

7th European T_EX Conference: EuroT_EX '92

September 14–18, Prague

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Highlights

- Graphics via T_EX and Metafont interaction
- MetaPost: Metafont with Postscript output
- Postscript fonts coupled to T_EX
- What every advisory service should know
- AsT_EX a model for a scientific workbench
- Tutorials: Advanced T_EX, Virtual fonts, XY-PiC, all for free!

1 Introduction

When announced at Paris last year some considered the organization in a Mideuropean country ambitious, especially because rumour has it that companies would not be interested. CSTuG proved us wrong: a very good conference in a nice atmosphere, worth its money and time spent. There was ample time and room for the invited speakers—each morning two of them—and ample time to meet other participants and discuss various issues. Social events were also well looked after: The Black Theatre, Laterna Magica, an organ concert, a visit to the oldest university of Europe, a visit to a monastery, next to the special program for the spouses.

Handy was the public transport passe-partout and the map of the city,¹ especially because the lecture room and the lodging place were some miles apart. The special morning bus assured that the lecture room was well-filled, each morning.

Thanks to grants from DANTE and GUTenberg delegates from several Mid- and Easteuropean countries could participate.

Outside the well-equipped lecture room² there were a display with T_EX/ Metafont related books, a display with work done via T_EX, or Metafont, and a computer room with also e-mail and FTP facilities, so that participants could read their e-mail and exchange files.

Thanks Jiri, Jiri, Karel and colleagues.

¹ That the names have been changed of various street in the mean time, did give rise to hilarious stories of T_EXies ending up in the middle of nowhere.

² With seats for hackers left, users right and those in doubt in the middle, :-)

³ A copy costs only DM 30,-. See elsewhere in this MAPS (bijlage 9). It is worth its money!

⁴ I guess this results from us being all volunteers, and doing these things at night, next to the job for living.

⁵ Copyright problems I guess.

⁶ This proves that our PR activities are not yet good enough, if ever.

⁷ He considered it a bit peculiar, because the previous nearly similar paper was awarded at Karlsruhe, three years earlier.

Well-done!

In total \approx 200 people attended the meeting.

The proceedings³ are (again) incomplete, and not of top quality, alas. Quite a number of typos and other elementary oversights which have nothing to do with T_EX, just correct use of the language and a little proofing, that is all.⁴ It would have been more pleasant reading if an English speaking T_EXie had gone through it. An article in French does not serve a broad audience either, the more so when it is just text, no diagrams nor illustrations to grasp the main points. There is no index. The table of contents contains wrong page numbers, and an important article—A way to ensure the future of T_EX: make its use easier on low-cost machines—is not mentioned in the the list. This proceedings would not have passed the barrier of a publishing house, I guess. The contents is good, though, and some papers are really excellent. Form vs. contents, it is just a pity that the form lacks behind the contents. It is a bit peculiar that the two (invited) papers of Frank Mittelbach and Chris Rowley are missing.⁵

From The Netherlands we had the speakers: Harry Gaylord (paper not in the proceedings), Theo Jurriens (only an abstract in the proceedings), Erik-Jan Vens and myself, next to three other Dutch participants. And believe it or not again a Dutchie who had not yet heard of NTG.⁶

Jackowski won the Cathy Booth award for the best paper.⁷

Next year the TUG annual meeting will be in Europe, Aston UK, July 93, with Peter Abbott as head of the organization committee.

There was again no 'Euro-summit.'

In the sequel I will not follow the day-to-day events, but concentrate on main issues.

I did travel by car, and visited GUST prior to the meeting.⁸

2 User Group Issues

The traditional European user groups are thriving, although Italic was absent. No participants from Italy, so I wondered whether there is still T_EX activity overthere.⁹ Yugoslavia was again absent for obvious reasons. CSTuG has a solid base of quite a number of active people and some 200 members. GUST has organized itself with already \approx 100 members. CyrTuG, and SibTuG, need still some time to get off. HunTuG is modest, and Rumania and Bulgaria just started. It is rumoured that CyrTuG thinks of organizing a meeting for East- and Mideuropean T_EXies next year. I think this is a very good idea, because the costs of attending a TUG meeting are prohibitively high, especially for participants from those countries, even if it is in Europe. Furthermore, only delegates might receive a grant, while with a meeting organized in Eastern Europe the threshold for all those interested will be lowered.

There was only time scheduled for the Mid- and East-european groups to report about their activities and inspire each other with their plans. Good, but not good enough. I would have liked to hear about plans from DANTE and GUTenberg, en public. I dropped recent MAPS-s and David Salomon's courseware for inspection.

3 Presentations

3.1 Graphics

We are aware of the de facto standard way to include graphics via encapsulated Postscript. No papers on that, however.

I found the more or less mature work of Alan Hoenig quite interesting: When T_EX and Metafont work together. Very good work and especially worthwhile for handling mathematical graphics via Metafont and incorporating this via a font in T_EX. Alan stresses

'Metafont is strong in drawing and doing calculations, while T_EX is strong in type-setting and file communication.

The idea behind having T_EX and Metafont work together is to have each do the things each is good at, and communicate these results to the other.'

His examples are nice and fun, especially the illustrations included in the post-proceedings paper. Captivating is his example of text flowing around irregular shapes. His macros are in the public domain. His paper is bound to be included in some future MAPS.

⁸I was happy to see the Poles rebuild their society, many people building new houses, and I became a little sad about the situation in the former DDR, although the reconstruction of roads has started.

⁹Consulting the TUG resource directory soothed me. It lists some 17 cities with TUG members in Italy.

¹⁰He reported already about it at Stanford, 1989, TUGboat 10, 4, 505–512. The user manual is in the AT&T Bell Laboratories report series: CSTR 162, April 1992.

John Hobby reported about his work with respect to MetaPost, a new language similar to Metafont but with Postscript output, and some features added.¹⁰ His interpreter implements at least the UNIX PIC and GRAP functionalities. His work is available for educational institutions under the non-disclosure agreement. For his paper see elsewhere in this MAPS.

Kristoffer Rose made his work on pretty arrows go public. His approach is classical and similar to L^AT_EX and LaMST_EX. Some discrete line and arrow elements in a font as basics, and macros for the required discrete functionalities. It is available under the GNU general public license. His user manual is also in the proceedings.

Erik-Jan Vens reported about inclusion of Postscript fonts into T_EX, giving the T_EX community access to the variety of fonts in use by professionals. See for his paper elsewhere in this MAPS.

3.2 Support

A very nice paper was Anita Hoover's 'The key to successful support: knowing your T_EX and L^AT_EX users.' An excellent survey of issues people in the support departments should be aware of. Her slogan is

'Never underestimate
nor overestimate your user.'

Good, very good, excellent! See elsewhere in this MAPS.

Theo Jurriens talked about his experience in using and teaching L^AT_EX in a multi-tool environment. His point is that in such an environment L^AT_EX can be used by everybody. See elsewhere in this MAPS.

3.3 Language aspects

Quite a few presentations dealt with the use of T_EX in languages different from English (or better the latin alphabet): Polish, Russian, Arab, and Hebrew. Because I don't speak any of these languages I can't go into detail. Interesting and related is Siebenmann's paper about 'Hyphenation in the presence of accents and diacritics.'

3.4 Future of T_EX

Phil Taylor presented an excellent survey of the New Typesetting System activities. This paper or its successor is bound to be redistributed within MAPS in the near future.

Frank Mittelbach and Chris Rowley's 'In pursuit of Quality,' had a weak basis: narrow columns of text

gives rise to difficulties. A revisiting of Richard Southall's 'Buses and weirdness,' Groningen 1990. This is precisely the reason why professional journals don't use 2-column format. AMS (and also the British Math society, I was told) gain awards for outstanding typography attained at via T_EX. So, Frank's talk was too negative, and one-sided, only looking at the bad practice. He should have started with the good discipline, and comment on that. The message is true however: don't use multi-column output for automatic high-quality work, unless you are willing to do too much post-proof adaptation.

Very intriguing is Michel Lavaud's mature paper about again As(sisted)T_EX, his Scientific Document Processor environment. I completely agree with his message

'Make the use of T_EX easier on low-cost machines.'

But, that is only part of the story: education is also very important, next to good PD versions.

Basically, he envisions that the near-future researcher will start with his document, and sidestep for doing experiments or simulations. I day-dreamed about this some years ago. It is opposed to the current practice of doing first the (thesis) research and then lock yourself up for the writing. With this in mind he has built his AsT_EX. With respect to the complexity of AsT_EX, see my discussion of it in the EuroT_EX '91 report.

This paper taught me a sensible nowadays and near-future way of T_EX-ing on low cost PC-s. The ingredients to make that possible are

front-end (framework and desqview)
T_EX, and
backend (a previewer with zoom and scroll functionality).

This all supported by multitasking and interprocess communication.

'Using T_EX on a 80386 notebook with OS/2 and emT_EX is certainly a better choice than using it on a workstation, because this cuts price and not performance, and the machine can be carried anywhere.'

Hummmm, . . . sounds good, a demonstration would be nice. Next to Blue Sky's Lightning T_EX on an 'Apple.' At an NTG meeting? Next June?

Laurent Siebenmann in his 'The lion and the mouse,' argued in the same direction. Macintosh-like user interface (the 'mouse') should be common practice, also in relation with T_EX (the 'lion'). His product is called LinoT_EX. He tendered some challenges with respect to the 'mouse ⇒ lion' interaction (in that direction). Also

Lavaud pointed out that this backward interaction—from the preview window smoothly and fast into the edit window at the right spot—would speed up T_EXing. According to Laurent the milestones for interactive T_EXing are

1986 David Fuchs' page-by-page preview

? Eberhard Mattes' word search in the preview (rather than source)

1991 Blue Sky's continuous output via Lightning T_EXtures.

3.5 Utilities.

On this front there was: Taupin with his MusicT_EX (see MAPS92.1), Rose with his XY-PiC (GNU PD), for typesetting pretty (commutative) diagrams, and my bordered table macro (see elsewhere in this MAPS) as well as my crossword macro (see elsewhere in this MAPS). My separation of the data specification from the typesetting earned some appraisal: '...it is so simple and natural.'

3.6 Publishing houses

Interesting was the presentation of MIR. They translated and typeset Concrete Mathematics, and the Joy of T_EX into Russian.

Vacha reported about the experiences with T_EX in publishing houses in Czecho-Slovakia.

At nearly every T_EX-conference I attended, there was a report about T_EX as formatter coupled to a database. Petr Sojka, Rudolf Cervenka, and Martin Svoboda (excuse me, neglecting the accents) reported about their experiences with the formatting by T_EX of Terminological Data Bank output, created by the CDS/Isis public domain database tool.

3.7 Education

Not much about education, really. Too bad.

3.8 L^AT_EX 3

Again no dates of yet. The big news for me was the appraisal, en public, for T_EX's kernel being frozen!

4 Tutorials

There was not a Q-&-A-session as such. However, Phil Taylor started his tutorial by composing a list of items to be discussed by consulting the audience about what they would like to be treated. Quite impressive, and courageous, although one can predict with near-certainty the main issues. Even more impressive was that he taught all by head! One can always learn something when attending T_EX classes: Do you know for example the difference between `\aftergroup` and `\afterassignment`? Perhaps you don't have to, because in applications it comes out quite natural.¹¹

¹¹ The difference is that `\aftergroup` can store more than one token and `\afterassignment` only one, the most recent one.

Another eye-opener was the reason why sometimes an explicit opening brace is needed as opposed to `\bgroup`.¹² Phil Taylor dropped during his tutorial that he would be happy to receive challenging typesetting problems: P.Taylor@vax.rhbnc.ac.uk.

Other tutorials were by Yannis Haralambous about virtual fonts, and by Kristoffer Rose about his XY-PiC. All collateral.

5 Parting gift

At the end of the conference Karel Horak and Petr Ol-sak, forgive me the lack of diacritical marks, surprised

everybody with their nice handout: 'The pamphlet on T_EX fonts,' sized a quarter A4. And of course there was the proceedings on Friday.

Once again, thanks to you all!

NTG's copy of the proceedings will be available for inspection at the readers' table at NTG's fall meeting. If the authors will grant permission, I will bring for inspection a proof of 'The L^AT_EX Companion'-book, by Michiel Goossens, Frank Mittlebach, and Alexander Samarin, to be published by Addison-Wesley.

¹²When the `\bgroup` is ambiguous, and can be seen as a parameter separator.