My Vision for Computer

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As the flagship publication of the IEEE Computer Society, Computer publishes peer-reviewed technical content that covers all aspects of computer science, computer engineering, technology, and applications. The articles selected for publication are edited to enhance readability for the general reader. Computer is a resource that practitioners, researchers, and managers can rely on to provide timely information about current research developments, trends, best practices, and changes in the profession.

Computer’s high-quality technical articles and its monthly columns and departments are of paramount value to our profession. Computer differentiates itself from topical publications that focus mostly on publishing peer-reviewed articles in a specific subfield of computing by also serving the Society as a critical conduit for reaching out to our members and other computing professionals.

Computer is uniquely positioned to sustain this great organization’s mission. The Society’s 2004 Strategic Plan—known as SP-5—outlined the Society’s mission “to advance the theory, practice, and application of computer science and engineering and information technology.” The Society’s members and staff further the mission of this not-for-profit organization by offering a variety of products and services.

The Society’s statement of direction captures its vision, stating that it aspires to be “the leading provider of technical information, community services, and personalized services for the world’s computing professionals.”

Computer should support this vision, helping to lead the Society into forward-looking thinking and planning.

PLANNING FOR THE FUTURE

As editor in chief, I will work with Computer’s editorial board, advisors, and editorial staff in a new round of brainstorming and analysis that will help to establish the future direction of this high-profile publication.

I will outline my plan in terms of what will be achievable in two years, with a short-term goal to be accomplished within six to 12 months, and long-term goals to reach by the end of my two-year term or at least to provide a solid foundation for achieving them. Additional far-reaching continuous improvement projects will be identified later.

Short-term goal

Identify and develop an effective mechanism for increasing the accessibility and thus Computer’s readership. We can achieve this goal through several new distribution and circulation channels that will initially be experimental but from which the “winners” will materialize. We should critically examine the way we produce and disseminate Computer and the way it is received and perceived by both Society members and others in the profession. As a result, we should identify and take immediate actions that are deemed to have the potential for making a positive difference.

Long-term goals

Produce greater impact through the development and dissemination of Computer’s content on a broader scale.

Enable accelerated feedback about technology innovations, best practices, education and curriculum initiatives, and lessons learned as published in Computer.

These goals will be achieved through synergy between the producers (authors and editors) and the consumers (readers in all segments and of diverse backgrounds and the professionals in a larger community). In this way, Computer will serve as an unsurpassed catalyst for advancing both the state of the art and the state of practice of computing in the 21st century. It will meet head on the challenges presented by the rapidly evolving and changing face of computing and the increasing diversity within this relatively young field.

SPECIFIC OBJECTIVES AND POSSIBLE NEW DIRECTIONS

We can increase Computer’s relevance to the computing profession by

- Building greater diversity in the editorial board and advisory panel. We need to improve the representation of the volunteer body to cover more nations, regions,
and ethnic origins. We should also expand our efforts to recruit more minority and women editors. We will strengthen the function of the advisory panel. We will make these improvements not for the sake of change itself but so that we can increase our effectiveness and efficiency. Finally, diversity must be rooted in consensus building so that we can work collectively to make a greater impact.

- Reaching out to the broader profession. With our large membership base, we can also assume that we have a large readership base. However, we also hear time and again that we need to penetrate the profession more effectively. In my view, the best way to accomplish this is through involving practicing professionals. My plan for Computer is to establish a CTO Forum to help us proactively engage representatives from both business and industry. I would invite the CTO Forum members to meet at least once annually with the EB, perhaps in conjunction with the Board of Governors meetings or on some other appropriate occasion. Joint meetings with other periodicals, especially those that can benefit from such a CTO Forum, might also be planned.

Certainly, in the 21st century, we should also actively and effectively explore the use of Web technology to compound the effect of our outreach efforts. There have been and will continue to be many discussions on “reaching out.” I believe that although we will never be short of ideas, we must find cost-effective, high-impact outreach programs for these goals to become a reality.

Editorial development

The Society as a whole is striving to devise an effective business plan to envision an end-to-end scenario of product and service development. It is our job to aggressively pursue articles on related topics for publication.

I have been advocating “interoperability” during the development of SP-5. I believe that we will be able to identify opportunities to flesh out interoperability during my tenure as Computer’s EIC, working more closely with constituents in our professional community. It is my conviction that Computer should lead the way in fostering such a culture. That said, the integrity and high quality of Computer’s technical content should never be compromised.

We want to encourage more professionals in our audience who are dynamic and influential thinkers to move out of the casual reading mode to become actively engaged in proactive reviewing and eventually become authors who contribute to the development of Computer’s editorial content.

Feature packaging and dissemination

We can entertain many ideas, such as Web-based communities endowed with royalty-free, quota-based access to Computer’s content; on-demand compilation and onsite production of topical collections of articles (or easy-to-create, template-driven promotional teasers), and so on. Of course, such freebies will need to be preapproved, but we can make this option more systematic and painless for volunteers (conferences, workshops, company or university seminars, section/chapter events, student gatherings, and so on). The recent efforts to develop and market a digital edition of Computer should be continued and benchmarked so we can learn from the experiment and improve our offering and presence.

Thus, with these broader dissemination and enhanced accessibility measures, Computer can be the catalyst for fostering rigorous discussion and debate of critical issues that will draw significant attention from the profession and related communities.

Assessing our own performance

Outcome assessment should play a critical role in evaluating our own performance. The EB should continue paying attention to performance metrics—impact factor, immediacy index, cited half-life, and so on—to measure the success (or failure) of our efforts and activities. In particular, as an ongoing project, we should explore ways to increase usage of Computer articles. The recent periodicals review conducted by the IEEE should provide a good benchmark, affording us an opportunity to learn from the exercise, consider actions that might be needed for calibration or correction, and march forward to create the next chapter in the history of this long-standing publication.

As computing has changed its face many times in the past decades and will continue to advance at a rapid pace, Computer’s editorial activities should focus on becoming a driving force of technology evolution rather than simply serving as a sounding board. The editorial board, advisory panel, editorial staff, and proposed CTO Forum should work synergistically to pave the road for future technology advancements and innovation by fully taking advantage of this great publication.

I am fortunate to be starting my new editorial journey with the full support of an outstanding board. I am also very pleased to report that I have successfully arm-twisted former EIC Doris Carver to continue her service, accepting the position of EIC Emeritus beginning this year, so that we can leverage her talent, experience, and efforts to the benefit of our readers.

I look forward to the exciting challenge and invite you to share your thoughts with me. Please contact me at c.chang@computer.org.

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