Integrated environments

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This month both Computer and IEEE Software are publishing articles that cover a broad range of topics related to integrated design and programming environments. The magazines complement each other in their coverage of this increasingly important area.

The articles appearing in Computer are surveys, tutorials, and case studies. They are intended to introduce Computer's general readership to the technical issues associated with the design, implementation, and use of these environments. The articles provide a range of technical perspectives that should encourage more widespread use of integrated design and programming environments and spawn related research projects.

The articles appearing in IEEE Software deal with more detailed technical issues and should give readers insight into the breadth and depth of current key issues in the environments area.

The fact that Computer and IEEE Software are complementing one another this month did not happen by accident. This experiment has been quite some time in the making. Even before becoming editor-in-chief of Computer, I wanted to establish a mechanism whereby Computer and the Computer Society's specialty magazines — IEEE Software, IEEE Computer Graphics & Applications, IEEE Expert, IEEE Micro, and IEEE Design & Test — could work together to provide our readers with significant and in-depth coverage of important and timely topics. "Companion issues" are one way of collaborating. This approach will also be attempted with multiple specialty magazines. For example, Computer, IEEE Software, and IEEE Expert will be involved in companion issues on the use of AI technology in software engineering: Computer will publish a tutorial and survey article, IEEE Software will publish in-depth articles on the software issues, and IEEE Expert will publish articles dealing with the hard-core AI topics of such applications.

This first attempt at this publication format involved a significant amount of time and interaction among Guest Editors David Notkin and Peter Henderson, myself, numerous authors, a very large body of referees, and the various parties' assistants. We had a large number of manuscripts submitted as candidate articles for these companion issues, and we thank the authors of those papers for submitting them. David and Peter have given much time to making this an outstanding issue of both Computer and IEEE Software. Without their competence, diligence, and hard work, these issues would not have come to pass.

The starting point for reading the articles is with David and Peter's introduction on p. 12 in Computer. The provide a nice classification of problem areas within the field to guide the reader in characterizing the results the various authors report.

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