Retrospectives and Reflections

20 Years of IT Professional

Commemorating the 20th anniversary of IT Professional, the advisory board chair and four past editors in chief reflect on the first two decades of the magazine.

Sorel Reisman, Advisory Board Chair

California State University

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To celebrate 20 successful years of IT Professional, we asked the current advisory board chair, Sorel Reisman, and four former editors in chief (EICs)—Wushow “Bill” Chou, Frank E. Ferrante, Simon Y. Liu, and San Murugesan—to reflect on the history of the magazine so far and where it’s headed.

SOREL REISMAN, ADVISORY BOARD CHAIR

Twenty or so years ago it seemed like the Computer Society’s (CS’s) primary focus was on topics from the discipline of computer science—the theoretical underpinnings of what computing industry practitioners worked on in their professional lives. Folks who were industry practitioners, and even some like me who were faculty in IS or IT academic departments (which I define as the practitioner end of the computing spectrum) felt marginalized by this focus. But rather than abandon the CS and IEEE, since most of us were or had been electrical...
engineers, we plotted to broaden the CS’s theoretical focus so that more practitioners like us could find value in CS membership.

If we look back at what was going on in the industry 20 years ago, you’d think our ambitions would have been easily realizable. From a practitioner and even a consumer standpoint, it was an exciting time. Some 1997 industry highlights: IEEE introduced 802.11 (the wireless local area network standard), Steve Jobs came back to Apple, Windows 98 was released, Yahoo Mail was introduced, world chess champion Garry Kasparov lost to IBM’s supercomputer Deep Blue, Microsoft acquired Hotmail, DVDs went on sale for the first time, lithium-ion batteries were first sold commercially, and both Facebook and Netflix came online. What a year! From our perspective, the most significant event of that year was the inception of IT Professional, with delivery scheduled for January 1999. This was a very short gestation period, atypical of IEEE publications.

Thinking back on the planning meetings that eventually led to IEEE’s approval of the magazine, the selection of the first editor in chief (Bill Chou), and the formation of the first editorial board, I remember our many animated yet friendly debates about the structure and direction of the magazine. Despite the often heated discussions, we all remained friends—even today. In fact, after Bill, with whom I had many of these debates, subsequent EICs appropriately came from the ranks of our first editorial boards.

Over the ensuing years, under the leadership of Arnold (Jay) Bragg and then Simon Liu, IT Professional itself really became professional, formalizing and improving its review process so that the magazine is now an indexed and referenceable publication competing qualitatively with other IEEE publications. More recently, under the outgoing EIC San Murugesan, the magazine is an annual sponsor of the IT in Practice (ITiP) track of the CS’s signature COMPSAC conference.

Our computer technology–driven society has changed a lot since 1997, and IT Pro, which was established to explain the implications of emerging computing technologies to professional practitioners and managers, has evolved too—both in terms of format and content. For example, in our first year of publication, we published seven articles about Y2K. Remember that? Our most recent issues are more diverse, still continuing to address contemporary IT issues (for example, mobile computing, security, cloud computing, and deep learning) of concern to today’s IT practitioners and managers. Two decades later, we are still here to help IT professionals learn and understand real, practical, and social issues related to emerging IT products and services. Stay with us. We have many more anniversaries to celebrate!

Sorel Reisman is a professor of information systems at California State University, Fullerton, and managing director of the MERLOT system at the California State University Office of the Chancellor. He is a past president of the CS (2011); a member of the IEEE Publications, Products, and Services Board; chair of the IT Professional advisory board; COMPSAC standing committee chair; and a Fulbright Specialist. Contact him at sreisman@computer.org.

WUSHOW “BILL” CHOU, EIC 1999–2001

IT Pro was initially intended to attract professionals who manage enterprise computer and communications systems, and to entice them to join the CS as members. (In spite of working closely with computers, few of these practitioners were IEEE or CS members.)

However, what was required to make IT Pro successful for these intended objectives did not fit well with the CS’s culture, philosophy, environment, and operational mode. There were many challenges and difficulties.
Identifying Topics and Content

The first challenge was to identify key and timely topics, to provide a suitable amount of technical information that was tutorial in nature and could enhance readers’ skills in managing and operating enterprise computer and communications systems, and to convince qualified authors to write such articles pro bono. For every article in the inaugural issue, a volunteer editor was responsible for choosing the title, writing a summary, and negotiating with a qualified individual to write the article without remuneration. This process was very time consuming for unpaid volunteers.

Finding Authors

The next challenge was identifying authors with intimate knowledge of the technology, management, or operation of enterprise computer or communications systems who were capable of writing for the intended audience, and were willing to write without compensation. Based on personal contacts, some editors were able to recruit a few authors. The difficulty was that such efforts were not sustainable in the longer term.

Finding Editors

Another challenge was finding individuals who had established professional status and were willing to serve as an editorial board member or advisory board member. I was fortunate enough to be able to appoint many highly qualified individuals as editors and advisory board members from my professional contacts. Among them were a member of the US National Academy of Engineering, a Knight of the Legion of Honor (France), a recipient of the Queen Elizabeth Prize of Engineering, two inductees of the Internet Hall of Fame, Taiwan’s minister of technology, a university president and a university dean, CEOs of IT corporations, CIOs of large enterprises, developers of IT systems, past presidents of the CS, a former EIC of an IT magazine, and experienced IT consultants. The difficulty was that most of these individuals were only willing to serve for a limited term, and people with such backgrounds were in short supply.

Operating within the CS’s Framework

Metrics that are typically used to judge the quality of an IEEE or CS magazine are the quantity of paper submissions, the percentage of submissions accepted for publication, and the number of citations of published papers. The challenge was to convince the CS Publications Board that IT Pro was a different kind of magazine than typical CS publications, and this board can be difficult to convince.

Attracting Intended Readers

We also needed to provide articles that would appeal to intended readers who were used to getting such articles for free or at a lower cost. As mentioned earlier, under the CS’s operating environment, it was unrealistic to provide such articles on a regular basis. It was even more difficult—actually impossible—not to charge a fee higher than what these potential readers were willing to pay.

Prognosis

Before the end of my term as EIC, it became clear that it was unrealistic to count on unpaid authors and editors to provide enough articles that appealed to the intended readers, to expect that the intended readers would be willing to pay a nontrivial amount for a subscription fee on
top of the membership fee, and to expect that the Pubs Board would allow the magazine to operate without a low acceptance rate and a high citation rate. It became clear that the focus of readership needed to be shifted toward our traditional membership (those who were already members), that the editors needed to be CS staff members, that the sources of the articles needed to depend on submissions, and that the prestige of the magazine needed to place emphasis on a low acceptance rate and a high citation rate. I am glad that Frank Ferrante, Jay Bragg, Simon Liu, and San Murugesan steered IT Pro into this new direction and evolved it into what it is today.

I feel very privileged to have worked with so many talented editors, advisors, and CS editorial staff. In particular, I was extremely impressed with Angela Burgess and Janet Wilson.

Wushow “Bill” Chou is a professor emeritus at North Carolina State University. He was the inaugural vice president of telecommunications at Network Analysis Corp., the founding director of Computer Studies and a professor at North Carolina State University, the inaugural chief information officer/deputy assistant secretary at the US Department of the Treasury, founding EIC of the Journal of Telecommunications Networks, and founding EIC of IT Professional. He was an IT consultant to more than 30 organizations, is an IEEE Fellow, and is a recipient of the US Treasury Meritorious Service Award. He has written more than 100 publications, given 100 public speeches, and visited 90 countries/territories. Chou received a PhD in electrical and computer engineering from the University of California, Berkeley. Contact him at chou@ncsu.edu.

FRANK E. FERRANTE, EIC 2002–2005

During my time as the second editor in chief of IT Professional, I knew the magazine was passing through a tough time. However, I was optimistic and felt IT Pro could maintain its readership and subscriptions if we could meet the needs of our readers.

Learn from Our Examples

My concerns at that time were the magazine’s themes and clear topics. As Bill Chou pointed out in the last month of his three-year term as our founding EIC, we needed to focus on “…delivering technical articles, rather than news and product information,” to give our readers an “…unbiased view of emerging technologies,” and to present easy-to-understand papers that could not be found in the CS’s detailed transactions. I knew emerging technology researchers out in the field had detailed material that we could present to our readers, but we needed to knock it down a level so that all readers could learn how the material applied to their needs.

Themes and Topics

Throughout my term as EIC, I promoted offering both themes and topics. With the help of our editorial staff and board members, we developed a clear theme for each issue but also looked for floating articles or topics that either extended information from past themes or introduced readers to new innovations (what we called “hot” topics of interest). This allowed us to offer new subjects so readers could see how these topics could be used in their own projects or to influence a future theme.
This approach might not have resulted in a massive increase in subscribers, but I did recall that it helped sustain our readership, leading to the continuation of this terrific magazine for our society.

**Top Articles**

Looking back on the articles published during my EIC term, I felt that the leading papers were ones that addressed current events such as 9/11, Hurricane Katrina, and jobs moving offshore. Wireless LAN standards, RFID techniques, grid computing systems, and population privacy were other hot topics. After my term ended, EIC Simon Liu requested that the board members vote on the top 10 papers from the first 10 years of the magazine, and he then identified the top 10 papers from the board’s votes.

He also drew data from the CSDL (the CS’s digital library) to get a list of the most downloaded articles.

Between the two lists, I found these articles from my EIC term to stand out (in no particular order):

- R. Weinstein, “RFID: A Technical Overview and its Application to the Enterprise,” vol. 7, no. 3, 2005, pp. 27–33 (on both lists);
- W. Stallings, “IEEE 802.11; Wireless LANs from a to n,” vol. 6, no. 5, 2004, pp. 32–37;

After seeing all of these terrific papers and more, I knew that *IT Professional* would grow and be maintained for many more decades, especially with all of the outstanding editorial board members and CS staff. *IT Pro* will always be a success for the CS.

**Frank E. Ferrante** is an executive partner and adjunct professor in the Mason School of Business at the College of William & Mary, and served as an associate faculty member at Johns Hopkins University’s Carey Business School. He has extensive experience in telecommunications system design, implementation, and management. Ferrante was technical director of R&D for the Northrop-Page Communications Engineers and senior manager and electro-magnetic compatibility analyst for the Atlantic Research Corporation. He has served on the CS Board of Governors as treasurer and a member of the Publications Board, as well as EIC of *IT Professional*. Ferrante received an MSEE from Syracuse University and an MS in engineering and public policy from Carnegie Mellon University. He’s a Life Senior Member of IEEE. Contact him at frankfwmbg@gmail.com.
During my time as EIC, I gained a much deeper level of appreciation for the exceptional support of CS staff and the outstanding volunteer advisory members, editors, and reviewers. They inspired me to believe that *IT Pro* represents the IT community at its best, striving to significantly impact the world of IT professionals.

In 2011, *IT Pro* was enlisted in the Institute for Scientific Information (ISI) index—the number of submitted manuscripts doubled, the number of article downloads doubled, and *IT Pro* became more geographically and technically diverse than ever, all while maintaining high-quality content and decreasing our submission-to-publication time. As I think about this period, four accomplishments stand out:

1. Diversifying advisory and editorial boards. We rejuvenated the advisory and editorial boards with new members, and identified and recruited new board members to reflect balance and diversity in geographic areas, gender, discipline, and background (academic and industry). We realigned editorial subject areas to better reflect the needs of *IT Pro* readers and to recruit outstanding subject area editors from around the world. By 2013, we had editors from nine countries, six female editors, and an equal number of editors from academia and industry.

2. Establishing a strong leadership team. We recruited three new associate EICs as part of succession planning; delegated authority and responsibility to associate EICs to handle various activities; and conducted regular meetings or calls with the EIC and associate EICs to develop and plan activities, review progress, identify improvement opportunities, and refine goals and visions if needed. Two associate EICs, San Murugesan and Irena Bojanova, later became EICs of *IT Pro*.

3. Enlisting in the ISI index. In 2009, *IT Pro* was not listed by the ISI index—this limited the magazine’s attraction and lowered incentives for contributions from the academic community. To address this, we established an ISI membership task force led by editorial board member Morris Chang. The task force analyzed ISI index requirements and inclusion processes and provided the necessary documentation to ISI. In 2011, *IT Pro* was successfully included in the ISI index.

4. Increasing agility to respond to reader needs. A review of the 20 most downloaded papers in 2009 revealed that most of the articles were on emerging technologies and practical tutorials. To respond to reader needs, a few columns and departments were added to increase submissions, augment hot topic coverage, elevate visibility, and improve readership and circulation. For instance, a column for emerging technologies was added to provide articles on the newest topics, even if the articles were not extremely deep technically. Another example was establishing a learning department for tutorial/survey articles that led readers to interesting things going on in the field. By 2013, the number of article downloads had doubled.

I sincerely believe that the IT professional community will benefit from *IT Pro*’s timely response to emerging topics and excellent scholarship for many years to come. I am grateful to my predecessors Bill Chou, Frank Ferrante, and Jay Bragg for establishing a solid and strong foundation as well as my successors San Murugesan and Irena Bojanova for continuously exploring new frontiers and charting new directions.

**Simon Y. Liu** is the associate administrator of the Agricultural Research Service, a research agency with more than 2,000 research scientists. He previously served as director of the National Agricultural Library, the world’s largest and most accessible research library specializing in agriculture. Before that, Liu served as associate director and chief information officer of the National Library of Medicine. He also served as the director of information management and security at the US Department of Justice and the chief IT architect of the US Treasury Department. Liu attended 10 universities in three countries and holds two PhDs and three master’s degrees in computer science, education, government management, business administration, and mathematics. Contact him at simonyliu@yahoo.com.
2018 marks IT Professional’s 20th anniversary, and this issue is its 121st (you can see past issues, articles, and article summaries conveniently aggregated at www.obren.nl/ieeeit). This is a significant milestone in the magazine’s journey and evolution, and it is a good time for recollection, reflection, and celebration.

IT Pro Is Unique

Since the first issue, much has changed in the technology and applications landscape, and also in our life, work, and profession as a result of advances in and adoption of IT. IT Pro has traced these changes well and remains a source of trusted information for IT professionals to update their skills and knowledge. The magazine continues to be informative, timely, stimulating, and helpful to a broad spectrum of readers interested in IT and its applications.

IT Pro is a unique, scholarly IT magazine specifically targeted to the IT community at large—including young and inexperienced students, academics, IT researchers, applications developers, and IT managers and executives. It’s unique primarily because it covers a wide spectrum of topics of interest and relevance—not only key emerging technologies but also their novel applications, key development challenges and issues, socioeconomic impacts, and more. The magazine also examines technology trends and highlights contributions of pioneers who formed the foundation for additional development and offered inspiration to advance our field.

Thanks to all those who conceived this unique magazine, shaped it, supported and promoted it, and steered it to its current stage.

Looking Back

I consider myself fortunate and privileged to be closely associated with this great magazine that IT professionals can rely on. My four-year tenure as EIC, which recently ended, has been a rewarding experience for me both professionally and personally. It gave me an opportunity to serve a community of IT and computer professionals, academics, researchers, and students (the future professionals) by offering them information of interest and relevance.

Over the past four years, IT Pro has published several special issues on emerging topics, including mobile commerce, wearable computing, data analytics, digital innovation and transformation, cybersecurity and privacy, the Internet of Things, cognitive computing, and graph databases. We also launched new departments and columns, such as Life in the C-Suite, Mastermind, Data Analytics, and IT and Future Employment.

IT Pro has performed consistently, making significant progress in terms of coverage, readership, citations, article downloads, and impact factor. The magazine is now indexed by major indexing services including ISI. Even 10 years after publication, many visionary and tutorial articles are still being widely read and cited. Readers, stakeholders, and industry professionals continue to appreciate and look forward to every new issue.

In 2014, Sorel Reisman, Carl Chang, and I realized that many practitioners considered COMPSAC and other CS conferences to be academic in nature and hence had shown little interest in participating. With the objective of bringing together researchers and practitioners to interact, share their knowledge, and discuss areas that need further research and development, IT Pro (in collaboration with COMPSAC) launched COMPSAC’s IT in Practice (ITiP) Symposium in 2015. The symposium is now an annual event. This year, COMPSAC and the ITiP Symposium will be held in Tokyo from 23–27 July (for details, visit www.compsac.org).
We’ve also affiliated *IT Pro* with other international and regional conferences and symposia relevant to IT practitioners, professionals, and managers, including the Software Technology Conference (STC). Furthermore, to focus attention on the importance of information systems governance, *IT Pro* organized an Information Systems Governance conference at NIST in 2015.

Despite a few challenges, difficulties, and barriers that we addressed satisfactorily, my journey as EIC has been relatively smooth and enjoyable. This is primarily because I had the support of several great people—editorial and advisory board members, editorial staff, guest editors, reviewers, authors, subscribers, readers, well-wishers, and the CS Board of Governors and executives who helped raise the magazine to greater heights. I acknowledge their contributions and encouragement.

**Looking Ahead**

Significant shifts are ahead, driving us to a new digital landscape and a new information age. We can’t yet fully visualize this future or anticipate its potential impact, so IT professionals must protect themselves from “technological threats”—that is, threats and issues posed to them by continuing rapid and widespread advances in IT. These include technological obsolescence, technological irrelevance, and a lack of skills and knowledge that are relevant now and will continue to be in the future.

To thrive in this dynamic environment, as I highlighted in my final EIC editorial (“Stay Professionally Fit, Always,” vol. 19, no. 6, 2017, pp. 4–7; bit.ly/2ArV6DG), IT professionals, academics, and researchers must continue to be professionally fit. They should be T-shaped professionals (or funnel-shaped professionals)—that is, professionals who have broad knowledge in several related areas, and in-depth knowledge and skills in one or more specific areas of interest. Then they will be able to really make a difference, helping change the world for the better, embracing advances in technology, and addressing challenges and issues that will arise in the new, interconnected, smarter information age.

*IT Pro* will continue to assist in this endeavor by providing ongoing updates on IT research and practice and general insights of interest and relevance to IT professionals and executives, researchers, and students. The magazine, however, will need your support and contributions to further enrich its value to readers in the exciting and challenging times ahead—the new information age. Continue to enjoy reading it and benefiting from it.

The magazine has a long, challenging road ahead. To reach further heights and to remain a preeminent magazine for IT professionals for years to come, it has to remain informative, timely, relevant, and valuable to its readers. It has to effectively engage with its readers, whose demographics and preferences will continue to change, and has to continue to be innovative in meeting readers’ varied and changing needs and expectations. My best wishes to *IT Pro* and its editorial board as they further the magazine’s journey.

_San Murugesan_ is the director of BRITE Professional Services and an adjunct professor at the University of Western Sydney, Australia. His research interests include cloud computing, green IT, the Internet of Things, and IT applications. Murugesan served in several senior positions in academia and industry in Australia and India. He was EIC of *IT Professional* from 2014–2017 and is co-editor of *Encyclopedia of Cloud Computing* (Wiley, 2014). Murugesan is a Fellow of the Australian Computer Society and the Institution of Electronics and Telecommunication Engineers (IETE). Contact him at san@computer.org.