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## President's note

Jim Hefferon

This is my last column as President. I am delighted to announce our next President and a robust election for the next Board. I will discuss some more events in the T<sub>E</sub>X world, and I will also take a minute for an exit reflection.

## Elections

This is an election year for TUG. Since there was a single candidate for President, Boris Veytsman, he will serve for the next two years. Congratulations Boris!

For the Board there are ten open seats. To every one of the candidates, let me say on behalf of the community, “Thank you for volunteering.” By the time this reaches you the results will be posted at [tug.org/election/](http://tug.org/election/).

## Conferences

This year's TUG conference takes place in conjunction with BachoT<sub>E</sub>X, April 29–May 3, 2017. We are joining the Polish group GUST in celebrating their 25th birthday. See [tug.org/tug2017/](http://tug.org/tug2017/) for more information. If you are planning to go please read “Things you always wanted to know about Bachotek” at [tug.org/tug2017/bachotex.html](http://tug.org/tug2017/bachotex.html).

The 11th International ConT<sub>E</sub>Xt meeting will be September 11–17, 2017 in Butzbach-Maibach, Germany. See [meeting.contextgarden.net/2017/](http://meeting.contextgarden.net/2017/) for the full information.

One more meeting note: we've submitted an application to be a satellite conference for the 2018 International Conference of Mathematicians in Rio de Janeiro. Nothing is firm yet but it is an exciting prospect. Fingers crossed.

## On the TUG site

Dave Walden has returned to doing interviews and the latest subject is Scott Pakin. I am a big admirer of Scott's work, including the Comprehensive L<sup>A</sup>T<sub>E</sub>X Symbol List, and I often recommend it when answering questions. But his Visual L<sup>A</sup>T<sub>E</sub>X FAQ made a bigger impression on me because the first time I saw it, I was floored. This idea is so compelling that of course the document needs to be made, but how come I never thought of anything like it? A brilliant idea just seems obvious in hindsight. As usual, Dave does a great job with an interesting subject. See [tug.org/interviews/pakin.html](http://tug.org/interviews/pakin.html).

There are also new book reviews. Boris Veytsman looks at *The Noblest Roman: A History of the Centaur Types of Bruce Rogers* by Jerry Kelly

and Misha Beletsky; Dave Walden reviewed *Track Changes: A Literary History of Word Processing* by Matthew G. Kirschenbaum; and I have looked at the latest edition of George Grätzer's *More Math Into L<sup>A</sup>T<sub>E</sub>X*. The link [tug.org/books/](http://tug.org/books/) will take you to all the book reviews, discounts, and more.

## Membership

The winner of the prize for the 2016 *Members Bring Members* drive is Doug Marmion. He received a limited edition of *Manuale Zapficum, 2009: Typographic arrangements of the words by and about the work of Hermann Zapf & Gudrun Zapf von Hesse* from RIT Press. Congratulations to Doug, and thank you to everyone who participated (and another thank you to Boris for taking care of the prize and the project administration).

Membership remains a concern. If you know someone who uses T<sub>E</sub>X and friends then urge them to consider joining TUG. In particular, point out to them how very inexpensive it is to support their tools. The basic membership early bird rate is \$85, with a \$40 deduction if you opt out of a paper copy of *TUGboat* and the software DVD and get them in electronic form only. If you are a student, a new grad, a senior, or a citizen of a country with a modest economy then after the deduction the annual membership is only \$15. It could not be more reasonable. See [tug.org/join.html](http://tug.org/join.html).

## Reflections

Although I am not a tumultuous person, it is fair to say that my brief time in office has been a tumultuous one for TUG. At times it seemed that the organization could collapse. It is a lesson in how fragile things are, that being good today is not enough and we must work hard to keep it up.

But we came through, with the support of members and with the pitching-in of everyone on the Board. I must especially note the efforts of Pavneet Arora, Barbara Beeton, Michael Doob, and Boris Veytsman. These folks have been an inspiration.

We are all glad to see TUG back accomplishing things in our community. Last summer's conference was delightful. We have, with our friends in GUST, every prospect of another wonderful meeting in a few months. And, we are optimistic about our chances for a prestigious conference venue in 2018.

Positive things are of course also happening outside of TUG. I am particularly cheered by the emergence of online sites for using T<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X. As a college teacher, I would like to see more undergraduates turned on to T<sub>E</sub>X and these sites significantly lower the barrier to entry.

Finally, to finish my time writing this column, I ask your indulgence to state a personal opinion.

All is not roses. TUG’s slow but steady loss of members is a worry. Others may not agree but I perceive that it is in part a reflection of a larger problem, decreased use. For instance, among colleagues at my school  $\text{\TeX}$  is no longer the go-to, even for semi-formal mathematical documents such as course exams. Part of this decrease comes from users wanting things that they have trouble getting with  $\text{\TeX}$  and so they shift to reaching first for other tools.

Everyone here knows that the  $\text{\TeX}$  family programs set a standard. They have made it possible for users who have not spent years being trained in printing, but instead are simply reasonably competent with the programs, to produce documents of professional quality, especially for mathematical text. And they have done it while maintaining the advantages of being markup-based and of being Free software.  $\text{\TeX}$  continues in many ways to set the standard; the work of Knuth, and of others in our community, remains a milestone accomplishment.

But in acknowledging the milestone we must also acknowledge that the work continues. One of TUG’s goals<sup>1</sup> is “To foster innovation in high-quality electronic document preparation.” And users want innovation. We have had our idea of documents widened, in many cases by what browsers give us, or even word processors. We want a variety of non-text elements, including video and audio. We also want to simply include many more of them, so that the model of floating occasional figures is stretched beyond its usefulness. We want reflowing text, including high quality line breaking, even if our content is mathematics.

We also want documents that are active. I am often asked about including interactive graphics such as zoom-in illustrations in Calculus, in both 2D and 3D. A colleague asked about a textbook for a topic that requires the most current information, mathematics for social justice, so that the document must update itself from the web with the latest statistics, including changing its graphs to reflect those facts, not just at compile time but at run time. And, I am writing a document on computability in which I want to embed a Scheme interpreter, so that students can run code.

Here is an example that is relatively mainstream. My department teaches from a statistics text where doing the homework requires that students leave the text for a JavaScript-heavy web site, and then return to the book for the next exercise. It is an awkward

pairing. Why are we going on the web? Because that’s the only way to do the needed activity (for instance, to have the computer simulate a thousand samples, each consisting of flipping a coin a hundred times). Then why are we going back to a book? Because web pages in browsers do not succeed as texts, at least as they are today constituted, at least in part because they are not typographically good enough. Despite the advantages of web pages — hyperlinks, searchable text, etc. — the elements of composition that have developed over centuries, the elements that  $\text{\TeX}$  does so well, are critical to making the text usable, to making the material easily comprehensible, and current pages and browsers do not do that well enough.

Do  $\text{\TeX}$  users have a way to do best-of-both? In the PDF viewer category, the standard is Acrobat Reader. It has high quality output and promises an embedded JavaScript interpreter and reflowing text, but it doesn’t do that across platforms. Among active formats, besides a browser the leading freely-usable one is Jupyter notebooks. They are very interesting but have no claims to first-class typography, to being able to produce professional-quality output.

Now, readers of *TUGboat* know that a great deal of very good work is being done on many of the issues I’ve named. I’ll mention the Lua $\text{\TeX}$  and  $\text{\LaTeX}$ 3 efforts as admirable examples and there are others. Indeed, some of the things I’ve mentioned are possible today, but often even those can be done only in ways that are ungainly, that require knowledge of a variety of technologies, that do not work across all major platforms, or that are a hack that we cannot reasonably expect to still work in a decade.

I don’t have a solution. But I do have this column, this one last time, and I will use it to make a request: the next time that you see a document on the web that wows you, ask yourself whether this could be done today with the  $\text{\TeX}$  family, by a reasonably capable user. To the extent that the answer is “yes” we as a community are doing great.

But where the answer is “no”, I hope that we will see that as a challenge, and will work together to *make* them do-able. Then  $\text{\TeX}$  will retain its place as a leading tool for creating the best documents. The work that we’ve done will continue to move forward.

And I shall enjoy that, from the relative calm of being an ex-President.

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<sup>1</sup> [tug.org/aims\\_ben.html](http://tug.org/aims_ben.html)