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1      0001 0 MODULE DELBAD (
2      0002 0
3      0003 0     LANGUAGE (BLISS32),
4      0004 0     IDENT = 'V04-001'
5      0005 1 BEGIN
6      0006 1
7      0007 1
8      0008 1 *****
9      0009 1 *
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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 2
34     0034 1
35     0035 1 ABSTRACT:
36     0036 1
37     0037 1     This routine removes the indicated blocks from the given file header
38     0038 1     and appends them to the bad block file.
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: 29-May-1978 22:43
49     0049 1
50     0050 1 MODIFIED BY:
51     0051 1
52     0052 1     V04-001 CDS0005      Christian D. Saether      7-Nov-1984
53     0053 1     Reread primary header to update hiblock and highwater
54     0054 1     mark. Also update revision date.
55     0055 1
56     0056 1     V03-006 CDS0004      Christian D. Saether      14-Aug-1984
57     0057 1     Remove obsolete reference to update_filesiz routine.

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.. 54 0058 1 |
.. 55 0059 1 |
.. 56 0060 1 | V03-005 CDS0003 Christian D. Saether 31-July-1984
.. 57 0061 1 | Remove local definition of get_map_pointer linkage.
.. 58 0062 1 | V03-004 CDS0002 Christian D. Saether 2-May-1984
.. 59 0063 1 | Perform deallocation to bad block file in secondary
.. 60 0064 1 | context. Add appropriate serialization.
.. 61 0065 1 |
.. 62 0066 1 | V03-003 CDS0001 Christian D. Saether 29-Dec-1983
.. 63 0067 1 | Use L_NORM linkage and BIND_COMMON macro.
.. 64 0068 1 |
.. 65 0069 1 | V03-002 ACG0367 Andrew C. Goldstein, 26-Oct-1983 19:49
.. 66 0070 1 | Update BADBLK.SYS file highwater mark
.. 67 0071 1 |
.. 68 0072 1 | V03-001 LMP0037 L. Mark Pilant, 28-Jun-1982 15:10
.. 69 0073 1 | Remove the addressing mode module switch.
.. 70 0074 1 |
.. 71 0075 1 | V02-003 ACG0230 Andrew C. Goldstein, 24-Dec-1981 0:16
.. 72 0076 1 | Go to longword external addressing
.. 73 0077 1 |
.. 74 0078 1 | V02-002 ACG0167 Andrew C. Goldstein, 16-Apr-1980 19:25
.. 75 0079 1 | Previous revision history moved to f11B.REV
.. 76 0080 1 | **
.. 77 0081 1 |
.. 78 0082 1 |
.. 79 0083 1 | LIBRARY 'SYSS$LIBRARY:LIB.L32';
.. 80 0084 1 | REQUIRE 'SRC$:FCPDEF.B32';
```

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: 82      1075 1 GLOBAL ROUTINE DEALLOCATE_BAD (FIB, FILE_HDR, POINTER, LAST_COUNT) : L_NORM NOVALUE =
: 83      1076 1
: 84      1077 1 :++
: 85      1078 1
: 86      1079 1 FUNCTIONAL DESCRIPTION:
: 87      1080 1
: 88      1081 1     This routine removes the indicated blocks from the given file header
: 89      1082 1     and appends them to the bad block file.
: 90      1083 1
: 91      1084 1
: 92      1085 1 CALLING SEQUENCE:
: 93      1086 1     DEALLOCATE_BAD (ARG1, ARG2, ARG3, ARG4)
: 94      1087 1
: 95      1088 1 INPUT PARAMETERS:
: 96      1089 1     ARG1: address of user FIB
: 97      1090 1     ARG2: address of file header
: 98      1091 1     ARG3: address of map pointer at which to start
: 99      1092 1     ARG4: new value for last pointer block count
100      1093 1
101      1094 1 IMPLICIT INPUTS:
102      1095 1     NONE
103      1096 1
104      1097 1 OUTPUT PARAMETERS:
105      1098 1     NONE
106      1099 1
107      1100 1 IMPLICIT OUTPUTS:
108      1101 1     NONE
109      1102 1
110      1103 1 ROUTINE VALUE:
111      1104 1     NONE
112      1105 1
113      1106 1 SIDE EFFECTS:
114      1107 1     file header updated, bad block log file updated, bad block file extended
115      1108 1
116      1109 1 --
117      1110 1
118      1111 2 BEGIN
119      1112 2
120      1113 2 MAP
121      1114 2     FIB          : REF BBLOCK,  ! user FIB argument
122      1115 2     FILE_HDR     : REF BBLOCK;  ! address of file header
123      1116 2
124      1117 2 LINKAGE
125      1118 2     L_MAKE_POINTER = CALL :
126      1119 2     GLOBAL (BUILD_POINTER = 9);
127      1120 2
128      1121 2 GLOBAL REGISTER
129      1122 2     COUNT          = 6,          ! count of blocks returned
130      1123 2     LBN            = 7,          ! LBN of map entry
131      1124 2     MAP_POINTER    = 8 : REF BBLOCK, ! pointer to scan map
132      1125 2     BUILD_POINTER   = 9 : REF BBLOCK; ! pointer to build new map entry
133      1126 2
134      1127 2 LOCAL
:001 !CDS0005 1128 2     HEADER          : REF BBLOCK;  ! local address of file header
: 137-2      1129 2
: 138      1130 2 BIND
: 139      1131 2     BB_FID = UPLIT WORD (BADBLK_FID, BADBLK_FID, 0);

```

```
140 1132 ~
141 1133 ~
142 1134 ~ BIND_COMMON;
143 1135 ~
001 :CDS0005 1136 ~ EXTERNAL ROUTINE
002 :CDS0005 1137 ~ SET_REVISION : L_NORM NOVALUE ADDRESSING MODE (GENERAL),
144 1138 ~ save revision date
145 1139 ~ SAVE_CONTEXT : L_NORM, save primary context
146 1140 ~ RESTORE_CONTEXT : L_NORM, restore primary context
147 1141 ~ SERIAL_FILE : L_NORM, file serialization lock.
148 1142 ~ RELEASE_SERIAL_LOCK : L_NORM, relinquish file serialization
149 1143 ~ WRITE_DIRTY : L_NORM, write modified buffers
150 1144 ~ GET_MAP_POINTER : L_MAP_POINTER, get value of next map entry
151 1145 ~ MAKE_POINTER : L_MAKE_POINTER, build new map entry
152 1146 ~ NEXT_HEADER : L_NORM, read next extension header
153 1147 ~ MARK_DIRTY : L_NORM, mark buffer for rewrite
154-1 1148 ~ CHECKSUM : L_NORM, compute file header checksum
155 1149 ~ READ_HEADER : L_NORM, read file header
156 1150 ~ EXTEND_HEADER : L_NORM, create extension header
157 1151 ~ SCAN_BADLOG : L_NORM, scan pending bad block log file
158 1152 ~
159 1153 ~ ! Get into secondary context.
160 1154 ~
161 1155 ~
162 1156 ~ SAVE_CONTEXT ();
163 1157 ~
164 1158 ~ ! Construct pointers into the file header and get the current contents of the
165 1159 ~ last map pointer.
166 1160 ~
167 1161 ~
168 1162 ~ HEADER = .FILE_HDR;
169 1163 ~ MAP_POINTER = .POINTER;
170 1164 ~
171 1165 ~ GET_MAP_POINTER ();
172 1166 ~
173 1167 ~ ! Now append the blocks to the bad block file.
174 1168 ~
175 1169 ~
176 1170 ~ LBN = .LBN + .LAST_COUNT; ! compute LBN of bad cluster
177 1171 ~ COUNT = .COUNT - .LAST_COUNT;
178 1172 ~
179 1173 ~ ! Serialize on the bad block file.
180 1174 ~
181 1175 ~
182 1176 ~ PRIM_LCKINDX = SERIAL_FILE (BB_FID);
183 1177 ~
184 1178 ~ HEADER = READ_HEADER (BB_FID, 0);
185 1179 ~
001 :CDS0005 1180 ~ WHILE 1 DO
002 :CDS0005 1181 ~ BEGIN
003 :CDS0005 1182 ~ IF .HEADER [FH2$W_EX_FIDNUM] EQL 0
004 :CDS0005 1183 ~ AND .HEADER [FH2$B_EX_FIDMAX] EQL 0
005 :CDS0005 1184 ~ THEN
006 :CDS0005 1185 ~ EXITLOOP;
007 :CDS0005 1186 ~
008 :CDS0005 1187 ~ HEADER = NEXT_HEADER (.HEADER, 0);
009 :CDS0005 1188 ~
010 :CDS0005 1188 ~ END;
```

```
:011 :CDS0005 1189 2
:192-6 1190 2 MARK DIRTY (.HEADER);
:193 1191 2 BUILD_POINTER = .HEADER + (.HEADER[FH2$B_MPOFFSET] + .HEADER[FH2$B_MAP_INUSE]) * 2;
:194 1192 2
:195 1193 2 IF NOT MAKE_POINTER (.COUNT, .LBN, .HEADER)
:196 1194 2 THEN
:197 1195 2 BEGIN
:198 1196 2 HEADER = EXTEND_HEADER (UPLIT BYTE (REP FIB$C LENGTH OF (0)), .HEADER, 0);
:199 1197 2 BUILD_POINTER = .HEADER + .HEADER[FH2$B_MPOFFSET] * 2;
:200 1198 2 MAKE_POINTER (.COUNT, .LBN, .HEADER);
:201 1199 2 END;
:202 1200 2
:001 :CDS0005 1201 2 ! If we have gotten into extension headers, we need to re-read the primary
:002 :CDS0005 1202 2 ! header to update fields there. Checksum the current header if that is
:003 :CDS0005 1203 2 ! the case.
:004 :CDS0005 1204 2
:005 :CDS0005 1205 2
:006 :CDS0005 1206 2 IF .HEADER [FH2$W_SEG_NUM] NEQ 0
:007 :CDS0005 1207 2 THEN
:008 :CDS0005 1208 2 BEGIN
:009 :CDS0005 1209 2 CHECKSUM (.HEADER);
:010 :CDS0005 1210 2
:011 :CDS0005 1211 2 HEADER = READ_HEADER (BB_FID, 0);
:012 :CDS0005 1212 2
:013 :CDS0005 1213 2 MARK_DIRTY (.HEADER);
:014 :CDS0005 1214 2 END;
:015 :CDS0005 1215 2
:016 :CDS0005 1216 2 SET_REVISION (.HEADER, 1);
:017 :CDS0005 1217 2
:203 1218 2 BBLOCK [HEADER[FH2$W_RECATTR], FAT$L_HIBLK] =
:204 1219 2 ROT (ROT (.BBLOCK [HEADER[FH2$W_RECATTR], FAT$L_HIBLK], 16) + .COUNT, 16);
:205 1220 2
:206 1221 2 ! If this file header supports it, stuff the high water field to
:207 1222 2 ! be the allocated size.
:208 1223 2
:209 1224 2
:210 1225 2 IF .HEADER [FH2$B_IDOFFSET] GEQU ($BYTEOFFSET (FH2$L_HIGHWATER)+4)/2
:211 1226 2 THEN
:212 1227 2 HEADER [FH2$L_HIGHWATER] = ROT (.BBLOCK [HEADER[FH2$W_RECATTR], FAT$L_HIBLK], 16) + 1;
:213 1228 2
:214 1229 2 CHECKSUM (.HEADER);
:215 1230 2
:216 1231 2 ! Write the modified header(s), release the serialization lock, and return to
:217 1232 2 ! primary context.
:218 1233 2
:219 1234 2
:220 1235 2 WRITE_DIRTY (.LB_BASIS [.PRIM_LCKINDX]);
:221 1236 2
:222 1237 2 RELEASE_SERIAL_LOCK (.PRIM_LCKINDX);
:223 1238 2
:224 1239 2 RESTORE_CONTEXT ();
:225 1240 2
:226 1241 2 ! Finally, remove the bad block cluster from the volume pending bad block log
:227 1242 2 ! file, if it was there.
:228 1243 2
:229 1244 2
:230 1245 2 SCAN_BADLOG (0, 0, .LBN, REMOVE_BADBLOCK, .COUNT);
```

: 231 1246 2  
: 232 1247 1 END;

! end of routine DEALLOCATE\_BAD

					.TITLE	DELBAD		
					.IDENT	\V04-001\		
					.PSECT	\$CODE\$,NOWRT,2		
0000	0003	0003	00000	P.AAA:	.WORD	3, 3, 0	:	
		00#	00006	P.AAB:	.BYTE	0[64]	:	
				BB_FID=		P.AAA		
				.EXTRN	SET_REVISION, SAVE_CONTEXT			
				.EXTRN	RESTORE_CONTEXT			
				.EXTRN	SERIAL_FILE, RELEASE_SERIAL_LOCK			
				.EXTRN	WRITE_DIRTY, GET_MAP_POINTER			
				.EXTRN	MAKE_POINTER, NEXT_HEADER			
				.EXTRN	MARK_DIRTY, CHECKSUM			
				.EXTRN	READ_HEADER, EXTEND_HEADER			
				.EXTRN	SCAN_BADLOG			
		03CC	00000	.ENTRY	DEALLOCATE_BAD, Save R2,R3,R6,R7,R8,R9		:	1075
0000G	53	B5	AF 9E 00002	MOVAB	BB_FID, R3		:	
	CF		00 00 FB 00004	CALLS	#0, SAVE_CONTEXT		:	1156
	52	08	AC D0 0000	MOVL	FILE_HDR, HEADER		:	1162
	58	0C	AC D0 0000	MOVL	POINTER, MAP_POINTER		:	1163
			0000G 30 00015	BSBW	GET_MAP_POINTER		:	1165
	57	10	AC C0 00016	ADDL2	LAST_COUNT, LBN		:	1170
	56	10	AC C2 0001A	SUBL2	LAST_COUNT, COUNT		:	1171
			53 DD 0001E	PUSHL	R3		:	1176
0000G	CF		01 FB 00020	CALLS	#1, SERIAL_FILE		:	
	18	AA	50 D0 00025	MOVL	R0, 24(BASE)		:	
			7E D4 00029	CLRL	-(SP)		:	1178
			53 DD 0002B	PUSHL	R3		:	
0000G	CF		02 FB 0002D	CALLS	#2, READ_HEADER		:	
	52		50 D0 00032	MOVL	R0, HEADER		:	
		0E	A2 B5 00035	TSTW	14(HEADER)		:	1182
			05 12 00038	BNEQ	2\$		:	
		13	A2 95 0003A	TSTB	19(HEADER)		:	1183
			0B 13 0003D	BEQL	3\$		:	
			7E D4 0003F	CLRL	-(SP)		:	1187
			52 DD 00041	PUSHL	HEADER		:	
0000G	CF		02 FB 00043	CALLS	#2, NEXT_HEADER		:	
			E8 11 00048	BRB	1\$		:	
			52 DD 0004A	PUSHL	HEADER		:	1190
0000G	CF		01 FB 0004C	CALLS	#1, MARK_DIRTY		:	
	50	01	A2 9A 00051	MOVZBL	1(HEADER), R0		:	1191
	51	3A	A2 9A 00055	MOVZBL	58(HEADER), R1		:	
	50		51 C0 00059	ADDL2	R1, R0		:	
	59		6240 3E 0005C	MOVAW	(HEADER)[R0], BUILD_POINTER		:	
			52 DD 00060	PUSHL	HEADER		:	1193
	7E		56 7D 00062	MOVQ	COUNT, -(SP)		:	
0000G	CF		03 FB 00065	CALLS	#3, MAKE_POINTER		:	
	21		50 EB 0006A	BLBS	R0, 4\$		:	
			7E D4 0006D	CLRL	-(SP)		:	1196
			52 DD 0006F	PUSHL	HEADER		:	





DELBAD  
V04-001

L 10  
8-Jan-1985 17:48:12  
2-Oct-1984 12:43:27

VAX-11 Bliss-32 V4.0-742  
[F11X.BUGSRC]DELBAD.B32;1

Page 8  
(2)

```
: Name Bytes Attributes
: $CODE$ 330 NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
```

Library Statistics

File	Symbols		Pages Mapped	Processing Time
	Total	Loaded Percent		
:_\$255\$DUA18:[SYSLIB]LIB.L32;1	18619	27 0	1000	00:02.0

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:DELBAD/OBJ=OBJ\$:DELBAD MSRC\$:DELBAD/UPDATE=(BUG\$:DELBAD)

```
: Size: 260 code + 70 data bytes
: Run Time: 00:19.7
: Elapsed Time: 00:35.8
: Lines/CPU Min: 3803
: Lexemes/CPU-Min: 44272
: Memory Used: 232 pages
: Compilation Complete
```

