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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 22, 2005

PAWEŁ JACKOWSKI, Ciekawe pętle i iteracje na drugą nóżkę [Interesting loops and iterations]; pp. 3–6

TOMASZ ŁUCZAK, Slax-TL — budowa, rozwój i wykorzystanie w praktyce [Slax-TL — structure, development and usage]; pp. 7–11

WOJCIECH MYSZKA, \LaTeX a logotyp Politechniki Wrocławskiej [\LaTeX and the Wrocław University of Technology logotype]; pp. 12–16

The authorities of the Wrocław University of Technology (WUT) has published Guidelines for Use of the University logotype. The guide contains not only the history and very formal description of the WUT's logo but also examples of acceptable and unacceptable use and templates. The question for \LaTeX users are: 'how to use \TeX tools for preparing templates of documents following the guide?'; 'how to use Pantone (spot) colors and prepare material for printers?'; 'how to choose and prepare optimal \LaTeX slide environments following PowerPoint templates?'; and 'how to mimic all these Office tools?' The author has prepared a web environment using (pdf) \LaTeX for generating stationery (business cards, letterhead, envelope). Some questions still remain open — for example, an elegant way to change page layout between the first and next pages.

JEAN-MICHEL HUFFLEN, MIBIB \TeX in Scheme; pp. 17–22

We present the main functions of MIBIB \TeX 's implementation using Scheme. In particular, that allows us to see how the modules are organised and how to run the different parts of MIBIB \TeX step by step. Let us recall that MIBIB \TeX deals with several data formats (syntaxes w.r.t. \TeX , bibliography files, XML) and we show how such coexistence is managed.

JEAN-MICHEL HUFFLEN, \TeX 's language within the history of programming languages; pp. 23–32

We connect some representative statements of \TeX 's language to analogous features belonging to other programming languages, from a historical point of view. Some features that look strange now are explained easily if we consider the era when \TeX was created. By comparing programming in \TeX with other paradigms, we also show what \TeX can do easily and what is tedious for it.

BOGUSŁAW JACKOWSKI and JANUSZ M. NOWACKI, Latin Modern fonts: how less means more; pp. 33–39

This article concerns the latest release of the Latin Modern family of fonts. At present the LM family consists of 57 fonts, each containing 665 glyphs on the average, mainly diacritics. For the first time source files for the glyphs were released as well (the LM fonts were developed with the MetaType1 system, which is based on MetaPost).

TOMASZ BARBASZEWSKI, Oprogramowanie otwarte. Dlaczego czasem nam nie idzie? [Why it is sometimes hard to succeed with open source software]; pp. 40–45

KRZYSZTOF LESZCZYŃSKI, Świat parserów [The world of parsers]; pp. 46–52

ANDRZEJ TOMASZEWSKI, Sto pociech i dwieście utrapień z realizacją pomysłów redaktora [Implementing editor's ideas — lots of fun, sometimes even more trouble]; pp. 53–54

PIOTR BOLEK, IPC w \TeX u [IPC in \TeX]; pp. 55–58

TACO HOEKWATER, METAPOST developments; pp. 59–63

The METAPOST system (by John Hobby) implements a picture-drawing language very much like that of METAFONT except that it outputs Encapsulated PostScript files instead of run-length-encoded bitmaps. METAPOST is a powerful language for producing figures for documents to be printed on PostScript printers, either directly or embedded in \TeX documents. It includes facilities for directly integrating \TeX text and mathematics with graphics.

JEAN-MICHEL HUFFLEN, Introduction to XSLT; p. 64

We propose a didactic demonstration of XSLT, the language of transformations used for XML texts. We use the `xsltproc` program, built via the `libxml2` library. Both are written using the C programming language and are parts of the Gnome project. Both

are running on Windows and Linux, but our demonstration is performed on the latter.

DAVID KASTRUP, The `bigfoot` bundle for critical editions; pp. 65–70

The \LaTeX package `bigfoot` and supporting packages solve many of today's problems occurring in the contexts of single and multiple blocks of footnotes, and more. The main application is with philological works and publications, but simpler problems can be solved painlessly as well without exercising all of the package's complexities. For other problems not yet tackled in this area, a solid framework is provided.

DAVID KASTRUP, Designing an implementation language for a \TeX successor; p. 71

Managing the complexity of \TeX 's codebase is an arduous task, so arduous that few mortals can hope to manage the underlying complexity. Its original author's computational roots date back to a time where the maturity and expressive power of existing programming languages was such that he chose to employ the assembly language of a fictional processor for the examples in his seminal work *The Art of Computer Programming*. In a similar vein, \TeX is written in a stripped-down subset of a now-extinct Pascal dialect. Current adaptations of the code base include more or less literal translations into Java (`NTS` and `ex \TeX`), C++ (the Omega-2.0 codebase), mechanically generated C (`Web2C`) and a few others. In practically all currently available cases, the data structures and control flow and overall program structure mimic the original program to a degree that again requires the resourcefulness of a highly skilled programmer to manage its complexity. As a result, almost all of those projects have turned out to be basically single-person projects, and few projects have shown significant progress beyond providing an imitation of \TeX . It is the persuasion of the author that progressing significantly beyond the state of the art as represented by \TeX will require the expressiveness and ease of use of a tailor-made implementation and extension language. Even a language as thwarted as Emacs Lisp has, due to its conciseness, rapid prototyping nature, extensibility and custom data types and its coevolution with the Emacs editor itself, enabled progress and add-ons reaching far beyond the original state as conceived by its original authors. This talk tries to answer the question what basic features an implementation platform and language for future typesetting needs should possess.

BARBARA BEETON, KARL BERRY, DAVID CARLISLE, TACO HOEKWATER, DAVID KASTRUP, BOGUSŁAW JACKOWSKI, KRZYSZTOF LESZCZYŃSKI, FRANK MITTELBACH, PETR OLŠÁK, BERND RAICHLE, MARTIN SCHROEDER, PHILIP TAYLOR, Pearls of \TeX programming; pp. 72–79

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Biuletyn GUST 23, 2006

JONATHAN KEW, The $X_{\text{q}}\TeX$ project: typesetting for the rest of the world; pp. 3–8

This paper will introduce the $X_{\text{q}}\TeX$ project, an extension of \TeX that integrates its typesetting capabilities with the Unicode text encoding standard, supporting all the world’s scripts, and with modern font technologies provided by today’s operating systems and text layout services.

$X_{\text{q}}\TeX$ offers the potential to be “ \TeX for the rest of the world” in several senses, as will be discussed and demonstrated. Much of the intimidating complexity of managing a \TeX installation — in particular, the process of installing and using new fonts — is eliminated by $X_{\text{q}}\TeX$ ’s integration with the host operating system’s font management. This greatly reduces the “barrier to entry” into the \TeX world for many non-technical users, and provides a richer and more flexible typographic environment.

Because $X_{\text{q}}\TeX$ is based on Unicode, the universal character encoding standard, and uses OpenType and AAT layout features in modern fonts to support complex non-Latin writing systems, it can work with Asian, Middle Eastern, and other traditionally “difficult” languages just as readily as with European languages.

$X_{\text{q}}\TeX$ was initially designed and implemented for Mac OS X, leveraging some key technologies available on that platform. However, this meant it was available only to a fairly small minority of potential users. However, with the introduction of $X_{\text{q}}\TeX$ for Linux, the benefits of $X_{\text{q}}\TeX$ become available to a new and wider community of users.

BOGUSŁAW JACKOWSKI and JANUSZ M. NOWACKI, Rodzina fontów Latin Modern [The Latin Modern font family]; pp. 9–12

The Latin Modern family of fonts is a collection of fonts, based on Donald E. Knuth’s Computer Modern family. At present, Latin Modern fonts are released in the PostScript Type 1 and OpenType formats; *METAPOST* (MetaType1) sources are also available.

The main feature of the Latin Modern fonts is its rich collection of diacritical characters, covering

all European Latin scripts as well as some other languages that use Latin alphabets, e.g., Vietnamese.

The aim of the Latin Modern project was to replace (but only as the default) a plethora of various relatives of the Computer Modern fonts, such as the CS, PL and VN fonts.

We hope that the presentation will convince at least Polish \TeX users that the LM fonts are a good replacement for the PL fonts at least in MeX and only as the default.

HANS HAGEN and JERZY B. LUDWICHOWSKI and VOLKER RW SCHAA, The new font project; pp. 13–14

In this short presentation, we will introduce a new project: the LM-ization of the free fonts that come with \TeX distributions. We will discuss the project objectives, timeline and cross-LUG funding aspects.

JERZY B. LUDWICHOWSKI, GUST font licenses; pp. 15–18

For some time the problem of font licenses was discussed at the *BachTeX* conferences and in various mail exchanges. The approach presented here tries to address the following issues: first, making sure that fonts developed for the \TeX world, where backwards compatibility is very important, will not be broken by “uncontrolled” modifications and second, addressing the issue of the notion of font source code files. As a result, two GUST font licenses were formulated.

PETR OLŠÁK, OFS — A macro package to manage your fonts; pp. 19–30

OFS (Olsak’s Font System) gives you a possibility to keep track of your fonts; especially if you have many fonts. It provides tools for making font catalogues, a comfortable user environment for font selection etc. The OFS was presented at *EuroTeX 2003* (Brest, France) but many new features were implemented in 2004. This article presents the latest version of this package.

TACO HOEKWATER, *METAPOST*: terminally ill or just playing dead?; pp. 31–34

In recent years, there is evidence of a renewed interest in the use of *METAPOST* for various drawing tasks. Simultaneously, it seems that just about every *METAPOST* user runs into some kind of limitation that makes the use of *METAPOST* far from ideal for the proposed task.

The diagnosis we have to make is whether these symptoms indicate a fatal disease in the program, or if they are only idiosyncrasies and scratches that can be cured with some therapy and a few band-aids.

HALINA WĄTRÓBSKA and RYSZARD KUBIAK, Od XML-a do \TeX -a, używając Emacsa i Haskell'a [From XML to \TeX , using Emacs and Haskell]; pp. 35–39

A bi-language Old Church Russian-Polish dictionary is being created at the University of Gdańsk. The dictionary is based on a relic of Old Slavonic writing, called Izbornik of the XIII century. All word forms from the relic are translated into Polish.

The whole dictionary was written in an XML notation. Specific features of the XML tagging applied as well as a collection of Haskell programs for processing the material of the dictionary are discussed in the article. The programs assist in building of the dictionary using Emacs, serve to analyse its various aspects and to convert it to the language of \TeX .

BOGUSŁAW JACKOWSKI and MARCIN WOLIŃSKI, Prolegomena do fenomenologii parametrycznego behawioru \TeX -a [Prolegomena to the phenomenology of the parametric behaviour of \TeX]; pp. 40–42

\TeX users certainly encounter situations where \TeX surprises them. Of course, \TeX wizards may never be surprised, but they are not addressed by our presentation. Our aim is to show a few such surprising — at least at the first glance — cases, without detailed analysis. It is worthy of knowing that such things may happen in the realm of \TeX .

MICHAŁ WRONKA, Wersjonowanie dokumentów \TeX -owych w pracy samodzielnej i grupowej [Versioning of \TeX documents in individual and group work]; pp. 43–46

Using version control in \TeX typesetting gives users a new range of possibilities. Tracking changes in documents to begin with, followed by synchronization across multiple machines, coordination of group work and managing simultaneous versions. In this article, I show how to adapt Subversion for use in typesetting with \TeX .

JOANNA RYĆKO, Typografia dla początkujących; pp. 47–52

As we all know, hours and hours can be spent talking and listening about typography. But on this occasion I will only write about absolute basics of the subject and this also in a telegraphic manner. The aim of the article is to show how to construct simple and typographically correct documents with \LaTeX .

JOANNA RYĆKO, Minimalny przykład [How to report (\LaTeX) \TeX problems: a minimal example and other rules]; pp. 53–57

This is a Polish translation of the German text written by Christian Faulhammer. It shows how to prepare a minimal example, which can be sent to a newsgroup while asking a question about \LaTeX . The original text in German and its English translation can be found at <http://www.minimalbeispiel.de>.

WOJCIECH MYSZKA, Jak przeżyć w nieprzyjaznym środowisku WYSIWYG [How to survive in a hostile WYSIWYG environment]; pp. 58–62

HANS HAGEN, Lua \TeX : Howling to the moon; pp. 63–68

Occasionally we reach the boundaries of \TeX and programming then becomes rather cumbersome. This is partly due to the limitations of the typesetting engine, but more important is that a macro language is not always best suited for the task at hand.

JEAN-MICHEL HUFFLEN, Advanced techniques in XSLT; pp. 69–75

This talk focus on some advanced techniques used within XSLT, such as sort procedures, keys, interface with identifier management, and priority rules among templates matching an XML node. We recall how these features work and propose some examples, some being related to bibliography styles. A short comparison between XSLT and nbst , the language used within $\text{BIB}\TeX$ for bibliography styles, is given, too.

JEAN-MICHEL HUFFLEN, $\text{BIB}\TeX$, $\text{mlBIB}\TeX$ and bibliography styles; pp. 76–80

The first part of this talk about $\text{BIB}\TeX$ will focus on some difficult points related to syntax of bibliography files, e.g., the specification of person and organisation names. In addition, we show how some successors of $\text{BIB}\TeX$ ($\text{BIB}\TeX$ 8, Bibulus , $\text{mlBIB}\TeX$) improve them. In a second part, we explain how bibliography styles are built. Some demonstrations of the $\text{BIB}\TeX$ program are given as part of this talk, and some technical points could be made clearer by using functions belonging to $\text{mlBIB}\TeX$.

GABRIELA GRUSZA, $\text{BIB}\TeX$ jako narzędzie automatyzujące pracę z bibliografią [$\text{BIB}\TeX$ as a tool for automating tasks around bibliographies]; pp. 81–87

This article is designed for \TeX beginners. It presents bases of $\text{BIB}\TeX$ usage including its advantages. Some of attention is given to bib styles with

extended discussion about jurabib package and program makebst. Besides, some tools that simplify the creation of the file containing the bibliographic data (Emacs, JabRef, Tkbibtex) are introduced.

TOMASZ ŁUCZAK, \TeX w biurze i jego wykorzystanie również przez nie- \TeX ników [\TeX in the office, and for non- \TeX ies]; pp. 88–90

It is possible to deploy \TeX in an office for preparing typical documents by employees who have not even have heard of \TeX .

A simple and functional user interface allows for a wider use of \LaTeX documents in daily correspondence, offers or contracts. Batch processing allows combining with other programs (as printing support through pdf) and wrapping with different interfaces (GUI as a stand-alone application or a browser interface, both using \TeX in the background).

Besides dedicated programs I will also mention the LyX editor which allows for an easy transition from the WYSIWYG world to the world of pretty documents. When describing the \TeX -nical part of these solutions I will also present some observations regarding the “soft” part of the deployment (the employees attitude towards \TeX), i.e., why it became a success.

ROBERT BIALIK, \LaTeX w środowisku naukowym. Spostrzeżenia, uwagi i propozycje [\LaTeX in the research community]; pp. 91–92

How to convince people to use the \TeX environment?! “Arguments versus habits”—a few words about introducing \TeX to academics. During the presentation, results of an “academics attitude towards \TeX ” survey will be presented.

JACEK KMIECIK and MAREK WÓJTOWICZ, Z \TeX -em w tle [With \TeX in the background]; pp. 93–95

WOJCIECH BIRULA, Czy \TeX polubi CATy? [\TeX and computer aided translation]; pp. 96–97

The article briefly describes some problems encountered while trying to use CAT programs in the process of translating \TeX files. The author’s experience concerns mainly \LaTeX , however presented problems are similar for other \TeX formats.

MACIEJ JAN GŁOWACKI, LiTeX : łatwość pierwszego kroku [LiTeX : a \TeX micro-distribution]; pp. 98–98

LiTeX is a new project aimed at reducing the size and ensuring ease of use of the \TeX system in the Linux system environment for PC machines (i586). The set of packages was designed primarily with \TeX beginners, typesetting in the Polish language, in mind: it contains amongst others the

newest versions of all the Polish and polonized fonts which are available with a license allowing free usage and copying. A complete and clear Polish language documentation constitutes an integral part of the distribution. LiTeX works completely independently of other \TeX installations, e.g., it does not use the TDS. Instead, it is firmly set within the Linux Standard Base.

PIOTR BOLEK and JAKUB KULESZA, Gentoo — powrót do źródeł [Gentoo Linux: back to sources]; pp. 99–103

Gentoo Linux is a good and useful source-based Linux distribution. The presentation will cover the following topics: The history of Gentoo Linux and the history of open source and the Linux system; facts and numbers, popularity and applications of Gentoo Linux; the reasons of growing popularity of Gentoo Linux; advantages and flaws of Gentoo Linux; Gentoo and \TeX .

JEAN-MICHEL HUFFLEN, Writing structured and semantics-oriented documents: \TeX vs. XML; pp. 104–108

Using XML-like syntax for documents gives them a tree structure, inducing a notion of structured document. Defining domain-dependent tags introduces a notion of semantics-oriented writing. These two points result in a new view about document production. In fact, they have already existed within \TeX , but in another shape. This article aims to point out these notions and the differences between them. It ends with some proposals about the evolution of the tools belonging to \TeX ’s world.

PRZEMYSŁAW SCHERWENTKE, Te nieszczęsne wiszące litery [Those wretched at-end-of-line conjunctives]; pp. 109–110

A set of macros to automate some Polish typesetting rules is presented. In particular, the problem of single characters at the end of a line is solved.

JERZY B. LUDWICHOWSKI, BOGUSŁAW LICHOŃSKI, TOMASZ PRZECHLEWSKI and STANISŁAW WAWRYKIEWICZ, Edukacyjny portal GUSTu [The open educational GUST portal]; pp. 111–112

HANS HAGEN, TACO HOEKWATER, BOGUSŁAW JACKOWSKI, PAWEŁ JACKOWSKI, FRANK MITTELBACH, BERND RAICHLER, PIOTR STRZELCZYK, Enjoy \TeX Pearls diving!; pp. 113–121

This year’s perils of \TeX programming will be presented by a team led by Paweł Jackowski.

[Received from Tomasz Przechlewski]