


```

CCCCCCCC LL      IIIIII MM      MM      AAAAAA CCCCCCCC
CCCCCCCC LL      IIIIII MM      MM      AAAAAA CCCCCCCC
CC        LL      II      MMMM  MMMM  AA      AA  CC
CC        LL      II      MMMM  MMMM  AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CC        LL      II      MM   MM   AA      AA  CC
CCCCCCCC LLLLLLLLLL IIIIII MM      MM  AA      AA  CCCCCCCC
CCCCCCCC LLLLLLLLLL IIIIII MM      MM  AA      AA  CCCCCCCC

```

```

RRRRRRRR EEEEEEEEE EEEEEEEEE QQQQQQ
RRRRRRRR EEEEEEEEE EEEEEEEEE QQQQQQ
RR      RR EE      QQ      QQ
RR      RR EE      QQ      QQ
RR      RR EE      QQ      QQ
RRRRRRRR EEEEEEEEE QQQ      QQ
RRRRRRRR EEEEEEEEE QQQ      QQ
RR      RR EE      QQ      QQ
RR      RR EE      QQ      QQ
RR      RR EE      QQ      QQ
RR      RR EEEEEEEEE QQQQ      QQ
RR      RR EEEEEEEEE QQQQ      QQ

```

XPRINT ('File: CLIMAC.REQ, Version V04-000, Edit 3, TJP, 14-DEC-1978')

```
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MODULE: CLIMAC.REQ

FACILITY: COMMAND LANGUAGE UTILITY INTERFACE

ABSTRACT: REQUIRE FILE WHICH DEFINES THE CLI INTERFACING MACROS

HISTORY:

VERSION: X01.00

AUTHORS: T.J. PORTER + M.L. JACK 03-MAY-77

MODIFIED BY:

V03-001 GAS0016 GERRY SMITH 28-OCT-1981
 FIX \$CLIQUALCODES MACRO.

V01-001 T.J. PORTER 14-DEC-1978
 CHANGE QDFLGS DEFAULT TO NULL STRING

V01-001 C. PETERS 18-APR-1978
 GIVE QDFLGS A DEFAULT VALUE OF 0.

V01-001 W.W. CLARK 17-OCT-1977
 ADD QDFLGS AND USRVAL TO \$CLIQUALDESC

--

!++

FUNCTIONAL DESCRIPTION:

THIS REQUIRE FILE DEFINES THE BLISS MACROS TO BE USED BY A UTILITY WHICH IMPLEMENTS A COMMAND OF THE VMS OPERATING SYSTEM. THE MACROS ARE THOSE FOR DECLARING THE BLOCKS USED IN THE COMMUNICATION BETWEEN THE UTILITY AND THE RESULT PARSER OF THE COMMAND LANGUAGE INTERPRETER. THE NAMES AND CALLING SEQUENCES ARE AS DESCRIBED IN VMS DOCUMENTATION.

!--

CREATE A CLI REQUEST DESCRIPTOR BLOCK

```
KEYWORDMACRO
$CLIREQDESC(RQTYPE, BITNUM=0, RQFLGS,
             ERRACT=0, PRSACT=0, ABSACT=0,
             QUALST=0)=
BLOCK[CLISQ_REQDESC,BYTE]
INITIAL(
  BYTE(%NAME('CLISK_',RQTYPE)),
  BYTE(BITNUM),
  CLISBITFLD(BYTE,CLISV_,RQFLGS),
  BYTE(0),
  LONG(ERRACT),
  LONG(0,0),

  LONG(PRSACT),
  LONG(ABSACT),
  LONG(QUALST))%:
  ! REQUEST TYPE BYTE
  ! PARAMETER BIT NUMBER
  ! FLAGS BYTE
  ! STATUS BYTE
  ! ERROR ACTION ROUTINE
  ! PARAMETER QUADWORD
  ! STRING DESCRIPTOR
  ! PARAMETER PRESENT ACTION ROUTINE
  ! PARAMETER ABSENT ACTION ROUTINE
  ! QUALIFIER DESCRIPTOR LISTHEAD
```

CREATE A CLI PARAMETER QUALIFIER DESCRIPTOR

```
KEYWORDMACRO
$CLIQUALDESC(QDCODE, QDFLGS = , TRUACT = 0, FLSACT = 0, USRVAL,
             TSTLST, SETLST, CLRLST) =
BLOCK[CLISQUALSIZE(USRVAL,TSTLST,SETLST,CLRLST),BYTE]
ALIGN(0)
INITIAL (
  BYTE(CLISQUALSIZE(USRVAL,TSTLST,SETLST,CLRLST)),
  BYTE(CLISQUALNAME(QDCODE)),
  %IF %NULL(USRVAL)
    %THEN CLISBITFLD(BYTE,CLISV_,QDFLGS)
    %ELSE CLISBITFLD(BYTE,CLISV_,(QDUSRV,%REMOVE(QDFLGS))) %FI,
  BYTE(0),
  LONG(0,0),
  LONG(TRUACT),
  LONG(FLSACT),
  %IF %NULL(USRVAL) %THEN %ELSE LONG(USRVAL), %FI
  %IF %NULL(%REMOVE(TSTLST)) %THEN BYTE(0) %ELSE CLISBITLIST(%REMOVE(TSTLST))%FI,
  %IF %NULL(%REMOVE(SETLST)) %THEN BYTE(0) %ELSE CLISBITLIST(%REMOVE(SETLST))%FI,
  %IF %NULL(%REMOVE(CLRLST)) %THEN BYTE(0) %ELSE CLISBITLIST(%REMOVE(CLRLST))%FI)%:
!
```

```

:
: CREATE THE END OF A QUALIFIER LIST
MACRO
:
: $CLIQUALEND = BYTE ALIGN(0) INITIAL(0)%,
: DECLARE THE NAMES OF CLI QUALIFIER CODES
:
: $CLIQUALCODES(UTILNAME) =
:   %IF %DECLARED(%QUOTE %QUOTE CLISUTILQUALPRE)
:     %THEN UNDECLARE %QUOTE %QUOTE CLISUTILQUALPRE; %FI
:   MACRO CLISUTILQUALPRE =
:     %NAME('CLISK_',CLISTAKE4(UTILNAME),'_')%QUOTE%;
:     EXTERNAL LITERAL
:     CLISQUALNAME(%REMAINING)%,
:
: THE FOLLOWING IS A SET OF UTILITY MACROS FOR ALL THE ABOVE
:
: CLISBITS(A,B)[]=
:   CLISMASK(%NAME(A,B))   CLISOR(%REMAINING)   CLISBITS(A,%REMAINING) %,
:
: CLISMASK(I,P,S,E)=
:   (1^((P)+(S)) - 1^(P)) %,
:
: CLISOR[]=
:   OR %,
:
: CLISBITFLD(ALLOC,PREFIX,VALUE)=
:   %IF %NULL(VALUE)
:     %THEN ALLOC(0)
:   %ELSE ALLOC(CLISBITS(PREFIX,%REMOVE(VALUE)))
:   %FI %,
:
: CLISLENGTH[] = %LENGTH %,
:
: CLISBITLIST[] = BYTE(%LENGTH,%REMAINING)%,
:
: CLISQUALSIZE(UVAL,TBLST,SBLST,CBLST) =
:   23 +
:     %IF %NULL(UVAL) %THEN 0 %ELSE 4 %FI +
:     %IF %NULL(%REMOVE(TBLST)) %THEN 0 %ELSE CLISLENGTH(%REMOVE(TBLST))%FI +
:     %IF %NULL(%REMOVE(SBLST)) %THEN 0 %ELSE CLISLENGTH(%REMOVE(SBLST))%FI +
:     %IF %NULL(%REMOVE(CBLST)) %THEN 0 %ELSE CLISLENGTH(%REMOVE(CBLST))%FI%,
:
: CLISTAKE4(SOMESTRING) = CLISJOIN4(%EXPLODE(SOMESTRING))%,
:
: CLISJOIN4(A,B,C,D) = %STRING(A,B,C,D)%,
:
: CLISQUALNAME[QUALNAME] =
:   %NAME(CLISUTILQUALPRE,CLISTAKE4(QUALNAME))%;

```

