```
RRRRRRRRRRR      MMM          MMM     SSSSSSSSSSS
RRRRRRRRRRRR     MMM          MMM     SSSSSSSSSSS
RRRRRRRRRRRR     MMM          MMM     SSSSSSSSSSS
RRR         RRR  MMMMMM    MMMMMM  SSS
RRR         RRR  MMMMMM    MMMMMM  SSS
RRR         RRR  MMMMMM    MMMMMM  SSS
RRR         RRR  MMM   MMM   MMM   SSS
RRR         RRR  MMM   MMM   MMM   SSS
RRR         RRR  MMM   MMM   MMM   SSS
RRRRRRRRRRR      MMM          MMM     SSSSSSSSS
RRRRRRRRRRRR     MMM          MMM     SSSSSSSSS
RRRRRRRRRRRR     MMM          MMM     SSSSSSSSS
RRR   RRR        MMM          MMM             SSS
RRR   RRR        MMM          MMM             SSS
RRR   RRR        MMM          MMM             SSS
RRR      RRR     MMM          MMM             SSS
RRR      RRR     MMM          MMM             SSS
RRR      RRR     MMM          MMM             SSS
RRR         RRR  MMM          MMM  SSSSSSSSSSS
RRR         RRR  MMM          MMM  SSSSSSSSSSS
RRR         RRR  MMM          MMM  SSSSSSSSSSS
```

FILEID**NTOMACROS

```
NN      NN  TTTTTTTTTT    000000    MM      MM    AAAAAA     CCCCCCCC  RRRRRRRR      000000      SSSSSSSS
NN      NN  TTTTTTTTTT    000000    MM      MM    AAAAAA     CCCCCCCC  RRRRRRRR      000000      SSSSSSSS
NN      NN      TT       00    00   MMMM  MMMM   AA    AA   CC        RR      RR   00    00    SS
NN      NN      TT       00    00   MMMM  MMMM   AA    AA   CC        RR      RR   00    00    SS
NNNN    NN      TT       00    0000 MM  MM  MM   AA    AA   CC        RR      RR   00    00    SS
NNNN    NN      TT       00    0000 MM  MM  MM   AA    AA   CC        RR      RR   00    00    SS
NN  NN  NN      TT       00  00  00 MM      MM   AA    AA   CC        RRRRRRRR     00    00      SSSSSS
NN  NN  NN      TT       00  00  00 MM      MM   AA    AA   CC        RRRRRRRR     00    00      SSSSSS
NN    NNNN      TT       0000    00 MM      MM   AAAAAAAAAA CC        RR  RR       00    00          SS
NN    NNNN      TT       0000    00 MM      MM   AAAAAAAAAA CC        RR  RR       00    00          SS
NN      NN      TT       00      00 MM      MM   AA    AA   CC        RR    RR     00    00          SS      ....
NN      NN      TT       00      00 MM      MM   AA    AA   CC        RR    RR     00    00          SS      ....
NN      NN      TT         000000   MM      MM   AA    AA     CCCCCCCC RR      RR   000000    SSSSSSSS      ....
NN      NN      TT         000000   MM      MM   AA    AA     CCCCCCCC RR      RR   000000    SSSSSSSS      ....

MM      MM    AAAAAA     RRRRRRRR
MM      MM    AAAAAA     RRRRRRRR
MMMM  MMMM  AA    AA     RR      RR
MMMM  MMMM  AA    AA     RR      RR
MM  MM  MM  AA    AA     RR      RR
MM  MM  MM  AA    AA     RR      RR
MM      MM  AA    AA     RRRRRRRR
MM      MM  AA    AA     RRRRRRRR
MM      MM  AAAAAAAAAA   RR  RR
MM      MM  AAAAAAAAAA   RR  RR
MM      MM  AA    AA     RR    RR
MM      MM  AA    AA     RR    RR
MM      MM  AA    AA     RR      RR
MM      MM  AA    AA     RR      RR
```

```
        .TITLE  NTOMACROS - RMS NETWORK MACRO DEFINITIONS
        .IDENT  'V04-000'

;
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;*****************************************************************************
;

;++
; Facility: RMS
;
; Abstract:
;
;       This module contains MACRO definitions used by RMS network modules.
;
; Environment: VAX/VMS, executive mode
;
; Author: James A. Krycka,      Creation Date:  17-MAY-1978
;
; Modified By:
;
;       V02-004 REFORMAT        J A Krycka      26-JUL-1980
;--
```

```
        .SBTTL  CODE GENERATION MACROS

;++
; $SETBIT sets a single bit in a field.
;--

        .MACRO  $SETBIT POS,BASE,?DISPL
        BBSS    POS,BASE,DISPL
DISPL:
        .ENDM   $SETBIT

;++
; $CLRBIT clears a single bit in a field.
;--

        .MACRO  $CLRBIT POS,BASE,?DISPL
        BBCC    POS,BASE,DISPL
DISPL:
        .ENDM   $CLRBIT

;++
; $MAPBIT maps the designated bit from R1 into the designated bit in R2.
; The bit is set in R2 only if the corresponding bit is set in R1.
;--

        .MACRO  $MAPBIT SRCBIT,DSTBIT,?LABEL
        BBC     #SRCBIT,R1,LABEL
        BBCS    #DSTBIT,R2,LABEL
LABEL:
        .ENDM   $MAPBIT

;++
; $ZERO_FILL writes zeroes into the specified buffer. On completion R0-R5 are
; destroyed (with R3 containing the address of one byte beyond the buffer).
; The default is to zero 512 bytes (1 page) at the specified address.
;--

        .MACRO  $ZERO_FILL DST=,SIZE=#512
        MOVC5   #0,DST,#0,SIZE,DST
        .ENDM   $ZERO_FILL

;++
; $CASEB, $CASEW, and $CASEL generate a CASEB, CASEW, CASEL instruction,
; respectively, followed by the case displacement table. The parameters for
; each macro are:
;
;       SELECTOR = the selector operand
;       BASE     = the base operand
;       (The limit operand is calculated from the # of entries in DISPL.)
;       DISPL    = the case displacement list
;
; Note that these macro definitions place BASE after SELECTOR and DISPL so that
; BASE can be omitted when keywords are not used in the macro invocation.
;--

        .MACRO  $CASEB  SELECTOR,DISPL,BASE=#0
```

```
        $CASE   SELECTOR,<DISPL>,BASE,TYPE=B
        .ENDM   $CASEB

        .MACRO  $CASEW  SELECTOR,DISPL,BASE=#0
        $CASE   SELECTOR,<DISPL>,BASE,TYPE=W
        .ENDM   $CASEW

        .MACRO  $CASEL  SELECTOR,DISPL,BASE=#0
        $CASE   SELECTOR,<DISPL>,BASE,TYPE=L
        .ENDM   $CASEL

;++
; $CASE is a level 2 macro used by $CASEB, $CASEW, and $CASEL. It generates a
; CASE[B/W/L] instruction followed by the case displacement table. The
; parameters for this macro are:
;
;       TYPE     = operand datatype of b, w, or l
;       SELECTOR = the selector operand
;       BASE     = the base operand
;       (The limit operand is calculated from the # of entries in DISPL.)
;       DISPL    = the case displacement list
;
; Note that the macro definition places SELECTOR and DISPL ahead of BASE and
; TYPE so that the latter can be omitted when keywords are not used in the
; macro invocation.
;--

        .MACRO  $CASE   SELECTOR,DISPL,BASE=#0,TYPE=B,?TABLE
        $$COUNT=0
        .IRP    EP,<DISPL>
        $$COUNT=$$COUNT+1
        .ENDR
        .IF     EQ,$$COUNT
        .ERROR  ; ***** case displacement list is null ***** ;
        .MEXIT
        .ENDC
        CASE'TYPE       SELECTOR,BASE,#<$$COUNT-1>
TABLE:
        .IRP    EP,<DISPL>
        .WORD   EP-TABLE
        .ENDR
        .ENDM   $CASE

        .END                            ; End of module
```

RMSCALLS
MAR

RMSIDXLNK
R32

RMS
LST

RMS32MAC
MAR

RMSMSGMAC
MAR

UTLDEF
R32

RMSIDXMAC
R32

UTLDEFUND
R32

RMSINTDEF
LST

RMSIDXDEF
R32

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