1983/49. Conversion of computer text files for input to the
          Government Printer's phototypesetter (Revision 1)

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Abstract

The procedure for the conversion of a PERKIN-ELMER 8/32
computer text file to a DEC DOS stream-ASCII format magnetic
tape is outlined.

INTRODUCTION

The procedure for the preparation of text on the Perkin-Elmer 8/32
computer for subsequent input to the Government Printer's phototypesetter
is as follows:

(1) Text should first be edited, and two additional symbols
     added. One of these is added to the end of each paragraph or
     heading, the other separates the elements of a table.

(2) The text input file (identified by the file extension .TXT)
     is then edited, and when in final form is copied to a type-
     setting command file (identified by the file extension .TYC).

(3) The typesetting command file is edited to replace the paragraph
     and table symbols by typesetting commands.

(4) A magnetic tape file is prepared in a form suitable for input
     to the Government Printer's phototypesetter.

(5) The magnetic tape and a marked-up copy of the text input file
     is sent to the Government Printer.

TEXT INPUT

The following special symbols are used:

$\sim$ (tilde) - delimits end of paragraph or heading
| (vertical line) - separates elements of a table

these symbols immediately follow text without intervening spaces.

There are some special symbols which cannot be printed on the
computer printer; these codes include: CTRL-F (hex 06) for an en rule
                                         CTRL-X (hex 18) for a dagger
                                         CTRL-> (hex 1E) for a degree sign.

Do not hyphenate any words; take long words over on to the next line.

Do not end a line with a required hyphen, unless this is to be
followed by a space.

Allow space for the expansion of typesetting control codes when
typing lines. Each $\sim$ requires two additional spaces, and each | three
additional spaces. If in doubt take words over on to the next line, or
leave the required number of spaces after each control code.

In many cases a row of a table may need to be split into two or
more lines. Do not split long column heads into two or more rows, as in

normal typing. Any adjustment needed is made by the typesetting program. It is not necessary to align columns in a table, although if this is possible it makes checking easier.

TYPESETTING COMMANDS

Most typesetting commands will be inserted by the Government Printer's photocomposition staff.

The following conversions are made to the .TYC file:

∿ is converted to CTRL-Gql
| is converted to CTRL-Gtab

this conversion is made using the CH command - watch for the message 'NON-BLANK CHARACTERS LOST' which signifies a line overflow. Such lines must be split. Do not attempt to print any file containing many CRTL-G (bell) codes. Each CRTL-G (bell) code causes the printer to halt for about 10 seconds while the bell tone is sounded.

PRODUCING THE MAGNETIC TAPE

OUTTAPE is a FORTRAN program which converts a normal 72-character per line text file to a file in DEC DOS stream-ASCII format.

OUTTAPE reads from the .TYC file in blocks of 150 lines.

It operates in two stages:

(1)   All-blank lines are deleted.
      A carriage return and line feed are added to the end of each text line.

(2)   On output to tape in 512-byte blocks all multiple blanks and nulls are deleted. If the number of characters in the last block is odd, a null is added.

The program is called by typing OUTTAPE and is operated as follows:

(1)   Load a tape on to the tape drive.

(2)   Enter RADIX-50 file name in response to prompt.

(3)   Enter file descriptor of input .TYC file.

(4)   As each block of lines is read in and output to tape the following information will be output to the screen:

      (a)   Number of non-blank lines input.
      (b)   Number of characters output.
      (c)   Number of 512-byte blocks output.
      (d)   Number of characters in last block.

The message 'Transfer complete' signifies that the program has terminated successfully.

The tape now comprises one or more files. The first block of each file consists of 14 bytes and contains the RADIX-50 file descriptor. The first file extension is .1 and is incremented for each subsequent file.

This header block is followed by a series of 512-byte blocks, which in turn are followed by a final block consisting of an even number of bytes (<=512).

Each file is separated by a filemark and the last file is followed by two filemarks.

OBTAINING A PRINT-OUT FROM THE MAGNETIC TAPE

If a print-out from the tape is needed it is best achieved using COPY. Proceed as follows:

(1) Rewind tape

(2) Enter COPY

(3) Enter LIST PR:

(4) Enter - IN MAG1:,512, VARIABLE
            DI
You will get an EOF message
Repeat DI for each file for which a print-out is required.

(5) Enter END - the file will be printed in hexadecimal and ASCII format.

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