


```

FFFFFFFFF      IIIIII      LL      EEEEEEEEEEE  RRRRRRRR      WW      WW      IIIIII      000000
FFFFFFFFF      IIIIII      LL      EEEEEEEEEEE  RRRRRRRR      WW      WW      IIIIII      000000
FF           II           LL      EE           RR           WW      WW      II           00           00
FF           II           LL      EE           RR           WW      WW      II           00           00
FF           II           LL      EE           RR           WW      WW      II           00           00
FF           II           LL      EE           RR           WW      WW      II           00           00
FFFFFFFFF      II           LL      EEEEEEEEEEE  RRRRRRRR      WW      WW      II           00           00
FFFFFFFFF      II           LL      EEEEEEEEEEE  RRRRRRRR      WW      WW      II           00           00
FF           II           LL      EE           RR           WW      WW      II           00           00
FF           II           LL      EE           RR           WW      WW      II           00           00
FF           II           LL      EE           RR           WWW      WWW      II           00           00
FF           II           LL      EE           RR           WWW      WWW      II           00           00
FF           IIIIII      LLLLLLLLLL  EEEEEEEEEEE  RR           RR      WW      WW      IIIIII      000000
FF           IIIIII      LLLLLLLLLL  EEEEEEEEEEE  RR           RR      WW      WW      IIIIII      000000

```

```

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           IIIIII      SSSSSSSS
LLLLLLLLLLL IIIIII      SSSSSSSS
LLLLLLLLLLL IIIIII      SSSSSSSS

```

FILERWIO
Table of contents

- FILEREAD IO MODULE

L 16

16-SEP-1984 00:12:18 VAX/VMS Macro V04-00

Page 0

(1) 51

RDWRTLBN - READ/WRITE LOGICAL BLOCK NUMBER

```
0000 1 .TITLE FILERWIO - FILEREAD IO MODULE
0000 2 .IDENT 'V04-000'
0000 3
0000 4 :*****
0000 5 :*
0000 6 :* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 23 :*
0000 24 :*
0000 25 :*****
0000 26
0000 27 :^+
0000 28 : FACILITY: USER CALLABLE PROCEDURES
0000 29
0000 30 : ABSTRACT:
0000 31
0000 32 : THIS MODULE PERFORMS LOGICAL BLOCK I/O FOR FILEREAD
0000 33
0000 34 : ENVIRONMENT: USER MODE
0000 35
0000 36 : AUTHOR: PETER H. LIPMAN , CREATION DATE: 14-DEC-76
0000 37
0000 38 : MODIFIED BY:
0000 39
0000 40 : V02-001 PHL0007 Peter H. Lipman 14-Mar-1981
0000 41 : Extend parmeter list to FILSRDWRTLBN to make it
0000 42 : possible to read more than one block at a time. This
0000 43 : enhancement was made in conjunction with the cacheing
0000 44 : feature in FILEREAD.
0000 45
0000 46 :--
```

```

0000 48 :
0000 49 : .PSECT YFILEREAD,BYTE,EXE
0000 50 :
0000 51 : .SBTTL RDWRTLBN - READ/WRITE LOGICAL BLOCK NUMBER
0000 52 :++
0000 53 : FUNCTIONAL DESCRIPTION:
0000 54 :
0000 55 : THIS ROUTINE READS/WITES N BYTES FROM/TO THE SPECIFIED
0000 56 : LOGICAL BLOCK NUMBER OF THE VOLUME ASSIGNED TO THE SPECIFIED CHANNEL
0000 57 :
0000 58 : CALLING SEQUENCE:
0000 59 :
0000 60 : CALLG  ARGLIST,FILSRDWRTLBN
0000 61 :
0000 62 : INPUT PARAMETERS:
0000 63 :
0000 64 :     CHAN(AP)      =           ;CHANNEL ASSIGNED TO THE VOLUME TO READ
0000 65 :     LBN(AP)      =           ;LOGICAL BLOCK NUMBER TO READ
0000 66 :     BUFADR(AP)   =           ;ADDRESS OF BUFFER TO READ INTO
0000 67 :     IOFUNC(AP)   =           ;I/O FUNCTION CODE
0000 68 :     BYTCNT(AP)   =           ;NUMBER OF BYTES TO TRANSFER
0000 69 :
0000 70 : IMPLICIT INPUTS:
0000 71 :
0000 72 :     NONE
0000 73 :
0000 74 : OUTPUT PARAMETERS:
0000 75 :
0000 76 :     RO = SYSTEM STATUS CODE
0000 77 :
0000 78 : IMPLICIT OUTPUTS:
0000 79 :
0000 80 :     NONE
0000 81 :
0000 82 : COMPLETION CODES:
0000 83 :
0000 84 :     NONE
0000 85 :
0000 86 : SIDE EFFECTS:
0000 87 :
0000 88 :     NONE
0000 89 :
0000 90 : EQUATED SYMBOLS:
0000 91 :
0000 92 :     OFFSETS FROM AP
0000 93 :
00000004 0000 94 :     CHAN      =           4   ;CHANNEL TO WHICH VOLUME IS ASSIGNED
00000008 0000 95 :     LBN      =           8   ;LOGICAL BLOCK NUMBER
0000000C 0000 96 :     BUFADR   =          12   ;BUFFER ADDRESS TO READ INTO
00000010 0000 97 :     IOFUNC   =          16   ;FUNCTION CODE FOR THE QIO
00000014 0000 98 :     BYTCNT   =          20   ;NUMBER OF BYTES TO TRANSFER
0000 99 :
0000 100 : --
0000 101 :
0000 102 : FILSRDWRTLBN::
0000 103 :     .WORD    0
SE 08 C2 0000 104 :     SUBL    #8,SP           ;ALLOCATE AN IO STATUS BLOCK

```

```

C 1
50 5E D0 0005 105      MOVL  SP,RO          ;ADDRESS OF IO STATUS BLOCK
      0008 106      $QIOW_S CHAN=CHAN(AP),-      ;CHANNEL
      0008 107      FUNC=IOFUNC(AP),-      ;I/O FUNCTION CODE
      0008 108      IOSB=(RO),-      ;ADDRESS OF I/O STATUS BLOCK
      0008 109      P1=@BUFADR(AP),-      ;BUFFER ADDRESS
      0008 110      P2=BYTCNT(AP),-      ;NO. OF BYTES
      0008 111      P3=LBN(AP)          ;LOGICAL BLOCK NUMBER
50 03 50 E9 002A 112      BLBC  RO,10$      ;BRANCH IF ERROR
50 6E 3C 002D 113      MOVZWL (SP),RO      ;STATUS CODE FROM I/O STATUS BLOCK
      0030 114 10$:
      04 0030 115      RET
      0031 116
      0031 117      .END

```

FILERWIO
Symbol table

- FILERWIO IO MODULE

D 1

16-SEP-1984 00:12:18 VAX/VMS Macro V04-00
5-SEP-1984 03:42:09 [SYS.SRC]FILERWIO.MAR,1

Page 4
(1)

FOR
V04

```

$$T1      = 00000001
BUFADR    = 0000000C
BYTCNT    = 00000014
CHAN      = 00000004
FILSRDWRTLBN 00000000 RG 01
IOFUNC    = 00000010
LBN       = 00000008
SYSSQIOW  ***** GX 01

```

```

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

```

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
YFILERWIO	00000031 (49.)	01 (1.)	NOPIC USR CON REL LCL NOSHR EXE RD WRT NOVEC BYTE

```

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

```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	35	00:00:00.04	00:00:02.24
Command processing	134	00:00:00.50	00:00:04.95
Pass 1	112	00:00:00.65	00:00:05.67
Symbol table sort	0	00:00:00.00	00:00:00.00
Pass 2	39	00:00:00.26	00:00:01.92
Symbol table output	1	00:00:00.02	00:00:00.02
Psect synopsis output	1	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	324	00:00:01.50	00:00:14.82

The working set limit was 1050 pages.
 2056 bytes (5 pages) of virtual memory were used to buffer the intermediate code.
 There were 10 pages of symbol table space allocated to hold 8 non-local and 1 local symbols.
 117 source lines were read in Pass 1, producing 11 object records in Pass 2.
 4 pages of virtual memory were used to define 4 macros.

```

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

```

Macro library name	Macros defined
_\$255\$DUA28:[SYS.OBJ]LIB.MLB;1	0
-\$255\$DUA28:[SYSLIB]STARLET.MLB;2	4
TOTALS (all libraries)	4

49 GETS were required to define 4 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LISS:FILERWIO/OBJ=OBJ\$:FILERWIO MSRC\$:FILERWIO/UPDATE=(ENH\$:FILERWIO)+EXECMLS/LIB

FILEREAD LIS	FILERWTO LIS
EXCEPTMSG LIS	EXSUBROUT LIS
DISMOUNT LIS	EXCEPTION LIS
DEBUGDATA LIS	ERRORLOG LIS
DEVICEDAT LIS	DEVICE
...	...

