

6th European T_EX Conference

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Abstract

- **User groups:**
CyrTUG is bound to become important. CSTUG prospers. HunTUG is modest. The Poles can't get organized. Yunus is only a list. The other five just go on.
- **Panels:**
T_EX in Europe, how can we obtain better acceptance?
L^AT_EX 3: impressive history, no release dates of yet.
- **Presentations:**
Zlatuska's ACCENTS processor, for automatic generation of accented virtual fonts for European languages from English input fonts in the T_EX font layout, looks promising.
- **Publishing houses:**
MIR is involved. Springer is active and has some user guides out for a pilot journal. The Czech scientific journals are all formatted by T_EX!
- **Products:**
L^AM^S-T_EX is still going public. Very promising though, especially the wizards manual.

1 Introduction

GUTenberg took the lead in organizing this meeting. The program committee contained representatives from other LUGs. The conference was well-organized. Some presentors forgot at which date they were scheduled for their act. Outside the (big) lecture room there were vendor exhibition space and PC's with FTP facilities, so that participants could read their e-mail and exchange files. (I received Nelson's TUGlib paper in this way!) Well-done! The conference was bi-lingual, simultaneous translation French ⇔ English. Representatives from mid and eastern Europe could attend the meeting due to grants from TUG and GUTenberg. In total ≈120 people registered, and roughly 100 attended the meeting. It became clear that DANTE had supported CSTUG tremendously! Bravo!

The proceedings are incomplete, and not of top quality, alas. My paper proved itself by stating that for math papers when changing from two into one column format, it is not enough to change the optional (columns) parameter. Furthermore, there is no entry to the paper in the index. It could have been Math, or education, or better still both. Both entries as such are completely lacking as well! An index entry to my paper does not occur under plain either, while it is all about math formatting in plain. Curious. Perhaps, the editor's task will be alleviated if keywords are provided by authors.

In the week before the meeting courses were held: L^AT_EX (Intro by Malcolm Clark and Modifying styles by Chris Rowley), T_EX (capita by Philip Taylor) and Metafont (by Doug Henderson and Yannis Haralambous). The organization of the courses was in the hands of Malcolm Clark.

I also grasped the opportunity to put some energy into the TUG publications committee work, while having a 'plat du jour' with Barbara Beeton. Via Patrick Ion I could also lay my hands on the proposed T_EX encoding schemes for math: dmsy10, dmex10, deum10, and dmsa10.

From The Netherlands there were three speakers: Johannes Braams, Theo Jurriens and myself, and three other participants. I had a nice time with Theo together with the Russian delegates: Anatoly Urvantsev, who participated also in NTG's 6th meeting at Utrecht, and Alexander Samarin.

Zlatuska won the Cathy Booth reward for the best paper.

Next year's meeting will be in Prague, September 92.

There was no 'Euro-summit', perhaps because Malcolm resigned as European coordinator. There had been no discussion either between the presidents of the local groups about for example evaluation of this meeting and how to proceed in future. Bernard just announced the next meeting at the end of the conference, with

consent of CSTUG (Zlatuska?), I presume. Although TUG's democracy has its negative effects, I prefer the democratic model.

In the sequel I will not follow the day-to-day events, but concentrate on user group issues, presentations, BoFs and panels.

I did travel by train. The night train, couchette included, is very cheap.

2 User Group Issues

Nelson Beebe gave a survey of the state of affairs within TUG. Heavily biased towards his own (good) works.

Since Cork91 CSTUG prospers with a group of similar size as NTG. Most, if not all, of their scientific papers are formatted via T_EX. They consider themselves strong enough to organize next year's meeting.

CyrTUG got organized, and is bound to dominate the scene in the (late) nineties. I expect this because of the rich scientific tradition in Russia, the PD character of T_EXware coupled to the lack of money at the users level, THE publishing house —MIR— is strongly involved, the sound organization, and the sheer number of Russian (Cyrillic speaking) people. This all in spite of the reorganization difficulties at this moment in Russia.

HunTUG remains modest. Yugoslavia was absent for obvious reasons. And Italic? Peter is active for sure. Yunus is just a list, a 'virtual' group? And what about the Polish T_EXies? Hanna mentioned the lack of organization and cooperation: 'two people have three different opinions.'

There was no time scheduled for the other European groups to report about their activities and inspire each other with their plans. A pity! Next best, I dropped 'NTG's Third Year' close to the copying machine. I also dropped the recent MAPS for inspection. Another copy of ukT_EXug's 91–92 schedule of workshops was obtained by similar mechanisms.

3 Presentations

3.1 Language aspects

A few presentations dealt with the use of T_EX in languages different from English, and even different from the Latin alphabet.¹ Johannes reported about his meanwhile mature, Babel project, which is bound to be incorporated in L^AT_EX 3. Yannis was quite impressive with his ScholarT_EX report. I leave the non-Latin contributions for what they are, because I'm a layman on the issue. One thing stroke me however: at least one presenter on the issue did not speak himself even one

of the languages aimed at!

3.2 User interfaces

With respect to user interfaces we had Alexander Samarin: T_EX integrated shell for the IBM PC, Lavaud: AsT_EX an integrated and customizable multiwindow environment for scientific research, and Göpelt & Schmid: WYSIWIG-T_EX-editors etc.

Samarin reported about 'yet another window/menu' system, intelligent with respect to selective loading of the needed (font) files. The system is written in Lisp, and not in the public domain of yet, if ever.

Lavaud's principle is sound: Try to make the best available, possibly at lowest cost, with what is available. His system is quite complex: Framework 3, a hypertext like file manager, interactive restructuring facilities for L^AT_EX documents, an interface to FORTRAN for performing numerical calculations from a L^AT_EX document, an interface to MAPLE for performing computations interactively from a text, a worksheet or a database. A PC in a LAN, equipped with this software, is claimed to be a low-cost alternative for a workstation. Would you believe that?

G&S reinvented the wheel. No mentioning of the GRIF project was done. It is not clear to me how useful this editor is. It does not, because I don't need it, nor does it alleviate the task of typists because their problems are not solved by this, while formatting T_EXscripts.

3.3 Utilities

On this front there was: Spivak's L^AM_S-T_EX, Schrod's Makeindex activity, Leguy's Drawing tree structures, Cérin's Macros for colour T_EXing, Laugier's Composition of chemical formulas.

Spivak has got fans in France, and he deserves it. His package is in the public domain and is certainly an alternative for L^AT_EX at the moment, and possibly for L^AT_EX 3, at least for mathematicians. So the AMS facilities, and Spivak's package are the tools for them. Hackers might profit from his wizard's manual, to be ordered via spivak@rice.edu, at copying costs.²

Schrod drew attention to the problems in creating a foolproof international makeindex. The problems can be indicated by the keywords: non-latin alphabets, special characters, formatting tags, different sorting orders. Does this demonstrate that one should not strive after universal tools, because of complexity?

Leguy demonstrated the reinventing of the wheel. He was not aware of earlier work. Therefore it is not clear in what sense this is better than what is already

¹There was a curious presentation about the history of alphabets, and their relations by the Association Alphabets.

²See elsewhere is this MAPS for details.

³A. Brüggeman–Klein & D. Wood(1989): Drawing trees nicely in T_EX. EP-ODD, 2, 2, 101–115.

available.³ Of course his trees look nice, but suffer from the page-size restrictions. With a ‘forest’ every tree has to be handled separately.

For colour T_EX it is believed that better alternatives than T_EX are available. A research paper?

Laugier again reinvented the wheel. Since he is employed by Publishing house Louis-Jan, they certainly needed these macros for their formatting. Special symbols —lines— were available in the LINE10 font.⁴

3.4 Publishing houses

Interesting was the presentation of Angelika Binding, from Springer. They experiment with the production of one journal via T_EX. She reported about the maintenance problems of all the files involved. The set-up of the styles was not similar to TUGboat, nor AMS. I have asked for a copy of the Springer demo and user guidelines.

Andrew Dobrowolski’s presentation was similar to the one at Dedham. All about SGML, T_EX, and FOSI.

3.5 Education

Not much about education. No education entry in the index of the proceedings. I think my presentation could best be classified under education. It deals with understanding plain in relation to math, and extending it when necessary, with as simple macros as possible. For complex math structures it is advised to adapt templates, and not to start from scratch. In the ‘Am I Blue’ section a handful of complex examples are provided.

The pitfalls treated are fundamental. L^AT_EX, (L)*A*M \mathcal{S} -T_EX, or . . . T_EX users might profit from it as well.

3.6 Fonts

Louarn reported about the use of the Lucida font families. Apart from a ‘matter of taste’ aspect, no fonts within these families are available for screen preview.

Zlatuska reported about accents handling via virtual fonts. His conclusion: ‘The ACCENTS processor has been presented, designed for automatic generation of accented virtual fonts for European languages from English input fonts in the T_EX text font layout. We have discussed the reasons why accented virtual fonts are worth being considered as a viable alternative to genuine Metafont-defined accented fonts. The ACCENTS processor has been programmed in WEB with substantial parts taken from VFTOVP and VPTOVF. It can be distributed freely and its source text modified under the GNU General Public licence condition of the Free Software Foundation. So far, change files for ports

under MS-DOS and SCO UNIX are available (by the author and David Toman).’

Very interesting if only I needed them. In education as example of virtual font usage?

4 Panels

A pity of publishing the proceedings before the meeting is among others that panel discussions and the like disappear into thin air. No recording was done during the meeting and no conclusions were arrived at. What is the use of this?

4.1 T_EX in Europe

Well-prepared by Joachim Schrod. No ETO (European T_EX Organization) was mentioned.

His points are (with my comments within parentheses added):

T_EX is for hackers not for users (I don’t agree),
T_EX does not meet the requirements of the different faculties of Universities (Again I don’t agree),
T_EX is not accepted at large because of high costs in teaching, maintenance and adaptation on the one hand, and on the other hand because housestyles require more typesetting capabilities than T_EX can offer. (There is some truth in there, but the context is lacking. Publishing starts with authors in relation with a publishing house. And that might work, see Knuth’s impressive books.)

T_EX is a monster to maintain (If you want to do everything, even if you don’t need it, you will of course end up with a software monster. But once you have targetted your users the task of what to maintain cost-effectively is simplified and shrunk into manageable proportions.)

Eastern Europe requirements are unknown. (Just wait and see what among others CyrTUG will come up with. Just publish your own papers.)

Will adopting other related standards improve acceptance? (Again show by the quality and cost-effectiveness of your publications that it is a worthwhile tool. If so, other standards will come down the road.)

4.2 L^AT_EX 3

I was very much surprised to see Philip Taylor on this panel. He justified his presence because of the complete flexibility aimed at in the L^AT_EX 3 project. Chris Rowley neatly summarized the activities.⁵ The keywords are: flexibility, extensibility and modularity. The approach is: kernel + modules, with fully documented code and module interfaces, a designer’s interface will also be provided. Some further thoughts are: no fragile

⁴From the Heidelberg server one can obtain chem.T_EX, a different but suitable package.

⁵I received from Chris a copy of David Read’s report: Some ideas to improve L^AT_EX. It is discussed from the SGML viewpoint.

commands, support for multiple languages, extra graphics facilities (using standard specials), error recovery, support for built-in help, support for any font, more commands will have environmental forms, named arguments, register arithmetic, support for various short forms, flexible float facilities, formatting of SGML-Tagged documents.

A walk through history lane

- Frank Mittelbach and Rainer Schöpf started the project.
- At Stanford89 Frank included a designer's interface.
- During 1990 discussion took place of what was needed for the user-interface. In May91 Leslie Lamport agreed with the specification.
- During 1990 it became clear that modification was not sufficient: a complete new system had to be developed.
- In 1990/91 workshops were held to discuss and elaborate on the designer's interface.
- Now and then some prototype code appears and is promptly criticized and modified.
- . . . no release dates of yet.

Compare this with the ease of using whatever T_EX as-is, and modifying manmac if need be, next to collaboration with your publisher (or better your context) on the available tools to be used to get the material out. But we are a vocational group are not we?

From the audience I picked-up the following.

Graphics? Will not be available.

Will the specs be published as such? All will be documented. No dates available.

Will T_EX be a proper subset of L^AT_EX 3? Phil suggested to provide an environment which would supply full plain T_EX.

5 BoFs

The usual BoFs were held: Future of TeX, Drivers, Fonts, and the brand new one, yes at last, about education. 10 persons for education signed up. The subject is very diverse because of the different backgrounds. Because I chaired that BoF it is easy to include the opinions expressed. It might be of interest to forward these kinds of opinions to the BoD of TUG or to the relevant committee, if any. Certainly, I will pay attention to this as part of my work for the Long-range Planning committee.

Education BoF report. In total 10 people attended:⁶

Kees van der Laan, cgl@rug.nl ((La)T_EX, SGML teaching experience),

Theo Jurriens, taj@rug.nl (L^AT_EX teaching experience especially with personnel),

Kriszta Hollo, h115hol@ella.hu (Occasional teacher),
Anne Desarmien, desarme@esiee.fr??? ((La)T_EX teacher),

Ghita Olsen, mdgugo@vms2.uni.c.dk??? (L^AT_EX teacher),

Pierre Dagnelie, gadneliebgxfsa51.be (No teaching at the moment),

Philipe Maziers, anorsubucln11.be (T_EX teacher),

Lothar Meyer-Lerbs, g07mhbrz41.ge??? (After course assistance),

Simon Claudet, (Not a teacher),

Mesniry(???), (Not yet teacher).

Time was too short to arrive at conclusions. One thing became crystal clear: teaching is very much context dependent, and biased by the local situation. TUG courses should not address the beginner, that can be handled locally. I mentioned TUG's activities: the TUG courses, and the activity of the Long-range Planning committee paying attention to the issue.

Then there is the (inactive) T_EX education list: texed@uicvm.bitnet.

We also have Bart Childs' TUG publications: Teaching T_EX, TUGboat 10, 2, 156–163, and Answers to T_EX tests, TUGboat 10, 3, 319–323.

A reaction to Childs' Teaching T_EX: Van der Laan: Teaching T_EX: Critics and L^AT_EX proposal. MAPS 90.1, 77–82.

Furthermore, there has been published: Charles Martin(1990): T_EX for T_EXnical typists, TUGboat 11, 3, 425–428, and Theo's contribution about T_EXniques in Siberia, Cahiers GUTenberg, 10&11, 7–13.

Donald Knuth (1984): A course on Metafont programming, TUGboat, 5, 2, 105–118.

Richard Southall's report: experiments in Teaching Metafont, in T_EX for Scientific Documentation(1985), Addison-Wesley.

Last but not least NTG has a working group on the issue: WG1 Education. Reports of its activities appear in NTG's MAPS.

Generally available selfteaching courseware:

Michael Doob: Gentle introduction to T_EX.⁷

Michael Urban: An introduction to L^AT_EX.⁸ Both can be ordered from the TUG office. Other books introducing (La)T_EX do exist, see for example Nelson Beebe's bibliography at TUGlibscience.utah.edu.

Then there is the pile of video tapes (with D_EK life): Software design course based on T_EX The Program, available for rent from the TUG office. A set of exercises for 'The Program' has been published in TUGboat, 11, 2, 165–170.

Other aspects mentioned at the Paris Education BoF were:

⁶Email addresses proved wrong in distributing this part.

⁷Translated into many languages. For a review see elsewhere in this MAPS91.2 or consult T_EX-NL.

⁸Also translated into French, as part of GUTenberg cahiers series, ISSN 1140-9304.

pricing policy (prices range from free to TUG's prices),
 teachers (most teachers are local, and not of advanced level, there is no need for TUG teachers for the low-level/introductory courses),
 courseware (provide standard exercise sets, courseware's function is to support or to take from, self-teaching aids are useful, module contents can best be prescribed via keywords, example teaching, impress people by power of T_EX, be aware of language problems, courseware preferably in the native language, math atlas of templates is needed, provide knowledge of typography),
 TUG courses (advanced are useful, more time for lab work, workshops to show solutions of frequently occurring problems),
 homogeneity of groups (wishful, user level typists and scientists),
 announcements (make teacher known),
 self-teaching (misconceptions are the danger, time-intensive).

Not discussed were teaching issues related to the Document Preparation Workbench: (La)T_EX intelligent editors, easy file/font handling, wysiwyg user environ-

ments, nor pedagogical aspects.

No general conclusions were arrived at, but the discussion has been (re)started, and will continue, hopefully.

6 Q&A's (Phil Taylor, Raymond Seroul)

Once again most of it disappeared into thin air. A pity. Theo raised the problem how to fill-out every line with dots, as is the habit with legal documents.

Another problem was how to flow text around figures. (Solutions published elsewhere.)

A problem resulted from fonts and Postscript usage: ex is not the height of the lower case letter. The solution is to measure the lower case letter, calculate ratio, load extra font at required size.

Phil challenged the audience —and offering a drink for the correct answer— by the question how T_EX would react upon an empty `\if\else\fi`? A theoretical problem, though, with a non-trivial answer, dependent upon the context.

Dictionary: e-mail translates into *courier électronique*.