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DDDDDDDD      IIIIII  RRRRRRRR  FFFFFFFFFF  CCCCCCCC  BBBB88888
DDDDDDDD      IIIIII  RRRRRRRR  FFFFFFFFFF  CCCCCCCC  BBBB88888
DD      DD      II      RR      RR  FF      CC      BB      BB
DD      DD      II      RR      RR  FF      CC      BB      BB
DD      DD      II      RR      RR  FF      CC      BB      BB
DD      DD      II      RR      RR  FF      CC      BB      BB
DD      DD      II      RRRRRRRR  FFFFFFFF  CC      BBBB88888
DD      DD      II      RRRRRRRR  FFFFFFFF  CC      BBBB88888
DD      DD      II      RR  RR      FF      CC      BB      BB
DD      DD      II      RR  RR      FF      CC      BB      BB
DD      DD      II      RR      RR  FF      CC      BB      BB
DD      DD      II      RR      RR  FF      CC      BB      BB
DDDDDDDD      IIIIII  RR      RR  FF      CCCCCCCC  BBBB88888
DDDDDDDD      IIIIII  RR      RR  FF      CCCCCCCC  BBBB88888

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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
LLLLLLLLLLLL IIIIII  SSSSSSSS
LLLLLLLLLLLL IIIIII  SSSSSSSS

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0001 0 MODULE DIRFCB (
0002 0
0003 0     LANGUAGE (BLISS32),
0004 0     IDENT = 'V04-000'
0005 1 BEGIN
0006 1
0007 1
0008 1 *****
0009 1 *
0010 1 *  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0025 1 *  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
0026 1 *  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0027 1 *
0028 1 *
0029 1 *****
0030 1
0031 1 ++
0032 1
0033 1 FACILITY: F11ACP Structure Level 1
0034 1
0035 1 ABSTRACT:
0036 1
0037 1     This routine makes the necessary adjustments to the FCP data
0038 1     base to make an FCB useful for directory operations.
0039 1 ENVIRONMENT:
0040 1
0041 1     STARLET operating system, including privileged system services
0042 1     and internal exec routines. This routine must be called
0043 1     in kernel mode.
0044 1
0045 1 --
0046 1
0047 1
0048 1 AUTHOR: Andrew C. Goldstein, CREATION DATE: 2-Jan-1977 23:37
0049 1
0050 1 MODIFIED BY:
0051 1
0052 1     A0100 ACG0001 Andrew C. Goldstein, 10-Oct-1978 20:01
0053 1     Previous revision history moved to F11A.REV
0054 1
0055 1 **
0056 1
0057 1

```

DIRFCB
V04-000

~~12~~⁵-~~sep~~³-1984 00:58:19
12-sep-1984 12:29:29

VAX-11 Bliss-32 V4.0-742 Page 2
DISK\$VMSMASTER:[F11A.SRC]DIRFCB.B32;1 (1)

: 58
: 59

0058 1 LIBRARY 'SYSSLIBRARY:LIB,L32';
0059 1 REQUIRE 'SRCS:FCPDEF.B32';

DIRS

.....

```
61 0374 1 GLOBAL ROUTINE MAKE_DIR_FCB (FCB) : NOVALUE =
62 0375 1
63 0376 1 |++
64 0377 1
65 0378 1 FUNCTIONAL DESCRIPTION:
66 0379 1
67 0380 1     This routine makes the necessary adjustments to the FCB data
68 0381 1     base to make an FCB useful for directory operations.
69 0382 1
70 0383 1 CALLING SEQUENCE:
71 0384 1     MAKE_DIR_FCB (ARG1)
72 0385 1
73 0386 1 INPUT PARAMETERS:
74 0387 1     ARG1: address of FCB
75 0388 1
76 0389 1 IMPLICIT INPUTS:
77 0390 1     CURRENT_VCB: address of VCB of volume in process
78 0391 1
79 0392 1 OUTPUT PARAMETERS:
80 0393 1     NONE
81 0394 1
82 0395 1 IMPLICIT OUTPUTS:
83 0396 1     NONE
84 0397 1
85 0398 1 ROUTINE VALUE:
86 0399 1     NONE
87 0400 1
88 0401 1 SIDE EFFECTS:
89 0402 1     FCB may be linked into FCB list
90 0403 1     oldest FCB LRU entry may be gone
91 0404 1
92 0405 1 |--
93 0406 1
94 0407 2 BEGIN
95 0408 2
96 0409 2 MAP
97 0410 2     FCB           : REF BBLOCK;   ! FCB argument
98 0411 2
99 0412 2 LOCAL
100 0413 2     DUMMY,       : REF BBLOCK;   ! dummy destination for REMQUE
101 0414 2     P             : REF BBLOCK;   ! random pointer
102 0415 2
103 0416 2 EXTERNAL
104 0417 2     CURRENT_VCB  : REF BBLOCK;   ! volume VCB
105 0418 2
106 0419 2 EXTERNAL ROUTINE
107 0420 2     DEALLOCATE;   ! deallocate block
108 0421 2
109 0422 2
110 0423 2 ! If the FCB represents a contiguous file, and it is not accessed,
111 0424 2 ! hook it into the directory LRU list, if it is not already there.
112 0425 2
113 0426 2
114 0427 2 IF .FCB[FCB$SL STLBN] NEQ 0
115 0428 2 AND .FCB[FCB$Q ACNT] EQL 0
116 0429 2 AND .CURRENT_VCB[VCB$B_LRU_LIM] GEQ 0
117 0430 2 THEN
```

```
118 0431 3 BEGIN
119 0432 3 IF NOT .FCB[FCB$V_DIR]
120 0433 3 THEN
121 0434 4 BEGIN
122 0435 4 CURRENT_VCB[VCB$B_LRU_LIM] = .CURRENT_VCB[VCB$B_LRU_LIM] - 1;
123 0436 4
124 0437 4 ! If we just overflowed the LRU, search the FCB list for the first
125 0438 4 ! (and therefore oldest) directory FCB and dump it.
126 0439 4 !
127 0440 4
128 0441 4 IF .CURRENT_VCB[VCB$B_LRU_LIM] LSS 0
129 0442 4 THEN
130 0443 5 BEGIN
131 0444 5 P = .CURRENT_VCB[VCB$L_FCBFL];
132 0445 5 IF NOT
133 0446 6 (
134 0447 6 WHILE .P NEQ .CURRENT_VCB DO
135 0448 7 BEGIN
136 0449 7 IF .P[FCB$V_DIR] THEN EXITLOOP 0;
137 0450 7 P = .P[FCB$L_FCBFL];
138 0451 7 END
139 0452 6 )
140 0453 5 THEN ! FCB found
141 0454 6 BEGIN
142 0455 6 REMQUE (.P, DUMMY); ! remove FCB from list
143 0456 6 DEALLOCATE (.P); ! deallocate the block
144 0457 6 CURRENT_VCB[VCB$B_LRU_LIM] = .CURRENT_VCB[VCB$B_LRU_LIM] + 1;
145 0458 6 END
146 0459 5 ELSE ! FCB not found - LRU not in use
147 0460 5 CURRENT_VCB[VCB$B_LRU_LIM] = -1;
148 0461 4 END;
149 0462 4
150 0463 4 ! If the LRU is not disabled (now indicated by a negative count value),
151 0464 4 ! insert the FCB into the list and mark it as a directory FCB.
152 0465 4 !
153 0466 4
154 0467 4 IF .CURRENT_VCB[VCB$B_LRU_LIM] GEQ 0
155 0468 4 THEN
156 0469 5 BEGIN
157 0470 5 FCB[FCB$V_DIR] = 1;
158 0471 5 INSQUE (.FCB, .CURRENT_VCB[VCB$L_FCBBL]);
159 0472 4 END;
160 0473 4
161 0474 4 ! If the FCB was already in the LRU, move it to the end of the FCB list
162 0475 4 ! to indicate its new use.
163 0476 4 !
164 0477 4
165 0478 4 END
166 0479 3 ELSE
167 0480 4 BEGIN
168 0481 4 REMQUE (.FCB, DUMMY);
169 0482 4 INSQUE (.FCB, .CURRENT_VCB[VCB$L_FCBBL]);
170 0483 4 END;
171 0484 3 END;
172 0485 2
173 0486 1 END; ! end of routine MAKE_DIR_ACCESS
```


PSECT SUMMARY

```
:  
: Name Bytes Attributes  
: $CODE$ 113 NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
```

Library Statistics

```
:  
: File ----- Symbols ----- Pages Processing  
: Total Loaded Percent Mapped Time  
: _$255$DUA28:[SYSLIB]LIB.L32;1 18619 8 0 1000 00:01.9
```

COMMAND QUALIFIERS

```
:  
: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:DIRFCB/OBJ=OBJ$:DIRFCB MSRC$:DIRFCB/UPDATE=(ENH$:DIRFCB)  
: Size: 113 code + 0 data bytes  
: Run Time: 00:07.0  
: Elapsed Time: 00:20.7  
: Lines/CPU Min: 4203  
: Lexemes/CPU-Min: 13994  
: Memory Used: 91 pages  
: Compilation Complete
```


