

## “With a little help from the wizards”

### Panel discussion with Hermann Zapf and Donald Knuth

Taco Hoekwater

The highlight of this Tuesday and possibly of the complete conference was the panel discussion with Hermann Zapf and Donald Knuth. The discussion was presented by Hans Hagen and Volker Schaa, but almost all of the actual talking was done by Zapf and Knuth.



Knuth started off by explaining the problems faced in digitizing curves. Basically he demonstrated the material covered in the ‘Discreteness and discretion’ chapter of the *Metafont* book, but it is nice to hear Knuth actually teaching this subject.

The first large subject was Hermann Zapf’s *OptimaNova*. Fifty years after the first version of the *Optima* font, Linotype inc. has enabled Zapf to design a new version of the font without the limitation that were imposed by the production processes half a century ago. The new version of the font has

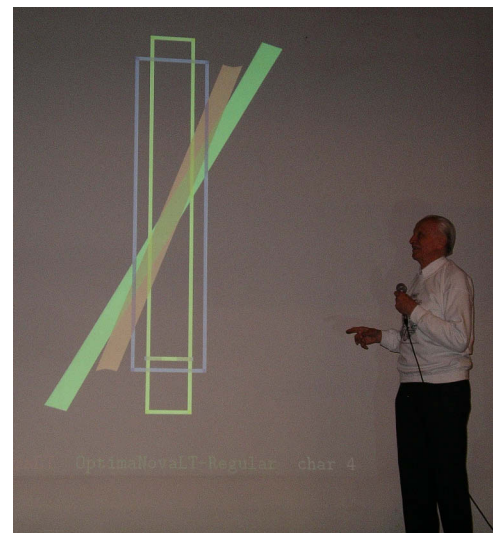
been released as an OpenType font. Apart from some shape corrections, it contains a number of extra glyphs that people have come to expect from modern fonts.

We had a good time listening to recollections of the woes of type design in the early fifties, and how it came to be that it took a whole eight years before the first version of *Optima* was released. It turns out that the original digital version of *Optima* was created without any supervision by Zapf himself!

In order to visualize the differences between the old and the new version, Hans had made a presentation with on each page, the same glyph from both the old and new version of the font. Both glyphs overlapped each other and were partially transparent, so that the differences between both versions became clear in a single glance. Using a number of these slides, Zapf spent a good time explaining in detail explain why ‘the old version is worse than the new version’.

At the moment, Hermann Zapf is busy working on a similar cleanup project for his *Palatino* font family. When the final *PalatinoNova* family will be released, the list of extra glyphs will be quite a bit longer than for *OptimaNova*.

The other large subject was the *Latin Modern* font family. Using a similar series of slides with overlapping glyphs as visual aids, Donald Knuth (and Zapf) were invited to give comments on the new glyphs as designed by Bogusław Jackowski and his team. Knuth explained that a number

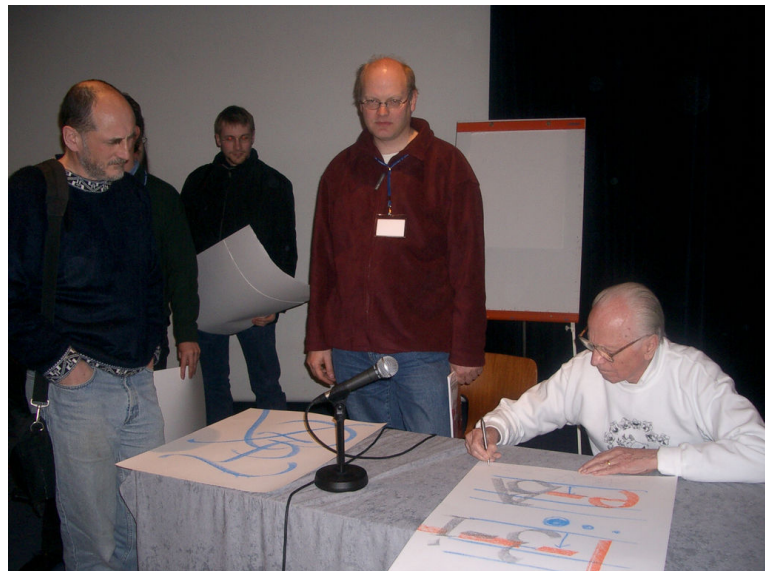


of the strange properties of Computer Modern are side-effect of his attempt to make his version as faithful as possible imitation of the original Monotype font.



Knuth then told us a nice tale explaining how the first version of Computer Modern was made by manually tracing projected 35mm slides of typeset text and then digitising the resulting drawing. Not until much later did he have access to the original lead characters of the font. Of all the glyphs in Computer Modern, he is least happy with the shape of the dollar-sign.

The panel ended off with Boguslav showing a number of the new glyphs in Latin Modern for perusal by Knuth and Zapf. In total the session lasted two full hours, with not a single boring minute in it.



Hermann signing his 'onstage' drawings



Panel discussion with Hermann Zapf and Donald Knuth: 'With a little help from the wizards'  
Hermann Zapf, Donald Knuth