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Editorial

Simon Pepping

We are pleased to present the Proceedings of the EUROTEX 2001 conference, the 12th annual gathering of the European TEX community. Like its predecessors, this conference has a varied and interesting programme, and thereby shows that its community is alive and thriving. Let us review what you will find in this volume.

No TEX conference would be complete without intense attention for fonts. Włodek Bzyl, Bogusław Jackowski, Janusz M. Nowacki and Piotr Strzelczyk make it clear that this is a strong tradition in the Polish TEX community. In two separate contributions they pay attention to the use of PostScript fonts with TEX. One of the contributions especially focuses on a new tool, MetaType1, that should help bridge the gap between TEX's early font technology and the Type1 font technology that emerged later but has become the standard. Péter Szabó tries to do exactly the same with his new tool TEXtrace.

David Antoš and Petr Sojka revisit another TEX tool of the first hour: Pattern Generation. Since the birth of TEX the computing world has become truly international. They present a complete reimplementation that accommodates the needs of internationalization, and is written for the current situation in which extensibility and reusability have become much more important than managing a complex task in a tiny memory space.

Internationalization is also the goal of Jean-Michel Hufflen's reimplementation of another work horse of TEX, viz. BIBTEX.

Janusz M. Nowacki also presents a new version of his Poligraf package, which aids users in preparing their TEX work for printing in a professional printing house.

Bogusław Jackowski and Krzysztof Leszczyński revisit one of TEX's hooks for extensions: specials. Using a special pseudo-font, they try to make the insertion of specials more flexible.

Math typesetting is of course one of the main goals of TEX. Its intuitive syntax of entering formulae—for those who are familiar with them—has been one of the factors in its success. Nevertheless, there is always room for improvement. Michal Marvan will present his `nath` package for natural TEX notation in mathematics, which brings more intelligence into the interpretation of the typewritten formulae and their subsequent typesetting.

The same mathematicians who use formulae to express their ideas and work, often recognize that a diagram is more expressive. Several tools already exist to make drawing such diagrams easier. Pedro Quaresma explains how he has extended the

good and avoided the bad and ugly of earlier packages in his new package DCPic.

Ulrik Vieth applies the motto of this conference, the good, the bad, the ugly, to math typesetting in TEX. However good TEX is, it is always wise to keep an open and critical mind. Ulrik points out where TEX's math typesetting is good, but also where it has bad or even ugly elements. This critical appraisal will help us to better understand TEX's position in comparison with other software packages that aim to offer similar functionality, and especially when interoperability with such packages is an issue.

Literate programming is another gem that Knuth left the computing world. In this era, with its ever more complex software, good documentation is of paramount importance. Michael Guravage will show us if and how literate programming is still a useful technique for today's software developers.

To paraphrase Antoš and Sojka, TEX and friends, being nearly twenty years old, no longer completely suit today's needs. Therefore one of the recurring themes of this conference is reimplemenation. In this respect $\mathcal{NTS}$ has been with us for almost 10 years, first as an idea, and for the last three years as a work in progress. At the time of this conference it will be available in a β-release. Karel Skoupy, its developer, will take us on a tour through the program, and show us how $\mathcal{NTS}$ processes its input into its output. I myself will try to convince you that the release of $\mathcal{NTS}$ is an important mile stone: it is the first really existing TEX reimplemenation. We should use it to develop and experiment with extensions and new functionality.

Giuseppe Bilotta takes his own angle to reimplementation. He will discuss what is required when we want a new TEX that is also suited to provide immediate feedback to the user, WYSIWYG TEX.

When immediate feedback and WYSIWYG were provided by Word Processing software, it immediately appealed to the majority of users. In the TEX world this was often done away with a shrug, pointing to the inefficient way of working with these packages and to the high quality of TEX's output. But it cannot be denied that immediate feedback and WYSIWYG are desirable features, and some have started work to make this available within TEX as well. Igor Strokov has done extensive work on an implementation on MS Windows. Jonathan Fine has taken earlier work on IPC TEX further on the combination of Unix and Emacs. They both will show us what they have achieved so far.

A hot spot of development in the world around us is XML. Hans Hagen is building native support for XML documents into his macro package CONTEXT. He will tell us about this and other aspects of XML and TEX in one of his presentations.

Berend de Boer, early CONTEXT user, will demonstrate an application which uses CONTEXT's XML capabilities in combination with various other techniques: database, XML structuring, XSL styling, CONTEXT typesetting.

In the XML world, MATHML is the newly proposed standard for structuring mathematical formulae. Tobias Burnus will demonstrate how it can be used to publish work on paper and on the web.

While XML is a new effort of the computing world at large to work with structured input, in smaller circles this is not a new development at all, *vide* SGML or even LATEX. Work on editors that help the user to produce structured input also stands in

a tradition of a decade. In this tradition J. Chlebíková, J. Guričan, M. Nagy and I. Odrobina present their Euromath system, a structured XML editor and browser.

On earlier TEX conferences the extension arena was dominated by eTEX, later joined by pdfTEX and their combination pdfeTEX. At this conference they are notably absent. Hans Hagen has been one of the first TEX implementors to see the importance of these TEX extensions. Undoubtedly in his presentation on TEX TOP publishing these two will play their role as invaluable means by which Hans achieves his graphical finesse.

pdfTEX is here to stay, due to the interesting capabilities of the PDF format in conjunction with the PDF viewers. Martin Schröder and Tom Kacvinsky will both discuss the possibilities and the problems of the combination of PDF with TeX.

Another area where we have seen tremendous progress in the last years is that of TEX distributions. While in the early 90's it required considerable skill to set up a working TEX installation, the more recent distributions, among which the TEXLive distribution, have brought successful installation within the reach of an average user. Fabrice Popineau will discuss the problems that have to be overcome in putting together such a distribution. And he will show new directions for distributions, among which installation over a network.

Hans Hagen's CONTEXT macro package has attracted a large dedicated user base. As with all new applications, early users must do without utilities which are taken for granted with existing applications. Taco Hoekwater presents a bibliographic module for CONTEXT, which will provide CONTEXT users with a better integration of their favourite format and BIBTEX.

Besides the turmoil of the newest developments, we also take time to reflect on the developments in the past that have brought us to where we are now. Paul Wackers takes us back to the time when typography was still new and modelled itself after the existing industry of handwritten books. He shows us how the new technology slowly developed its own paradigms and style, much of which we still recognize.

Finally, why are we doing all this work? Surely, because it is interesting. But we also work to create a tool that users can deploy together with other tools to complete a complex task. Michael Moortgat, Richard Moot & Dick Oehrle do just that. Their focus is on a language technology project, and one of their requirements is high-quality, flexible typesetting of natural deductions. They will show how they use TEX successfully to meet that requirement.

S. Austin, D. Menshikov, and M. Vulis demonstrate how they use TEX together with their own GeX plugin and PDF technology for displaying of real-time weather and geographic information.

Finally, Laurent Siebenmann goes back to the basics of TEX and applies that rare ability to write a program in TEX's macro language. With this technique he creates an application that allows users to read Russian emails, even when they do not have the required Cyrillic fonts installed.

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