000     133              .ENTRY   EXE$SCHDWK,^M<R2,R3,R4,R5,R6,R7,R8,R9>
         FFFB'   30     0002     134              BSBW     EXE$NAMPID              ;GET TARGET PROCESS ID
                        0005     135              SETIPL   #0                     ;ALLOW INTERRUPTS
      56 50   E9        0008     136              BLBC     R0,20$                 ;IF LBC INVALID ARGUMENT
   59    51   D0        000B     137              MOVL     R1,R9                  ;SET TARGET PROCESS ID
   58    02   9A        000E     138              MOVZBL   #TQE$C_WKSNGL,R8       ;SET SINGLE SHOT WAKEUP REQUEST
```

```
        55    10 AC   D0  0011   139           MOVL    WKREPTIM(AP),R7       ;GET ADDRESS OF DELTA REPEAT TIME
              33       13  0015   140           BEQL    10$                  ;IF EQL NONE SPECIFIED
        50    0C       3C  0017   141           MOVZWL  #SS$_ACCVIO,R0        ;ASSUME ACCESS VIOLATION
                       001A  142                IFNORD  #8,(R5),20$          ;CAN DELTA REPEAT TIME BE READ?
        50   0184 8F   3C  0020   143           MOVZWL  #SS$_IVTIME,R0       ;ASSUME INVALID REPEAT TIME
        55    65       7D  0025   144           MOVQ    (R5),R5              ;GET REPEAT TIME
              20       13  0028   145           BEQL    10$                  ;IF EQL NONE SPECIFIED
              35       14  002A   146           BGTR    20$                  ;IF GTRU INVALID REPEAT TIME
        58    06       9A  002C   147           MOVZBL  #TQE$C_WKREPT,R8     ;SET REPEAT WAKEUP REQUEST
        56    56       CE  002F   148           MNEGL   R6,R6                ;NEGATE REPEAT TIME
        55    55       CE  0032   149           MNEGL   R5,R5
        56    00       D9  0035   150           SBWC    #0,R6
              10       12  0038   151           BNEQ    10$                  ;IF NEQ REPEAT TIME GREATER THAN 10MS
  55  000186A0 8F      D1  003A   152           CMPL    #10*1000*10,R5       ;REPEAT TIME GREATER THAN 10MS?
              07       1B  0041   153           BLEQU   10$                  ;IF LEQU YES
  55  000186A0 8F      D0  0043   154           MOVL    #10*1000*10,R5       ;SET REPEAT TIME TO 10MS
        57    0C AC    D0  004A   155  10$:      MOVL    WKDAYTIM(AP),R7      ;GET ADDRESS OF DELTA EXPIRATION TIME
        54  0000'CF    D0  004E   156           MOVL    W^SCH$GL_CURPCB,R4   ;GET CURRENT PROCESS PCB ADDRESS
            0093       30  0053   157           BSBW    BUILDTQE             ;CHECK ACCESSIBILITY OF DAY TIME
        38 A4          B5  0056   158           TSTW    PCB$W_ASTCNT(R4)     ;AST QUEUE ENTRY QUOTA EXCEEDED?
              68       15  0059   159           BLEQ    50$                  ;IF LEQ YES
              9E       16  005B   160           JSB     @(SP)+               ;ALLOCATE AND FILL IN TIME QUEUE ENTRY
        38 A4          B7  005D   161           DECW    PCB$W_ASTCNT(R4)     ;UPDATE AVAILABLE AST QUEUE ENTRIES
              05       0060   162                RSB
              04       0061   163  20$:          RET
```

```
                        0062      165            .SBTTL   SET TIMER
                        0062      166    ;+
                        0062      167    ; EXE$SETIMR - SET TIMER
                        0062      168    ;
                        0062      169    ; THIS SERVICE PROVIDES THE CAPABILITY TO SCHEDULE THE SETTING OF AN EVENT
                        0062      170    ; FLAG AND DECLARATION OF AN AST TO OCCUR AT A SPECIFIED TIME.
                        0062      171    ;
                        0062      172    ; INPUTS:
                        0062      173    ;
                        0062      174    ;        EFN(AP) = EVENT FLAG NUMBER.
                        0062      175    ;        TMDAYTIM(AP) = ADDRESS OF DELTA TIME TO EXPIRATION.
                        0062      176    ;        ASTADR(AP) = ADDRESS OF AST ROUTINE.
                        0062      177    ;        REQIDT(AP) = REQUEST IDENTIFICATION.
                        0062      178    ;
                        0062      179    ;        R4 = CURRENT PROCESS PCB ADDRESS.
                        0062      180    ;
                        0062      181    ; OUTPUTS:
                        0062      182    ;
                        0062      183    ;        R0 LOW BIT CLEAR INDICATES FAILURE TO SET TIMER.
                        0062      184    ;
                        0062      185    ;                R0 = SS$_ACCVIO - EXPIRATION TIME CANNOT BE READ BY CALLING
                        0062      186    ;                        ACCESS MODE.
                        0062      187    ;
                        0062      188    ;                R0 = SS$_EXQUOTA - INSUFFICIENT AST OR TIMER QUOTA REMAINING
                        0062      189    ;                        AND IMPLICIT RESOURCE WAIT IS NOT ENABLED.
                        0062      190    ;
                        0062      191    ;                R0 = SS$_ILLEFC - ILLEGAL EVENT FLAG CLUSTER SPECIFIED.
                        0062      192    ;
                        0062      193    ;                R0 = SS$_INSFMEM - SUFFICIENT SYSTEM DYNAMIC MEMORY DOES NOT
                        0062      194    ;                        EXIST TO ALLOCATE TIME QUEUE ENTRY AND IMPLICIT
                        0062      195    ;                        RESOURCE WAIT IS NOT ENABLED.
                        0062      196    ;
                        0062      197    ;                R0 = SS$_UNASEFC - SPECIFIED EVENT FLAG CLUSTER IS NOT
                        0062      198    ;                        ASSIGNED.
                        0062      199    ;
                        0062      200    ;        R0 LOW BIT SET INDICATES SUCCESSFUL COMPLETION.
                        0062      201    ;
                        0062      202    ;                R0 = SS$_NORMAL - NORMAL COMPLETION.
                        0062      203    ;-
                        0062      204
                   OFFC 0062      205            .ENTRY   EXE$SETIMR,^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
  57    08 AC    D0   0064      206            MOVL     TMDAYTIM(AP),R7          ;GET ADDRESS OF DELTA EXPIRATION TIME
        58    00 9A   0068      207            MOVZBL   #TQE$C_TMSNGL,R8         ;SET SINGLE SHOT TIMER REQUEST
  59    60 A4    D0   0068      208            MOVL     PCB$L_PID(R4),R9         ;SET TARGET PROCESS ID
  53    04 AC    9A   006F      209            MOVZBL   EFN(AP),R3              ;GET EVENT FLAG NUMBER
        53    DD   0073      210            PUSHL    R3                      ;SAVE EVENT FLAG NUMBER
      FF88' 30   0075      211            BSBW     SCH$CLREF               ;CLEAR SPECIFIED EVENT FLAG
        6F    10   0078      212            BSBB     BUILDTQE                ;CHECK ACCESSIBILITY OF DAY TIME
  5B    10 AC    D0   007A      213            MOVL     REQIDT(AP),R11          ;GET REQUEST IDENTIFICATION
  5A    0C AC    D0   007E      214            MOVL     ASTADR(AP),R10          ;GET ADDRESS OF AST ROUTINE
        05    13   0082      215            BEQL     30$                     ;IF EQL NONE SPECIFIED
        38 A4    B5   0084      216            TSTW     PCB$W_ASTCNT(R4)        ;AST QUEUE ENTRY QUOTA EXCEEDED?
        3A    15   0087      217            BLEQ     50$                     ;IF LEQ YES
              0089      218   30$:   SETIPL   #IPL$_SYNCH             ;RAISE IPL TO SYNCH LEVEL
  51  0080 C4    D0   008C      219            MOVL     PCB$L_JIB(R4),R1        ;GET ADDRESS OF JIB
        34 A1    B5   0091      220            TSTW     JIB$W_TQCNT(R1)         ;ANY TIMER QUOTA REMAINING?
        34    13   0094      221            BEQL     70$                     ;IF EQL NO
```

```
                            0096    222             SETIPL  #IPL$_ASTDEL                      ;LOWER IPL TO ASTDEL LEVEL
                    9E  16  0099    223             JSB     @(SP)+                            ;ALLOCATE AND FILL IN TIME QUEUE ENTRY
          52  0080  C4  D0  009B    224             MOVL    PCB$L_JIB(R4),R2                  ;GET JIB ADDRESS
                34  A2  B7  00A0    225             DECW    JIB$W_TQCNT(R2)                   ;UPDATE AVAILABLE TIME QUEUE ENTRIES
                        52  DC  00A3    226             MOVPSL  R2                            ;READ CURRENT PSL
    28 A5   52   02  16  EF  00A5    227             EXTZV   #PSL$V_PRVMOD,#PSL$S_PRVMOD,R2,TQE$B_RMOD(R5) ;INSERT REQUEST ACCESS
            10 A5      5A  D0  00AB    228             MOVL    R10,TQE$L_AST(R5)             ;INSERT ADDRESS OF AST ROUTINE
                        08  13  00AF    229             BEQL    40$                          ;IF EQL NONE SPECIFIED
                    38 A4  B7  00B1    230             DECW    PCB$W_ASTCNT(R4)              ;UPDATE AVAILABLE AST QUEUE ENTRIES
        28 A5   40 BF  88  00B4    231             BISB    #ACB$M_QUOTA,TQE$B_RMOD(R5)  ;SET AST ACCOUNTING FLAG
            14 A5      5B  D0  00B9    232 40$:        MOVL    R11,TQE$L_ASTPRM(R5)         ;INSERT AST PARAMETER/REQUEST IDENTIFICATION
            29 A5   04 AE  90  00BD    233             MOVB    4(SP),TQE$B_EFN(R5)          ;SET EVENT FLAG NUMBER
                            05  00C2    234             RSB
                    50  1C  3C  00C3    235 50$:        MOVZWL  #SS$_EXQUOTA,R0             ;SET QUOTA EXCEEDED
                            00C6    236 60$:        SETIPL  #0                               ;ALLOW INTERRUPTS
                        04  00C9    237             RET
    F4 24 A4      0A  E0  00CA    238 70$:        BBS     #PCB$V_SSRWAIT,PCB$L_STS(R4),50$ ;IF SET, IMPLIED WAIT DISABLED
        4C A4      01  9A  00CF    239             MOVZBL  #RSN$_ASTWAIT,PCB$L_EFWM(R4) ;SET WAIT STATE RESOURCE NUMBER
  00000000'EF  02  C8  00D3    240             BISL    #<1@RSN$_ASTWAIT>,SCH$GL_RESMASK ; SET PRESENCE FLAG IN SUMMARY
            5C  08 AD  D0  00DA    241             MOVL    8(FP),AP                         ;RESTORE ORIGINAL ARGUMENT POINTER
                    5E  5D  D0  00DE    242             MOVL    FP,SP                            ;TRIM STACK BACK TO CHANGE MODE DISPATCH
        52  0000'CF  7E  00E1    243             MOVAQ   W^SCH$GQ_MWAIT,R2               ;SET ADDRESS OF WAIT QUEUE LISTHEAD
                FF17'  31  00E6    244             BRW     SCH$WAIT                         ;WAIT PROCESS IN ORIGINAL ACCESS MODE
                            00E9    245             .DSABL  LSB
```

G 2

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                        00E9   247              .SBTTL  BUILD PROTOTYPE TIME QUEUE ENTRY
                        00E9   248  ;
                        00E9   249  ; SUBROUTINE TO CHECK ARGUMENTS, ALLOCATE TIME QUEUE ENTRY, AND FILL IN
                        00E9   250  ; PROTOTYPE TIME QUEUE ENTRY.
                        00E9   251  ;
                        00E9   252
                        00E9   253  BUILDTQE:                                 ;BUILD TIME QUEUE ENTRY
         50   0C   3C   00E9   254          MOVZWL  #SS$_ACCVIO,R0            ;ASSUME ACCESS VIOLATION
                        00EC   255          IFNORD  #8,(R7),40$               ;CAN EXPIRATION TIME BE READ?
                   9E   16   00F5   256          SETIPL  #IPL$_ASTDEL         ;RAISE TO AST DELIVERY LEVEL
              FF06'  30   00F5   257          JSB     @(SP)+                  ;CHECK QUOTAS
                        00F7   258          BSBW    EXE$ALLOCTQE              ;ALLOCATE TIME QUEUE ENTRY
              67 50   E9   00FA   259          BLBC    R0,40$                 ;IF LBC ALLOCATION FAILURE
       20 A2   55   7D   00FD   260          MOVQ    R5,TQE$Q_DELTA(R2)       ;INSERT REPEAT TIME
    0B A2   58   08   89   0101   261          BISB3   #TQE$M_ABSOLUTE,R8,TQE$B_RQTYPE(R2)
                        0106   262                                           ;SET REQUEST TYPE, assume absolute
       OC A2   59   D0   0106   263          MOVL    R9,TQE$L_PID(R2)         ;INSERT TARGET PROCESS ID
    2C A2   60 A4   D0   010A   264          MOVL    PCB$L_PID(R4),TQE$L_RQPID(R2) ;INSERT REQUESTER PROCESS ID
       50   67   7D   010F   265          MOVQ    (R7),R0                    ;MAKE SURE EXPIRATION TIME IS IN MEMORY
                        0112   266
                        0112   267          ASSUME  IPL$_SYNCH EQ IPL$_TIMER
                        0112   268
                        0112   269          SETIPL  #IPL$_SYNCH              ;SYNCHRONIZE ACCESS TO SYSTEM DATA BASE
       58   0000'CF   7D   0115   270          MOVQ    W^EXE$GQ_SYSTIME,R8  ;GET CURRENT ABSOLUTE TIME
       50   50   7D   011A   271          MOVQ    R0,R0                      ;GET EXPIRATION TIME
              13   18   011D   272          BGEQ    10$                      ;IF GEQ ALREADY ABSOLUTE TIME
    0B A2   08   8A   0'1F   273          BICB2   #TQE$M_ABSOLUTE,TQE$B_RQTYPE(R2) ; Indicate not absolute
       51   51   CE   0123   274          MNEGL   R1,R1                      ;NEGATE EXPIRATION TIME
       50   50   CE   0126   275          MNEGL   R0,R0
       51   00   D9   0129   276          SBWC    #0,R1                      ;
       50   58   C0   012C   277          ADDL    R8,R0                      ;CALCULATE REAL EXPIRATION TIME
       51   59   D8   012F   278          ADWC    R9,R1                      ;
06   0B A2   03   00   ED   0132   279  10$:    CMPZV   #0,#3,TQE$B_RQTYPE(R2),#TQE$C_WKREPT ;REPEAT WAKEUP REQUEST?
              12   12   0138   280          BNEQ    20$                      ;IF NEQ NO
       55   50   C0   013A   281          ADDL    R0,R5                      ;CALCULATE NEXT EXPIRATION TIME
       56   51   D8   013D   282          ADWC    R1,R6                      ;
       56   59   D1   0140   283          CMPL    R9,R6                      ;CURRENT TIME AFTER NEXT TIME?
              07   1F   0143   284          BLSSU   20$                      ;IF LSSU NO
              12   1A   0145   285          BGTRU   30$                      ;IF GTRU YES
       55   58   D1   0147   286          CMPL    R8,R5                      ;CURRENT TIME AFTER NEXT TIME?
              0D   1A   014A   287          BGTRU   30$                      ;IF GTRU YES
       55   52   D0   014C   288  20$:    MOVL    R2,R5                      ;COPY ADDRESS OF TIME QUEUE ENTRY
              9E   16   014F   289          JSB     @(SP)+                   ;FILL IN REQUEST DEPENDENT PARAMETERS
           FEAC'  30   0151   290          BSBW    EXE$INSTIMQ              ;INSERT ENTRY IN TIME QUEUE
       50   01   3C   0154   291          MOVZWL  #SS$_NORMAL,R0            ;SET NORMAL COMPLETION STATUS
              0B   11   0157   292          BRB     40$                      ;
       50   52   D0   0159   293  30$:    MOVL    R2,R0                      ;SET ADDRESS OF TIME QUEUE ENTRY
           FEA1'  30   015C   294          BSBW    EXE$DEANONPAGED         ;DEALLOCATE TIME QUEUE ENTRY
       50   0184 8F   3C   015F   295          MOVZWL  #SS$_IVTIME,R0       ;SET INVALID TIME COMPLETION STATUS
                   04   0164   296  40$:    SETIPL  #0                       ;ALLOW INTERRUPTS
                        0167   297          RET                              ;
                        0168   298
                        0168   299          .END
```

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20

```
ACBSM_QUOTA                   = 00000040
ASTADR                        = 0000000C
BUILDTQE                        000000E9 R        01
EFN                           = 00000004
EXE$ALLOCTQE                    ******** X        01
EXE$DEANONPAGED                 ******** X        01
EXE$GQ_SYSTIME                  ******** X        01
EXE$INSTIMQ                     ******** X        01
EXE$NAMPID                      ******** X        01
EXE$SCHDWK                       00000000 RG       01
EXE$SETIMR                       00000062 RG       01
IPL$_ASTDEL                   = 00000002
IPL$_SYNCH                    = 00000008
IPL$_TIMER                    = 00000008
JIB$Q_TQCNT                   = 00000034
LOGNAM                        = 00000008
PCB$L_EFWM                    = 0000004C
PCB$L_JIB                     = 00000080
PCB$L_PID                     = 00000060
PCB$L_STS                     = 00000024
PCB$V_SSRWAIT                 = 0000000A
PCB$W_ASTCNT                  = 00000038
PIDADR                        = 00000004
PR$_IPL                       = 00000012
PSL$S_PRVMOD                  = 00000002
PSL$V_PRVMOD                  = 00000016
REQIDT                        = 00000010
RSN$_ASTWAIT                  = 00000001
SCH$CLREF                       ******** X        01
SCH$GL_CURPCB                   ******** X        01
SCH$GL_RESMASK                  ******** X        01
SCH$GQ_MWAIT                    ******** X        01
SCH$WAIT                        ******** X        01
SS$_ACCVIO                    = 0000000C
SS$_EXQUOTA                   = 0000001C
SS$_IVTIME                    = 00000184
SS$_NORMAL                    = 00000001
TMDAYTIM                      = 00000008
TQE$B_EFN                     = 00000029
TQE$B_RMOD                    = 00000028
TQE$B_RQTYPE                  = 0000000B
TQE$C_TMSNGL                  = 00000000
TQE$C_WKREPT                  = 00000006
TQE$C_WKSNGL                  = 00000002
TQE$L_AST                     = 00000010
TQE$L_ASTPRM                  = 00000014
TQE$L_PID                     = 0000000C
TQE$L_RQPID                   = 0000002C
TQE$M_ABSOLUTE                = 00000008
TQE$Q_DELTA                   = 00000020
WKDAYTIM                      = 0000000C
WKREPTIM                      = 00000010
```

SYSSCHEVT                          - SYSTEM SERVICES TO SCHEDULE EVENTS¹ ²    16-SEP-1984 02:30:03  VAX/VMS Macro V04-00        Page  9
Psect synopsis                                                              5-SEP-1984 03:56:51  [SYS.SRC]SYSSCHEVT.MAR;1            (1)

                                                                                                                                 SYS
                                                                                                                                 V04

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

PSECT name                    Allocation         PSECT No.  Attributes
----------                    ----------         ---------  ----------
 .  ABS  .                    00000000  (    0.)  00 (  0.)  NOPIC  USR  CON  ABS  LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
 . BLANK .                    00000168  (  360.)  01 (  1.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD    WRT NOVEC BYTE
$ABS$                         00000000  (    0.)  02 (  2.)  NOPIC  USR  CON  ABS  LCL NOSHR  EXE   RD    WRT NOVEC BYTE

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

Phase                   Page faults    CPU Time      Elapsed Time
-----                   -----------    --------      ------------
Initialization                30      00:00:00.07    00:00:00.26
Command processing           106      00:00:00.54    00:00:02.02
Pass 1                       272      00:00:07.64    00:00:17.33
Symbol table sort              0      00:00:01.22    00:00:02.52
Pass 2                        71      00:00:01.55    00:00:02.69
Symbol table output            7      00:00:00.08    00:00:00.09
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         489      00:00:11.12    00:00:24.93
```

The working set limit was 1200 pages.
43678 bytes (86 pages) of virtual memory were used to buffer the intermediate code.
There were 50 pages of symbol table space allocated to hold 803 non-local and 11 local symbols.
299 source lines were read in Pass 1, producing 18 object records in Pass 2.
19 pages of virtual memory were used to define 18 macros.

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

Macro library name                       Macros defined
------------------                       --------------
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                 8
_$255$DUA28:[SYSLIB]STARLET.MLB;2              7
TOTALS (all libraries)                        15
```

893 GETS were required to define 15 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:SYSSCHEVT/OBJ=OBJ$:SYSSCHEVT MSRC$:SYSSCHEVT/UPDATE=(ENH$:SYSSCHEVT)+EXECML$/LIB

SYSSETPRA
LIS

SYSSETSSF
LIS

SYSSNDJBC
LIS

SYSSETIME
LIS

SYSSETPFM
LIS

SYSUPDSEC
LIS

SYSSNDMSG
LIS

SYSSETPRT
LIS

SYSSETPRV
LIS

SYSUNWIND
LIS

SYSSETSTK
LIS

SYSSETMOD
LIS

SYSSETEXV
LIS

SYSSETPRI
LIS

SYSSCHEVT
LIS