
The state of T_EX

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This article is based on my address at the Annual General Meeting at TUG 2017. I am grateful to the TUG Board & AGM participants for the discussion, and, of course, to GUST for the hosting of BachoT_EX!

When we talk about the state of T_EX, three things come to mind: T_EX software, T_EX community and the T_EX Users Group as part of this community.

While the original Knuthian `tex` is frozen, **T_EX software** as a whole is not. Nor should it be. The world around us changes, so our software must change if we want to stay relevant. There have been several important shifts in digital typesetting, which presented challenges for us, such as the switch to the PDF formats, and the advent of first 8-bit encodings and then Unicode. In response T_EX software changed: modern engines and macro packages natively work with PDF, Unicode, TTF and OTF fonts.

We have now new challenges, which need to be addressed. There are new PDF features, which are not adequately addressed by the free viewers. Another important problem is the emergence of PDF archiving and accessibility standards. Governments increasingly demand standards compliance from their contractors. If T_EX does not produce compliant output “out of the box”, it will become not relevant first for government-related publications, then for big publishers, and then for the rest of the world. To ensure compliance we need both volunteer development effort *and* some funding. I think we can reach publishers and other stakeholders about this. I urge those interested in this issue to join the TUG Accessibility & Standards Working Group (<https://tug.org/twg/accessibility>).

Speaking of **T_EX community**, I must say that at almost any T_EX conference there are concerns about the decreased popularity of T_EX. I do not necessarily share this feeling. As a T_EX consultant I see among my clients, besides the usual bunch of publishers, professionals and students of mathematics & “hard” sciences, also rather unexpected users: lawyers, physicians, biologists, philosophers, and many others. Still for the future of T_EX, we need to ensure that new generations are exposed to it. I do not say that *everybody* should use T_EX. Rather I think those who might like it must be given the opportunity to learn and use it. We should show the

possibilities of T_EX and friends to the students of schools and universities. We should encourage teachers to share their experience, lesson plans and ideas. Perhaps we can help to organize competitions among students and teachers, olympiads, T_EX camps and courses. Again I would like to use this opportunity to remind about the TUG Education Working Group (<https://tug.org/twg/edutex>) and urge those interested in T_EX in schools and universities to join.

The efforts described above require coordination, organization, and, let us be practical, money. This leads us to the state of the **T_EX Users Group**. In the old days TUG membership was almost the only way to get those T_EX tapes or the answers to one’s T_EXnical questions. Now with the advent of the Internet, easy access to distributions and online forums, the situation has changed. Thus it is not unexpected that the membership in TUG has considerably dropped. Is TUG itself still relevant or needed?

I think it is. We need a center to coordinate development, advocacy and fundraising efforts. TUG seems to be a natural entity for this — especially being a tax exempt (in the United States) organization. We already serve several T_EX-related projects by collecting money for them, and we can increase this activity.

However, I think we need to reconsider the role of TUG membership for TUG. While we always will serve our members, we need to realize that we also serve the T_EX community in general. We should accept that many T_EX users do not want the commitment of full membership. We should tell these users that any donation of time or money is welcome too. We also need to do fundraising among organizational T_EX users: publishers, universities, etc. In other words, we might want to consider behaving as a charity organization serving the wide community of T_EX users, including, but not limited to, our core membership.

In conclusion, there are many interesting opportunities and challenges for us as T_EX developers, T_EX users and TUG members. I hope we all will rise to meet them.

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