



# TYPE1 FONT COLLECTION FOR T<sub>E</sub>X

or adaptation of the fonts  
from the Ghostscript distribution

Bogusław Jackowski

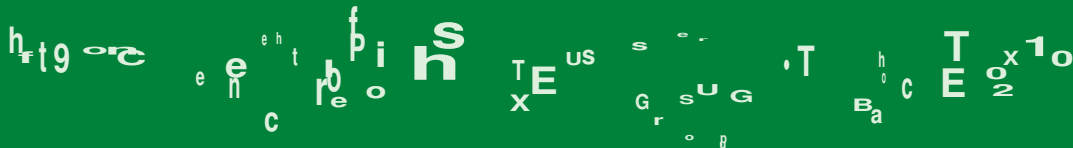
Janusz M. Nowacki

Piotr Strzelczyk

h<sub>t</sub>g  
c o m p a n e  
s i h  
P h  
E T X U S r G U S  
c B a 0 T 0<sup>E</sup> x<sub>2</sub>  
0 1

With Ghostscript (from version 6.0) we get a free collection of 30 fonts, in most cases authorized by URW. These fonts contain Polish diacritic characters.

To use them with  $\text{T}\text{E}\text{X}$ , one needs to prepare some necessary files: TFM, ENC and MAP. This can be done, for example, with the help of the TOIL package.





NimbusSanL-Regular  
**NimbusSanL-Bold**  
*NimbusSanL-Regultalic*  
***NimbusSanL-BoldItalic***

NimbusSanL-ReguCondensed  
**NimbusSanL-BoldCondensed**  
*NimbusSanL-ReguCondltalic*  
***NimbusSanL-BoldCondltalic***

NimbusRomNo9L-Regular  
**NimbusRomNo9L-Medium**  
*NimbusRomNo9L-RegularItalic*  
***NimbusRomNo9L-MediumItalic***

NimbusMonL-Regular  
**NimbusMonL-Bold**  
*NimbusMonL-RegularOblique*  
***NimbusMonL-BoldOblique***

URW Gothic L-Book  
**URW Gothic L-Demi**  
*URW Gothic L-Book Obli*  
***URW Gothic L-Demi Obli***

**Charter BT-Bold**  
***Charter BT-Bold Italic***  
Charter BT-Roman  
*Charter BT-Italic*

*URW Chancery L-Medi Italic*

That's all, folks!

9 t h C d e r o f t o p h e s h E X s e s G h . C B O T E<sup>10</sup>

# That's all, folks!

Investigative users, however, should carefully study the construction of characters, the details like the number of nodes, the shape of the Bézier curves and how they join, hinting, etc.





The collection contains 30 fonts, with about 300 characters each. Let's assume that it takes about 1 minute at average to judge a single character, so...

$$30 \times 300 \times 1 = 9000 \text{ minutes (150 hours)}$$

This means that after 20 days we know what the fonts quality is and we may have a plan for their modification.

# “Ogonek” characters

Łą łą Łą

Bookman

Century

Times

Łą łą Łą

Swiss

Swiss Condensed

Palatino

Łą łą

Courier

Chancery

g t h C o r e r e h t s p i b E T x r e g s r u p G T S E X 0 2 1 0 U C H 0

# “Ogonek” characters

Ł ł

Bookman

Ł ł

Century

Ł ł

Times

Ł ł

Swiss

Ł ł

Swiss Condensed

Ł ł

Palatino

Ł ł

Courier

Ł ł

Chancery

The shape of the tail is  
a good cause for a crusade

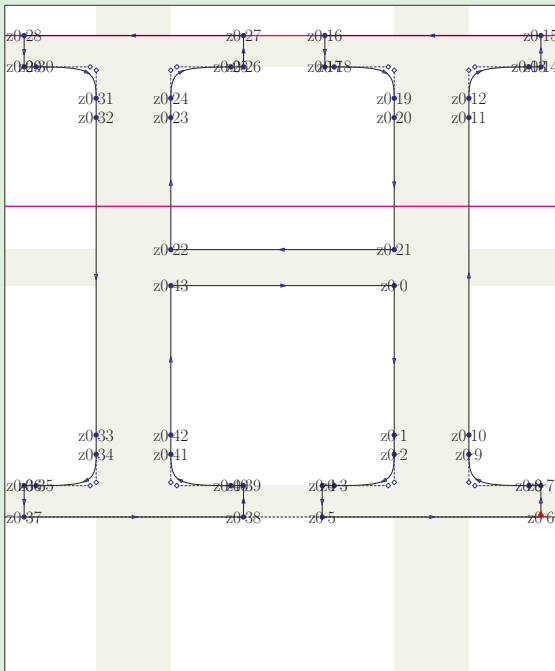


the original version

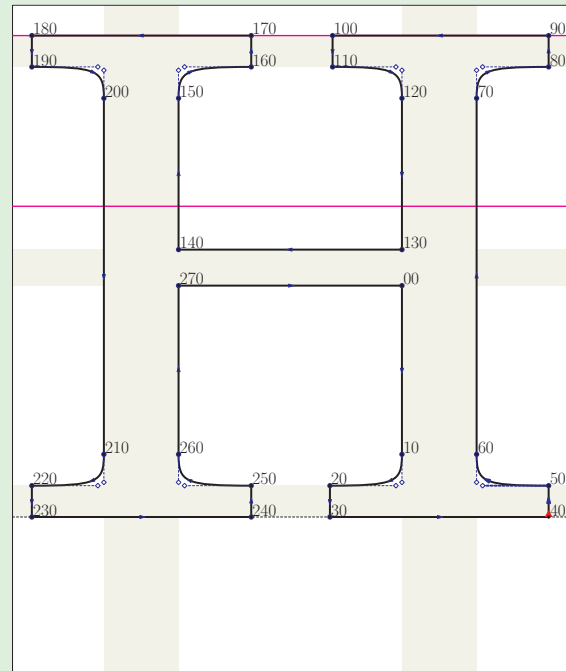


modified version

Most of the Ghostscript collection fonts have been constructed with too many nodes which are redundant – removing them does not change the shape of the glyphs.

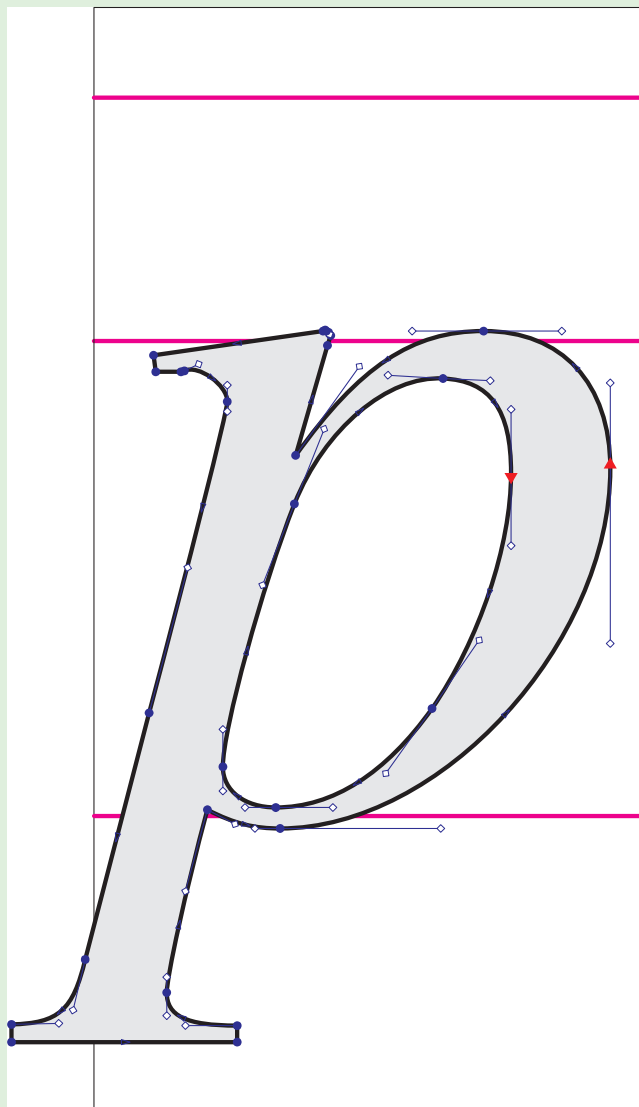


the original version



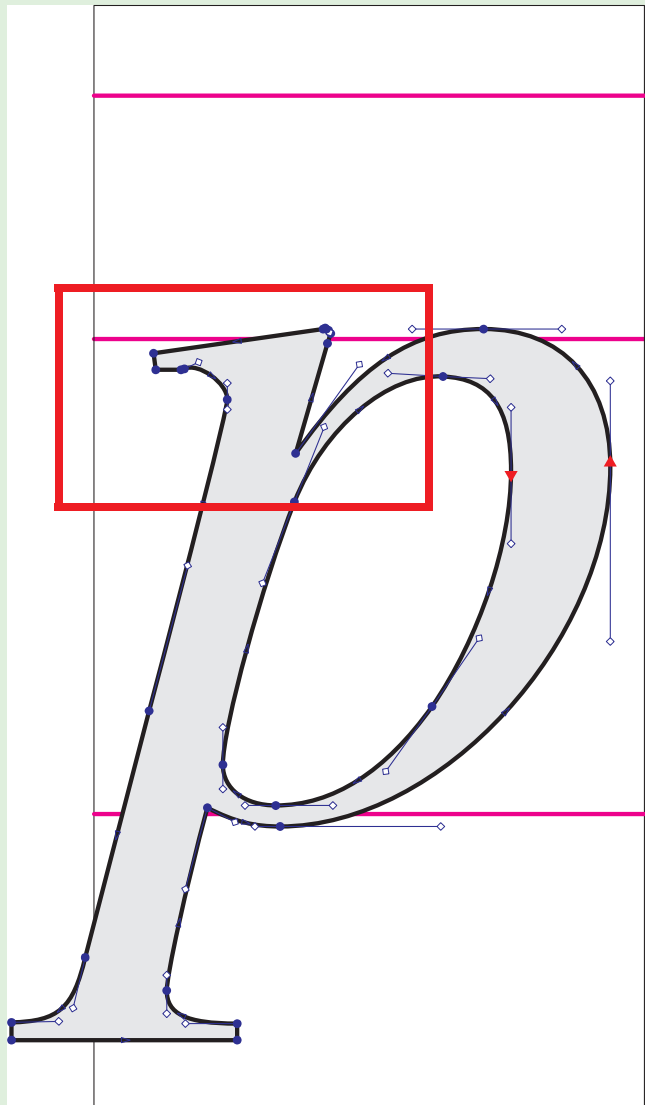
modified version

Some  
characters  
seem correct



NimbusRoman (Times)

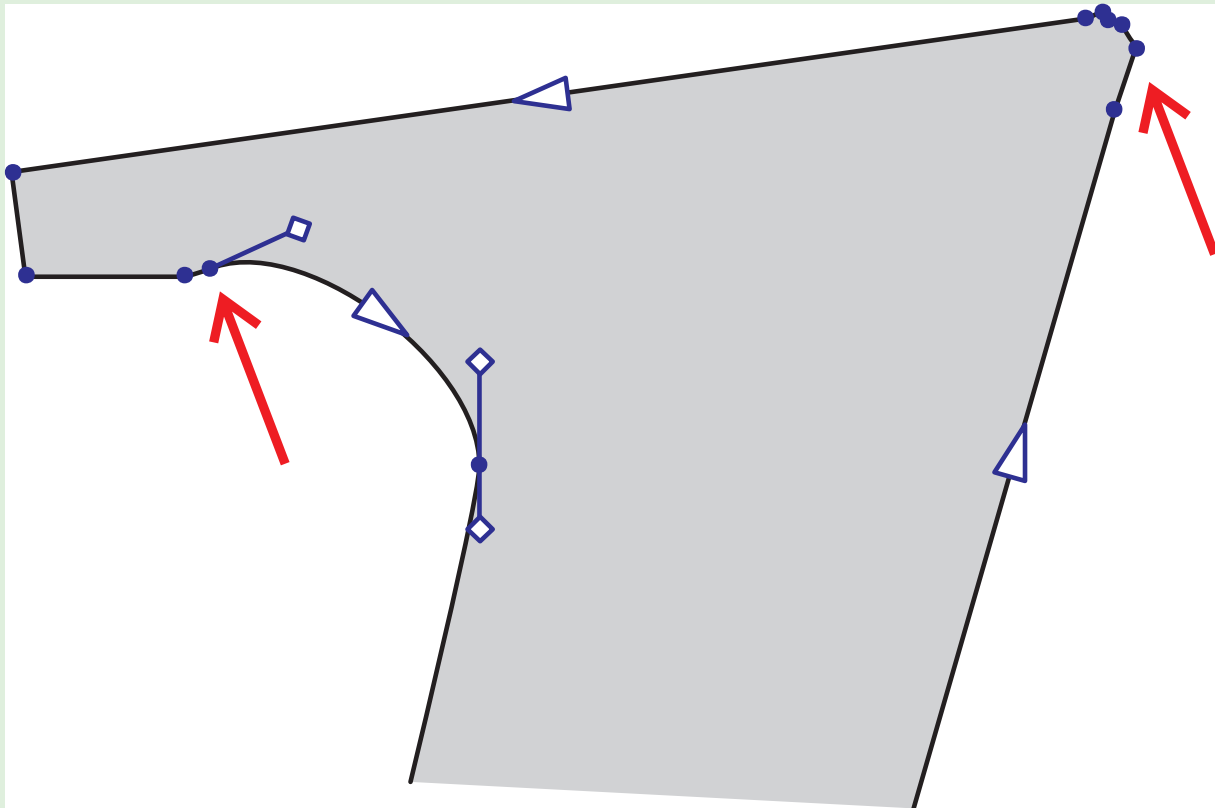
Some  
characters  
seem correct,  
but...



Nimbus Roman (Times) Italic

h C o f e c n f e P o i s X h U s e r G r o p U G . S P C h E T X 2 q

There are too much nodes and there's the incorrect run of the path.



Nimbus Roman (Times) Italic

t<sub>9</sub> c h e r e n o t h o i r x u s e r G o p G U S B C a H O 0 0





Dot higher, dot lower

Giżycko!;

Font NimbusRomNo9L-Regular

Gĩżycko!;

Font NimbusMonL-Regular

**Giżycko!;**

Font NimbusSanL-Regular

Dots after adjusting

Giżycko!;

Font QuasiTimes-Regular

Giżycko!;

Font QuasiCourier-Regular

**Giżycko!;**

Font QuasiSwiss-Regular

To arrange accents properly, it was necessary to reconstruct some of the characters and to create all of the accented letters (accents position) anew.

In “Swiss” the widths of the “dotlessi” and “i” characters are different without a good reason. There are more such surprises.

Most fonts of the type “Condensed” show a “vise” effect. It means non-proportional geometry changes of the characters: for example vertical rules get narrower, but the horizontal ones do not.

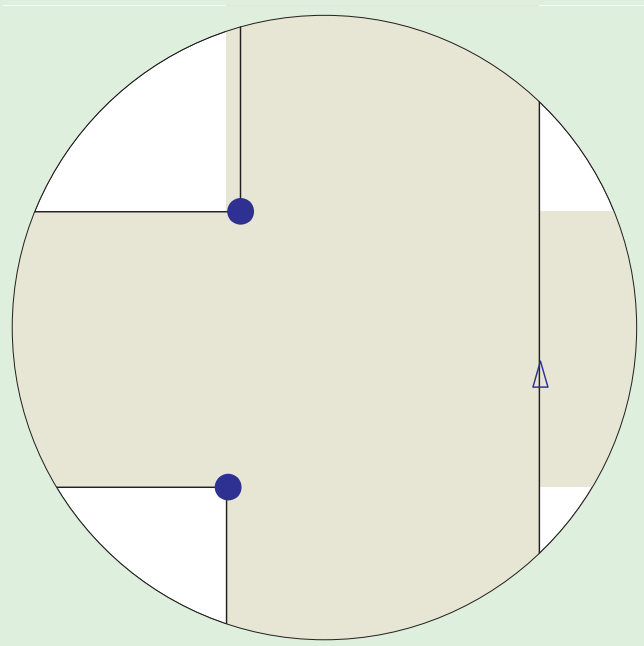
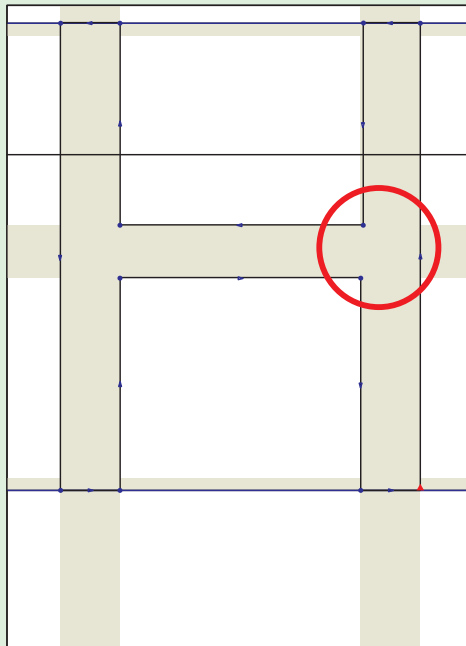
**BACHOTEK**

the original version

**BACHOTEK**

modified version

Most often occurring errors are variable stem widths. The elements which should have the same size, differ about  $\pm 1$  unit, what causes incorrect discretization.



It was necessary (for  
T<sub>E</sub>X users) to complete fonts  
with ligatures, some Greek  
characters, mathematical characters...

$\alpha$   $\beta$   $\delta$   $\pi$   $\ell$   $\infty$   
 $\Delta$   $\Pi$   $\Sigma$   $\Omega$   
*ff* *fi* *fl* *ffi* *ffl* *fk*  
 $\leq$   $\triangleleft$   $\emptyset$   $\geq$

QuasiSwiss-RegularItalic

The TFM specification permits 16 nominal heights and 16 nominal character depths. For example, “Chancery” contains 120 heights and 80 depths. Optimal reduction of the sizes can be done with METAFONT, during the metric files generation.

The best solution is to design new tables of sizes compatible with the  $\text{T}_{\text{E}}\text{X}$  requirements.



In national characters it was  
necessary to set up kerning pairs.

We can use the “Quasi” fonts to typeset  
in languages which use Latin characters.

The result of the adaptation work are the following fonts:

QuasiBookman-Roman

**QuasiBookman-Bold**

*QuasiBookman-Italic*

***QuasiBookman-BoldItalic***

QuasiCentury-Roman

**QuasiCentury-Bold**

*QuasiCentury-Italic*

***QuasiCentury-BoldItalic***

QuasiPalatino-Roman

**QuasiPalatino-Bold**

*QuasiPalatino-Italic*

***QuasiPalatino-BoldItalic***

QuasiSwiss-Regular  
**QuasiSwiss-Bold**  
*QuasiSwiss-RegularItalic*  
***QuasiSwiss-BoldItalic***

QuasiSwiss-CondensedRegular  
**QuasiSwiss-CondensedBold**  
*QuasiSwiss-CondensedItalic*  
***QuasiSwiss-CondensedBoldItalic***

QuasiTimes-Regular  
**QuasiTimes-Bold**  
*QuasiTimes-RegularItalic*  
***QuasiTimes-BoldItalic***

QuasiCourier-Regular  
**QuasiCourier-Bold**  
*QuasiCourier-RegularItalic*  
***QuasiCourier-BoldItalic***

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