

[illegible]


```
SSSSSSSS NN NN DDDDDDDD SSSSSSSS MM MM BBBB BBBB
SSSSSSSS NN NN DDDDDDDD SSSSSSSS MM MM BBBB BBBB
SS SS NN NN DD DD SS SS MMMM MMMM BB BB
SS SS NN NN DD DD SS SS MMMM MMMM BB BB
SS SSSSSS NN NN DD DD SS SSSSSS MM MM BBBB BBBB
SSSSSSS NN NN DD DD SSSSSS MM MM BBBB BBBB
SS SS NN NNNN DD DD SS SS MM MM BB BB
SS SS NN NNNN DD DD SS SS MM MM BB BB
SSSSSSSS NN NN DDDDDDDD SSSSSSSS MM MM BBBB BBBB
SSSSSSSS NN NN DDDDDDDD SSSSSSSS MM MM BBBB BBBB
```

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```
LL IIIIII SSSSSSSS
LL IIIIII SSSSSSSS
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 IIIIII SSSSSSSS
LLLLLLLLLL IIIIII SSSSSSSS
LLLLLLLLLL IIIIII SSSSSSSS
```



```
1 0001 0 MODULE SNDSMB (  
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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27 0027 1 *  
28 0028 1 *  
29 0029 1 *****  
30 0030 1  
31 0031 1 ++  
32 0032 1  
33 0033 1 FACILITY: F11XQP Structure Level 2  
34 0034 1  
35 0035 1 ABSTRACT:  
36 0036 1  
37 0037 1     This routine constructs and sends a message to the symbiont manager  
38 0038 1     to cause a file to be spooled and deleted.  
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: 5-Jun-1978 11:23  
49 0049 1  
50 0050 1 MODIFIED BY:  
51 0051 1  
52 0052 1     V03-007 ACG0408 Andrew C. Goldstein, 23-Mar-1984 14:48  
53 0053 1     Add AST parameter so that impure storage is fully based  
54 0054 1  
55 0055 1     V03-006 CDS0005 Christian D. Saether 30-Dec-1983  
56 0056 1     Use L_NORM linkage and BIND_COMMON macro.  
57 0057 1
```



```

58 0058 1 V03-005 CDS0004 Christian D. Saether 26-Jul-1983
59 0059 1 Use new send job controller service.
60 0060 1
61 0061 1 V03-004 CDS0003 Christian D. Saether 13-May-1983
62 0062 1 Reflect change to IOC$CVT_DEVNAM interface.
63 0063 1
64 0064 1 V03-003 CWH1002 CW Hobbs 1-Mar-1983
65 0065 1 Use extended pid and owner in symbiont message
66 0066 1
67 0067 1 V03-002 CDS0002 Christian D. Saether 16-Dec-1982
68 0068 1 Make item list generation pic.
69 0069 1
70 0070 1 V03-001 CDS0001 C Saether 30-Jul-1982
71 0071 1 Changes for ACP to XQP.
72 0072 1 No timer on waiting for job controller reply.
73 0073 1
74 0074 1 V02-004 ACG0245 Andrew C. Goldstein, 23-Dec-1981 21:21
75 0075 1 Check error return from queue manager
76 0076 1
77 0077 1 V02-003 SPF0025 Steve Forgey 08-Sep-1981
78 0078 1 Add new header fields to symbiont manager message.
79 0079 1
80 0080 1 V02-001 GWF0043 Gary W. Fowler 12-May-1981 15:20
81 0081 1 Add file size option and file size to message sent to job
82 0082 1 controller.
83 0083 1
84 0084 1 V02-000 ACG0167 Andrew C. Goldstein, 16-Apr-1980 19:25
85 0085 1 Previous revision history moved to [F11B.SRC]F11B.REV
86 0086 1 **
87 0087 1
88 0088 1
89 0089 1 LIBRARY 'SYSS$LIBRARY:LIB.L32';
90 0090 1 REQUIRE 'SRC$:FCPDEF.B32';
91 1081 1
92 1082 1
93 1083 1 MACRO
94 1084 1
95 1085 1 ! Layout of item list for job controller.
96 1086 1 ! The first item is the queue name.
97 1087 1 ! The second item is the file identification.
98 1088 1 ! The third item is the delete file item code.
99 1089 1 ! Only fields that are filled in with non-zero values are defined.
100 1090 1
101 1091 1
102 1092 1 ITM_QNAMSIZ = 0, 0, 16, 0 %, ! queue name size
103 1093 1 ITM_QNAMCODE = 2, 0, 16, 0 %, ! queue name item code
104 1094 1 ITM_QNAMADDR = 4, 0, 32, 0 %, ! queue name address
105 1095 1
106 1096 1 ITM_FILEINFOSIZ = 12, 0, 16, 0 %, ! file identification size
107 1097 1 ITM_FILEINFOCODE = 14, 0, 16, 0 %, ! file id item code
108 1098 1 ITM_FILEINFOADDR = 16, 0, 32, 0 %, ! file id address
109 1099 1
110 1100 1 ITM_DELFILECODE = 26, 0, 16, 0 % ; ! delete file item code.
111 1101 1
112 1102 1
113 1103 1 LITERAL
114 1104 1 ITM_LENGTH = 3*12 + 4, ! 3 item codes + stopper.
```

SNDSMB
V04-000

E 9
16-Sep-1984 01:17:16
14-Sep-1984 12:30:48

VAX-11 Bliss-32 V4.0-742
DISK\$VMSMASTER:[F11X.SRC]SNDSMB.B32;1 Page 3 (1)

: 115
: 116

1105 1
1106 1

FS_LENGTH

= 16 + 2*FID\$C_LENGTH + 4 + 4 + 2
+ 16 + 2 + F12\$S_FILENAME + F12\$S_FILENAMEEXT;


```

118 1107 1 GLOBAL ROUTINE SEND_SYMBIONT (HEADER, FCB) : L_NORM NOVALUE =
119 1108 1
120 1109 1 ++
121 1110 1
122 1111 1 FUNCTIONAL DESCRIPTION:
123 1112 1
124 1113 1 This routine constructs and sends a message to the symbiont manager
125 1114 1 to cause a file to be spooled and deleted.
126 1115 1
127 1116 1
128 1117 1 CALLING SEQUENCE:
129 1118 1 SEND_SYMBIONT (ARG1, ARG2)
130 1119 1
131 1120 1 INPUT PARAMETERS:
132 1121 1 ARG1: address of file header
133 1122 1 ARG2: address of file control block
134 1123 1
135 1124 1 IMPLICIT INPUTS:
136 1125 1 IO_PACKET: address of I/O packet of this request
137 1126 1
138 1127 1 OUTPUT PARAMETERS:
139 1128 1 NONE
140 1129 1
141 1130 1 IMPLICIT OUTPUTS:
142 1131 1 NONE
143 1132 1
144 1133 1 ROUTINE VALUE:
145 1134 1 NONE
146 1135 1
147 1136 1 SIDE EFFECTS:
148 1137 1 message sent to symbiont manager
149 1138 1
150 1139 1 --
151 1140 1
152 1141 2 BEGIN
153 1142 2
154 1143 2 MAP
155 1144 2 HEADER : REF BBLOCK, ! file header arg
156 1145 2 FCB : REF BBLOCK; ! file control block arg
157 1146 2
158 1147 2 BUILTIN
159 1148 2 LOCC;
160 1149 2
161 1150 2 LINKAGE
162 1151 2 L_IOC_CVT = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 5,
163 1152 2 REGISTER = 4, REGISTER = 1) :
164 1153 2 NOTUSED (6, 7, 8, 9, 10, 11);
165 1154 2
166 1155 2 LOCAL
167 1156 2 ITEMLIST : BBLOCK [ITM_LENGTH], ! item list for jbc.
168 1157 2 FILEINFO_STR : VECTOR [FS_LENGTH, BYTE], ! everything the jbc wants
169 1158 2 to know about the file.
170 1159 2 P, string scan pointer
171 1160 2 JBCSTS : VECTOR [2], io status block for SNDJBC
172 1161 2 LENGTH, length of converted device name
173 1162 2 IDENT_AREA : REF BBLOCK, address of file header ident area
174 1163 2 UCB : REF BBLOCK, UCB of spooled device

```

```
175      1164 2          VCB          : REF BBLOCK; ! VCB of spooled device
176      1165 2
177      1166 2 BIND_COMMON;
178      1167 2
179      1168 2 EXTERNAL ROUTINE
180      1169 2     WAIT_FOR_AST : L_NORM NOVALUE, ! wait for completion AST
181      1170 2     CONTINUE_THREAD : L_NORM NOVALUE, ! completion AST to resume thread
182      1171 2     IOC$CVT_DEVNAM : L_IOC_CVT ADDRESSING MODE (GENERAL);
183      1172 2                                     ! get device name of UCB
184      1173 2
185      1174 2 ! Initialize item list to zeroes.
186      1175 2 !
187      1176 2
188      1177 2 CH$FILL (0, ITM_LENGTH, ITEMLIST);
189      1178 2
190      1179 2 ! Get UCB and VCB addresses for the spooled device.
191      1180 2 !
192      1181 2
193      1182 2 UCB = .IO_PACKET[IRP$$_MEDIA];
194      1183 2 VCB = .UCB[UCB$$_VCB];
195      1184 2
196      1185 2 ! Point the first item at the queue name in the spooled device's VCB.
197      1186 2 ! This might be a little racy in that we could become unscheduled and
198      1187 2 ! the device set non-spooled or changed before the sndjbc service gets
199      1188 2 ! a chance to look at it, but that should be no more harmful than if
200      1189 2 ! we copied it off to local storage and it changed before the service
201      1190 2 ! executed anyway. At worst the VCB gets deallocated and some garbage
202      1191 2 ! is picked up for the name. BFD.
203      1192 2 !
204      1193 2
205      1194 2 ITEMLIST [ITM_QNAMSIZ] = .VCB [VCB$$_QNAMECNT];
206      1195 2 ITEMLIST [ITM_QNAMCODE] = SJCS_QUEUE;
207      1196 2 ITEMLIST [ITM_QNAMADDR] = VCB [VCB$$_QNAMECNT] + 1;
208      1197 2
209      1198 2 ! Fill in the file identification string.
210      1199 2 ! "Normal" callers of this service supply only the counted device
211      1200 2 ! string, the file ID and the directory ID. The service then performs
212      1201 2 ! an access function on that file to recover other information it needs
213      1202 2 ! in a trustworthy manner.
214      1203 2 ! However, we ARE the file system, and therefore can be trusted. Also,
215      1204 2 ! an attempt to call us back recursively with an access function just
216      1205 2 ! flat out will not work, because we'll be sitting here waiting for the
217      1206 2 ! SNDJBC service to finish.
218      1207 2 ! Therefore, we will also put the end of file block, access mask,
219      1208 2 ! and expanded file spec in this string also. SNDJBC will look at it
220      1209 2 ! because we are calling from exec mode or better and use this info
221      1210 2 ! rather than doing an access function on the file.
222      1211 2 !
223      1212 2
224      1213 2 ! First get the counted device string. Leave the trailing ":" on
225      1214 2 ! the string for now, because we'll want it a little later when
226      1215 2 ! the full file name string is built.
227      1216 2 !
228      1217 2
229      1218 2 IOC$CVT_DEVNAM (15, FILEINFO_STR [1],
230      1219 2     .CURRENT_UCB, 0; LENGTH);
231      1220 2 FILEINFO_STR [0] = .LENGTH;
```



```

232 1221 2
233 1222 2 ! Pick up the file ID from the FCB instead of the file header
234 1223 2 ! because the RVN has already been normalized in the FCB, i.e.,
235 1224 2 ! APPLY_RVN has already been called.
236 1225 2 ! Also zero out the DID while we're at it.
237 1226 2
238 1227 2
239 1228 2 CH$COPY (FID$_LENGTH, FCB[FCB$_FID], 0, 2*FID$_LENGTH, FILEINFO_STR [16]);
240 1229 2
241 1230 2 ! Next is the end of file block for the file.
242 1231 2
243 1232 2
244 1233 2 (FILEINFO_STR [28])<0,32> = ROT (.BBLOCK[HEADER[FH2$_RECATTR],FAT$_EFBLK], 16);
245 1234 2 IF .(FILEINFO_STR [28])<0,32> NEQ 0
246 1235 2 AND .BBLOCK[HEADER[FH2$_RECATTR],FAT$_FFBYTE] EQL 0
247 1236 2 THEN
248 1237 2 (FILEINFO_STR [28])<0,32> = .(FILEINFO_STR [28])<0,32> - 1;
249 1238 2
250 1239 2 ! File access mask (everything allowed).
251 1240 2
252 1241 2
253 1242 2 (FILEINFO_STR [32])<0,32> = %X'FFFFFFFF';
254 1243 2
255 1244 2 ! Build an expanded file name string including the device, null directory
256 1245 2 ! spec, and the file name.
257 1246 2
258 1247 2
259 1248 2 P = CH$MOVE (.FILEINFO_STR [0], FILEINFO_STR [1], FILEINFO_STR [38]);
260 1249 2
261 1250 2 ! Now that the entire device spec has been copied, adjust the count
262 1251 2 ! on the first string to drop the trailing ':', just like RMS does
263 1252 2 ! for the DVI field in the NAM block.
264 1253 2
265 1254 2
266 1255 2 FILEINFO_STR [0] = .FILEINFO_STR [0] - 1;
267 1256 2
268 1257 2 ! Add in null directory spec.
269 1258 2
270 1259 2
271 1260 2 (.P)<0,16> = '[';
272 1261 2 P = .P + 2;
273 1262 2
274 1263 2 ! Now pick up the file name from the ident area in the header.
275 1264 2
276 1265 2
277 1266 2 IDENT_AREA = .HEADER + .HEADER[FH2$_IDOFFSET] * 2;
278 1267 2
279 1268 2 P = CH$MOVE (F12$_FILENAME, IDENT_AREA [F12$_FILENAME], .P);
280 1269 2 P = CH$MOVE (F12$_FILENAMEEXT, IDENT_AREA [F12$_FILENAMEEXT], .P);
281 1270 2
282 1271 2 ! Find the end of the filename. It is delimited by the space character
283 1272 2 ! if less than the full filename size.
284 1273 2 ! Turns out that the maximum legal filename is 39 + 1 + 39 + 1 + 5, or
285 1274 2 ! 85, whereas the filename plus filenameext add up to 86.
286 1275 2 ! Scan for 85 characters from the beginning of the concatenated filename.
287 1276 2 ! Set P back to the beginning of the string we just copied and scan.
288 1277 2 ! Using P as the second output argument causes it to get the address

```



```

289 1278 2 ! of the located space character after the locc executes, which will
290 1279 2 ! either be at the space character, if found, or at the 86'th byte.
291 1280 2 !
292 1281 2 !
293 1282 2 LOCC (%REF(' '), %REF (85), (.P - FI2$$_FILENAME - FI2$$_FILENAMEEXT) ; .P);
294 1283 2 !
295 1284 2 ! We skipped filling in the size field at byte 36 in this string so
296 1285 2 ! get it now. The filename string started at byte 38.
297 1286 2 !
298 1287 2 (FILEINFO_STR [36])<0,16> = .P - FILEINFO_STR [38];
299 1288 2 !
300 1289 2 ! Set up the item list entry for the file information string.
301 1290 2 !
302 1291 2 !
303 1292 2 ITEMLIST [ITM_FILEINFOSIZ] = .P - FILEINFO_STR [0];
304 1293 2 ITEMLIST [ITM_FILEINFOCODE] = SJC$ FILE_IDENTIFICATION;
305 1294 2 ITEMLIST [ITM_FILEINFOADDR] = FILEINFO_STR [0];
306 1295 2 !
307 1296 2 ! Finally the item code to delete the file after printing.
308 1297 2 !
309 1298 2 !
310 1299 2 ITEMLIST [ITM_DELFILECODE] = SJC$_DELETE_FILE;
311 1300 2 !
312 1301 2 ! The status from the service is always written to the iosb and the
313 1302 2 ! completion ast is always delivered, regardless of status, so we
314 1303 2 ! do not need to separately check the status of the service call.
315 1304 2 !
316 1305 2 !
317 P 1306 2 $SNDJBC (EFN = EFN,
318 P 1307 2     FUNC = SJC$ ENTER_FILE,
319 P 1308 2     IOSB = JBCSTS,
320 P 1309 2     ASTADR = CONTINUE_THREAD,
321 P 1310 2     ASTPRM = .BASE,
322 1311 2     ITMLST = ITEMLIST);
323 1312 2 !
324 1313 2 ! The completion ast is always delivered, so we must always wait for it.
325 1314 2 !
326 1315 2 !
327 1316 2 WAIT_FOR_AST ();
328 1317 2 !
329 1318 2 ! A full longword of status is returned from sndjbc.
330 1319 2 !
331 1320 2 !
332 1321 2 IF NOT .JBCSTS [0]
333 1322 2 THEN
334 1323 2 BEGIN
335 1324 2     CLEANUP_FLAGS[CLF_DELFILE] = 1;
336 1325 2     USER_STATUS[1] = .JBCSTS [0];
337 1326 2     ERR_EXIT (SS$_NOTPRINTED);
338 1327 2 END;
339 1328 2 !
340 1329 1 END;

```

! end of routine SEND_SYMBIONT

.TITLE SNDSMB
.IDENT \V04-000\

SNDSMB
V04-000

K 9
16-Sep-1984 01:17:16
14-Sep-1984 12:30:48

VAX-11 Bliss-32 V4.0-742
DISK\$VM\$MASTER:[F11X.SRC]SNDSMB.B32;1 Page 9 (2)

02	OC	6E	E8	000D4	BLBS	JBCSTS, 2\$	: 1321
04	AA	20	88	000D7	BISB2	#32, 2(BASE)	: 1324
	A7	6E	D0	000DB	MOVL	JBCSTS, 4(R7)	: 1325
2184		8F	BF	000DF	CHMU	#8580	: 1326
		04	000E3	2\$:	RET		: 1329

; Routine Size: 228 bytes, Routine Base: \$CODE\$ + 0000

; 341 1330 1
; 342 1331 1 END
; 343 1332 0 ELUDOM

PSECT SUMMARY

Name	Bytes	Attributes
\$CODE\$	228	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Symbols		Pages Mapped	Processing Time
	Total	Loaded Percent		
_\$255\$DUA28:[SYSLIB]LIB.L32;1	18619	37 0	1000	00:01.9

COMMAND QUALIFIERS

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

; Size: 228 code + 0 data bytes
; Run Time: 00:19.1
; Elapsed Time: 00:40.5
; Lines/CPU Min: 4175
; Lexemes/CPU-Min: 49081
; Memory Used: 231 pages
; Compilation Complete

0173 AH-BT13A-SE
VAX/VMS V4.0

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SND5MB
LIS

SHFDLR
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TRUNC
LIS

FAL

FAL
MAP

SELVOL
LIS

DAPDEF
MOL

SMALOC
LIS

SNOBAD
LIS

SWITUL
LIS

WITURN
LIS