


```

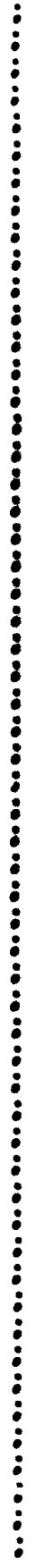
MM      MM      AAAAAA      KK      KK      PPPPPPPP      TTTTTTTTTT      RRRRRRRR
MM      MM      AAAAAA      KK      KK      PPPPPPPP      TTTTTTTTTT      RRRRRRRR
MMMM    MMMM    AA          AA      KK      KK      PP          PP      TT          RR          RR
MMMM    MMMM    AA          AA      KK      KK      PP          PP      TT          RR          RR
MM      MM      AA          AA      KK      KK      PP          PP      TT          RR          RR
MM      MM      AA          AA      KK      KK      PP          PP      TT          RR          RR
MM      MM      AA          AA      KKKKKK      PPPPPPPP      TT          RRRRRRRR
MM      MM      AA          AA      KKKKKK      PPPPPPPP      TT          RRRRRRRR
MM      MM      AAAAAAAAAA      KK      KK      PP          TT          RR      RR
MM      MM      AAAAAAAAAA      KK      KK      PP          TT          RR      RR
MM      MM      AA          AA      KK      KK      PP          TT          RR      RR      RR
MM      MM      AA          AA      KK      KK      PP          TT          RR      RR      RR
MM      MM      AA          AA      KK      KK      PP          TT          RR      RR      RR
MM      MM      AA          AA      KK      KK      PP          TT          RR      RR      RR

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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 MAKPTR (
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 *
11 0011 1 *   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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28 0028 1 *
29 0029 1 *
30 0030 1
31 0031 1 **
32 0032 1
33 0033 1 FACILITY: F11ACP Structure Level 2
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1     This routine constructs retrieval pointer in the file header map area
38 0038 1     for the indicated blocks.
39 0039 1
40 0040 1 ENVIRONMENT:
41 0041 1
42 0042 1     STARLET operating system, including privileged system services
43 0043 1     and internal exec routines.
44 0044 1
45 0045 1 --
46 0046 1
47 0047 1
48 0048 1 AUTHOR: Andrew C. Goldstein, CREATION DATE: 14-Dec-1977 17:13
49 0049 1
50 0050 1 MODIFIED BY:
51 0051 1
52 0052 1     B0103   ACG0122   Andrew C. Goldstein,   17-Jan-1980 15:54
53 0053 1     Get bug check codes up to date
54 0054 1
55 0055 1     B0102   ACG0096   Andrew C. Goldstein,   18-Dec-1979 18:59
56 0056 1     Add zero count bug trap
57 0057 1

```

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58 0058 1 : B0101 ACG0008 Andrew C. Goldstein, 28-Dec-1978 19:27
59 0059 1 : Add placement control support
60 0060 1 :
61 0061 1 : B0100 ACG00001 Andrew C. Goldstein, 10-Oct-1978 20:00
62 0062 1 : Previous revision history moved to [F11B.SRC]F11B.REV
63 0063 1 : ..
64 0064 1 :
65 0065 1 :
66 0066 1 LIBRARY 'SYSSLIBRARY:LIB.L32';
67 0067 1 REQUIRE 'SRCS:FCPDEF.B32';
68 1058 1 :
69 1059 1 LINKAGE
70 1060 1 L_MAKE_POINTER = CALL :
71 1061 1 GLOBAL (MAP_POINTER = 9),
72 1062 1 :
73 1063 1 L_CHECK_POINTER = CALL :
74 1064 1 GLOBAL (HEADER = 8);
75 1065 1 :
76 1066 1 FORWARD ROUTINE
77 1067 1 MAKE_POINTER : L_MAKE_POINTER, ! build map pointer
78 1068 1 CHECK_POINTER : L_CHECK_POINTER; ! check if pointer will fit
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1069 1 GLOBAL ROUTINE MAKE_POINTER (COUNT, LBN, FILE_HEADER, PLACEMENT_CODE) : L_MAKE_POINTER =
1070 1
1071 1 **
1072 1
1073 1 FUNCTIONAL DESCRIPTION:
1074 1
1075 1     This routine constructs retrieval pointer in the file header map area
1076 1     for the indicated blocks.
1077 1
1078 1
1079 1 CALLING SEQUENCE:
1080 1     MAKE_POINTER (ARG1, ARG2, ARG3, ARG4)
1081 1
1082 1 INPUT PARAMETERS:
1083 1     ARG1: block count
1084 1     ARG2: start LBN
1085 1     ARG3: address of file header
1086 1     ARG4: if present, placement data to record or 0
1087 1
1088 1 IMPLICIT INPUTS:
1089 1     R9 = address to receive pointer
1090 1
1091 1 OUTPUT PARAMETERS:
1092 1     NONE
1093 1
1094 1 IMPLICIT OUTPUTS:
1095 1     R9 = address past pointer
1096 1
1097 1 ROUTINE VALUE:
1098 1     1 if OK
1099 1     0 if pointer won't fit
1100 1
1101 1 SIDE EFFECTS:
1102 1     pointer added to header map area
1103 1
1104 1 --
1105 1
1106 2 BEGIN
1107 1
1108 1 EXTERNAL REGISTER
1109 1     MAP_POINTER      = 9 : REF BBLOCK; ! pointer to map area
1110 1
1111 1 MAP
1112 1     FILE_HEADER     : REF BBLOCK; ! buffer containing file header
1113 1
1114 1 GLOBAL REGISTER
1115 1     HEADER          = 8 : REF BBLOCK; ! local pointer to file header
1116 1
1117 1 LOCAL
1118 1     PLACEMENT      : copy of placement data
1119 1     POINTER_SIZE;  : size needed for map pointer
1120 1
1121 1
1122 1 ! Check the specified count; it must not be zero.
1123 1
1124 1
1125 2 IF .COUNT EQL 0

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137 1126 2 THEN BUG_CHECK (MAPCNTZER, FATAL, 'Attempted to generate zero length map pointer');
138 1127 2 : See if placement is specified.
139 1128 2 :
140 1129 2 :
141 1130 2 PLACEMENT = 0;
142 1131 2 POINTER_SIZE = 2;
143 1132 2 IF ACTUALCOUNT GEQU 4
144 1133 2 THEN
145 1134 2 BEGIN
146 1135 2 PLACEMENT = .PLACEMENT_CODE;
147 1136 2 IF .PLACEMENT NEQ 0
148 1137 2 THEN POINTER_SIZE = .POINTER_SIZE + 1;
149 1138 2 END;
150 1139 2 :
151 1140 2 ! Get the address of the file header for the check routine.
152 1141 2 ! Then determine the format of the pointer and build it.
153 1142 2 :
154 1143 2 :
155 1144 2 HEADER = .FILE_HEADER.
156 1145 2 :
157 1146 2 IF .COUNT LEQU 256 AND .LBN LSSU 1^22
158 1147 2 THEN
159 1148 2 BEGIN
160 1149 2 IF NOT CHECK_POINTER (.POINTER_SIZE) THEN RETURN 0;
161 1150 2 IF .PLACEMENT NEQ 0
162 1151 2 THEN
163 1152 4 BEGIN
164 1153 4 (.MAP_POINTER)<0,16> = .PLACEMENT;
165 1154 4 MAP_POINTER = .MAP_POINTER + 2;
166 1155 3 END;
167 1156 3 :
168 1157 3 MAP_POINTER[FM2$V_FORMAT] = FM2$C_FORMAT1;
169 1158 3 MAP_POINTER[FM2$B_COUNT1] = .COUNT - 1;
170 1159 3 MAP_POINTER[FM2$V_HIGHLBN] = .LBN<16,6>;
171 1160 3 MAP_POINTER[FM2$W_LOWLBN] = .LBN<0,16>;
172 1161 3 MAP_POINTER = .MAP_POINTER + 4;
173 1162 3 END
174 1163 3 :
175 1164 2 ELSE
176 1165 3 BEGIN
177 1166 3 POINTER_SIZE = .POINTER_SIZE + 1;
178 1167 3 IF .COUNT LEQU 16384
179 1168 3 THEN
180 1169 4 BEGIN
181 1170 4 IF NOT CHECK_POINTER (.POINTER_SIZE) THEN RETURN 0;
182 1171 4 IF .PLACEMENT NEQ 0
183 1172 4 THEN
184 1173 5 BEGIN
185 1174 5 (.MAP_POINTER)<0,16> = .PLACEMENT;
186 1175 5 MAP_POINTER = .MAP_POINTER + 2;
187 1176 4 END;
188 1177 4 :
189 1178 4 MAP_POINTER[FM2$V_FORMAT] = FM2$C_FORMAT2;
190 1179 4 MAP_POINTER[FM2$V_COUNT2] = .COUNT - 1;
191 1180 4 MAP_POINTER[FM2$SL_LBN2] = .LBN;
192 1181 4 MAP_POINTER = .MAP_POINTER + 6;
193 1182 4 END

```

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194 1183 4
195 1184 3 ELSE
196 1185 4 BEGIN
197 1186 4 POINTER SIZE = .POINTER_SIZE + 1;
198 1187 4 IF .COUNT LEQU 1*30
199 1188 4 THEN
200 1189 5 BEGIN
201 1190 5 IF NOT CHECK_POINTER (.POINTER_SIZE) THEN RETURN 0;
202 1191 5 IF .PLACEMENT NEQ 0
203 1192 5 THEN
204 1193 6 BEGIN
205 1194 6 (.MAP_POINTER)<0,16> = .PLACEMENT;
206 1195 6 MAP_POINTER = .MAP_POINTER + 2;
207 1196 5 END;
208 1197 5
209 1198 5 .MAP_POINTER = ROT (.COUNT-1, 16);
210 1199 5 MAP_POINTER[FM2$V_FORMAT] = FM2$C_FORMAT3;
211 1200 5 MAP_POINTER[FM2$L_LBN3] = .LBN;
212 1201 5 MAP_POINTER = .MAP_POINTER + 8;
213 1202 5 END
214 1203 5
215 1204 4 ELSE BUG_CHECK (PTRCNT, FATAL, 'ACP block count exceeds retrieval pointer size');
216 1205 3 END;
217 1206 2 END;
218 1207 2
219 1208 2 RETURN 1;
220 1209 2
221 1210 1 END;

```

! end of routine MAKE_POINTER

				.TITLE	MAKPTR	
				.IDENT	\V04-000\	
				.EXTRN	BUGS_MAPCNTZER, BUGS_PTRCNT	
				.PSECT	\$CODE\$,NOWRT,2	
				.ENTRY	MAKE_POINTER, Save R2,R3,R4,R8	1069
54	0000V	CF	9E	MOVAB	CHECK_POINTER, R4	
	04	AC	D5	TSTL	COUNT	1125
		04	12	BNEQ	1\$	
			FEFF	BUGW		1126
			0000*	.WORD	<BUGS_MAPCNTZER!4>	
		52	D4	CLRL	PLACEMENT	1130
53		02	D0	MOVL	#2, POINTER_SIZE	1131
04		6C	91	CMPB	(AP), #4	1132
		08	1F	BLSSU	2\$	
52	10	AC	D0	MOVL	PLACEMENT_CODE, PLACEMENT	1135
		02	13	BEQL	2\$	1136
		53	D6	INCL	POINTER_SIZE	1137
58	0C	AC	D0	MOVL	FILE_HEADER, HEADER	1144
00000100	8F	04	AC	CMP	COUNT, #256	1146
		2F	1A	BGTRU	4\$	
00400000	8F	08	AC	CMP	LBN, #4194304	
		25	1E	BGEQU	4\$	
		53	DD	PUSHL	POINTER_SIZE	1149
64		01	FB	CALLS	#1, CHECK_POINTER	

			62		50	E9	0003F		BLBC	R0, 7\$		
					52	D5	00042		TSTL	PLACEMENT	1150	
					03	13	00044		BEQL	3\$		
69	02		89		52	B0	00046		MOVW	PLACEMENT, (MAP_POINTER)+	1153	
	89		0E		01	F0	00049	3\$:	INSV	#1, #14, #2, (MAP_POINTER)	1157	
89	06	04	AC		01	83	0004E		SUBB3	#1, COUNT, (MAP_POINTER)+	1158	
			00		0A	AC	F0	00053	INSV	LBN+2, #0, #6, (MAP_POINTER)+	1159	
			89		08	AC	B0	00059	MOVW	LBN, (MAP_POINTER)+	1160	
					67	11	0005D		BRB	10\$	1146	
					53	D6	0005F	4\$:	INCL	POINTER SIZE	1166	
		00004000	8F		04	AC	D1	00061	CMPL	COUNT, #16384	1167	
					28	1A	00069		BGTRU	6\$		
					53	DD	0006B		PUSHL	POINTER SIZE	1170	
			64		01	FB	0006D		CALLS	#1, CHECK_POINTER		
			57		50	E9	00070		BLBC	R0, 11\$		
					52	D5	00073		TSTL	PLACEMENT	1171	
					03	13	00075		BEQL	5\$		
69	02		89		52	B0	00077		MOVW	PLACEMENT, (MAP_POINTER)+	1174	
	50		0E		02	F0	0007A	5\$:	INSV	#2, #14, #2, (MAP_POINTER)	1178	
89	0E	04	AC		01	C3	0007F		SUBL3	#1, COUNT, R0	1179	
			00		50	F0	00084		INSV	R0, #0, #14, (MAP_POINTER)+		
					08	AC	D0	00089	MOVL	LBN, 1(MAP_POINTER)	1180	
					05	C0	0008E		ADDL2	#5, MAP_POINTER	1181	
					33	11	00091		BRB	10\$	1167	
					53	D6	00093	6\$:	INCL	POINTER SIZE	1186	
		40000000	8F		04	AC	D1	00095	CMPL	COUNT, #1073741824	1187	
					23	1A	0009D		BGTRU	9\$		
					53	DD	0009F		PUSHL	POINTER SIZE	1190	
			64		01	FB	000A1		CALLS	#1, CHECK_POINTER		
			23		50	E9	000A4	7\$:	BLBC	R0, 11\$		
					52	D5	000A7		TSTL	PLACEMENT	1191	
					03	13	000A9		BEQL	8\$		
					52	B0	000AB		MOVW	PLACEMENT, (MAP_POINTER)+	1194	
	50		89		01	C3	000AE	8\$:	SUBL3	#1, COUNT, R0	1198	
	89	04	AC		10	9C	000B3		ROTL	#16, R0, (MAP_POINTER)+		
					8F	88	000B7		BISB2	#192, -3(MAP_POINTER)	1199	
		FD	A9		08	AC	D0	000BC	MOVL	LBN, (MAP_POINTER)+	1200	
			89		04	11	000C0		BRB	10\$	1187	
							FEFF	000C2	9\$:	BUGW	1204	
							0000*	000C4		.WORD	<BUG\$ PTRCNT!4>	
			50		01	D0	000C6	10\$:	MOVL	#1, R0	1208	
						04	000C9		RET			
					50	D4	000CA	11\$:	CLRL	R0	1210	
						04	000CC		RET			

; Routine Size: 205 bytes, Routine Base: \$CODE\$ + 0000


```

223 1211 1 ROUTINE CHECK_POINTER (SIZE) : L_CHECK_POINTER -
224 1212 1
225 1213 1 ++
226 1214 1
227 1215 1 FUNCTIONAL DESCRIPTION:
228 1216 1
229 1217 1 This routine determines whether a map pointer of the given size
230 1218 1 will fit in the file header.
231 1219 1
232 1220 1
233 1221 1 CALLING SEQUENCE:
234 1222 1 CHECK_POINTER (ARG1)
235 1223 1 INPUT PARAMETERS:
236 1224 1 ARG1: map pointer size in words
237 1225 1
238 1226 1 IMPLICIT INPUTS:
239 1227 1 R8: address of file header
240 1228 1
241 1229 1 OUTPUT PARAMETERS:
242 1230 1 NONE
243 1231 1
244 1232 1 IMPLICIT OUTPUTS:
245 1233 1 NONE
246 1234 1
247 1235 1 ROUTINE VALUE:
248 1236 1 1 if pointer fits
249 1237 1 0 if not
250 1238 1
251 1239 1 SIDE EFFECTS:
252 1240 1 header map in use count updated if pointer fits
253 1241 1
254 1242 1 --
255 1243 1
256 1244 2 BEGIN
257 1245 2
258 1246 2 EXTERNAL REGISTER
259 1247 2 HEADER = 8 : REF BBLOCK; ! file header address
260 1248 2
261 1249 2
262 1250 2 IF .HEADER[FH2$B_MAP_INUSE] + .SIZE GTRU
263 1251 2 .HEADER[FH2$B_ACOFFSET] - .HEADER[FH2$B_MPOFFSET]
264 1252 2 THEN RETURN 0;
265 1253 2
266 1254 2 HEADER[FH2$B_MAP_INUSE] = .HEADER[FH2$B_MAP_INUSE] + .SIZE;
267 1255 2
268 1256 2 RETURN 1;
269 1257 2
270 1258 1 END; ! end of routine CHECK_POINTER

```

```

0004 0000 CHECK_POINTER:
          .WORD Save R2
51      3A A8 9A 00002 MOVZBL 58(HEADER), R1
51      04 AC C0 00006 ADDL2 SIZE, R1

```

```

: 1211
: 1250
:

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      50      02  A8  9A 0000A      MOVZBL 2(HEADER), R0      : 1251
      52      01  A8  9A 0000E      MOVZBL 1(HEADER), R2      :
      50      52  C2 00012      SUBL2  R2, R0           :
      50      51  D1 00015      CMPL   R1, R0           :
      3A  A8      04  09 1A 00018      BGTRU  1$              :
      50      01  AC  80 0001A      ADDB2  SIZE, 58(HEADER) : 1254
      50      01  D0 0001F      MOVL   #1, R0          : 1256
      50      04  D4 00023 1$      RET                    :
      50      04  04 00025      CLRL   R0              : 1258
      50      04  04 00025      RET                    :

```

: Routine Size: 38 bytes, Routine Base: \$CODE\$ + 00CD

```

: 271      1259  1
: 272      1260  1 END
: 273      1261  0 ELUDOM

```

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	243	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	30	0	1000	00:01.9

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD, INITIAL, OPTIMIZE)/LIS=LIS\$MAKPTR/OBJ=OBJ\$MAKPTR MSRC\$=MAKPTR/UPDATE=(ENH\$MAKPTR)

```

: Size:      243 code + 0 data bytes
: Run Time:  00:11.4
: Elapsed Time: 00:24.1
: Lines/CPU Min: 6636
: Lexemes/CPU-Min: 24226
: Memory Used: 154 pages
: Compilation Complete

```

The image displays a grid of 100 small, illegible terminal window screenshots, each representing a different software utility or command. The windows are arranged in a 10x10 grid. Several windows are clearly labeled with their names and the 'LIS' extension, including:

- LOCKDB LIS
- LOCKERS LIS
- LOCKDN LIS
- MAKACC LIS
- MAKPTR LIS
- MAKMB LIS
- MAKSTR LIS
- MAPUBN LIS
- MATCHNAME LIS
- MODIFY LIS
- MPWIND LIS
- MOUNT LIS
- MYTHOR LIS
- PARSNM LIS
- PM5 LIS
- QUOTAUTIL LIS

The remaining windows in the grid contain various types of data, including lists, tables, and command-line outputs, but the text is too small to read.