Fewer Dead Trees, More Engagement

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THIS ISSUE of IEEE Software is the first that most of us will read on a screen rather than on paper. It also marks a change of guard for the magazine's editor in chief. Let's see what these changes mean for our community and the magazine. At the end of the column is a link to volunteer for the magazine's boards. Jump there if you're in a hurry; IEEE Software needs you!

Switch to Digital
In 2013 it became evident that our readers were switching en masse from print subscriptions to digital delivery. In response to that trend and to take advantage of digital delivery options while saving paper, printing, and distribution costs, IEEE Computer Society approved the move to digital as the primary delivery mechanism starting in 2015. This change is now reflected in our membership renewal forms, which list digital delivery as the default; the print issue is available only at a considerable additional cost. Also, through the new “Software and Systems” Computer Society membership option (www.computer.org/portal/web/membership/Software-and-Systems-Join), you can get a digital subscription to Software (and 12 more Digital Library articles) without paying extra.

Don’t let the two nonpaper versions of the magazines that the Computer Society now offers confuse you. The “digital” format, which is the complete magazine, is available to individual members through an app or as one PDF download. The “electronic” format, which consists of either the entire issue or individual articles in PDF format, is distributed through the Computer Society Digital (yes) Library. I understand that the app is available only to individual subscribers, not to members of institutions that subscribe to the Digital Library.

I must admit that, initially, I was skeptical when I heard about the switch to digital. I love printed paper, and I have been slow to adjust to the brave new world of e-reading. I like looking at the books lining my bookshelves, I enjoy the speed with which I can flip a magazine’s pages, I value the serendipity brought by grazing printed material, and I have fond memories of browsing through library stacks. (In the past, when I visited a university, I made a point to spend some time in its library, photocopy articles, and look for new and interesting stuff. I can still remember the neatly bound, typewritten volumes of a USSR journal, which was translated into English at the height of the Cold War, that I once chanced upon at the University of British Columbia library.) Also, I find it difficult to read articles on my computer screen, and I can’t stop worrying I might one day lose digital access to the material I enjoy.

However, what happens in practice differs a lot from the romanticized picture I’ve presented. My desk is literally crumpling under the load of three stacks of partly read maga-
zines. Having run out of shelf space, I stack old books behind the new ones, and I’m looking for three more shelf-meters (10 ft.) to organize the eyesore on my desk. When I visit a library, I look around with an empty feeling, which sinks in when I reflect that I can find vastly more, and more current, material on the Internet. I fall behind in reading the beloved paper copies on my desk, probably because I spend excessive time reading stuff on the Web. And magazines often arrive weeks late at my home address and then weigh down my backpack when I take them on the road.

I therefore decided to experiment with Software’s digital format and was pleasantly surprised. I read the magazine through its Qmags app on an iPad and an $80 no-frills Android tablet, and as a PDF on my laptop. All worked well. Some problems mentioned in reviews of the Android app seemed to have been addressed in the version I downloaded. The text was crisp (even on the Android tablet’s lackluster screen), the hyperlinks from the table of contents navigated fine, and I could zoom in to read small figures. The PDF wasn’t protected by any insidious digital-rights-management scheme, which means I can archive it to ensure its long-term availability. (My insecurity regarding availability is probably unfounded because over the past 15 years, the material I can access online has always been increasing.)

For me, the advantages of the switch to digital were eye-opening. First, I can say goodbye to the accumulating stacks of magazines on my desk and the space required to shelve them: out of sight, out of mind. Then, with a tablet at hand, I can now tap to read Software articles—stuff that really matters, instead of another rehash of the day’s events on the Web. Surprisingly, I found I can browse faster through a magazine’s online version than through the paper one. So, I’ll go over a lot more material. Finally, I can have all the articles the day they appear, wherever I am, and carry them always with me.

### Future Perfect

The switch to digital can also enable us to do many more things in the future. Currently, magazines are delivered in batch as a facsimile of what was the print edition. Instead, we could deliver them in a flowed-text format, which allows nice zooming and is more suitable for reading online on diverse devices. We can also switch to gradual delivery of the articles, keeping our community more engaged through comments and “likes.” Adopting the existing tablet newstand applications will let readers view all our magazines through the same interface. With digital delivery’s low marginal cost, we can easily experiment with alternative pricing models, such as limited-time free introductory subscriptions, affordable student offers, and free access to a specific number of articles.

At the same time, we must find a way to provide digital (rather than electronic) access to all institutional-subscriber members. Getting enhanced (anonymized) analytics from the magazine’s digital readers can help us guide the editorial content toward what our community actually reads. We can gain valuable insight from knowing the articles being read, the engagement per article, and the engagement of subscriber groups. More important, given that paper, binding, and weight no longer constrain the magazine, we could more easily increase our page count and issue frequency.
Crowdsourced editing and composition might help in this direction.

**Building a Community of Software Practitioners**

You might have noticed the new editor’s name on this column’s masthead. The strength of *Software* is its community of practitioners and researchers. The editorial and advisory boards and the editor in chief are only helping the community express its ideas. Having said that, I’m excited to be taking over the magazine’s helm from this issue onward. I’m extremely grateful to Forrest Shull for the terrific state in which he’s leaving the magazine, and to our two boards for their contagious enthusiasm, amazing hard work, inspirational ideas, and indispensable level-headedness. *Software* enjoys excellent health. It’s the most popular choice for a Computer Society magazine and generates about 180,000 digital article downloads per year. The magazine’s people-ware is its core asset: the strong and widely respected editorial and advisory boards, the keen Software Engineering Radio team churning out podcasts with more than 40 thousand downloads per episode, and its supportive reader community.

Yet there are challenges in staying true to our mission, “building a community of leading software practitioners,” because the Internet is raising the bar on how technical communities are served. The emergence of technology blogs, Q&A sites, massive open online courses, open-access publishing, and career-oriented social networking sites means that yesterday’s offerings no longer cut it. We must adapt or risk becoming irrelevant.

My vision is for *Software* to be the leading voice for software engineering practitioners and researchers, competing in authoritativeness, accessibility, field reach, and engagement with publications such as Nature, Science, the Harvard Business Review, the Economist, and the MIT Sloan Management Review. This will be a tough nut to crack, but there’s already a plan in place involving the department columns and regular articles and the magazine’s design, online presence, promotion, and governance.

On the department front, key ideas include a column offering advice on software engineering topics, a department that will host our field’s experts and luminaries, summaries of important conferences, and a retrospective of influential articles. We can also enhance our regular articles by having important conference or journal papers rewritten for practitioners, commissioned articles on hot topics, short articles by practitioners for practitioners, and a service that pairs developers with an interesting story with academics who want to help its presentation.

We can do a lot to enhance our online presence: publish regular social network updates, run online debates, host author-provided infographics and rich presentations, establish collaborations with online communities, run blogs, and fine-tune our digital delivery. Initiating a collaboration with existing online communities, such as those behind GitHub and the StackExchange sites (Stack Overflow, Programmers, Software Quality Assurance & Testing, Code Review, and so on) can be a win-win situation in which Software can act as a neutral hub.

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Sadly, no matter how attractive our content becomes, the mountain won’t come to Muhammad, so we must work harder on promotion, visibility, and marketing. Our goals here include expanding the awards program, publishing translated summary pages, employing mailing lists, publishing a newsletter, and partnering with initiatives targeting software developers, such as the Hour of Code and the Google Summer of Code. We can also explore cross-selling opportunities with software vendors and leveraging our multimedia offerings.

To deliver on all these fronts, we must change how the magazine is run. The most important factor of *Software*’s success is its volunteer board members. Through larger and wider volunteer participation in our boards, we can establish the bandwidth required to deliver the changes I outlined, and more. This will entail appointing associate editors in chief for new editorial content domains (for example, conference reports and articles), and advisory board members for engaging with our communities.

I’m certain that by issuing open calls for new board members, many of you will step in to help. Through a position on one of the *Software* boards, you can serve your profession, interact closely with leaders in your field, affect the field’s direction, and gain additional recognition and visibility (if you haven’t more than enough already). You can apply for the available board positions at http://goo.gl/forms/piw5yF6HXE. Although the form will remain open until the end of January 2015, please visit the form now, and volunteer generously to become part of the team that will create the new *Software*. $\text{\textcopyright}$