

.....

```

MM      MM  RRRRRRRR  DDDDDDDD  BBBB8888  LL      KK      KK
MM      MM  RRRRRRRR  DDDDDDDD  BBBB8888  LL      KK      KK
MMMM    MMMM RR      RR  DD      DD  BB      BB  LL      KK      KK
MMMM    MMMM RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RRRRRRRR  DD      DD  BBBB8888  LL      KKKKKK
MM      MM  RRRRRRRR  DD      DD  BBBB8888  LL      KKKKKK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DD      DD  BB      BB  LL      KK      KK
MM      MM  RR      RR  DDDDDDDD  BBBB8888  LLLLLLLLLL  KK      KK
MM      MM  RR      RR  DDDDDDDD  BBBB8888  LLLLLLLLLL  KK      KK

```

```

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
LLLLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLLLL IIIIII  SSSSSSSS

```

```

1 0001 0 MODULE MRDBLK (
2 0002 0
3 0003 0     LANGUAGE (BLISS32),
4 0004 0     IDENT = 'V04-000'
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
10 0010 1 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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26 0026 1 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1 ++
32 0032 1
33 0033 1 FACILITY: MOUNT Utility Structure Levels 1 & 2
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1     This routine reads a block from the disk being mounted.
38 0038 1
39 0039 1 ENVIRONMENT:
40 0040 1
41 0041 1     STARLET operating system, including privileged system services
42 0042 1     and internal exec routines.
43 0043 1
44 0044 1 --
45 0045 1
46 0046 1
47 0047 1 AUTHOR: Andrew C. Goldstein, CREATION DATE: 18-Oct-1977 11:35
48 0048 1
49 0049 1 MODIFIED BY:
50 0050 1
51 0051 1     V03-002 HH0041     Hai Huang     24-Jul-1984
52 0052 1     Remove REQUIRE 'LIBD$: [VMSLIB.OBJ]MOUNTMSG.B32'.
53 0053 1
54 0054 1     V03-001 STJ0246     Steven T. Jeffreys,     04-Apr-1982
55 0055 1     Create a common I/O routine that will be used for
56 0056 1     all synchronous I/O done within $MOUNT.
57 0057 1

```

```
.. 58      0058 1 | V02-001 ACG0167      Andrew C. Goldstein, 18-Apr-1980 13:38
.. 59      0059 1 | |
.. 60      0060 1 | |**
.. 61      0061 1 | |
.. 62      0062 1 | |
.. 63      0063 1 | LIBRARY 'SYSS$LIBRARY:LIB.L32';
.. 64      0064 1 | REQUIRE 'SRC$:MOUDEF.B32';
.. 65      0596 1 |
.. 66      0597 1 |
.. 67      0598 1 | FORWARD ROUTINE
.. 68      0599 1 | READ_BLOCK,          ! read a disk block
.. 69      0600 1 | WRITE_BLOCK;        ! write a disk block
```

```
71 0601 1 GLOBAL ROUTINE READ_BLOCK (LBN, BUFFER) =
72 0602 1
73 0603 1 |++
74 0604 1 |
75 0605 1 | FUNCTIONAL DESCRIPTION:
76 0606 1 |
77 0607 1 |     This routine reads the indicated block from the device that
78 0608 1 |     CHANNEL is assigned to.
79 0609 1 |
80 0610 1 | CALLING SEQUENCE:
81 0611 1 |     READ_BLOCK (ARG1, ARG2)
82 0612 1 |
83 0613 1 | INPUT PARAMETERS:
84 0614 1 |     ARG1: LBN of block
85 0615 1 |     ARG2: address of buffer to read into
86 0616 1 |
87 0617 1 | IMPLICIT INPUTS:
88 0618 1 |     CHANNEL: channel number to use
89 0619 1 |
90 0620 1 | OUTPUT PARAMETERS:
91 0621 1 |     NONE
92 0622 1 |
93 0623 1 | IMPLICIT OUTPUTS:
94 0624 1 |     NONE
95 0625 1 |
96 0626 1 | ROUTINE VALUE:
97 0627 1 |     I/O or system service status of request
98 0628 1 |
99 0629 1 | SIDE EFFECTS:
100 0630 1 |     block read
101 0631 1 |
102 0632 1 | --
103 0633 1 |
104 0634 2 BEGIN
105 0635 2
106 0636 2 LOCAL
107 0637 2     STATUS,                ! system status code
108 0638 2     IO_STATUS           : VECTOR [2]; ! I/O status block
109 0639 2
110 0640 2 EXTERNAL
111 0641 2     CHANNEL;                ! channel number for I/O
112 0642 2
113 P 0643 2 STATUS = DO_IO (CHAN = .CHANNEL,
114 PP 0644 2     FUNC = IOS_READBLK,
115 PP 0645 2     IOSB = IO_STATUS[0],
116 PP 0646 2     EFN = MOUNT_EFN,
117 P 0647 2     P1 = .BUFFER,
118 P 0648 2     P2 = 512,
119 0649 2     P3 = .LBN);
120 0650 2
121 0651 2 IF .STATUS THEN STATUS = .(IO_STATUS[0])<0,16>;
122 0652 2 RETURN .STATUS;
123 0653 2
124 0654 1 END;                ! end of routine READ_BLOCK
```

.TITLE MRDBLK

```

.IDENT \V04-000\
.EXTRN CHANNEL, COMMON_IO
.PSECT $CODE$,NOWRT,2
.ENTRY READ_BLOCK, Save nothing          : 0601
SUBL2 #8, SP                               :
CLRQ -(SP)                                : 0649
CLRL -(SP)
PUSHL LBN
MOVZWL #512, -(SP)
PUSHL BUFFER
CLRQ -(SP)
PUSHAB IO_STATUS
PUSHL #33
PUSHL CHANNEL
PUSHL #26
CALLS #12, COMMON_IO
BLBC STATUS, 1$                            : 0651
MOVZWL IO_STATUS, STATUS
RET                                         : 0654

```

	0000	00000							
5E	08	C2	00002						
	7E	7C	00005						
	7E	D4	00007						
	04	AC	DD	00009					
7E	0200	8F	3C	0000C					
	08	AC	DD	00011					
	7E	7C	00014						
	20	AE	9F	00016					
	21	DD	00019						
	0000G	CF	DD	0001B					
	1A	DD	0001F						
00000000G	00	0C	FB	00021					
	03	50	E9	00028					
	50	6E	3C	0002B					
		04	0002E	1\$:					

; Routine Size: 47 bytes, Routine Base: \$CODE\$ + 0000

		0000	00000	.ENTRY	WRITE_BLOCK, Save nothing	:	0655
5E		0B	C2 00002	SUBL2	#8, SP	:	
		7E	7C 00005	CLRQ	-(SP)	:	0703
		7E	D4 00007	CLRL	-(SP)	:	
	04	AC	DD 00009	PUSHL	LBN	:	
7E	0200	8F	3C 0000C	MOVZWL	#512, -(SP)	:	
	08	AC	DD 00011	PUSHL	BUFFER	:	
		7E	7C 00014	CLRQ	-(SP)	:	
	20	AE	9F 00016	PU_1AB	IO_STATUS	:	
		20	DD 00019	PUSL	#32	:	
	0000G	CF	DD 0001B	PUSHL	CHANNEL	:	
		1A	DD 0001F	PUSHL	#26	:	
00000000G	00	0C	FB 00021	CALLS	#12, COMMON_IO	:	
	03	50	E9 00028	BLBC	STATUS, 1\$:	0705
	50	6E	3C 0002B	MOVZWL	IO_STATUS, STATUS	:	
		04	0002E 1\$:	RET		:	0708

; Routine Size: 47 bytes, Routine Base: \$CODE\$ + 002F


```
181 0709 1 GLOBAL ROUTINE COMMON_IO (EFN,CHAN,FUNC,IOSTS,ASTADR,ASTPRM,P1,P2,P3,P4,P5,P6)=
182 0710 1
183 0711 1 ++
184 0712 1
185 0713 1 FUNCTIONAL DESCRIPTION:
186 0714 1
187 0715 1 This routine is the common I/O routine for all synchronous I/O
188 0716 1 done by the $MOUNT system service. Event flags are used very
189 0717 1 cautiously to prevent confusion arising from an outside agent
190 0718 1 setting and clearing event flags indiscriminently.
191 0719 1
192 0720 1 CALLING SEQUENCE:
193 0721 1 Identical to $QIO. A macro, DO_IO, has been defined in MOUDEF
194 0722 1 so that existing code can use this routine by replacing the
195 0723 1 call to $QIOW with an invocation of DO_IO without having to
196 0724 1 change the order or names of routine arguments.
197 0725 1
198 0726 1 INPUT PARAMETERS:
199 0727 1 See $QIOW for the details.
200 0728 1
201 0729 1 IMPLICIT INPUTS:
202 0730 1 NONE
203 0731 1
204 0732 1 OUTPUT PARAMETERS:
205 0733 1 NONE
206 0734 1
207 0735 1 IMPLICIT OUTPUTS:
208 0736 1 NONE
209 0737 1
210 0738 1 ROUTINE VALUE:
211 0739 1 I/O or system service status of request
212 0740 1
213 0741 1 SIDE EFFECTS:
214 0742 1 Some I/O has been attempted, and at exit, the event flag
215 0743 1 MOUNT_EFN is always set.
216 0744 1
217 0745 1 --
218 0746 1
219 0747 2 BEGIN ! Start of routine COMMON_IO
220 0748 2
221 0749 2 LOCAL
222 0750 2 IOSB : REF BBLOCK VOLATILE,
223 0751 2 IO_STATUS : BBLOCK [8],
224 0752 2 STATUS;
225 0753 2
226 0754 2 ! If an I/O status block was not specified, use a local one.
227 0755 2 !
228 0756 2
229 0757 2 IF (IOSB = .IOSTS) EQL 0
230 0758 2 THEN
231 0759 2 BEGIN
232 0760 2 CH$FILL (0, 8, IO_STATUS);
233 0761 2 IOSB = IO_STATUS;
234 0762 2 END;
235 0763 2
236 0764 2 ! Issue the I/O request.
237 0765 2 !
```

```

: 238
: 239 P 0766 2
: 240 P 0767 2 STATUS = $QIOW (EFN = .EFN,
: 241 P 0768 2 CHAN = .CHAN,
: 242 P 0769 2 FUNC = .FUNC,
: 243 P 0770 2 IOSB = .IOSB,
: 244 P 0771 2 ASTADR = .ASTADR,
: 245 P 0772 2 ASTPRM = .ASTPRM,
: 246 P 0773 2 P1 = .P1,
: 247 P 0774 2 P2 = .P2,
: 248 P 0775 2 P3 = .P3,
: 249 P 0776 2 P4 = .P4,
: 250 P 0777 2 P5 = .P5,
: 251 P 0778 2 P6 = .P6
: 252 0779 2 );
: 253 0780 2
: 254 0781 2 ! If the return status from $QIOW indicates success, make sure that
: 255 0782 2 ! the I/O actually completed. If it did not, then wait for the event
: 256 0783 2 ! flag again, after resetting it to a known state.
: 257 0784 2 !
: 258 0785 2
: 259 0786 2 IF .STATUS
: 260 0787 2 THEN
: 261 0788 2 BEGIN
: 262 0789 3 WHILE (.IOSB [0,0,16,0] EQL 0) DO
: 263 0790 4 BEGIN
: 264 0791 4 $CLREF (EFN = .EFN);
: 265 0792 5 IF (.IOSB [0,0,16,0] EQL 0)
: 266 0793 4 THEN
: 267 0794 4 $WAITFR (EFN = .EFN);
: 268 0795 3 END;
: 269 0796 3 STATUS = .IOSB [0,0,16,0];
: 270 0797 2 END;
: 271 0798 2
: 272 0799 2 ! Set the specified event flag and return.
: 273 0800 2 !
: 274 0801 2 !
: 275 0802 2
: 276 0803 2 $$SETEF (EFN = .EFN);
: 277 0804 3 RETURN (.STATUS)
: 0805 1 END;

```

! End of routine COMMON_IO

						.EXTRN SYSSQIOW, SYSSCLREF	
						.EXTRN SYSSWAITFR, SYSSSETEF	
				003C 00000		.ENTRY COMMON IO, Save R2,R3,R4,R5	: 0709
				0C C2 00002		SUBL2 #12, SP	
	08	5E	10	AC D0 00005		MOVL IOSIS, IOSB	: 0757
				0A 12 0000A		BNEQ 1\$	
08		6E		00 2C 0000C		MOVCS #0, (SP), #0, #8, IO_STATUS	: 0760
				6E 00011			
	08	AE		6E 9E 00012		MOVAB IO_STATUS, IOSB	: 0761
		7E	2C	AC 7D 00016 1\$:		MOVQ P5, -(SP)	: 0779
		7E	24	AC 7D 0001A		MOVQ P3, -(SP)	
		7E	1C	AC 7D 0001E		MOVQ P1, -(SP)	
		7E	14	AC 7D 00022		MOVQ ASTADR, -(SP)	

	7E	28	AE	DD	00026	PUSHL	IOSB	:	
		08	AC	7D	00029	MOVQ	CHAN, -(SP)	:	
		04	AC	D9	0002D	PUSHL	EFN	:	
00000000G	00		0C	FB	00030	CALLS	#12, SYSSQIOW	:	
	52		50	D0	00037	MOVL	R0, STATUS	:	
	24		52	E9	0003A	BLBC	STATUS, 4\$:	0786
		08	BE	B5	0003D 2\$:	TSTW	@IOSB	:	0789
			1B	12	00040	BNEQ	3\$:	
00000000G	00	04	AC	DD	00042	PUSHL	EFN	:	0791
			01	FB	00045	CALLS	#1, SYSSCLREF	:	
		08	BE	B5	0004C	TSTW	@IOSB	:	0792
			EC	12	0004F	BNEQ	2\$:	
00000000G	00	04	AC	DD	00051	PUSHL	EFN	:	0794
			01	FB	00054	CALLS	#1, SYSSWAITFR	:	
	52	08	EO	11	0005B	BRB	2\$:	0789
			BE	3C	0005D 3\$:	MOVZWL	@IOSB, STATUS	:	0796
00000000G	00	04	AC	DD	00061 4\$:	PUSHL	EFN	:	0803
			01	FB	00064	CALLS	#1, SYSSSETEF	:	
	50		52	D0	0006B	MOVL	STATUS, R0	:	0804
			04	0006E	RET			:	0805

: Routine Size: 111 bytes, Routine Base: \$CODE\$ + 005E

```
: 278      0806 1
: 279      0807 1 END
: 280      0808 0 ELUDOM
```

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	205	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]LIB.L32;1	18619	16	0	1000	00:02.0

COMMAND QUALIFIERS

