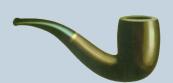


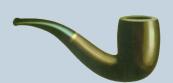
Fonts of Future

Edifying Thoughts of Tobacco Smokers

Bogusław Jackowski Marek Ryćko



J.S. Bach's poem "Edifying Thoughts of a Tobacco Smoker" (Erbauliche Gedanken eines Tabakrauchers) is an example of a naïve yet charming and commendable philosophy. We borrowed the title from it, because our remarks concerning TFX fonts one can also consider naïve...

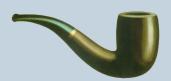


$\mathcal{N}_{\mathcal{T}}\mathcal{S}$ needs NFS

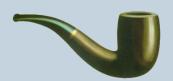
We firmly believe that "a new typesetting system" necessitates designing a "new font system," i.e., a new model of fonts.

A new model of fonts may have an influence for the design of a "TNTS" – a "truly new typesetting system."

This implies that a "TNTS" should include also a successor of a new METAFONT.



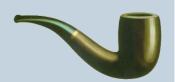
256 characters, 255 widths, 16 heights, 16 depths, 64 italic corrections, ligatures and kerns hard-wired into TFM files (difficult to control for a TEX user), no information about the bounding box of a letter in a metric file (not speaking about the details of the outline of a character), fixed encoding, oversimplified \accent mechanism, no direct interface between TEX and METAFONT, etc.



There is no such thing as "left italic correction":

mug junk chat

mug {\it junk\/} chat



There is no such thing as "character axis":









Why does using fancy styles, such as swash letters, caps-small-caps, nautic digits, etc., mean switching fonts?

There is no reason or rhyme in it.



Why have math symbols to be constructed out of pieces? In some applications a user must bother about it, e.g., if a given formula is to be cut out using a cutting plotter, but not only.

The illustration on the next page shows the results of non-continuous brace change: in the first formula the brace (built out of two chars) has proper size, in the second—the brace (single char) is too small.



$$x_i = \sigma \left(\sum_{j=1}^n w_{ij} x_j + u_i \right)$$

$$\min_{\pi} \left\{ J(\pi, x_0) = \lim_{N \to \infty} E\left(\sum_{k=0}^N \alpha^k \cdot g(x_k, u_k, w_k) \right) \right\}$$

$$\lim_{N\to\infty} \mathbb{E} \left(\sum_{k=0}^{n} w_{ij} x_{j} + \sum_{k=0}^{n} \alpha^{k} \right)$$



Challenge (or benchmark)

Examples of tasks that seem to be unbeatable for contemporary typesetting systems:

- math
- calligraphy
- dance notation
- music notation











René Magritte's pipe is acually not a pipe. Is our lecture actually a lecture about fonts of tomorrow?

