EuroBachoTEX 2013 proceedings

The EuroBachoTEX 2013 proceedings was published by GUST, the Polish language TEX user group. Their web site is `http://www.gust.org.pl`.

Bogusław Jackowski, and Marek Ryćko, Two typographic etudes for basic calculus and implementation; pp. 5–8

Two simple techniques for creating certain Bézier curves will be presented. Although mathematically nearly trivial, they are potentially useful, especially when implemented as an interactive option.

Bogusław Jackowski, Łukasz Dziedzic and Marek Ryćko, Joining two Bézier arcs smoothly; pp. 9–12

Bogusław Jackowski, Łukasz Dziedzic and Marek Ryćko, Constructing a family of constrained (metrically consistent) Bézier arcs; pp. 13–16

(Combined and expanded version published in this issue of *TUGboat*.)

Hans Hagen, Speed performance in ConTEXt; pp. 17–24

In the 'mk' and `hybrid` progress reports I have written some words on speed. Why is speed still important today?

Hans Hagen, Does TEX have a future?; pp. 25–29

(Published in this issue of *TUGboat*.)

Hans Hagen, SwigLib basics; pp. 30–32

SwigLib aims to add portable library support to LuaTEX. It does not provide Lua code except where absolutely required, since different macro packages have different needs. It also fits in the spirit of TEX and Lua to minimize core components.

Luigi Scarso, The `swiglib` project; pp. 33–36

This project has the following objectives:

- Set up an infrastructure for building libraries for LuaTEX using Swig so that we stay close to the original APIs.
- Investigate libraries of different complexity. We also explore the impact of dependencies on other libraries.
- Provide a set of common helpers that can be integrated in libraries.
- Provide documentation on how to use this infrastructure and how to roll out your own.
- Come up with a naming scheme to allow avoiding clashes between similar libraries. In principle a user or macro package should be able to generate libraries independently of others and use these in a regular TEX setup.
- Make a couple of working examples of libraries, available for all major platforms.

The project will be initially hosted at `https://github.com/luigiScarso/swiglib`.

Paweł Łupkowski and Mariusz Urbański, Preparing for scientific conference with LATEX. A short practical how-to.; pp. 37–44

(Published in this issue of *TUGboat*.)

Paweł Łupkowski, How to teach LATEX? Cognitive science curriculum case study; pp. 44–47

In this paper I will present my experience teaching LATEX in an introductory information technology course. I will present my syllabus for the course and the idea of embedding LATEX skills into other subjects in the cognitive science curriculum. I will also compare the results of the LATEX course evaluation for its four editions (2010, 2011, 2012 and 2013).

Bartosz Marciniak, Converting LATEX source files into XML format with XQuery; pp. 48–50

The XQuery language, designed for querying XML documents, in practice allows performing any transformation of XML document sets. It also allows performing transformations of data in formats which can be formulated as XML, e.g., CSV files.

A source LATEX file is also such a format. Its structure and instructions should be describable with a set of XML tags. In this presentation an attempt to use XQuery for a transformation of a LATEX document into an XML document will be presented.

Przemysław Scherwentke, Translating into the Pokémon language; pp. 51–53

According to one of its definitions, the Pokémon language is a dialect of the Polish language used by the majority of teenage girls or simply Pokémons. According to Nonsensopedia (the Polish encyclopedia of humor, `http://nonsensopedia.wikia.com/wiki/Pokemoniaste_pismo`): "That language is often regarded as a script of the feeble minded and cretins but in reality comprises an ingenious cipher which in itself is not difficult to crack but a normal person encountering such a cipher loses interest in trying to solve the riddle of the Pokémon language ... We will present a (TEX, of course) tool which allows ordinary people to translate normal language utterings into the Pokémon language.

David Kastrup, Extension language integration of LuaTEX and LilyPond; pp. 54–58

LuaTEX uses Lua as its extension language while the music typesetter LilyPond employs the Scheme dialect Guile for that purpose.

It is interesting to see how those extension languages are integrated into the "core" language and

what interfaces are used for passing information back and forth between user, principal language, and extension languages and to what degree the languages interact to form a coherent experience or one more modelled along the line of "I'd rather like to discuss this with your brain surgeon".

Kees van der Laan, Spirals in PostScript; pp. 59–66

Programming curves specified in polar coordinates work elegantly in PostScript, because of PS's facility for rotation of user space. This is shown for the cardioid, limaçon, lemniscate, Archimedes, and growth spirals. The Gyre logo is analysed and imitated in PostScript. Printing of text along spiral-like belts on a sphere in the projection plane is done, yielding poor man's typesetting on a sphere in projection, for want of better.

Kees van der Laan, Head and tail in summation: Catching up with numerical math and Mathematica; pp. 67–74

Direct summation of slowly convergent series is not efficient. Splitting up the sum into head and infinite tail and applying Euler summation to the tail yields an efficient technique. Applying Boole's transformation to the tail may, for slowly convergent alternating series, drastically improve accuracy. Series for $\zeta(x)$, $\eta(x)$, $\lambda(x)$, and $\beta(x)$ have been included. This note reflects my understanding of chapter 1 of Nico Temme's book *Special Functions* (Wiley, 1996), and is aimed at those who want to refresh their summation-of-series knowledge and skills and add Mathematica to their toolbox. Mathematica has changed calculus education. Notebook publishing is an extra to (LA)TEX publishing, for the moment.

Jean-Michel Hufflen, MlBibTEX in 2013: The point; pp. 75–78

Our MlBibTEX program — aiming to be a better BibTEX — is now able to build bibliographies for documents in LATEX. It can also take into account some particular features for the bibliographies processed by the biblatex package and the `bib` module of ConTEXt. We review the present abilities of this program before an important change in its implementation language (now Scheme). We will also explain why this change could enlarge MlBibTEX's features.

Jean-Michel Hufflen, Why typesetting music is so difficult; pp. 79–84

Some software allows users to specify musical pieces, possibly using several staves for different voices and instruments. These pieces can be typeset in order to get a result suitable for musicians. For simple cases, this result is very nice. However, typesetting a musical score is not comparable to typesetting a text. Also, some meta-information is needed in order to typeset correctly some pieces, especially in baroque music. We propose an exploration of these difficulties. Attending this talk only requires basic knowledge about music and scores.

Jean-Michel Hufflen, XML today: Success or failure?; pp. 85–94

XML came out in the late 1990s as a possible standard for information interchange between diverse programs. What is its point in 2013? Has XML completely eclipsed its predecessor, SGML? What is XML's place within the world of the Web and within programming activity?

Jean-Michel Hufflen, BachoTEX song; pp. 95–98

A printed score of this renowned tune.

Paweł Jackowski, TEX beauties and oddities; pp. 99–105

Collected TEX pearls, with contributions from Bogusław Jackowski, Gunter Essers, Jerzy Ludwichowski, Piotr Strzelczyk, and Marcin Borkowski.

Abstracts; pp. 106–110

The remaining abstracts had no corresponding papers submitted.

Kaveh Bazargan, How TEX helps deliver XML-first production to journal publishers

Almost all publishers of academic journals require a granular XML of each article, along with PDF, HTML, and other formats. The XML is the archive of the article, so it is imperative that the content of all formats match precisely. I will show how TEX can be used both to generate XML from the author manuscript, and to convert the XML into PDF and other deliverables.

Piotr Bolek, The traditional vs. the future book

What do the tablet revolution and the growing popularity of e-readers mean for the books, publishing industry and readers? A digital book, audiobook, multibook or just an application? A multimedia publication — only a toy, a manual or something more?

Examples of publications, ideas and new opportunities. The book of future and its production — technologies, standards, formats and tools.

Digital distribution vs. intellectual property and access to digital content. Models of distribution and access to content. Contemporary and informal distribution channels.

Katarzyna Burakowska, Communication outside of words. Meta-communication.

Research showed that words of a message account only for 7% of the perceived value of a spoken message, while the tone of voice accounts for 38% and facial expression for up to 55%. Thus the non-verbal elements of verbal communication are very important for its efficiency. There is a lot of research regarding importance of meta messages in verbal communication. This knowledge is being used in creative ways by theatre artists. I haven't come across research evaluating meta-messages in written communication, though graphics artists use them very often in their works. I would like to share my thoughts regarding that issue. I'm not a typographer, but do work in visual arts, so my presentation will be, as usual, a little bit off the main conference subject.

Willi Egger, Workshop: Bookbinding

Based on last year's success there will be a workshop in bookbinding. This time we are going to build a sturdy *shoe-box* type of box. While waiting for the glued box to dry we will make other types of boxes, small and suitable for gift-packaging.

Hans Hagen, Those typographic things TEXies are proud of ... do they really make sense?

Why do we use TEX? Is it because we have no other choice? Is it because we like to program? Do we go for the looks? It is no problem to locate users who, no matter how they started, praise the virtues of this typesetting system. Isn't it one of the reasons why we meet at BachoTEX? How valid are these sentiments? Does all this focusing on details makes sense or not? What are those features that we like so much and do they really make that much sense?

Hans Hagen, Bits and pieces: ConTEXt, MetaPost, Lua and more, part 1

Last year ConTEXt MkIV became a bit more what I had in mind when we moved to LuaTEX. I will give a quick overview of what has been (re)done, extended, finalized, set in motion and what might happen.

Hans Hagen, Bits and pieces: ConTEXt, MetaPost, Lua and more, part 2

Because we want our machinery to do more and more, performance becomes an issue, especially in workflows where there is lots of output. I will discuss some aspects of performance as well as some experiments that Luigi Scarso and I did in the process of getting LuaJITTEX up and running.

Hans Hagen, LuaTEX tutorial

Participants will learn at least: what LuaTEX is really; for whom LuaTEX is useful; the prerequisites to using it; what callbacks are; how to use the LuaTEX reference manual.

Last but not least several examples will be discussed in detail, so that the basic mechanisms can sink in. Handouts will be provided.

Hans Hagen and Frans Goddijn, Books will go ... are you sure?

In the Netherlands (and probably elsewhere too) there is a web shop where you can buy designer knitware produced by grannies. Apart from the social aspects, this new business model might as well translate to producing books.

If you go to a bookshop you will notice that the kids corner still offers lots of books, and surprisingly, many of these are well designed (and definitely better bound than those for grown-ups).

In this session some old folks will discuss the future of books and design with you from this perspective. Please bring with you, your favourite books from childhood (the ones that impressed you) or nice ones that you gave friends and family. Of course kids are invited to join in.

Aleksandra Hankus, The end of the world will come. Books will go.

We have been debating for many years during our conferences whether a "paper" book will survive. The title of my talk may suggest the debate to be continued. Perhaps... Still, the talk will concern the XIX century in the first place. The time which people sensitive to beauty would like, in my opinion, to move to. I will attempt to show a journal (a weekly) from those years. A weekly issued (typeset) in such a way that it completely took away my willingness to buy printed stuff nowadays.

Ryszard Kubiak, A personal view of markup languages

A markup language is a notation in which a textual document can be written down in order to later give it an elegant graphical form by a computer. Many such languages have been and are continually being designed, the language of TEX being one of them. The creators of markup languages take into account various aspects of human-computer and human-human communication. The talk will be about my personal views and experience of using various languages.

Bogusław Jackowski, Piotr Strzelczyk and Piotr Pianowski, On the progress of the TEX Gyre Math project: The TG Bonum Math font

Two fonts — TG Pagella Math and TG Termes Math — have been released so far within the frame of the TEX Gyre math project. Currently,

the TG Bonum Math font is under preparation; we will present the current state of the work. The remaining font, TG Schola Math, will, hopefully, be (pre)released by the end of 2013.

Paweł Łupkowski, A poster: Online LaTeX editors — fancy toys or usable tools?

I review several LaTeX editors available online. I will pay attention to the range of offered packages and compilation options available. I will also take a closer look at options of integration with other services (like Dropbox) offered by the editors. In addition, mobile solutions will be described.

Arthur Reutenauer, Polyglossia update

Polyglossia was created five years ago as the XeLaTeX-aware replacement of Babel, whose development had come to a halt. Aiming at providing what its predecessor had done two decades ago for then-existing variants of TeX, it has grown to support over 70 languages. For many languages it relies heavily on `fontspec`, whose extensive font-handling capabilities are essential, and which several years ago was made to support LuaTeX. However, Polyglossia itself had notably left LuaTeX aside until now.

Today, work has started on experimental support for LuaTeX, and work on Babel has also thankfully resumed. I will discuss the relationship between both packages, and plans for Polyglossia's future in the ever-evolving world of TeX.

Arthur Reutenauer, Behaviour-driven development for TeX

Behaviour-driven development is a software development process whose central idea is that in order to write any computer program, one should first specify how its different parts should behave, and only then start implementing them. It builds on a slightly older method called test-driven development, whose main tenet is to write tests before the code. Behaviour-driven development thus recommends to not only write tests and specifications beforehand, but also to conduct an analysis of what the different parts should do, and to let that analysis drive the development workflow.

This is evidently a very different approach from the one we usually use for writing packages and macros, but, having used it for a couple of years in the industry, I would like to introduce it to the TeX community and to explore options and ideas from these areas that would, in my humble opinion, benefit us.

Barbara Wilińska, Workshop: Painting initials

You'll be able to paint your own initial, little by little, with your teacher's trifling help, but still all by yourself.

Inspirations may be found at `http://bancroft.berkeley.edu/digitalscriptorium/`, `http://www.enluminures.culture.fr/documentation/enlumine/fr/`, or, perhaps, in your family's collections ...

Andrzej Tomaszewski, On readability of script and print

An attempt to define the underlying notions and present the area of interest of the research community. A survey of some research on readability (during the twentieth century), initially on reading hygiene and sight protection, with a later focus on improving perception. The figure of Miles Albert Tinker, the leading researcher on print readability. How those problems were seen in Poland.

Zofia Walczak, Spring cleaning in the garden — grafting LaTeX

Spring in the garden. We are trying to do everything in order to have a good harvest. And how about LaTeX? Are we doing enough for the people who don't know LaTeX yet? I will ask many questions and give a few answers.

Marcin Woliński and Adam Twardoch, Designing a scientific journal following the example of *Journal of Language Modelling*

Journal of Language Modelling (`http://jlm.ipipan.waw.pl`) is a new, free (no publication fees) open-access journal. All content is available under a Creative Commons licence.

We will talk about the design process of the journal's layout and its implementation as a XeLaTeX document class.

[Received from Jerzy Ludwichowski.]