

```

RRRRRRRRRRRR   UUU       UUU   NNN       NNN   00000000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRRRRRRRRRRR   UUU       UUU   NNN       NNN   00000000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRRRRRRRRRRR   UUU       UUU   NNN       NNN   00000000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNNNNN     NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNNNNN     NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNNNNN     NNN   000       000   FFF       FFF
RRRRRRRRRRRR   UUU       UUU   NNN       NNN   000       000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRRRRRRRRRRR   UUU       UUU   NNN       NNN   000       000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRRRRRRRRRRR   UUU       UUU   NNN       NNN   000       000   FFFFFFFFFFFFFFFF   FFFFFFFFFFFFFFFF
RRR   RRR       UUU       UUU   NNN       NNNNNN   000       000   FFF       FFF
RRR   RRR       UUU       UUU   NNN       NNNNNN   000       000   FFF       FFF
RRR   RRR       UUU       UUU   NNN       NNNNNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUU       UUU   NNN       NNN   000       000   FFF       FFF
RRR             RRR   UUUUUUUUUUUUUUU   NNN       NNN   00000000   FFF       FFF
RRR             RRR   UUUUUUUUUUUUUUU   NNN       NNN   00000000   FFF       FFF
RRR             RRR   UUUUUUUUUUUUUUU   NNN       NNN   00000000   FFF       FFF

```

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NDX

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```
    CCCCCCCC  000000  NN    NN  VV    VV  BBBBBBBBBB  BBBBBBBBBB
    CCCCCCCC  000000  NN    NN  VV    VV  BBBBBBBBBB  BBBBBBBBBB
CC   CC   00   00   NN    NN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NN    NN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NNNN   NN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NNNN   NN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NN    NN  VV    VV  BBBBBBBBBB  BBBBBBBBBB
CC   CC   00   00   NN  NN  NN  VV    VV  BBBBBBBBBB  BBBBBBBBBB
CC   CC   00   00   NN    NN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NN  NNNN  VV    VV  BB    BB  BB    BB
CC   CC   00   00   NN    NN    VV  VV  BB    BB  BB    BB
CC   CC   00   00   NN    NN    VV  VV  BB    BB  BB    BB
CC   CC   00   00   NN    NN    VV  VV  BB    BB  BB    BB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
      CCCCCCCC  000000  NN    NN      VV  VV  BBBBBBBBBB  BBBBBBBBBB
```

```
LL           IIIIII  SSSSSSSS
LL           IIIIII  SSSSSSSS
LL            I      SS
LL            I      SS
LL            I      SS
LL            I      SS
LL            I      SSSSSS
LL            I      SSSSSS
LL            I      SS
LL            I      SS
LL            I      SS
LL           IIIIII  SSSSSSSS
LL           IIIIII  SSSSSSSS
```

```

1 0001 0 MODULE CONVBB (
2 0002 0 IDENT = 'V04-000'
3 P 0003 0 %BLISS32[
4 P 0004 0 ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE, NONEXTERNAL=LONG_RELATIVE)
5 0005 0 ]
6 0006 0 ) =
7 0007 1 BEGIN
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: DSR (Digital Standard RUNOFF) / DSRPLUS
34 0034 1
35 0035 1 ABSTRACT: Convert a binary number into a vector of characters and
36 0036 1 return the result and character count.
37 0037 1
38 0038 1
39 0039 1 ENVIRONMENT: Transportable
40 0040 1
41 0041 1 AUTHOR: R.W.Friday CREATION DATE: May, 1979
42 0042 1

```

Revision History

:	44	0043	1	%SBTTL 'Revision History'
:	45	0044	1	!
:	46	0045	1	MODIFIED BY:
:	47	0046	1	!
:	48	0047	1	002 KFA00002 Ken Alden 07-Mar-1983
:	49	0048	1	Global edit of all modules. Updated module names, idents,
:	50	0049	1	copyright dates. Changed require files to BLISS library.
:	51	0050	1	!
:	52	0051	1	!--

CONVBB
V04-00G

Module Level Declarations

: 54 0052 1 %SBTTL 'Module Level Declarations'
: 55 0053 1
: 56 0054 1 !
: 57 0055 1

I 15
16-Sep-1984 00:10:31
14-Sep-1984 13:05:52

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]CONVBB.BLI;1

C
V

```

59 0056 1 GLOBAL ROUTINE CONVBB (BINARY_NUMBER, KHARACTERS, KHARACTER_COUNT, BASE) : NOVALUE =
60 0057 1
61 0058 1 ++
62 0059 1 FUNCTIONAL DESCRIPTION:
63 0060 1
64 0061 1     Converts 'binary_number' to a vector of characters,
65 0062 1     returning them in 'kharacters'; kharacter_count is the
66 0063 1     number of digits converted.
67 0064 1     The absolute value of 'binary_number' is converted,
68 0065 1     so that the user is responsible for handling negative numbers.
69 0066 1     The number will be converted according to the value of BASE.
70 0067 1
71 0068 1 FORMAL PARAMETERS:
72 0069 1
73 0070 1     See FUNCTIONAL DESCRIPTION
74 0071 1
75 0072 1 IMPLICIT INPUTS:
76 0073 1
77 0074 1     NONE
78 0075 1
79 0076 1 IMPLICIT OUTPUTS:
80 0077 1
81 0078 1     NONE
82 0079 1
83 0080 1 ROUTINE VALUE:
84 0081 1 COMPLETION CODES:
85 0082 1
86 0083 1     NONE
87 0084 1
88 0085 1 SIDE EFFECTS:
89 0086 1
90 0087 1     NONE
91 0088 1
92 0089 1 --
93 0090 1
94 0091 1 BEGIN
95 0092 1
96 0093 1 OWN
97 0094 1     DIGITS : INITIAL (CH$PTR(UPLIT('0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZ')));
98 0095 1
99 0096 1 MAP
100 0097 1     KHARACTERS : REF VECTOR;
101 0098 1
102 0099 1 LOCAL
103 0100 1     LEFT_TO_CONVERT;
104 0101 1
105 0102 1     .KHARACTER_COUNT = 0;
106 0103 1     LEFT_TO_CONVERT = ABS (.BINARY_NUMBER);
107 0104 1
108 0105 1 DO
109 0106 1     BEGIN
110 0107 1     KHARACTERS [..KHARACTER_COUNT] = CH$?CHAR( CH$PLUS(.DIGITS, (.LEFT_TO_CONVERT MOD .BASE)));
111 0108 1     LEFT_TO_CONVERT = .LEFT_TO_CONVERT/.BASE;
112 0109 1     .KHARACTER_COUNT = ..KHARACTER_COUNT + 1;
113 0110 1     END
114 0111 1 UNTIL .LEFT_TO_CONVERT EQL 0;
115 0112 1

```

CONVBB
 V04-000

Module Level Declarations

```

: 116      0113 2   RETURN;
: 117      0114 1   END;
  
```

!End of CONVBB

```

.TITLE CONVBB
.IDENT \V04-000\
  
```

.PSECT \$SPLITS,NOWRT,NOEXE,2

```

45 44 43 42 41 39 38 37 36 35 34 33 32 31 30 00000 P.AAA: .ASCII \0123456789ABCDEFGHIJKLMN
54 53 52 51 50 4F 4E 4D 4C 4B 4A 49 48 47 46 0000F
                                     5A 59 58 57 56 55 0001E
  
```

.PSECT \$OWNS,NOEXE,2

00000000' 00000 DIGITS: .ADDRESS P.AAA

.PSECT \$CODE\$,NOWRT,2

```

                                     0004 00000
                                     0C BC D4 00002
                                     52 04 AC D0 00005
                                     03 18 00009
                                     52 52 CE 0000B
                                     51 0C BC D0 0000E 1$:
                                     52 01 7A 00012
                                     8E 10 AC 7B 00017
08 BC41 00000000'FF40 9A 0001D
                                     52 10 AC C6 00027
                                     0C BC D6 0002B
                                     52 D5 0002E
                                     DC 12 00030
                                     04 00032
  
```

```

.ENTRY CONVBB, Save R2
CLRL @KCHARACTER COUNT
MOVL BINARY_NUMBER, LEFT_TO_CONVERT
BGEQ 1$
MNEGL LEFT_TO_CONVERT, LEFT_TO_CONVERT
MOVL @KCHARACTER COUNT, R1
EMUL #1, LEFT_TO_CONVERT, #0, -(SP)
EDIV BASE, (SP)+, R0, R0
MOVZBL @DIGITS[R0], @KCHARACTERS[R1]
DIVL2 BASE, LEFT_TO_CONVERT
INCL @KCHARACTER_COUNT
TSTL LEFT_TO_CONVERT
BNEQ 1$
RET
  
```

; Routine Size: 51 bytes, Routine Base: \$CODE\$ + 0000

```

: 118      0115 1
: 119      0116 1 END
: 120      0117 0 ELUDOM
  
```

!End of module

PROJECT SUMMARY

Name	Bytes	Attributes
\$SPLITS	36	NOVEC,NOWRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
\$OWNS	4	NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
\$CODE\$	51	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

CONVBB
V04-000

Module Level Declarations

L 15
16-Sep-1984 00:10:31
14-Sep-1984 13:05:52

VAX-11 Bliss-32 V4.0-742
[RUNOFF.SRC]CONVBB.BLI;1

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(4)

COMMAND QUALIFIERS

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

: Size: 51 code + 40 data bytes
: Run Time: 00:01.7
: Elapsed Time: 00:05.7
: Lines/CPU Min: 4153
: Lexemes/CPU-Min: 9230
: Memory Used: 23 pages
: Compilation Complete

A dense grid of approximately 15 columns and 25 rows of small, faint text. The text is mostly illegible but contains several distinct labels such as:

- CNTVMS LIS
- CNUDAT LIS
- CONTENTS LIS
- CNTVMS MSG LIS
- CNTURS LIS
- CONVBB LIS
- CONVBR LIS
- CONVBL LIS
- CONTRL LIS

The grid also contains various symbols, including vertical bars and small icons, interspersed with the text.