


```

CCCCCCCC  HH      HH  KK      KK  DDDDDDDD  MM      MM  000000
CCCCCCCC  HH      HH  KK      KK  DDDDDDDD  MM      MM  000000
CC        HH      HH  KK      KK  DD        DD  MMMM  MMMM  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CC        HH      HH  KK      KK  DD        DD  DD        DD  00      00
CCCCCCCC  HH      HH  KK      KK  DDDDDDDD  MM      MM  000000
CCCCCCCC  HH      HH  KK      KK  DDDDDDDD  MM      MM  000000

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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
LLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLL IIIIII  SSSSSSSS

```

.....

```

1 0001 0 MODULE CHKDMO (
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: F11ACP Structure Level 1
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1     This routine dismounts the volume in use if it should be.
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: 29-Apr-1977 17:19
48 0048 1
49 0049 1 MODIFIED BY:
50 0050 1
51 0051 1
52 0052 1     V03-005 HH0049 Hai Huang 16-Aug-1984
53 0053 1     Call IOC$DALLOC_DMT to handle deallocation on dismount.
54 0054 1
55 0055 1     V03-004 HH0047 Hai Huang 13-Aug-1984
56 0056 1     Correct IOC$DALLOC_DEV linkage (UCB address in R5).
57 0057 1

```

```
58 0058 1 V03-003 ACG0441 Andrew C. Goldstein, 10-Aug-1984 17:02
59 0059 1 Rework dismount interlocking to eliminate races and
60 0060 1 uninterlocked operation; clear the device lock; perform
61 0061 1 deallocation here instead of at last deassign.
62 0062 1
63 0063 1 V03-002 LMP0221 L. Mark Pilant, 27-Mar-1984 12:59
64 0064 1 Change UCBSL_OWNUIC to ORBSL_OWNER and UCBSW_VPROT to
65 0065 1 ORBSW_PROT.
66 0066 1
67 0067 1 V03-001 PRD0037 Paul R. DeStefano 13-Sep-1983
68 0068 1 Modified to no longer clear volume valid when dismounting
69 0069 1 the volume.
70 0070 1
71 0071 1 V02-001 ACG0226 Andrew C. Goldstein, 24-Nov-1981 22:28
72 0072 1 Issue IOS_AVAILABLE on DISMOUNT/NOUNLOAD
73 0073 1
74 0074 1 V02-000 ACC0167 Andrew C. Goldstein, 7-May-1980 18:47
75 0075 1 Previous revision history moved to F11A.REV
76 0076 1 **
77 0077 1
78 0078 1
79 0079 1 LIBRARY 'SYSS$LIBRARY:LIB.L32';
80 0080 1 REQUIRE 'SRC$:FCPDEF.B32';
81 0395 1
82 0396 1
83 0397 1
84 0398 1 Part of this routine runs at IPL$_SYNCH, so it must be locked into the
85 0399 1 working set.
86 0400 1
87 0401 1
88 0402 1 LOCK_CODE;
```

```

90 0403 1 GLOBAL ROUTINE CHECK_DISMOUNT : NOVALJE =
91 0404 1
92 0405 1 +-+
93 0406 1
94 0407 1 FUNCTIONAL DESCRIPTION:
95 0408 1
96 0409 1 This routine checks if the volume in use is marked for dismount and
97 0410 1 idle. If so, it completes the dismount.
98 0411 1
99 0412 1 CALLING SEQUENCE:
100 0413 1 CHECK_DISMOUNT ( )
101 0414 1
102 0415 1 INPUT PARAMETERS:
103 0416 1 NONE
104 0417 1
105 0418 1 IMPLICIT INPUTS:
106 0419 1 CURRENT_UCB: UCB of unit in use
107 0420 1 CURRENT_VCB: VCB of volume in use
108 0421 1 ACP$AQBD: queue header for ACP
109 0422 1
110 0423 1 OUTPUT PARAMETERS:
111 0424 1 NONE
112 0425 1
113 0426 1 IMPLICIT OUTPUTS:
114 0427 1 NONE
115 0428 1
116 0429 1 ROUTINE VALUE:
117 0430 1 NONE
118 0431 1
119 0432 1 SIDE EFFECTS:
120 0433 1 Volume dismounted if appropriate
121 0434 1
122 0435 1 --
123 0436 1
124 0437 2 BEGIN
125 0438 2
126 0439 2 LINKAGE
127 0440 2 DALLOC_DEV = JSB (REGISTER = 4, REGISTER = 5)
128 0441 2 : NOPRESERVE (3)
129 0442 2 : PRESERVE (2, 4, 5)
130 0443 2 : NOTUSED (6, 7, 8, 9, 10, 11);
131 0444 2 LOCAL
132 0445 2 UCB : REF BBLOCK, ! local address of UCB
133 0446 2 VCB : REF BBLOCK, ! local address of VCB
134 0447 2 ORB : REF BBLOCK, ! local address of ORB
135 0448 2 FCB : REF BBLOCK, ! local address of FCB
136 0449 2 STS : ! general status value
137 0450 2 LKSTS : VECTOR [6], ! lock status block
138 0451 2 WCB : REF BBLOCK; ! local address of WCB
139 0452 2
140 0453 2 EXTERNAL
141 0454 2 IO_CHANNEL ! channel number for all I/O
142 0455 2 CURRENT_UCB : REF BBLOCK, ! UCB of unit in process
143 0456 2 CURRENT_VCB : REF BBLOCK, ! VCB of volume in process
144 0457 2 QUEUE_HEAD : REF BBLOCK, ! address of ACP queue header
145 0458 2 CTL$GC_PCB : ADDRESSING_MODE(GENERAL); ! PCB address
146 0459 2

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147 0460 2 EXTERNAL ROUTINE
148 0461 2 LOCK IODB, ! lock I/O data base mutex
149 0462 2 UNLOCK IODB, ! unlock I/O data base mutex
150 0463 2 DEALLOCATE, ! deallocate dynamic memory
151 0464 2 FLUSH FID, ! flush blocks from the buffer pool
152 0465 2 SEND_ERRLOG, ! send message to error logger
153 0466 2 IOCS$DALLOC_DMT : DALLOC_DEV ADDRESSING_MODE (GENERAL);
154 0467 2 ! deallocate device
155 0468 2
156 0469 2
157 0470 2 ! First check the mark for dismount bit.
158 0471 2 !
159 0472 2
160 0473 2 UCB = .CURRENT UCB;
161 0474 2 ORB = .UCB[UCB$L_ORB];
162 0475 2 IF NOT .BBLOCK [OCB[UCB$L_DEVCHAR], DEV$V_DMT]
163 0476 2 THEN RETURN;
164 0477 2
165 0478 2 ! The volume is marked for dismount. The remainder of the tests and the
166 0479 2 ! dismount bit twiddling must be done interlocked.
167 0480 2 !
168 0481 2
169 0482 2 LOCK IODB ();
170 0483 2 SET_IPL (IPL$_SYNCH);
171 0484 2
172 0485 2 VCB = .CURRENT VCB;
173 0486 2 IF .VCB[VCB$W_TRANS] EQL 1
174 0487 2 THEN
175 0488 2 BEGIN
176 0489 2
177 0490 2 ! The volume is marked for dismount and idle. Set the dismount in progress
178 0491 2 ! bit to stop all further activity.
179 0492 2 !
180 0493 2
181 0494 2 UCB[UCB$V_DISMOUNT] = 1;
182 0495 2 UNLOCK_IODB ();
183 0496 2
184 0497 2 ! Make an error log entry to record the dismount.
185 0498 2 !
186 0499 2
187 0500 2 SEND_ERRLOG (0, .UCB);
188 0501 2
189 0502 2 ! Flush the buffer pool of any blocks of this volume.
190 0503 2 !
191 0504 2
192 0505 2 FLUSH_FID (0);
193 0506 2
194 0507 2 ! Issue an unload function if unload was requested.
195 0508 2 !
196 0509 2
197 P 0510 2 $QIOW (
198 P 0511 2 CHAN = .IO_CHANNEL,
199 P 0512 2 EFN = EFN,
200 P 0513 2 FUNC = (IF TESTBITSC (UCB[UCB$V_UNLOAD])
201 P 0514 2 THEN IOS_UNLOAD
202 P 0515 2 ELSE IOS_AVAILABLE)
203 0516 2 );

```

```

204 0517
205 0518
206 0519
207 0520
208 0521
209 0522
210 0523
211 0524
212 0525
213 0526
214 0527
215 P 0528
216 P 0529
217 P 0530
218 P 0531
219 P 0532
220 0533
221 0534
222 0535
223 0536
224 0537
225 0538
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227 0540
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245 0558
246 0559
247 0560
248 0561
249 0562
250 0563
251 0564
252 0565
253 0566
254 0567
255 P 0568
256 P 0569
257 P 0570
258 P 0571
259 P 0572
260 P 0573

```

```

! If this is a shared mount, raise the device lock to PW to get the
value block, and prepare for writing it back. If the device is not
shared, the lock is already at EX. If the device is not cluster
accessible, there is no lock.

IF (LKSTS [1] = .UCB [UCB$LOCKID]) NEQ 0
AND .UCB [UCB$PID] EQ 0
THEN
BEGIN
STS = $ENQW (LKMODE = LCK$K_PWMODE,
LKSB = LKSTS,
EFN = EFN,
FLAGS = LCK$M_CONVERT + LCK$M_SYNCSTS
+ LCK$M_NOQUOTA);

IF NOT .STS
OR NOT .LKSTS
THEN BUG_CHECK (XQPERR, FATAL, 'Unexpected lock manager error');
END;

! Mark the volume dismounted and disconnect the VCB from the UCB.

LOCK IOB ();
BBLOCK [UCB[UCB$DEVCHAR], DEV$V_MNT] = 0;
BBLOCK [UCB[UCB$DEVCHAR], DEV$V_DMT] = 0;
BBLOCK [UCB[UCB$DEVCHAR], DEV$V_SWL] = 0;
UCB[UCB$VCB] = 0;
UCB[UCB$W_REFC] = .UCB[UCB$W_REFC] - 1;
UCB[UCB$V_DISMOUNT] = 0;
ORB[ORB$SYS_PROT] = 0;
ORB[ORB$OWN_PROT] = 0;
ORB[ORB$GRP_PROT] = 0;
ORB[ORB$WOR_PROT] = 0;
ORB[ORB$OWNER] = 0;
UCB[UCB$W_DIRSEQ] = .UCB[UCB$W_DIRSEQ] + 1;

! If the device lock exists, now demote it as appropriate (to CR if
the device is not allocated, to EX otherwise). Clear the value
block if this is the final dismount.

IF .LKSTS [1] NEQ 0
THEN
BEGIN
LKSTS [2] = 0;
LKSTS [3] = 0;
LKSTS [4] = 0;
LKSTS [5] = 0;

STS = $ENQ (LKMODE = IF .UCB [UCB$PID] NEQ 0
THEN LCK$K_EXMODE
ELSE LCK$K_CRMODE,
LKSB = LKSTS,
EFN = EFN,
FLAGS = LCK$M_CONVERT + LCK$M_CVTSYS

```

```

261 P 0574 4 + LCK$M_SYNCSTS + LCK$M_NOQUOTA + LCK$M_VALBLK
262 0575 4 );
263 0576 4 IF NOT .STS
264 0577 4 OR NOT .LKSTS
265 0578 4 THEN BUG_CHECK (XQPERR, FATAL, 'Unexpected lock manager error');
266 0579 4 END;
267 0580
268 0581 3 ! Call IOC$DALLOC_DMT routine to deallocate the device when appropriate.
269 0582 3 !
270 0583 3
271 0584 3 IOC$DALLOC_DMT (.CTL$GL_PCB, .UCB);
272 0585 3
273 0586 3 ! We can now release the locks while we proceed to clean up the mounted
274 0587 3 volume data base.
275 0588 3 !
276 0589 3
277 0590 3 UNLOCK_IODB ();
278 0591 3
279 0592 3 UNTIL REMQUE (.VCB[VCB$$_FCBFL], FCB)
280 0593 3 DO
281 0594 4 BEGIN
282 0595 4 UNTIL REMQUE (.FCB[FCB$$_WLFL], WCB) ! Release all window segments
283 0596 4 DO DEALLOCATE (.WCB);
284 0597 4 DEALLOCATE (.FCB); ! release all FCB's
285 0598 4 END;
286 0599 3
287 0600 3 DEALLOCATE (.VCB); ! release the VCB
288 0601 3
289 0602 3 QUEUE_HEAD[AQBSB_MNTCNT] = .QUEUE_HEAD[AQBSB_MNTCNT] - 1;
290 0603 3 END ! end of dismount processing
291 0604 3
292 0605 2 ELSE
293 0606 2 UNLOCK_IODB ();
294 0607 2
295 0608 1 END; ! end of routine CHECK_DISMOUNT

```

```

.TITLE CHKDMO
.IDENT \V04-000\

.EXTRN IO_CHANNEL, CURRENT_UCB
.EXTRN CURRENT_VCB, QUEUE_HEAD
.EXTRN CTL$GL_PCB, LOCK_IODB
.EXTRN UNLOCK_IODB, DEALLOCATE
.EXTRN FLUSH_FID, SEND_ERRLOG
.EXTRN IOC$DALLOC_DMT, SYSSQIOW
.EXTRN SYSSENQW, BUG$_XQPERR
.EXTRN SYSSENQ

.PSECT $LOCKEDC1$,NOWRT,2

.ENTRY CHECK_DISMOUNT, Save R2,R3,R4,R5,R6,R7 : 0403
MOVAB DEALLOCATE, R7 :
MOVAB UNLOCK_IODB, R6 :
SUBL2 #24, SP :
MOVL CURRENT_UCB, UCB : 0473
MOVL 28(UCB), ORB : 0474

```

```

00FC 0000
57 0000G CF 9E 00002
56 0000G CF 9E 00007
5E 18 C2 0000C
55 0000G CF D0 0000F
53 1C A5 D0 00014

```


01	3A	A5	05	E0	00018	BBS	#5, 58(UCB), 1\$	0475
				04	0001D	RET		
	0000G	CF	00	FB	0001E	1\$: CALLS	#0, LOCK_IODB	0482
		12	08	DA	00023	MTPR	#8, #18	0483
		52	0000G	CF	00026	MOVL	CURRENT_VCB, VCB	0485
		01	OC	A2	0002B	CMPW	12(VCB); #1	0486
				03	13	BEQL	2\$	
			00FD	31	00031	BRW	15\$	
	66	A5	10	88	00034	2\$: BISB2	#16, 102(UCB)	0494
		66	00	FB	00038	CALLS	#0, UNLOCK_IODB	0495
			55	DD	0003B	PUSHL	UCB	0500
	0000G	CF	7E	D4	0003D	CLRL	-(SP)	
			02	FB	0003F	CALLS	#2, SEND_ERRLOG	
	0000G	CF	7E	D4	00044	CLRL	-(SP)	0505
			01	FB	00046	CALLS	#1, FLUSH_FID	
			7E	7C	0004B	CLRQ	-(SP)	0516
			7E	7C	0004D	CLRQ	-(SP)	
			7E	7C	0004F	CLRQ	-(SP)	
			7E	7C	00051	CLRQ	-(SP)	
			7E	D4	00053	CLRL	-(SP)	
04	64	A5	0C	E5	00055	BBCC	#12, 100(UCB), 3\$	
			01	DD	0005A	PUSHL	#1	
			02	11	0005C	BRB	4\$	
			0000G	11	DD	0005E	3\$: PUSHL	#17
			CF	DD	00060	4\$: PUSHL	IO_CHANNEL	
			01	DD	00064	PUSHL	#1	
	00000000G	00	0C	FB	00066	CALLS	#12, SYSSQIOW	
	04	AE	20	A5	0006D	MOVL	32(UCB), LKSTS+4	0524
			29	13	00072	BEQL	6\$	
			2C	A5	00074	TSTL	44(UCB)	0525
			24	12	00077	BNEQ	6\$	
			7E	7C	00079	CLRQ	-(SP)	0532
			7E	7C	0007B	CLRQ	-(SP)	
			7E	7C	0007D	CLRQ	-(SP)	
		7E	2A	7D	0007F	MOVQ	#42, -(SP)	
			20	AE	9F	00082	PUSHAB	LKSTS
			04	DD	00085	PUSHL	#4	
			01	DD	00087	PUSHL	#1	
	00000000G	00	0B	FB	00089	CALLS	#11, SYSENQW	
		54	50	DD	00090	MOVL	RO, STS	
		03	54	E9	00093	BLBC	STS, 5\$	0533
		04	6E	E8	00096	BLBS	LKSTS, 6\$	0534
			FEFF	00099	5\$: BUGW			0535
			0000*	0009B	.WORD	<BUGS XQPERR!4>		
	0000G	CF	00	FB	0009D	6\$: CALLS	#0, LOCK_IODB	0541
	3A	A5	0228	8F	AA	000A2	BICW2	#552, 58(UCB)
			34	A5	D4	000A8	CLRL	52(UCB)
			5C	A5	B7	000AB	DECW	92(UCB)
	66	A5	10	8A	000AE	BICB2	#16, 102(UCB)	0547
			18	A3	7C	000B2	CLRQ	24(ORB)
			20	A3	7C	000B5	CLRQ	32(ORB)
			63	D4	000B8	CLRL	(ORB)	0552
			00AC	C5	B6	000BA	INCW	172(UCB)
			04	AE	D5	000BE	TSTL	LKSTS+4
			36	13	000C1	BEQL	10\$	0560
			08	AE	7C	000C3	CLRQ	LKSTS+8
			10	AE	7C	000C6	CLRQ	LKSTS+16

		7E	7C	000C9	CLRQ	-(SP)	: 0575
		7E	7C	000CB	CLRQ	-(SP)	:
		7E	7C	000CD	CLRQ	-(SP)	:
		7E	D4	000CF	CLRL	-(SP)	:
	7E	6B	8F	9A 000D1	MOVZBL	#107, -(SP)	:
		20	AE	9F 000D5	PUSHAB	LKST\$:
		2C	A5	D5 000D8	TSTL	44(UCB)	:
			04	13 000DB	BEQL	7\$:
			05	DD 000DD	PUSHL	#5	:
			02	11 000DF	BRB	8\$:
			01	DD 000E1	PUSHL	#1	7\$:
			01	DD 000E3	PUSHL	#1	8\$:
00000000G	00		0B	FB 000E5	CALLS	#11, SYS\$ENQ	:
	54		50	D0 000EC	MOVL	R0, STS	:
	03		54	E9 000EF	BLBC	STS, 9\$	0576
	04		6E	E8 000F2	BLBS	LKSTS, 10\$	0577
				FEFF 000F5	BUGW		0578
				0000* 000F7	.WORD	<BUG\$ XQPERR!4>	:
	54	00000000G	00	D0 000F9	MOVL	CTL\$GC_PCB, R4	0584
		00000000G	00	16 00100	JSB	IOC\$DA[LOC_DMT	:
	66		00	FB 00106	CALLS	#0, UNLOCK_IODB	0590
	53	00	B2	0F 00109	REMQUE	@0(VCB), FCB	0592
			14	1D 0010D	BVS	14\$:
	54	10	B3	0F 0010F	REMQUE	@16(FCB), WCB	0595
			07	1D 00113	BVS	13\$:
			54	DD 00115	PUSHL	WCB	0596
	67		01	FB 00117	CALLS	#1, DEALLOCATE	:
			F3	11 0011A	BRB	12\$:
			53	DD 0011C	PUSHL	FCB	0597
	67		01	FB 0011E	CALLS	#1, DEALLOCATE	:
			E6	11 00121	BRB	11\$	0592
			52	DD 00123	PUSHL	VCB	0600
	67		01	FB 00125	CALLS	#1, DEALLOCATE	:
	50	0000G	CF	D0 00128	MOVL	QUEUE_HEAD, R0	0602
		0B	A0	97 0012D	DECB	11(R0)	:
				04 00130	RET		0486
	66		00	FB 00131	CALLS	#0, UNLOCK_IODB	0606
				04 00134	RET		0608

: Routine Size: 309 bytes, Routine Base: \$LOCKEDC1\$ + 0000

```

: 296      0609 1
: 297      0610 1 END
: 298      0611 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
\$LOCKEDC1\$	309	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	38	0	1000	00:01.9

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:CHKDMO/OBJ=OBJ\$:CHKDMO MSRCS:CHKDMO/UPDATE=(ENHS:CHKDMO)

: Size: 309 code + 0 data bytes
: Run Time: 00:11.3
: Elapsed Time: 00:37.0
: Lines/CPU Min: 3250
: Lexemes/CPU-Min: 20484
: Memory Used: 151 pages
: Compilation Complete

FCPOEF B32	ACPCNTR LIS	CHKSUM LIS	CHKPRO LIS	DEACCS LIS
BADSEN LIS	CLENUP LIS	CPYAM LIS	CHKHDR LIS	COMMON LIS
CREHDR LIS	CREWIN LIS	ACCESS LIS	ALLOB LIS	CHKDMD LIS
CREATE LIS	CREFCB LIS	DELETE LIS		