


```

DDDDDDDD      IIIIII  RRRRRRRR  GGGGGGGG  EEEEEEEEE  TTTTTTTTTT
DDDDDDDD      IIIIII  RRRRRRRR  GGGGGGGG  EEEEEEEEE  TTTTTTTTTT
DD      DD      II      RR      RR  GG      EE      TT
DD      DD      II      RR      RR  GG      EE      TT
DD      DD      II      RR      RR  GG      EE      TT
DD      DD      II      RR      RR  GG      EE      TT
DD      DD      II      RRRRRRRR  GG      EEEEEEEEE  TT
DD      DD      II      RRRRRRRR  GG      EEEEEEEEE  TT
DD      DD      II      RR  RR      GG  GGGGGG  EE      TT
DD      DD      II      RR  RR      GG  GGGGGG  EE      TT
DD      DD      II      RR      RR  GG      GG      EE      TT
DD      DD      II      RR      RR  GG      GG      EE      TT
DDDDDDDD      IIIIII  RR      RR  GG      EEEEEEEEE  TT
DDDDDDDD      IIIIII  RR      RR  GG      EEEEEEEEE  TT

```

```

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 G MODULE DIRGET (
2 0002 0 LANGUAGE (BLISS32),
3 0003 0 IDENT = 'V04-000',
4 0004 0 ) =
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 gets a directory record from the directory being
38 0038 1 operated upon.
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: 26-Dec-1976 18:48
48 0048 1
49 0049 1 MODIFIED BY:
50 0050 1
51 0051 1 A0100 ACG0001 Andrew C. Goldstein, 10-Oct-1978 20:01
52 0052 1 Previous revision history moved to F11A.REV
53 0053 1
54 0054 1 **
55 0055 1
56 0056 1
57 0057 1 LIBRARY 'SYS$LIBRARY:LIB.L32';

```

DIRGET
V04-000

: 58

0058 1 REQUIRE 'SRCS:FCPDEF.B32';

^{E 4}
16-Sep-1984 00:58:53
14-Sep-1984 12:29:29

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

DIRS
V04-

: Re

.....
A R R A

.....
1

.....
.


```

117 0430 2 ! Check it against the directory end of file recorded in the FCB.
118 0431 2 !
119 0432 2 !
120 0433 2 VBN = (.RECNUMBER-1) / (512/16) + 1; ! 512 byte blocks, 16 byte records
121 0434 2 IF .VBN NEQ .DIR_VBN
122 0435 2 THEN
123 0436 2 BEGIN
124 0437 2 DIR_VBN = 0;
125 0438 2 IF .VBN GTRU .DIR_FCB[FCB$$_EFBLK] THEN RETURN 0; ! no record if beyond end
126 0439 2 !
127 0440 2 ! Now map VBN to LBN. If the directory is contiguous, use the FCB; if not,
128 0441 2 ! call the mapper with the window. Also, if the directory is contiguous
129 0442 2 ! and multi-block reads are enabled, compute the number of blocks to be read.
130 0443 2 !
131 0444 2 !
132 0445 2 COUNT = 1;
133 0446 2 IF .DIR_FCB[FCB$$_STLBN] NEQ 0 ! non-zero start LBN means contiguous
134 0447 2 THEN
135 0448 2 BEGIN
136 0449 2 LBN = .DIR_FCB[FCB$$_STLBN] + .VBN - 1;
137 0450 2 IF .MULTI
138 0451 2 THEN COUNT = .DIR_FCB[FCB$$_EFBLK] - .VBN + 1;
139 0452 2 END
140 0453 2 ELSE
141 0454 2 BEGIN
142 0455 2 LBN = MAP_VBN (.VBN, .DIR_WINDOW);
143 0456 2 IF .LBN EQL -1 THEN RETURN 0; ! EOF if map fails
144 0457 2 END;
145 0458 2 !
146 0459 2 ! Read the block and point to the record within it.
147 0460 2 !
148 0461 2 !
149 0462 2 DIR_BUFFER = READ_BLOCK (.LBN, .COUNT, DIRECTORY_TYPE);
150 0463 2 DIR_VBN = .VBN;
151 0464 2 END;
152 0465 2 !
153 0466 2 ADDRESS = .DIR_BUFFER + (.RECNUMBER-1)*16 - (.VBN-1)*512;
154 0467 2 RETURN .ADDRESS;
155 0468 2 !
156 0469 1 END; ! end of routine DIRGET

```

```

.TITLE DIRGET
.IDENT \V04-000\

.EXTRN DIR_VBN, DIR_BUFFER
.EXTRN DIR_FCB, DIR_WINDOW
.EXTRN MAP_VBN, READ_BLOCK

.PSECT $CODE$,NOWRT,2

.ENTRY DIRGET, Save R2,R3,R4,R5
MOVAB DIR_VBN, R5
SUBL3 #1, RECNUMBER, R4
DIVL3 #32, R4, R0
MOVAB 1(R0), VBN
CMLP VBN, DIR_VBN

```

```

54 04 55 0000G 003C 00000
50 04 AC 01 9E 00002
54 01 C3 00007
52 01 20 C7 0000C
65 01 A0 9E 00010
52 01 52 D1 00014

```

```

: 0373
: 0433
: 0434

```

			53	13	00017	BEQL	3\$		
			65	D4	00019	CLRL	DIR_VBN		0437
	3C	50	CF	D0	0001B	MOVL	DIR_FCB, R0		0438
		A0	52	D1	00020	CMPL	VBN, 60(R0)		
			5C	1A	00024	BGTRU	4\$		
		53	01	D0	00026	MOVL	#1, COUNT		0445
			30	A0	D5	TSTL	48(R0)		0446
			16	13	0002C	BEQL	1\$		
51		52	30	A0	C1	ADDL5	48(R0), VBN, R1		0449
				51	D7	DECL	LBN		
		22	08	AC	E9	BLBC	MULTI, 2\$		0450
50	3C	A0	52	C3	00039	SUBL3	VBN, 60(R0) R0		0451
		53	01	A0	9E	MOVAB	1(R0), COUNT		
				17	11	BRB	2\$		0446
			0000G	CF	DD	PUSHL	DIR_WINDOW		0455
				52	DD	PUSHL	VBN		
	0000G	CF		02	FB	CALLS	#2, MAP_VBN		
		51		50	D0	MOVL	R0, LBN		
	FFFFFFF	8F		51	D1	CMPL	LBN, #-1		0456
				27	13	BEQL	4\$		
				02	DD	PUSHL	#2		0462
				0A	BB	PUSHR	#^M<R1,R3>		
	0000G	CF		03	FB	CALLS	#3, READ_BLOCK		
	0000G	CF		50	D0	MOVL	R0, DIR_BUFFER		
		65		52	D0	MOVL	VBN, DIR_VBN		0463
50		54		04	78	ASHL	#4, R4, R0		0466
		50	0000G	CF	C0	ADDL2	DIR_BUFFER, R0		
52		52		09	78	ASHL	#9, R2, R2		
		50		52	C2	SUBL2	R2, R0		
		50	0200	C0	9E	MOVAB	512(R0), ADDRESS		0467
				04	00081	RET			0469
				50	D4	CLRL	R0		
				04	00084	RET			

; Routine Size: 133 bytes, Routine Base: \$CODE\$ + 0000

```

: 157      0470 1
: 158      0471 1 END
: 159      0472 0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	133	NOVEC,NOWRT, RD, EXE,NOSHR, LCL, REL, CON,NOPI,ALIGN(2)

Library Statistics

DIRGET
V04-000

16-Sep-1984 00:58:53
14-Sep-1984 12:29:29

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[F11A.SRC]DIRGET.B32;1 Page 6 (2)

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
:_\$255\$DUA28:[SYSLIB]LIB.L32;1	18619	3	0	1000	00:02.0

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS\$:DIRGET/OBJ=OBJ\$:DIRGET MSRC\$:DIRGET/UPDATE=(ENHS:DIRGET)

: Size: 133 code + 0 data bytes
: Run Time: 00:06.7
: Elapsed Time: 00:20.7
: Lines/CPU Min: 4220
: Lexemes/CPU-Min: 10819
: Memory Used: 82 pages
: Compilation Complete

DISI
V04.

