


```

BBBBBBBB      AAAAAA      SSSSSSSS      PPPPPPPP      UU      UU      RRRRRRRR      IIIIII      000000      BBBBBBBB
BBBBBBBB      AAAAAA      SSSSSSSS      PPPPPPPP      UU      UU      RRRRRRRR      IIIIII      000000      BBBBBBBB
BB      BB      AA      AA      SS      PP      PP      RR      RR      II      00      00      BB      BB
BB      BB      AA      AA      SS      PP      PP      RR      RR      II      00      00      BB      BB
BB      BB      AA      AA      SS      PP      PP      RR      RR      II      00      00      BB      BB
BBBBBBBB      AA      AA      SSSSSS      PPPPPPPP      UU      UU      RRRRRRRR      II      00      00      BBBBBBBB
BBBBBBBB      AA      AA      SSSSSS      PPPPPPPP      UU      UU      RRRRRRRR      II      00      00      BBBBBBBB
BB      BB      AAAAAAAAAA      SS      PP      RR      RR      II      00      00      BB      BB
BB      BB      AAAAAAAAAA      SS      PP      RR      RR      II      00      00      BB      BB
BB      BB      AA      AA      SS      PP      RR      RR      II      00      00      BB      BB
BB      BB      AA      AA      SS      PP      RR      RR      II      00      00      BB      BB
BBBBBBBB      AA      AA      SSSSSSSS      PP      UU      UU      RR      RR      IIIIII      000000      BBBBBBBB
BBBBBBBB      AA      AA      SSSSSSSS      PP      UU      UU      RR      RR      IIIIII      000000      BBBBBBBB

```

....
....
....
....

```

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 BASS$PUR_IO_BUF ( ; Purge I/O buffer for a file.
2 0002 0 IDENT = '1-007' ; File: BASPURI0B.B32
3 0003 0 ) =
4 0004 1 BEGIN
5 0005 1
6 0006 1 *****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY *
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25 0025 1 *
26 0026 1 *
27 0027 1 *****
28 0028 1
29 0029 1
30 0030 1 **
31 0031 1 FACILITY:
32 0032 1
33 0033 1 ABSTRACT:
34 0034 1
35 0035 1 This module contains routines which will check the LUN indicated by R11
36 0036 1 and print the contents of the associated I/O buffer if there is valid
37 0037 1 data in the buffer. These routines are intended to be called before
38 0038 1 a file is closed (explicitly or implicitly at end of program) or if
39 0039 1 an error occurs during an output element transmit.
40 0040 1
41 0041 1 ENVIRONMENT: User mode - AST reentrant
42 0042 1
43 0043 1 AUTHOR: Donald G. Petersen, CREATION DATE: 22-Jan-79
44 0044 1
45 0045 1 MODIFIED BY:
46 0046 1
47 0047 1 DGP, : VERSION 1-01
48 0048 1 1-001 - original
49 0049 1 1-002 - Use 32-bit addresses for externals. JBS 27-JAN-1979
50 0050 1 1-003 - Change entry point names so we have two: one for CLOSE
51 0051 1 and one for error handling. JBS for DGP 07-MAR-1979
52 0052 1 1-004 - Make PUR_IO_ERR purge the terminal on unit zero. DGP 07-Mar-79
53 0053 1 1-005 - Remove references to BASS$ routines. JBS 10-MAY-1979
54 0054 1 1-006 - Change from an OTS routine to a BAS routine, since FORTRAN
55 0055 1 does not need to purge I/O buffers. JBS 20-AUG-1979
56 0056 1 1-007 - Don't purge virtual arrays; it is quite complex, and CLOSE
57 0057 1 will do it. JBS 30-AUG-1979

```

BAS\$\$PUR_IO_BUF
1-007

i 16
16-Sep-1984 00:58:52
14-Sep-1984 11:56:32

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BASPURIOB.B32;1

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(1)

: 58 0058 1 !--
: 59 0059 1
: 60 0060 1 !<BLF/PAGE>

```

62      0061 1  !
63      0062 1  ! SWITCHES:
64      0063 1  !
65      0064 1  !
66      0065 1  SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
67      0066 1  !
68      0067 1  !
69      0068 1  ! LINKAGES:
70      0069 1  !
71      0070 1  !
72      0071 1  REQUIRE 'RTLIN:OTSLNK';           ! define all linkages
73      0500 1  !
74      0501 1  !
75      0502 1  ! TABLE OF CONTENTS:
76      0503 1  !
77      0504 1  !
78      0505 1  FORWARD ROUTINE
79      0506 1      BAS$$PUR_IO_ERR : NOVALUE,       ! Purge outstanding output buffer
80      0507 1                                      ! following an error
81      0508 1      BAS$$PUR_IO_CLO : CALL_CCB NOVALUE; ! Purge outstanding output buffer
82      0509 1                                      !
83      0510 1                                      ! during a close
84      0511 1  !
85      0512 1  ! INCLUDE FILES:
86      0513 1  !
87      0514 1  !
88      0515 1  REQUIRE 'RTLML:OTSLUB';           ! I/O statement block
89      0655 1  !
90      0656 1  REQUIRE 'RTLIN:RTLPSECT';         ! Define DECLARE_PSECTS macro
91      0751 1  !
92      0752 1  REQUIRE 'RTLIN:BASIOERR';         ! Define I/O error symbols
93      0805 1  !
94      0806 1  LIBRARY 'RTLSTARLE';             ! STARLET library
95      0807 1  !
96      0808 1  !
97      0809 1  ! MACROS:
98      0810 1  !
99      0811 1      NONE
100     0812 1  !
101     0813 1  ! EQUATED SYMBOLS:
102     0814 1  !
103     0815 1  !
104     0816 1  LITERAL
105     0817 1      K_CR = %X'0D';                 ! ASCII CR
106     0818 1      K_NULL = %X'00';               ! ASCII NUL
107     0819 1      K_LF = %X'0B';                 ! ASCII LF
108     0820 1  !
109     0821 1  !
110     0822 1  ! PSECT declarations
111     0823 1  !
112     0824 1  DECLARE_PSECTS (BAS);             ! Put this in BAS psect
113     0825 1  !
114     0826 1  ! OWN STORAGE:
115     0827 1  !
116     0828 1      NONE
117     0829 1  !
118     0830 1  ! EXTERNAL REFERENCES:

```

BAS\$\$PUR_IO_BUF
1-007

K 16
16-Sep-1984 00:58:52
14-Sep-1984 11:56:32

VAX-11 Bliss-32 V4.0-742
[BASRTL.SRC]BAS\$PURIOB.B32;1

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(2)

```
: 119      0831  1  !  
: 120      0832  1  
: 121      0833  1  EXTERNAL ROUTINE  
: 122      0834  1  BAS$$CB_PUSH : JSB CB_PUSH,           : Load register CCB  
: 123      0835  1  BAS$$CB_POP : JSB CB_POP NOVALUE,       : Done with register CCB  
: 124      0836  1  BAS$$NEXT_LUN : NOVALUE,                 : Get next logical unit number  
: 125      0837  1  BAS$$STOP_IO : NOVALUE;                : Signal fatal BASIC I/O error  
: 126      0838  1
```

```

128 0839 1 GLOBAL ROUTINE BASS$PUR_IO_CLO          ! Purge the contents of an I/O buffer
129 0840 1   : CALL_CCB NOVALUE =
130 0841 1
131 0842 1 +-+
132 0843 1 FUNCTIONAL DESCRIPTION:
133 0844 1
134 0845 1   This routine will PUT the contents of the buffer associated with the LUN
135 0846 1   passed to it if the buffer has valid data in it. This routine is expected
136 0847 1   to aid in closing a file either implicitly or explicitly if the last lan-
137 0848 1   guage to access the file has the Basic semantics where an output record
138 0849 1   may be continued across several output statements. Therefore, an output
139 0850 1   buffer may exist which has valid data in it which should be printed before
140 0851 1   a program finishes executing.
141 0852 1
142 0853 1 FORMAL PARAMETERS:
143 0854 1
144 0855 1   NONE
145 0856 1
146 0857 1 IMPLICIT INPUTS:
147 0858 1
148 0859 1   LUB$V_OUTBUF_DR      Flag to indicate the output buffer has valid
149 0860 1                   data in it
150 0861 1   LUB$W_LUN            LUN number
151 0862 1
152 0863 1 IMPLICIT OUTPUTS:
153 0864 1
154 0865 1   LUB$V_OUTBUF_DR      Flag to indicate the output buffer has valid
155 0866 1   LUB$B_BAS_VFC2      'post' carriage control for PRN file format
156 0867 1                   data in it
157 0868 1
158 0869 1 ROUTINE VALUE:
159 0870 1
160 0871 1   NONE
161 0872 1
162 0873 1 SIDE EFFECTS:
163 0874 1
164 0875 1   NONE
165 0876 1
166 0877 1 --
167 0878 1
168 0879 2   BEGIN
169 0880 2
170 0881 2   EXTERNAL REGISTER
171 0882 2   CCB : REF BLOCK [, BYTE];
172 0883 2
173 0884 3   IF (.CCB [LUB$V_OUTBUF_DR] AND (.CCB [LUB$B_ORGAN] NEQ LUB$K_ORG_VIRTU))
174 0885 2   THEN
175 0886 3     BEGIN
176 0887 3 +-+
177 0888 3     Write out the buffer. This involves a call to RMS.
178 0889 3
179 0890 3     CCB [RAB$W_RSZ] = .CCB [LUB$A_BUF_PTR] - .CCB [LUB$A_RBUF_ADR];
180 0891 3     CCB [RAB$L_RBF] = .CCB [LUB$A_RBUF_ADR];
181 0892 3     CCB [LUB$V_OUTBUF_DR] = 0;
182 0893 3
183 0894 4     IF ( NOT $PUT (RAB = .CCB))
184 0895 3     THEN

```

```

185      0896 4      BEGIN
186      0897 4
187      0898 4      WHILE (.CCB [RAB$L_STS] EQL RMS$RSA) DO
188      0899 5      BEGIN
189      0900 5      $WAIT (RAB = .CCB);
190      0901 5      $PUT (RAB = .CCB);
191      0902 4      END;
192      0903 4
193      0904 4      IF ( NOT .CCB [RAB$L_STS]) THEN BAS$$STOP_IO (BAS$K_IOERR_REC);
194      0905 4
195      0906 5      END;
196      0907 5
197      0908 5      CCB [LUB$B_BAS_VFC1] = K_LF;
198      0909 5      CCB [LUB$B_BAS_VFC2] = K_NULL;
199      0910 5
200      0911 5      + Initialize the record buffer.
201      0912 5
202      0913 5      CCB [LUB$A_BUF_PTR] = .CCB [LUB$A_RBUF_ADR];
203      0914 5      CCB [LUB$A_BUF_END] = .CCB [LUB$A_RBUF_ADR] + .CCB [LUB$W_RBUF_SIZE];
204      0915 5      CCB [LUB$L_PRINT_POS] = 0;
205      0916 5      END;
206      0917 5
207      0918 5      RETURN;
208      0919 5      END;

```

!End of BAS\$\$PUR_IO_CLO

```

.TITLE BAS$$PUR_IO_BUF
.IDENT \1-007\

.EXTRN BAS$$CB_PUSH, BAS$$CB_POP
.EXTRN BAS$$NEXT_LUN, BAS$$STOP_IO
.EXTRN SY$$PUT, SY$$WAIT

.PSECT _BAS$CODE, NOWRT, SHR, PIC, 2

```

					0004 00000	.ENTRY BAS\$\$PUR_IO_CLO, Save R2	: 0839
				00	9E 00002	MOVAB SY\$\$PUT, R2	
5C	FE	AB		03	E1 00009	BBC #3, -2(CCB), 4\$: 0884
		05	C4	AB	91 0000E	CMPB -60(CCB), #5	
				56	13 00012	BEQL 4\$	
22	AB	B0	AB	EC	A3 00014	SUBW3 -20(CCB), -80(CCB), 34(CCB)	: 0890
		28	AB	EC	D0 0001B	MOVL -20(CCB), 40(CCB)	: 0891
		FE	AB		08 8A 00020	BICB2 #8, -2(CCB)	: 0892
				5B	DD 00024	PUSHL CCB	: 0894
		62		01	FB 00026	CALLS #1, SY\$\$PUT	
		28		50	E8 00029	BLBS R0, 3\$	
		000182DA	8F	08	AB D1 0002C	1\$: CMPL 8(CCB), #99034	: 0898
				10	12 00034	BNEQ 2\$	
		00000000G	00	5B	DD 00036	PUSHL CCB	: 0900
				01	FB 00038	CALLS #1, SY\$\$WAIT	
				5B	DD 0003F	PUSHL CCB	: 0901
		62		01	FB 00041	CALLS #1, SY\$\$PUT	
				E6	11 00044	BRB 1\$: 0896
		0A	08	AB	E8 00046	2\$: BLBS 8(CCB), 3\$: 0904
		7E		01	CE 0004A	MNEGL #1, -(SP)	
		00000000G	00	01	FB 0004D	CALLS #1, BAS\$\$STOP_IO	
		DA	AB	0B	B0 00054	3\$: MOVW #11, -38(CCB)	: 0908

BASSPUR_IO_BUF
1-007

B 1
16-Sep-1984 00:58:52 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 11:56:32 [BASRTL.SRC]BASPURIOB.B32;1

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(3)

B0	AB	EC	AB	D0	00058	MOVL	-20(CCB), -80(CCB)	:	0913
		D2	AB	3C	0005D	MOVZWL	-46(CCB), R0	:	0914
B4	AB	EC	BB40	9E	00061	MOVAB	@-20(CCB)[R0], -76(CCB)	:	
		C8	AB	D4	00067	CLRL	-56(CCB)	:	0915
				04	0006A	4\$:	RET	:	0919

: Routine Size: 107 bytes, Routine Base: _BAS\$CODE + 0000

: 209 0920 1

```

211 0921 1 GLOBAL ROUTINE BAS$$PUR_IO_ERR          ! Purge terminal I/O
212 0922 1   : NOVALUE =
213 0923 1
214 0924 1 !++
215 0925 1 ! FUNCTIONAL DESCRIPTION:
216 0926 1
217 0927 1     This routine will PUT the contents of any terminal buffer.
218 0928 1     It is used just before printing an error message to be sure that
219 0929 1     the message appears after any output produced before the error
220 0930 1     condition.
221 0931 1
222 0932 1 FORMAL PARAMETERS:
223 0933 1
224 0934 1     NONE
225 0935 1
226 0936 1 IMPLICIT INPUTS:
227 0937 1
228 0938 1     LUB$V_OUTBUF_DR          Flag to indicate the output buffer has valid
229 0939 1                          data in it
230 0940 1
231 0941 1 IMPLICIT OUTPUTS:
232 0942 1
233 0943 1     LUB$V_OUTBUF_DR          Flag to indicate the output buffer has valid
234 0944 1     LUB$B_BAS_VFC2          'post' carriage control for PRN file format
235 0945 1                          data in it
236 0946 1
237 0947 1 ROUTINE VALUE:
238 0948 1
239 0949 1     NONE
240 0950 1
241 0951 1 SIDE EFFECTS:
242 0952 1
243 0953 1     NONE
244 0954 1
245 0955 1 --
246 0956 1
247 0957 2     BEGIN
248 0958 2
249 0959 2     GLOBAL REGISTER
250 0960 2       CCB = K_CCB_REG : REF BLOCK [, BYTE];
251 0961 2
252 0962 2     LOCAL
253 0963 2       FLAG,
254 0964 2       LUN;
255 0965 2
256 0966 2 !+
257 0967 2 ! Scan through all logical units, purging the ones OPEN to a terminal.
258 0968 2 !-
259 0969 2     FLAG = 0;
260 0970 2
261 0971 2     DO
262 0972 2       BEGIN
263 0973 2 !+
264 0974 2 ! Get the next logical unit number.
265 0975 2 !-
266 0976 2       BAS$$NEXT_LUN (FLAG, LUN);
267 0977 2

```

```

: 268      0978  4      IF (.FLAG NEQ 0)
: 269      0979  3      THEN
: 270      0980  4      BEGIN
: 271      0981  4      :+
: 272      0982  4      : LUN is the next logical unit number. If the file it represents is
: 273      0983  4      : open to a terminal, purge it.
: 274      0984  4      :-
: 275      0985  4      BAS$$CB_PUSH (.LUN, LUB$K_ILUN_MIN);
: 276      0986  4
: 277      0987  5      IF (.CCB [LUB$V_OPENED] AND .CCB [LUB$V_UNIT_0] AND .CCB [LUB$V_FORCIBLE])
: 278      0988  4      THEN
: 279      0989  4      BAS$$PUR_IO_CLO ();
: 280      0990  4
: 281      0991  4      BAS$$CR_POP ();
: 282      0992  3      END;
: 283      0993  3
: 284      0994  3      END
: 285      0995  2      UNTIL (.FLAG EQL 0);
: 286      0996  2
: 287      0997  2      RETURN;
: 288      0998  1      END;

```

!End of BAS\$\$PUR_IO_ERR

			0804 00000	.ENTRY	BAS\$\$PUR_IO_ERR, Save R2,R11	: 0921
	5E		08 C2 00002	SUBL2	#8, SP	: 0969
		04	AE D4 00005	CLRL	FLAG	: 0976
			5E DD 00008 1\$:	PUSHL	SP	
		08	AE 9F ^J00A	PUSHAB	FLAG	
00000000G	00		02 FB 0000D	CALLS	#2, BAS\$\$NEXT_LUN	
		04	AE D5 00014	TSTL	FLAG	: 0978
			25 13 00017	BEQL	3\$	
	50		08 CE 00019	MNEGL	#8, R0	: 0985
	52		6E D0 0001C	MOVL	LUN, R2	
		00000000G	00 16 0001F	JSB	BAS\$\$CB_PUSH	
	0F	FC	AB E9 00025	BLBC	-4(CCB), 2\$: 0987
		FE	AB 95 00029	TSTB	-2(CCB)	
			0A 18 0002C	BGEQ	2\$	
05	FE	AB	06 E1 0002E	BBC	#6, -2(CCB), 2\$	
	FF5D	CF	00 FB 00033	CALLS	#0, BAS\$\$PUR_IO_CLO	: 0989
		00000000G	00 16 00038 2\$:	JSB	BAS\$\$CB_POP	: 0991
		04	AE D5 0003E 3\$:	TSTL	FLAG	: 0995
			C5 12 00041	BNEQ	1\$	
			04 00043	RET		: 0998

: Routine Size: 68 bytes, Routine Base: _BAS\$CODE + 006B

```

: 289      0999  1
: 290      1000  1 END
: 291      1001  1
: 292      1002  0 ELUDOM

```

!End of module - BAS\$\$PUR_IO_BUF

PSECT SUMMARY

```
:  
:      Name                Bytes                Attributes  
:  _BAS$CODE              175  NOVLC,NOVRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)
```

Library Statistics

```
:  
:      File                ----- Symbols ----- Pages Processing  
:      _$255$DUA28:[SYSLIB]STARLET.L32;1  Total   Loaded   Percent   Mapped   Time  
:                                          9776     9         0        581     00:01.2
```

COMMAND QUALIFIERS

```
:  
:      BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS$:BASPURI0B/OBJ=OBJ$:BASPURI0B MSRC$:BASPURI0B/UPDATE=(ENH$:BASPURI0B  
:      )  
:  
: Size:                175 code + 0 data bytes  
: Run Time:            00:09.1  
: Elapsed Time:       00:22.4  
: Lines/CPU Min:      6577  
: Lexemes/CPU-Min:   35960  
: Memory Used:        103 pages  
: Compilation Complete
```


0029 AH-BT13A-SE
VAX/VMS V4.0

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BASPOS
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BASOPENDE
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LIS

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LIS

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BASPOWR
LIS

BASPOWJ
LIS

BASPOWR
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0030 AH-BT13A-SE
VAX/VMS V4.0

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The image displays a grid of 100 small terminal window screenshots, arranged in a 10x10 grid. Each window shows a different software application or utility running on a VAX/VMS system. The windows contain various data, code, and graphical elements. Several windows are highlighted with larger, semi-transparent text labels:

- BASRAD50 LIS
- BASRSET LIS
- BASRPUT LIS
- BASRECPRO LIS
- BASRESTAR LIS
- BASRANDOM LIS
- BASREMAP LIS
- BASRESTOR LIS
- BASRIGT LIS