Editor’s note: Biuletyn GUST is the publication of GUST, the Polish language \TeX\ user group. Their web site is http://www.gust.org.pl.

Biuletyn GUST 25 (2008)

Ulrik Vieth, Zrozumieć estetykę składu matematyki [Understanding the aesthetic of math typesetting]; pp. 5–21

One of the core strengths of \TeX\ is the ability to typeset math to a very high level of aesthetic standards. However, this level of quality not only depends on \TeX\ alone, but relies on close interaction between sophisticated algorithms (built into the \TeX\ engine) and the fine-tuning of metric information (built into math fonts), which is not so well understood.

At a previous conference Bogusław Jackowski presented a paper, “Appendix G Illuminated”, in which he translated the formal description of \TeX\’s algorithms for math typesetting into a visual representation, illustrating the mathematical and geometric relations between the various font metric parameters. While this helps to improve the understanding, it doesn’t resolve the question of how to determine good values of font metric parameters when designing a new font.

In this paper, we analyze the values of these parameters in existing fonts and draw some conclusions about the underlying design principles. In the end, we hope to obtain a recipe for how to determine good values of font metric parameters based on simple design parameters such as the x-height or rule thickness.

Jonathan Kew, Co nowego w świecie XE\TeX\-a? [What’s new in the XE\TeX\ world?]; pp. 22–27

This presentation will review the current state of the Xe\TeX\ engine and associated packages, with an emphasis on features that have been added or updated over the past year, and will be included in the \TeX\ Live 2008 release. These include updated OpenType support, synthetic font styles, the polyglossia macro package, updated math font support, built-in source/PDF synchronization support, and more.

We will also look at how Xe\TeX\ fits in with other \TeX\ engines and with the wider software world. Xe\TeX\ is not the only extension of \TeX\ providing Unicode and modern font support, but it is based on a quite different approach from others, both old (Omega) and new (Lua\TeX). Each has both strengths and weaknesses, which users should consider when choosing the appropriate tool for their particular needs.

Karel Piška, Testy fontów \TeX\ Gyre (wiosna 2008) [Tests of the \TeX\ Gyre fonts (Spring 2008)]; pp. 28–33

The contribution presents the results of verification of previous and newest versions of the \TeX\ Gyre fonts, shows examples of various testing techniques, overviews suggestions and bugs; many of them, reported earlier, have already been fixed in the recent releases. “Synoptic tables” have been produced to list a full glyph repertoire to check it for correctness of shapes, completeness, consistency between regular, bold, italic, and bold italic faces, etc. We will also discuss the status and the future of the Cyrillic and Greek parts.

Mateusz Kmiecik, Od Logo do MetaPost [From Logo to MetaPost]; pp. 34–40

The Logo language (turtle graphics) is recommended for teaching of informatics at secondary schools in Poland. It is a quite primitive language so young people quickly hit the limits when programming more advanced pictures. Could MetaPost be used to this end?

Piotr Krakowiak and Tomasz Łuczak, Dragonia Magazine – kulisy redakcji [The Dragonia Magazine backstage]; pp. 41–43

The Dragonia Magazine is a monthly free e-zine published since 2006. It is devoted to GNU/Linux and free software. Most of the issues were typeset with Scribus, one with InDesign but the latest are typeset with \LaTeX. We will show the abilities and restrictions of typesetting of a periodical of several dozen pages with Scribus, the reasons behind the migration to typesetting with \LaTeX\ and the results—or what was gained and what was lost.

Jacek Kmiecik, Dostosowanie \LaTeX-a do konkretnych potrzeb [The tuning of \LaTeX\ to one’s purposes]; pp. 44–52

A few of the simplest ways for tuning the canonical \LaTeX\ macros to one’s own typographical requirements will be presented.

Jonathan Kew, \TeX\ works: obniżenie progu dostępności [\TeX\works: Lowering the barrier to entry]; pp. 53–59

Published in TUGboat 29:3.

Grzegorz Murzykowski, Styl bibliograficzny pl64.bst [A bibliography style: ‘pl64.bst’]; pp. 59–60

I generated the pl64n BIB\TeX\ bibliography style (‘n’ for natbib) with makebst and then fine tuned some details by hand to make the style as compliant
with the spirit of Polish standards as possible, making my own choices where not determined by the standards or not available with makebst.

Grzegorz Murzynowski, O składaniu listów E. Szarzyńskiego trojako: estetycznie, \TeX -owo, troszkę hackersko [Threefold on typesetting of E. Szarzyński’s letters: aesthetic-, \TeX-, and a little hacker-wise]; pp. 61–66

The “102 listy” by E. Szarzyński is a series of letters which he wrote to himself just before committing suicide. Fairy tales on colorful papers with calligraphic handwriting have been bound into a book which by being richly adorned reminds one of medieval incunabula. Preparing it for print we decided on one color (black) ink and instead of reproducing the adornments to provide their descriptions which gives our edition a rather conceptual character.

I intend to report on fonts we used and typographical conventions which aim at a clear separation of the editorial level, which describes the original, from Szarzyński’s text, at the same time trying to reflect the conventions used by the author.

The engine I am using since at least half a year is \TeXX, currently at version 0.997. I am using the availability of the system OpenType fonts, the possibilities to easily declare the features available through fontspec and the new conveniences offered by \TeXX like the pseudo-feature “slant”. I will describe how \TeXX serves the aesthetic of a book.

I intend to give the audience a few words on the basic typesetting parameters, such as \tolerance and \emergencystretch in the context of their role for the appearance of the work.

If time allows, I will present a few tricks, such as typesetting of a fragment longer than a page in such a way that all “t” characters are typeset as crosses (as in Szarzyński’s original).

Jean-Michel Hufflen, XSLT 2.0 vs. XSLT 1.0; pp. 67–77

This article focuses on the new features introduced by version 2.0 of XSLT, the language of transformations used for XML texts. We show why these new features — groups of XML subtrees, functions, interface with schemas — ease the development of some applications. Some examples, related to bibliography management, will be demonstrated.

Marcin Woliński, bayerancki — mój pierwszy font [bayerancki — my first font]; p. 78

The subject of this talk is my first attempt at creating a font. The font is named “bayerancki” and is (loosely) based on Herbert Bayer’s “Universal” from 1925. The font has been prepared with MetaType1.
(the primary funding project of LuaTeX code development) is that we need to support OpenType fonts with more than average features in ConTeXt (needed by Oriental \TeX\). In this talk I will reflect on the possible use, abuse and/or misuse of OpenType fonts, the complications in implementing the standard(s), and the consequence for \TeX\ users.


HANS HAGEN and TACO HOEKWATER, Lua z \TeX-em i Con\TeXt-em [The luaification of \TeX\ and Con\TeXt]; pp. 114–123 Published in TUGboat 29:2.

HANS HAGEN, TACO HOEKWATER, and VOLKER SCHAA, Font Euler na nowo: współpraca z Hermanem Zapfem [Reshaping Euler: A collaboration with Hermann Zapf]; pp. 124–128 Published in TUGboat 29:2.

JEAN-MICHEL HUFFLEN, \TeX\-owe narzędzia składu dla języków Dalekiego Wschodu [Asian \TeX\-like typesetting engines]; pp. 129–131

In order to extend M\TeX\ to languages of the Far East, we are experimenting with \TeX\ engines for them—e.g., \p\TeX\—after attending the first Asian \TeX\ conference. We give a demonstration of that.

Paweł Jackowski, \TeX\: śliczności i dziwności [\TeX\: Beauties and oddities]; pp. 140–144

See the \TeX\ Pearls web page: http://www.gust.org.pl/projects/pearls.

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ULRIK VIETH, Matematyka OpenType iluminowana [OpenType Math Illuminated]; pp. 7–16

Published in TUGboat 30:1.

JEAN-MICHEL HUFFLEN, Wprowadzenie do XQuery [Introduction to XQuery]; pp. 17–25

XQuery is a query language for data stored in XML form. It can be used to search such documents and arrange the result, as an XML structure or simple text (possibly suitable for a \TeX\ engine). Like XSLT 2.0, it is based on XPath 2.0. We propose an introduction to XQuery, and some comparisons with XSLT to allow readers to discern the applications for which XQuery is suitable.

JEAN-MICHEL HUFFLEN, Jak jest zorganizowana dokumentacja MIBiHTeXa [How MIBiHTeX’s documentation is organised]; pp. 26–30

MIBiHTeX’s documentation is planned to be multilingual—that is, written in several languages—and to be able to share as many examples as possible. Different people can write translations of the original English documentation in parallel. In addition, we show how the translations of this documentation can be updated if need be. This documentation can be used as printed text or an online document. The features for managing this documentation can be reused for other programs. In a first part, we explain our requirements in detail. Then we show how they are implemented.

MAREK RYĆKO, Projektowanie programowalnych aspektów oprogramowania typograficznego [Designing programmable aspects of typographic software]; pp. 31–33

It has been 32 years from the time when Donald Knuth started to design and write a typographic system, consisting of a program for computer typesetting, and a program for creating character shapes. Those programs are still in use now and a lot of effort is put into creating their contemporary versions.

One of the recent achievements in programming in the typographic area is a new version of the MetaPost program, for creating vector graphics. The effort went into separating the program code into a library, called MP\lib, and a small program, MetaPost, that uses this library.

In the talk I plan to look closely at the current implementation of MP\lib (version 1.110) from the software designer point of view. I will show, in a step-by-step style, a possible way of thinking in designing a new program, that will include a functionality of MetaPost/MP\lib, but will be created using programming techniques and tools that were not available 32 years ago. The design will be object-oriented and based on a very high-level programming language.

The result of the design process, carried on in the presented way, will be transparent program code, easily understandable, extendable, and easy to use as a part of other programs and systems.

PHILIP TAYLOR, Preprocessor parshape [A Parshape Pre-processor]; pp. 34–36

\parshape is a powerful but potentially verbose primitive that provides the hooks necessary for wrapping text around graphics or other figures. When the outline of the inserted figure is rectangular, considerable simplification can be accomplished by providing a \parshape pre-processor in \TeX.

JEAN-MICHEL HUFFLEN, Skład wielokierunkowy w XSL-FO [Multi-directional typesetting in XSL-FO]; pp. 37–40

XSL-FO is an XML format that aims to describe high-quality print output. This article complements the introduction to XSL-FO given at EuroBacho\TeX
2007. We show how XSL-FO allows users to typeset texts belonging to different writing systems: from left to right, from right to left, etc. We compare this implementation to \TeX-like typesetting engines, e.g., \TeX--\Xe\TeX.

Ryszard Kubiak, Tworzenie dokumentacji oprogramowania dla użytkowników w \La\TeX i Hyperlatexu [Creating software documentation for users with \La\TeX and Hyperlatex]; pp. 41–46

A \La\TeX-based notation is shown in the article as a language for writing source versions of software manuals for its users. Books or brochures as PDF files can be prepared simply by using \TeX and their HTML version can be generated from the same source files by calling Hyperlatex from the Emacs editor. The author describes his experience in using this technology.

Chris Rowley, Składanie poza \texttt{\textbackslash box}-em: zaczyn dyskusji [Typesetting outside the \texttt{\textbackslash box}: A discussion item]; pp. 47–49

There are some fundamental problems in basing the future of high-quality, highly-automated typographic software on extending the monolithic and programmatic paradigm of current \TeX-related software developments.

It is therefore time to take seriously other paradigms and strategically different software architecture, moving on to a development path that will attract and exploit both the typographic and programming expertise of \TeX gurus and also other sources of high-quality software design for document processing.

Paweł Jackowski, \TeX: śliczności i dziwności [\TeX: Beauties and oddities]; pp. 59–65

See the \TeX Pearls web page: \url{http://www.gust.org.pl/projects/pearls}.