The Clock Is Ticking

Forrest Shull

THE CLOCK IS TICKING on my last year as editor in chief. It’s now either a bit over two months into 2014 (as I write this) or just under halfway through (by the time you read this), so this is an opportune time to revisit goals and priorities while there’s still time for corrective action. Managing IEEE Software for the past three years has been a fun and fascinating endeavor, in no small part because this period has been one of such flux for scientific publications. Many of the old models for doing business have been changing and continue to change drastically, as does our understanding of the types and media of technical content that provide value to readers. One of the perks of this job has been the exciting and rewarding sense of helping invent new solutions that provide value in our brave new world in collaboration with like-minded colleagues at the IEEE Computer Society and elsewhere across the software engineering field.

Trusted with managing the health of this magazine, and faced with a context where models are changing and the new paradigms aren’t yet well understood, my modus operandi has been to pilot as many worthwhile new approaches as possible and put resources into the ones with the most promising results. So I feel that I owe you, our readers, a report on some of those results and the associated lessons learned.

It’s important not to get too fixated on piloting new information at the expense of paying attention to the fundamentals.

I hope you’ll find this look “under the hood” of our periodical to be insightful and interesting—and if something inspires you to share your own ideas or even volunteer to get involved, even better!

To set some context, the overall picture is healthy. The latest numbers that I’ve seen show that subscriptions are on the increase, especially of our recently introduced digital edition, where the increases have been huge. The number of submissions and our impact factor have remained steady during a time when other scientific publications have seen large fluctuations. Still, we would always like to do better. Given the ever-increasing importance of software in our world and the rapid pace of change, the sky’s the limit for the reach that we should have.

The Constants in the Equation

It’s important to note that several things that provide constraints to our work have not—and will not—change: our mission, our volunteers, and our reliance on peer review.

Our Mission

The mission of bridging research and application is central to all that we do, with far-reaching implications on decisions large and small (including things that you wouldn’t necessarily expect, such as the word limits of our articles, which are kept tight so as to convey the essential findings of research more easily to a practitioner audience). It’s also a fairly unique mission, and given the size and scope of the software engineering field, I would welcome more publications in this space because I worry about potential disconnects.

IEEE Software Mission Statement

To be the best source of reliable, useful, peer-reviewed information for leading software practitioners—the developers and managers who want to keep up with rapid technology change.
between the research and practitioner communities. Rather than see them as competition, I would appreciate having other voices to help convey important takeaways to software developers and decision-makers. (But this is a topic for another column.)

Our Volunteers
We have access to many talented individuals who give of their time to make IEEE Software a success. Because we can’t provide monetary inducements, we must make this an attractive proposition in other ways, visibility and exposure being key aspects. But more important is that IEEE Software’s content becomes part of the history and fundamental underpinnings of software engineering in a way that many other venues for developer content do not. Our importance in academia and to teaching institutions also means that IEEE Software’s content has an outsize role in influencing and training the next generation of practicing software engineers. More than that, however, the chance to be around other active and energized volunteers is a unique benefit that has a way of generating activity and energy all on its own.

Our Peer Review
Compared to other venues for disseminating new thinking about software engineering, such as practitioner-oriented blogs, conferences, and other magazines, our content requires a nontrivial amount of time between submission and print. This is due to the peer-review process that all article submissions go through. And while timeliness is something to prize, it doesn’t come at the expense of thorough review. This is one of our unique added values and remains a cornerstone of the scientific endeavor. Far from a negative, it’s one of our key selling points: there’s no shortage of opinions available about software development, and helping separate the wheat from the chaff is one of the important services IEEE Software provides.

Some Goals from Day One
For my first column as editor in chief, way back in January/February 2011, I laid out several goals to help IEEE Software successfully navigate the changing landscape of scientific publishing as I then understood it. In publishing this agenda, I wanted to commit myself to some key priorities and attract other like-minded thinkers.

In a nutshell, my overarching goal for the magazine has always been for it to be more than “just” a piece of printed matter that shows up every couple of months or so. No matter how good our content, if that’s the only way that interested readers can find it, all the material that’s out there competing for attention will drown us out. So I’ve been looking to get our content into other venues and different media, as well as to find more opportunities for interacting with the community of software engineers. I started this job convinced we needed to move away from a model where we broadcast good content to one in which we supported a dialogue about good content—and a dialogue that continues across multiple locations and platforms, at that.

I intended to implement this overall goal in several specific ways.

Industry Experience Reports
Continuing the Insights department was one of my first priorities in 2011, and three years later, it’s still going strong. Linda Rising created and then helmed this department in its early years, and more

HOW TO REACH US

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recently, Helen Sharp took over the role. We’re currently in the process of transitioning to a new department editor who I know will continue the technical strength of this content. In 2011, I wrote, “Just as I believe that research isn’t complete if it doesn’t reach stakeholders who can benefit from it, I believe it also needs to be informed by hearing the real-life challenges and experiences of practitioners.” Insights has been a great venue for allowing this to happen.

Opportunities to Post Comments

This has been one area where we haven’t been as successful as I would have liked, with a few notable exceptions. We’re able to post a small number of articles online from each issue with the opportunity for readers to leave feedback. We do get comments—and interesting ones, at that—but only rarely do we get the critical mass and the back-and-forth of a timely dialog.

I have a couple of theories as to why this might be, and I particularly believe that the asynchronous nature of reaching our readership makes it hard to get enough people together on a given page at a given time (readers may find articles in print in the physical magazine, browsing in the digital edition, or years later through the digital library). On this point, I’ve come to believe that my original goal was unrealistic and have noted with satisfaction that the dialog occurs effectively but in more typical ways, for example, through the thoughtful letters to the editor that we get (which tend to be much longer than would easily fit into a comment at the end of an article) or, in at least one instance, on a peer-reviewed feature-length article that commented with great technical depth on a prior publication.

Conference Collaborations

Having a presence at conferences was originally important to me for the visibility it provides the magazine. We’ve been successful at this: we have a presence and do outreach at numerous conferences every year to let members of the software engineering community know more about our magazine. More importantly, however, in a typical year we engage with four to five conferences in a more intensive way, usually by sponsoring best paper awards. Over the years, my thinking on this has evolved, and I see more benefits than I originally understood: best paper awards help recognize deserving authors, of course, but they also provide excellent exemplars of the kinds of practical yet rigorous content that we like to see in the magazine. In addition, participating in conferences in underserved geographic areas is one way in which we give back to the larger software engineering community. For example, for several years we’ve supported the African Conference on Software Engineering and Applied Computing (ACSEAC), the only conference focusing on that geographic region.

Podcasts

I often hear from readers that they still love the physical magazine itself—there’s an undeniable attraction to being able to pick up an issue, flip through to see what catches your eye, and perhaps serendipitously come across some interesting content that you never would have thought to download based on titles or keywords alone. But I’ve always felt that it’s important to build on this by producing other kinds of content and getting it out to software engineers in different ways.

Podcasts have long been one of my favorite media because they allow me to use time that would otherwise have been unproductive (for example, during my commute) to catch up on interesting content and hear it in the author’s own voice. At this point in time, more of our regular departments have made the leap to podcasting, giving our edi-
tors another way of engaging with the audience. Our centerpiece, Software Engineering Radio, continues to draw 40,000 to 50,000 listeners per episode, demonstrating a real hunger for this type of content. (More on that in the sidebars.)

One Goal That Evolved
Many goals have come up, evolved, or been discarded over time. Some have proven fairly quickly to be unworkable, while others required some experimentation to understand the issues in play. At any rate, let me share just one of these initiatives, which is noteworthy due to the length of time we’ve been working on it and the amount of effort it requires: our annual Software Experts Summit (SES).

This began as a way of having our board members and other thought leaders associated with the magazine showcase some of their latest thinking at an open event, which was planned to coincide with our annual board meeting. We’ve always done our best to keep prices low for attendees and focus on providing an interesting and energizing day on a timely technical topic. We’ve also tried to make this as much about good technical presentations as it is about giving the audience a chance to interact with both each other and the featured experts.

Over the years, we’ve understood that SES is able to stand on its own. We’ve formed a lot of useful collaborations with the local software engineering communities in areas such as Munich, London, and Silicon Valley to bring together outstanding technical programs. Our SES event this year is particularly ambitious, showcasing our content and connection to thought leaders in India, a market where we should be better known (and from which we should draw more content), given the amount of software development going on there. Advisory board member Girish Suryanarayana of Siemens Technology and Services Pvt. Ltd. is spearheading the efforts required to bring us to this part of the world. See the ad on the inside front cover for more information.

Looking Around
Of course, all these experiments and innovations continue against a constant backdrop of strong departments, solid article submissions, and thorough peer reviews. It’s important not to get too fixated on piloting new innovations at the expense of paying attention to the fundamentals. Managing this part of “the business” is in some ways even more important than new initiatives because without strong and relevant technical content, no amount of innovations in delivery or technology will help. So I’d like to thank the associate editors in chief, reviewers, and other volunteers who ensure timely and valuable peer review and maintain constantly timely and interesting departments.

In January 2015, a new editor in chief of IEEE Software will be officially in place, with new priorities and ideas to put into practice. I’m looking forward to a well-earned rest and the chance to see what new innovations are in the magazine’s future.

I should close by putting the spotlight on the many people that help make IEEE Software happen, and happen so well. None of this would be possible without the very professional staff at the Computer Society, the volunteers who pour so much of themselves into this (and who keep me energized as well), and especially Hakan Erdogmus, the prior editor in

WELCOME TO ROBERT BLUMEN
I’m very pleased to announce the addition of Robert Blumen to the editorial board. Robert will be taking the newly created position of department editor for Software Engineering Radio (www.se-radio.net), our podcast targeted at the professional software developer. He’s been a key contributor to SE Radio since before IEEE Software took it over in February 2012 and brings an institutional knowledge and passion that’s been indispensable throughout the transition. Of the “Ten Most Useful” podcasts in a recent survey of SE Radio listeners, Robert was the host of five of them. His interview with Nati Shalom on memory grid architecture is one of the most downloaded of the more than 200 interviews on the site. I’m very pleased to have Robert in this role and expect it will be instrumental in creating even tighter ties between the podcast and the magazine.

Robert is a software engineer at Symphony Commerce (formerly sneakpeeq), which provides e-commerce services and infrastructure for small and medium-sized businesses. He received a BS in physics from Stanford University and an MS in electrical engineering/computer science from the University of California, Berkeley.
FROM THE EDITOR

THE PRAGMATIC ARCHITECT RETURNS

This issue kicks off the return of our Pragmatic Architect department under a new department editor, Eoin Woods. I’m very excited to have Eoin joining our editorial board.

Eoin currently serves as the lead software architect for UBS Investment Bank, where he leads a team responsible for industrial-scale systems used by the UBS Operations group. He’s also a sought-after speaker, appearing regularly at many important practitioner-focused conferences such as Software Practice Advancement (SPA), Working IEEE/IFIP Conference on Software Architecture (WICSA), Software Architect, and QCon. He’s the coauthor of the widely cited software architecture book *Software Systems Architecture: Working with Stakeholders Using Viewpoints and Perspectives* (Addison-Wesley), now in its second edition. Just as importantly, he has a solid understanding of both the theoretical and practical aspects of developing sound systems that deliver real value, making him perfect for this role.

Software architecture remains one of our most popular topics, and I can’t wait to see the new directions in which Eoin takes us in that space. Welcome, Eoin!

IEE SOFTWARE CALL FOR PAPERS

Software Engineering for Internet Computing: Internetware and Beyond

Submission deadline: 1 June 2014 • Publication: January/February 2015

The Internet, once a network of networks, has become not just the platform of choice for delivering services to increasingly mobile users but also the connective tissue among people, information, and things. This special issue seeks articles that explore state-of-the-art research and industry practices of software engineering for Internet computing. Topics of interest include but are not limited to:

- software and programming models for dominant and emerging Internet-based systems such as cloud computing, service computing, social computing, mobile Internet, Internet of things, and cyber-physical systems;
- platforms and application frameworks for Internet-based software;
- engineering and quality-assurance approaches for Internet-based software;
- software design models for Internet-based software, such as UML, BPM, and Petri Net;
- software development processes and tools for the Internet, or with the Internet;
- technology and human-interaction models and techniques in the development of Internet-based software;
- migration or integration of legacy software to Internet-based software; and
- case studies and experience reports on one or more of the above aspects in industry practices.

Questions?

For more information about the focus, contact the guest editors:
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- Hong Mei (meih@pku.edu.cn)

Submission Guidelines

Manuscripts must not exceed 4,700 words including figures and tables, which count for 200 words each. Submissions in excess of these limits may be rejected without refereeing. The articles we deem within the theme and scope will be peer-reviewed and are subject to editing for magazine style, clarity, organization, and space. We reserve the right to edit the title of all submissions. Be sure to include the name of the theme or special issue for which you are submitting.

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