C 10

```
EEEEEEEEEEEEEEE  DDDDDDDDDDDD      TTTTTTTTTTTTTTT
EEEEEEEEEEEEEEE  DDDDDDDDDDDD      TTTTTTTTTTTTTTT
EEEEEEEEEEEEEEE  DDDDDDDDDDDD      TTTTTTTTTTTTTTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEEEEEEEEEEE     DDD         DDD         TTT
EEEEEEEEEEEE     DDD         DDD         TTT
EEEEEEEEEEEE     DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEE              DDD         DDD         TTT
EEEEEEEEEEEEEEE  DDDDDDDDDDDD            TTT
EEEEEEEEEEEEEEE  DDDDDDDDDDDD            TTT
EEEEEEEEEEEEEEE  DDDDDDDDDDDD            TTT
```

```
EX

Mod
---
ED
ED
ED
ED
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ED
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ED
ED
ED
ED
ED
ED
ED
ED
ED
ED
ED
ED
ED
SYS
LBR
LII
```

```
**FILE**ID**CHMSUBS                                   N 12
```

```
  CCCCCCCC  HH      HH  MM      MM    SSSSSSSS  UU      UU  BBBBBBBB      SSSSSSSS
  CCCCCCCC  HH      HH  MM      MM    SSSSSSSS  UU      UU  BBBBBBBB      SSSSSSSS
CC          HH      HH  MMMM  MMMM  SS          UU      UU  BB      BB  SS
CC          HH      HH  MMMM  MMMM  SS          UU      UU  BB      BB  SS
CC          HH      HH  MM  MM  MM  SS          UU      UU  BB      BB  SS
CC          HH      HH  MM  MM  MM  SS          UU      UU  BB      BB  SS
CC          HHHHHHHHHH  MM      MM    SSSSSS    UU      UU  BBBBBBBB      SSSSSS
CC          HHHHHHHHHH  MM      MM    SSSSSS    UU      UU  BBBBBBBB      SSSSSS
CC          HH      HH  MM      MM          SS  UU      UU  BB      BB          SS
CC          HH      HH  MM      MM          SS  UU      UU  BB      BB          SS
CC          HH      HH  MM      MM          SS  UU      UU  BB      BB          SS    ....
CC          HH      HH  MM      MM          SS  UU      UU  BB      BB          SS    ....
  CCCCCCCC  HH      HH  MM      MM  SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS      ....
  CCCCCCCC  HH      HH  MM      MM  SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS      ....

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
```

EDT
V04-

```
0001  0 %TITLE 'EDT$CHMSUBS - change mod^ SUBSTITUTE command'
0002  0 MODULE EDT$CHMSUBS (                               ! Change mode SUBSTITUTE command
0003  0                 IDENT = 'V04-000'                          ! File: CHMSUBS.BLI Edit: JBS1008
0004  0                 ) =
0005  1 BEGIN
0006  1 !
0007  1 !****************************************************************
0008  1 !*                                                              *
0009  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                     *
0010  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.      *
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0023  1 !*                                                                          *
0024  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS   *
0025  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0026  1 !*                                                                          *
0027  1 !*                                                                          *
0028  1 !****************************************************************************
0029  1 !
0030  1
0031  1 !++
0032  1 ! FACILITY:     EDT -- The DEC Standard Editor
0033  1 !
0034  1 ! ABSTRACT:
0035  1 !
0036  1 !       This module executes the change mode SUBSTITUTE (S) command.
0037  1 !
0038  1 ! ENVIRONMENT:  Runs at any access mode - AST reentrant
0039  1 !
0040  1 ! AUTHOR: Bob Kushlis, CREATION DATE: Unknown
0041  1 !
0042  1 ! MODIFIED BY:
0043  1 !
0044  1 ! 1-001 - Original.  DJS 04-Feb-1981.  This module was created by
0045  1 !       extracting the routine EDT$$SUB_CMD  from module CHANGE.BLI.
0046  1 ! 1-002 - Regularize headers.  JBS 04-Mar-1981
0047  1 ! 1-003 - Use new message codes.  JBS 04-Aug-1981
0048  1 ! 1-004 - New cursor position on backwards substitute.  SMB 28-Oct-1981
0049  1 ! 1-005 - Delete initial blank line by running through PRETTY.  JBS 02-Nov-1981
0050  1 ! 1-006 - Rework edit 1-004 to accomplish the same thing without changing
0051  1 !         the cursor position from V2.  SMB 17-Aug-1982
0052  1 ! 1-007 - Remove EDT$$G_LN_NO for new screen update logic.  JBS 29-Sep-1982
0053  1 ! 1-008 - Pass the correct number of lines to EDT$$DEL_TXTLN.  JBS 08-Oct-1982
0054  1 !--
0055  1
```

```
:    57        0056   1 %SBTTL 'Declarations'
:    58        0057   1 !
:    59        0058   1 ! TABLE OF CONTENTS:
:    60        0059   1 !
:    61        0060   1
:    62        0061   1 REQUIRE 'EDTSRC:TRAROUNAM';
:    63        0500   1
:    64        0501   1 FORWARD ROUTINE
:    65        0502   1     EDT$$SUB_CMD;                                  ! Execute the SUBSTITUTE command
:    66        0503   1
:    67        0504   1 !
:    68        0505   1 ! INCLUDE FILES:
:    69        0506   1 !
:    70        0507   1
:    71        0508   1 REQUIRE 'EDTSRC:EDTREQ';
:    72        0643   1
:    73        0644   1 !
:    74        0645   1 ! MACROS:
:    75        0646   1 !
:    76        0647   1 !       NONE
:    77        0648   1 !
:    78        0649   1 ! EQUATED SYMBOLS:
:    79        0650   1 !
:    80        0651   1 !       NONE
:    81        0652   1 !
:    82        0653   1 ! OWN STORAGE:
:    83        0654   1 !
:    84        0655   1 !       NONE
:    85        0656   1 !
:    86        0657   1 ! EXTERNAL REFERENCES:
:    87        0658   1 !
:    88        0659   1 !       In the routine
```

```
1 %SBTTL 'EDT$$SUB_CMD  - change mode SUBSTITUTE command'
1
1 GLOBAL ROUTINE EDT$$SUB_CMD                           ! Change mode SUBSTITUTE command
1     =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine implements the SUBSTITUTE command.  Just search for the
1 !       search string, delete it and insert the replace string.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       EDT$$G_DIR
1 !       EDT$$A_LN_PTR
1 !       EDT$$G_SEA_STRLEN
1 !       EDT$$T_SEA_STR
1 !       EDT$$G_SUB_STRLEN
1 !       EDT$$T_SUB_STR
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! ROUTINE VALUE:
1 !
1 !       1 = substitution made, 0 = not made (cor  o' ι or some error)
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2   BEGIN
2
2   EXTERNAL ROUTINE
2       EDT$$DEL_TXTLN : NOVALUE,               ! Delete whole lines of text
2       EDT$$INS_CHS,                   ! Insert a string of characters which may include carriage returns
2       EDT$$MSG_BELL : NOVALUE,                ! Output a message to the terminal with a warning bell
2       EDT$$STR_SEACMD,                        ! Search for a specific string
2       EDT$$CS_LEFT,                           ! Move left a character
2       EDT$$CS_RIGHT;                          ! Move right a character
2
2   EXTERNAL
2       EDT$$G_DIR,                             ! The current direction.
2       EDT$$A_LN_PTR,                          ! Current character pointer
2       EDT$$G_SEA_STRLEN,                      ! Length of current search string
2       EDT$$T_SEA_STR,                         ! Current search string
2       EDT$$G_SUB_STRLEN,                      ! Length of subs string
2       EDT$$T_SUB_STR,                         ! Current SUBSTITUTE string
2       EDT$$A_CUR_BUF : REF TBCB_BLOCK;        ! Current text buffer control block
2
```

```
2      MESSAGES ((STRNOTFND, BADRANGE));
2
2      LOCAL
2          STS,
2          NUM_LINES : LN_BLOCK,
2          END_POS;
2
2  !+
2  ! Search for the string.
2  !-
2
3      IF (.EDT$$G_DIR EQL DIR_BACKWARD)
2      THEN
2  !+
2  ! Move back one position before starting the search
2  !-
2          STS = EDT$$STR_SEACMD (EDT$$T_SEA_STR, .EDT$$G_SEA_STRLEN, 1, .EDT$$G_DIR)
2      ELSE
2          STS = EDT$$STR_SEACMD (EDT$$T_SEA_STR, .EDT$$G_SEA_STRLEN, 0, .EDT$$G_DIR);
2
3      IF (.STS EQL 1)
2      THEN
2  !+
2  ! String was found, do the SUBSTITUTE.
2  !-
3          BEGIN
3  !+
3  ! Move to the end of the string, counting the lines involved.
3  !-
3          MOVELINE (EDT$$A_CUR_BUF [TBCB_CUR_LIN], NUM_LINES);
3
3          DECR I FROM .EDT$$G_SEA_STRLEN - 1 TO 0 DO
3              EDT$$CS_RIGHT ();
3
3          SUBLINE (NUM_LINES, EDT$$A_CUR_BUF [TBCB_CUR_LIN], NUM_LINES);
3          ADDLINE (NUMBER_ONE, NUM_LINES);
3          END_POS = .EDT$$A_LN_PTR;
3  !+
3  ! Move back to the beginning.
3  !-
3
3          DECR I FROM .EDT$$G_SEA_STRLEN - 1 TO 0 DO
3              EDT$$CS_LEFT ();
3
3  !+
3  ! Make sure the string isn't too long.
3  !-
3
4          IF ((.NUM_LINES [LN_HI] NEQU 0) OR (.NUM_LINES [LN_MD] NEQU 0))
3          THEN
4              BEGIN
4              EDT$$MSG_BELL (EDT$_BADRANGE);
4              RETURN (0);
3              END;
3
3  !+
3  ! Delete the string.
```

```
:  204          0774  3 !-
:  205          0775  3         EDT$$DEL_TXTLN (.NUM_LINES [LN_LO], .END_POS);
,  206          0776  3 !+
:  207          0777  3 ! Insert the replacement string.
:  208          0778  3 !-
:  209          0779  3         EDT$$INS_CHS (EDT$$T_SUB_STR, .EDT$$G_SUB_STRLEN);
:  210          0780  3 !+
:  211          0781  3 ! If we are moving backward, then move back across the string
:  212          0782  3 !-
:  213          0783  3
:  214          0784  4         IF (.EDT$$G_DIR EQL DIR_BACKWARD)
:  215          0785  3         THEN
:  216          0786  3
:  217          0787  3             DECR I FROM .EDT$$G_SUB_STRLEN TO 1 DO
:  218          0788  3                 EDT$$CS_LEFT ();
:  219          0789  3
:  220          0790  3         RETURN (1);
:  221          0791  3         END
:  222          0792  2     ELSE
:  223          0793  3         BEGIN
:  224          0794  3 !+
:  225          0795  3 ! String was not found, EDT$$MSG_BELL  an error.
:  226          0796  3 !-
:  227          0797  3
:  228          0798  3         IF (.STS EQL 0) THEN EDT$$MSG_BELL (EDT$_STRNOTFND);
:  229          0799  3
:  230          0800  3         RETURN (0);
:  231          0801  2         END;
:  232          0802  2
:  233          0803  1     END;                                        ! of routine EDT$$SUB_CMD

                                                          .TITLE  EDT$CHMSUBS EDT$CHMSUBS - change mode SUBSTITUT
:                                                                             E command
                                                          .IDENT  \V04-000\

                                                          .EXTRN  EDT$$DEL_TXTLN, EDT$$INS_CHS
                                                          .EXTRN  EDT$$MSG_BELL, EDT$$STR_SEACMD
                                                          .EXTRN  EDT$$CS_LEFT, EDT$$CS_RIGHT
                                                          .EXTRN  EDT$$G_DIR, EDT$$A_LN_PTR
                                                          .EXTRN  EDT$$G_SEA_STRLEN
                                                          .EXTRN  EDT$$T_SEA_STR, EDT$$G_SUB_STRLEN
                                                          .EXTRN  EDT$$T_SUB_STR, EDT$$A_CUR_BUF
                                                          .EXTRN  EDT$_STRNOTFND, EDT$_BADRANGE

                                                          .PSECT  _EDT$CODE,NOWRT,  SHR,  PIC,2

                                        07FC 00000        .ENTRY  EDT$$SUB_CMD, Save R2,R3,R4,R5,R6,R7,R8,R9,-; 0662
                                                                  R10                                         :
                       5A 00000000G  00  9E 00002        MOVAB   EDT$$G_SUB_STRLEN, R10                      :
                       59 00000000G  00  9E 00009        MOVAB   EDT$$CS_LEFT, R9                            :
                       58 00000000G  00  9E 00010        MOVAB   EDT$$A_CUR_BUF, R8                          :
                       57 00000000G  00  9E 00017        MOVAB   EDT$$G_DIR, R7                              :
                       56 00000000G  00  9E 0001E        MOVAB   EDT$$G_SEA_STRLEN, R6                       :
                       5E            08  C2 00025        SUBL2   #8, SP                                      :
                       51            66  D0 00028        MOVL    EDT$$G_SEA_STRLEN, R1                       : 0733
                       50            67  D0 0002B        MOVL    EDT$$G_DIR, R0                              : 0728
```

```
                             06  12 0002E          BNEQ    1$                                           ;
                             50  DD 00030          PUSHL   R0                                           ; 0733
                             01  DD 00032          PUSHL   #1                                           ;
                             04  11 00034          BRB     2$                                           ;
                             50  DD 00036 1$:      PUSHL   R0                                           ; 0735
                             7E  D4 00038          CLRL    -(SP)                                        ;
                             51  DD 0003A 2$:      PUSHL   R1                                           ;
                  00000000G  00  9F 0003C          PUSHAB  EDT$$T_SEA_STR                               ;
   00000000G   00            04  FB 00042          CALLS   #4, EDT$$STR_SEACMD                          ;
               01            50  D1 00049          CMPL    STS, #1                                      ; 0737
                             03  13 0004C          BEQL    3$                                           ;
                           008E  31 0004E          BRW     14$                                          ;
               50            68  D0 00051 3$:      MOVL    EDT$$A_CUR_BUF, R0                           ; 0746
6E       06    A0            06  28 00054          MOVC3   #6, 6(R0), NUM_LINES                         ;
               52            66  D0 00059          MOVL    EDT$$G_SEA_STRLEN, I                         ; 0748
                             07  11 0005C          BRB     5$                                           ;
   00000000G   00            00  FB 0005E 4$:      CALLS   #0, EDT$$CS_RIGHT                            ; 0749
               F6            52  F4 00065 5$:      SOBGEQ  I, 4$                                        ;
               51       06   AE  B0 00068          MOVW    UPPER_WORD, SAVE                             ; 0751
               50            68  D0 0006C          MOVL    EDT$$A_CUR_BUF, R0                           ;
6E       06    A0            6E  C3 0006F          SUBL3   NUM_LINES, 6(R0), NUM_LINES                  ;
               52       0A   A0  D0 00074          MOVL    10(R0), R2                                   ;
               52       04   AE  D9 00078          SBWC    NUM_LINES, R2                                ;
         04    AE            52  D0 0007C          MOVL    R2, NUM_LINES                                ;
         06    AE            51  B0 00080          MOVW    SAVE, UPPER_WORD                             ;
                             6E  D6 00084          INCL    FIRST_LWORD                                  ; 0752
                             03  12 00086          BNEQ    6$                                           ;
                        04   AE  B6 00088          INCW    NEXT_WORD                                    ;
               53 00000000G  00  D0 0008B 6$:      MOVL    EDT$$A_LN_PTR, END_POS                       ; 0753
               52            66  D0 00092          MOVL    EDT$$G_SEA_STRLEN, I                         ; 0758
                             03  11 00095          BRB     8$                                           ;
               69            00  FB 00097 7$:      CALLS   #0, EDT$$CS_LEFT                             ; 0759
               FA            52  F4 0009A 8$:      SOBGEQ  I, 7$                                        ;
                        04   AE  B5 0009D          TSTW    NUM_LINES+4                                  ; 0765
                             05  12 000A0          BNEQ    9$                                           ;
                        02   AE  B5 000A2          TSTW    NUM_LINES+2                                  ;
                             08  13 000A5          BEQL    10$                                          ;
                  00000000G  8F  DD 000A7 9$:      PUSHL   #EDT$_BADRANGE                               ; 0768
                             3A  11 000AD          BRB     15$                                          ;
                             53  DD 000AF 10$:     PUSHL   END_POS                                      ; 0775
               7E       04   AE  3C 000B1          MOVZWL  NUM_LINES, -(SP)                             ;
   00000000G   00            02  FB 000B5          CALLS   #2, EDT$$DEL_TXTLN                           ;
                             6A  DD 000BC          PUSHL   EDT$$G_SUB_STRLEN                            ; 0779
                  00000000G  00  9F 000BE          PUSHAB  EDT$$T_SUB_STR                               ;
   00000000G   00            02  FB 000C4          CALLS   #2, EDT$$INS_CHS                             ;
                             67  D5 000CB          TSTL    EDT$$G_DIR                                   ; 0784
                             0C  12 000CD          BNEQ    13$                                          ;
52             6A            01  C1 000CF          ADDL3   #1, EDT$$G_SUB_STRLEN, I                     ; 0787
                             03  11 000D3          BRB     12$                                          ;
               69            00  FB 000D5 11$:     CALLS   #0, EDT$$CS_LEFT                             ; 0788
               FA            52  F5 000D8 12$:     SOBGTR  I, 11$                                       ;
               50            01  D0 000DB 13$:     MOVL    #1, R0                                       ; 0793
                                 04 000DE          RET                                                  ;
                             50  D5 000DF 14$:     TSTL    STS                                          ; 0798
                             0D  12 000E1          BNEQ    16$                                          ;
                  00000000G  8F  DD 000E3          PUSHL   #EDT$_STRNOTFND                              ;
   00000000G   00            01  FB 000E9 15$:     CALLS   #1, EDT$$MSG_BELL                            ;
```

```
                                        50  D4 000F0 16$:     CLRL    R0                                          ; 0803
                                            04 000F2          RET                                                 ;

; Routine Size:  243 bytes,    Routine Base:  _EDT$CODE + 0000


;  234          0804  1
;  235          0805  1 !<BLF/PAGE>
```

```
:  237          0806  1 END                                               ! of module EDT$CHMSUBS
:  238          0807  1
:  239          0808  0 ELUDOM




:                                    PSECT SUMMARY
:
:       Name                        Bytes                         Attributes
:
:   _EDT$CODE                             243  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)



:                             Library Statistics
:
:                                               -------- Symbo.s --------        Pages        Processing
:       File                                    Total    Loaded   Percent        Mapped       Time
:
:   _$255$DUA28:[EDT.SRC]EDT.L32;1               377        35         9          40           00:00.2
:   _$255$DUA28:[EDT.SRC]PSECTS.L32;1              2         1        50           7           00:00.1




:                                    COMMAND QUALIFIERS
:
:       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACEBACK/LIS=LIS$:CHMSUBS/OBJ=OBJ$:CHMSUBS MSRC$:CHMSUBS.BLI/UPDATE=(ENH$:CHMSUBS
:       )

; Size:          243 code + 0 data bytes
; Run Time:         00:15.4
; Elapsed Time:     00:19.0
; Lines/CPU Min:     3146
; Lexemes/CPU-Min:  11937
; Memory Used:  117 pages
; Compilation Complete
```

0132 AH-BT13A-SE
VAX/VMS V4.0

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