Saluting Our 2000 Referees

Our referees are crucial to the quality of articles in IEEE Software, contributing many hours and careful thought to choosing and improving what we publish. As a result, they help maintain and raise the standards of our profession. The volunteer editors, the professional staff, and I extend a sincere thanks to them all. If we have missed your name, we apologize; be sure to let us know so we can acknowledge your contribution publicly. And please email us at software@computer.org if you would like to join this honored group and serve the magazine by becoming a reviewer.

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Reviewer Thanks

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of the university, while practice is the business of industry. Researchers provide the rigorous underlying knowledge that yields techniques for solving the problems of practice. Practice is considered a mundane business that, at best, furnishes researchers with problems for study and (occasionally) a site for evaluating the utility of research results. This institutional separation goes as almost unremarkable, with passing asides to “academia and industry.”

Another consequence is that, as far as practice is concerned, we teach the technically rational. So, we teach methodology and technique—and this apparently works, because methodology and technique are eminently teachable and assessable. Of course, we are then troubled by reports that

our students, when moving to the reality of practice in business, encounter problems when attempting to deploy these problem-solving techniques. That is because actual practice is at odds with the view suggested by an epistemology based on technical rationality.

The actuality of practice: The swamp

Practice, far from being mundane, is a subtle, sophisticated, and managed accomplishment. For example, in software system construction, the requirements analysis stage—the problem-setting stage—has proved to be persistently intractable to a technically rational solution. Yet we recognize that requirements analysis is a fundamental (and difficult) activity, whose poor execution results, all too frequently, in a fatally flawed system. Schön argues that professional practice has as much to do with identifying the problem as with solving the identified problem, where problem setting is “a process in which, interactively, we name the things to which we will attend and frame the context in which we will attend to them” (The Reflective Practitioner, p. 40).

As such, this aspect of practice lacks rigor and prescription—not in any pejorative sense, but in the sense revealed by Schön’s swamp metaphor:

There is a high, hard ground where practitioners can make effective use of research-based theory and technique, and there is a swampy lowland where situations are confusing “messes” incapable of technical solution. ...