RPGRTL

```
RRRRRRRR    PPPPPPPP      GGGGGGGG    DDDDDDD    EEEEEEEEEE    FFFFFFFFFF
RRRRRRRR    PPPPPPPP      GGGGGGGG    DDDDDDD    EEEEEEEEEE    FFFFFFFFFF
RR    RR    PP      PP  GG            DD    DD   EE            FF
RR    RR    PP      PP  GG            DD    DD   EE            FF
RR    RR    PP      PP  GG            DD    DD   EE            FF
RRRRRRRR    PPPPPPPP    GG            DD    DD   EEEEEEEE      FFFFFFFF
RRRRRRRR    PPPPPPPP    GG            DD    DD   EEEEEEEE      FFFFFFFF
RR    RR    PP          GG    GGGGGG  DD    DD   EE            FF
RR    RR    PP          GG    GGGGGG  DD    DD   EE            FF
RR    RR    PP          GG        GG  DD    DD   EE            FF
RR    RR    PP          GG        GG  DD    DD   EE            FF            ....
RR      RR  PP                GGGGGG  DDDDDDD    EEEEEEEEEE    FF            ....
RR      RR  PP                GGGGGG  DDDDDDD    EEEEEEEEEE    FF            ....

RRRRRRRR    EEEEEEEEEE      QQQQQQ
RRRRRRRR    EEEEEEEEEE      QQQQQQ
RR    RR    EE           QQ        QQ
RR    RR    EE           QQ        QQ
RR    RR    EE           QQ        QQ
RRRRRRRR    EEEEEEEE      QQ        QQ
RRRRRRRR    EEEEEEEE      QQ        QQ
RR    RR    EE           QQ    QQ   QQ
RP    RR    EE           QQ    QQ   QQ
RR      RR  EE           QQ        QQ
RR      RR  EE           QQ        QQ
RR      RR  EEEEEEEEEE      QQQQ  QQ
RR      RR  EEEEEEEEEE      QQQQ  QQ
```

! File: RPGDEF.REQ, Edit:LPT1015

```
!++

! FACILITY:    VAX RPG II

! ABSTRACT:

!       This is a common definition file for VAX RPG II.  All definitions
!       of data structures that must be known by the compiler and the
!       generated code and RTL support should be included here.
!       This file should be required in COMLIB.REQ.

! ENVIRONMENT: VAX/VMS user mode

! AUTHOR: D. Braffitt, CREATION DATE: 12-Nov-1982

! MODIFIED BY:

!       1-001    Original                                    DJB 12-Nov-1983
!       1-002    Add RPG$L_CTX_ERROR                         LPT 14-Feb-1983
!       1-003    Add program control block macros            LPT 18-Mar-1983
!       1-004    Add RPG$K_ERR_SUBSC                         LPT 24-Mar-1983
!       1-005    Add support for record control/sequence check
!                 blocks; add RPG$IOEXCEPTION error location
!                 constants; add current CTX area ID         DJB 11-Apr-1983
!       1-006    RPG$S_CTX_PRINTER should be 32.             DJB 12-Apr-1983
!       1-007    Add RPG$V_CTX_RNF.                          DJB 14-Apr-1983
!       1-008    Change RPG$A_RCB_EXTFL to RPG$A_RCB_EXTFLD  LPT 25-Apr-1983
!       1-009    Add RPG$V_RCB_MATCH                         LPT 10-Jun-1983
!       1-010    Fix offset of some RCB fields               LPT 10-Jun-1983
```

```
!      1-011    Add RPG$V_RCB_CNTRLF                              LPT 22-Jun-1983
!      1-012    Add RPG$V_CTX_OVPEND                              LPT  5-Jul-1983
!      1-013    Correct PRINTER context area offsets             DJB 05-Jul-1983
!      1-014    Add RPG$B_SCB_FLAGS                               DJB 20-Jul-1983
!      1-015    Delete RPG$A_CTX_MATCHAREA                        LPT 21-Nov-1983
!--


!+
! Definitions for the RPG II file context area.
! This area is allocated in PSECT $LOCAL by the compiler
! for each file immediately preceding the RAB.  The actual size allocated
! depends on the file type.
!-


MACRO
    RPG$W_CTX_FLAGS=        -4,0,16,0 %,   ! Flag bits
    RPG$V_CTX_UOFF=         -4,0,1,0 %,    ! TRUE only if file is conditioned
                                           !   by an external indicator which is off
    RPG$V_CTX_EOF=          -4,1,1,0 %,    ! TRUE only if file is at end of file
    RPG$V_CTX_LOOKAH=       -4,2,1,0 %,    ! TRUE only if file is an input file
                                           !   which contains look-ahead fields
    RPG$V_CTX_RNF=          -4,3,1,0 %,    ! TRUE only if last attempt to read from
                                           !   file resulted in record not found
    RPG$B_CTX_ID=           -1,0,8,0 %,    ! Version number
    RPG$L_CTX_ERROR=        -8,0,32,0 %,   ! Error number for RPG detected errors
    RPG$A_CTX_SCB=          -12,0,32,0 %,  ! Address of current entry in the
                                           !   sequence control block
    RPG$A_CTX_READ=         -16,0,32,0 %,  ! Address of the READ routine
    RPG$A_CTX_CRCB=         -20,0,32,0 %,  ! Address of the current record control
                                           !   block
    RPG$A_CTX_OVIND=        -12,0,32,0 %,  ! Address of the overflow indicator for
                                           !   this PRINTER file
    RPG$W_CTX_FL=           -14,0,16,0 %,  ! # of lines on logical page (1-112)
    RPG$W_CTX_OL=           -16,0,16,0 %,  ! Overflow line # (1-112)
    RPG$W_CTX_LINE=         -18,0,16,0 %,  ! Current line on printed page
    RPG$W_CTX_PFLAGS=       -20,0,16,0 %,  ! Flags for print control
    RPG$V_CTX_FIRST=        -20,0,1,0 %,   ! TRUE only before first write to file
    RPG$V_CTX_IPFORMS=      -20,1,1,0 %,   ! TRUE only if first page forms
                                           !   positioning has been requested
    RPG$V_CTX_OVLINE=       -20,2,1,0 %,   ! TRUE is this is an overflow line
    RPG$V_CTX_OVPEND=       -20,3,1,0 %,   ! TRUE if overflow is pending
    RPG$W_CTX_SKIPB=        -22,0,16,0 %,  ! # of lines to space before printing
                                           !   (0-3)
    RPG$W_CTX_SKIPA=        -24,0,16,0 %,  ! # of lines to space after printing
                                           !   (0-3)
    RPG$W_CTX_SPACEB=       -26,0,16,0 %,  ! Line number to skip to before printing
                                           !   (1-112)
    RPG$W_CTX_SPACEA=       -28,0,16,0 %;  ! Line number to skip after printing
                                           !   (1-112)

LITERAL
    RPG$K_CTX_ID=           1,             ! Current CTX area id
    RPG$S_CTX_OUTPUT=       8,             ! Size of context area for output files
    RPG$S_CTX_PRINTER=      28,            ! Size of context area for printer files
    RPG$S_CTX_INPUPD=       20;            ! Size of context area for input and
                                           !   update files
```

```
!+
! Definitions for the RPGII file record control and sequence check blocks.
! This area is allocated in PSECT $LOCAL by the compiler
! for each input and update file immediately following the record buffer.
!-

MACRO
    RPG$A_RCB_RECID=          0,0,32,0 %,  ! Addr of record identifying indicator
    RPG$A_RCB_EXTFLD=         4,0,32,0 %,  ! Addr of extract field routine
    RPG$A_RCB_MATCH_RTN=      8,0,32,0 %,  ! Addr of match field compare and
                                           !   extract code
    RPG$A_RCB_CFR=           12,0,32,0 %,  ! Addr of control field compare routine
    RPG$W_RCB_FLAGS=         16,0,16,0 %,  ! Record control block flag bits
    RPG$V_RCB_SEQ=           16,0,1,0 %,   ! TRUE if record type is seq checked
    RPG$V_RCB_MATCH=         16,1,1,0 %,   ! TRUE if record type has match fields
    RPG$V_RCB_CNTRLF=        16,2,1,0 %,   ! TRUE if record type has control fields

    RPG$A_SCB_RCB=            0,0,32,0 %,  ! Address of the RCB of the record which
                                           !   is the current record in the sequence
    RPG$B_SCB_FLAGS=          4,0,8,0 %,   ! Sequence control block flag bits
    RPG$V_SCB_OPT=            4,0,1,0 %,   ! TRUE if record type is optional
    RPG$V_SCB_NO=             4,1,1,0 %,   ! TRUE if more than one of this record
                                           !   type may be present
    RPG$V_SCB_1SEEN=          4,2,1,0 %,   ! TRUE if one of the current record type
                                           !   has been seend
    RPG$V_SCB_LAST=           4,3,1,0 %;   ! TRUE if this is the end of the table
                                           !   and RPG$A_SCB_RCB contains the
                                           !   address of the 1st element in the SCB

LITERAL
    RPG$S_RCB=               18,            ! Size of record control block
    RPG$S_SCB=                5;            ! Size of sequence check block
```

```
!+
! Definitions for RPG error handling.
! The address of the program control block is found in RPG$A_PCB
! which is found offset from the frame pointer.
! For version 1, the only field in the program control block
! is the internal version number.
!-

MACRO
    RPG$A_PCB=                -4,0,32,0 %,  ! Address of program control block
    RPG$B_PCB_ID=              0,0,8,0 %;   ! Version number

!+
! Definitions of first parameter to RPG$IOEXCEPTION to describe where
! to find IO error.
!-

LITERAL
    RPG$K_ERR_RAB=                1,        ! Condition value in RAB field
    RPG$K_ERR_FAB=                2,        ! Condition value in FAB field
    RPG$K_ERR_FILE_CNTXT=         3;        ! Condition value in file context area

!+
! Definition of literal for error passed to RPG$ERROR
!-

LITERAL
    RPG$K_ERR_SUBSC=              5;        ! Same as COBOL for now
```

RMS0TRUNC
LIS

STAPRFLNM
LIS

RPGCVTPTO
LIS

RPGHANDLE
LIS

RPGMOVE1
LIS

RPGLIB
REQ

RMSGBL
LIS

RPGRTL
LIS

RPGDSPLY
LIS

RPGRTL
MAP

RPGPROLOG
REQ

RPGEXTIND
LIS

RPGLIB
LIS

RMS0SRCH
LIS

RMS0WAIT
LIS

RPGBTZ
LIS

RPGMOVE2
LIS

RPGDIVIDE
LIS

RPGIOEXCE
LIS

RPGDEF
REQ

RMS0UPDAT
LIS

RPGERROR
LIS