

an error that previously involved three or more pairs of context would now appear as follows:

```
! Error.
(somewhere) The \top
                line
...
1.123 \The
                bottom line.
```

(If `\errorcontextlines<0` you wouldn't even see the '...' here.)

## 11. Output recycling

One more new integer parameter completes the set. If `\holdinginserts>0` when  $\TeX$  is putting the current page into `\box255` for the `\output` routine,  $\TeX$  will not move anything from insertion nodes into the corresponding boxes; all insertion nodes will stay in place. Designers of output routines can use this when they want to put the contents of box 255 back into the current page to be re-broken (because they might want to change `\vsize` or something).

## 12. Exceptions to upward compatibility

The new features of  $\TeX$  and METAFONT imply that a few things work differently than before. I will try to list all such cases here (except when the previous behavior was erroneous due to a bug in  $\TeX$  or METAFONT). I don't know of any cases where users will actually be affected, because all of these exceptions are pretty esoteric.

- $\TeX$  used to convert the character strings `^^0, ^^1, ..., ^^9, ^^a, ^^b, ^^c, ^^d, ^^e, ^^f` into the respective single characters `p, q, ..., y, !, ", #, $, %, &`. It will no longer do this if the following character is one of the characters `0123456789abcdef`.

- $\TeX$  used to insert no character at the end of an input line if `\endlinechar>127`. It will now insert a character unless `\endlinechar>255`. (As previously, `\endlinechar<0` suppresses the end-of-line character. This character is normally 13 = ASCII control-M = carriage return.)

- Some diagnostic messages from  $\TeX$  used to have the notation `["80] ... ["FF]` when referring to characters 128...255 (for example when displaying the contents of an overflow box involving fonts that include such characters). The notation `^^80 ... ^^ff` is now used instead.

- The expressions `char128` and `char0` used to be equivalent in METAFONT; now `char` is defined modulo 256 instead. Hence `char-1 = char255`, etc.

- INITEX used to forget all previous hyphenation patterns each time you specified `\patterns`. Now all hyphenation pattern specifications are cumulative, and you are not permitted to use `\patterns` after a paragraph has been hyphenated by INITEX.

- $\TeX$  used to act a bit differently when you tried to typeset missing characters of a font. A missing character is now considered to be a word boundary, so you will get slightly more diagnostic output when `\tracingcommands>0`.

- $\TeX$  and METAFONT will report different statistics at the end of a run because they now have a different number of primitives.

- Programs that use the string pool feature of TANGLE will no longer run without changes, because the new TANGLE starts numbering multicharacter strings at 256 instead of 128.

- INITEX programs must now set `\lefthyphenmin=2` and `\righthyphenmin=3` in order to reproduce their previous behavior.

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## Public METAFONT Available

Editor's note: Klaus Thull announces that, as of 6 October, Public METAFONT is available. Public METAFONT compiles with Turbo Pascal v.4 or 5 and has passed the trap test. As with its companion, Public  $\TeX$  (see *TUGboat* 10#1, pp. 15-22), this program has virtual memory (and is also somewhat slow).

Work is going on at sites other than Klaus' for improving performance and video, as has been the case with Public  $\TeX$ . Distribution is now being handled by DANTE, the German speaking  $\TeX$  users association. The changefile for version 0 of Public METAFONT is available at

Bitnet: `listserv@dhdurz1`