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**TUG 2011 in India**

Barbara Beeton

For the second time (the first was in 2002), the TUG annual conference was held in Kerala, India. Since I wasn't able to attend the first one, this was an exciting new experience.

The principal accommodations were in a hotel just off the beach near Trivandrum. The view toward the shore was quite enchanting, and the waves, which built up across the entire expanse of the Indian Ocean, made me wonder why there weren't any surfers — but that isn't the Indian way.

The conference itself took place in the facilities of River Valley Technologies, an interesting coach ride inland. (On the way, one unexpected sight was the iconic “dangerous bend” sign “in the wild”! Thanks to Reinhard Kotucha, a photo was obtained and forwarded to Don Knuth as a souvenir.) The buildings and grounds of River Valley have been designed and constructed to be minimally dependent on external utilities while providing an inviting and accessible workplace. The garden provides fresh fruit and vegetables for the canteen, and water is collected from rain, stored, used and recycled. “Natural” air conditioning is provided by broad roof overhangs and open windows for air circulation; only the conference room, directly under the roof, requires powered air conditioning. The River Valley web site (<http://river-valley.com/new-office-campus>) has photos and a good description of the facilities, and it is well worth viewing.

A TUG conference isn't just location. The real attraction is seeing old friends, making new ones, and learning what has been going on in the T<sub>E</sub>X world. This year's conference wasn't a large one, but it was interesting. The theme, eBooks, is a “hot” topic these days, and one of my goals was to find out what tools are available right now that can be applied to the Math Society's books to make them available in electronic form. (Interest has even been expressed in the possibility of putting this material onto small devices such as cell phones and PDAs; my conclusion is that this isn't going to happen very soon — not even if a magnifying glass is supplied à la the compact OED.) The consensus seems to be that things are looking up with respect to moderate-sized e-readers, but the situation is still far from ideal.

Several talks captured my attention in particular. I don't mean to slight any of the others; in fact, all the talks had something important to say, and we are fortunate that they are available on video: <http://river-valley.tv/conferences/tug-2011>.

Alan Wetmore's demonstration of several actual e-book devices was a real eye-opener. While text looked quite good, and this paper-and-ink devotee can even see an attraction for some situations, the math still needs work. Watching a display equation pour down the side of the screen like honey from a pitcher must be seen to be believed.

The problem of communicating published math to readers with impaired vision is a thorny one. Ross Moore has been working for several years on techniques for converting L<sup>A</sup>T<sub>E</sub>X files to tagged PDF. Adobe has apparently said that they will accept MathML, and now that PDF is an international standard, the goal should be to hold them to that implied promise. More work is needed, but this appears to be an achievable goal.

For decades, I've used the “light box” technique to determine whether two allegedly identical pages really are the same. Rishi described what I would call a “virtual light box” that overlays two PDF pages so that any small variation glares out from the screen. Using this technique, River Valley has cut its need for printed proof from four sheets per page to one sheet per four pages. (You do the arithmetic.) It really is magic, and I want a copy; it seems to be available now from the [river-valley.com](http://river-valley.com) site.

Dominik Wujastyk's talk about designing, typesetting and publishing his father's memoirs was a touching lesson in what can be done by someone with real interest in a project, but very little funding. The result, passed around through the audience, is a fine example that aspires to Don Knuth's exhortation to create beautiful books.

More contemporary in flavor are the multilingual phrase books created by Karel Skoupý. Very colorful, they are well designed, well organized, and I would really enjoy using them if I understood the languages involved.

This issue is a composite — talks for which papers were delivered along with other, regular articles. We've done this before, and expect to do it again when conditions warrant, so that delays are kept to a minimum. A final note: Although Axel Kielhorn did not attend the meeting, his article was so close to the topic that it seemed appropriate to include it among the talks.

Thanks to Kaveh, Radhakrishnan and Krishna for their kind invitation to hold the conference at River Valley, and to everyone else involved in making everything work so well.

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