

## Preface

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My purpose for assembling these essays is to make you think about the things that you may have been taking for granted up to now about software. The “right” things to do in this field are not so obvious. These essays are designed to shake you up, and perhaps make the hair on the back of your neck stand up (from anger, hopefully not fear!). I think that our industry suffers from too many people who just go along with the flow, and choose not to question what we do and why we do it. This collection of essays captures insights gained during 25 years of experience in the software industry. Many of them are controversial, and you may find you do not agree with all of them. That is the intent.

When you find an essay you particularly agree with, talk with your colleagues, and see if you can do your part to change the current course of the industry—or at least your little corner of it. After all, the industry is nothing other than the sum of all these little corners, just like yours. So change it!

And when you find an essay that you strongly disagree with, send me an email (A.M.Davis@IEEE.org), discuss it with your colleagues, tell them how misguided I am (and my essay is). I don’t ask you to agree with me; I just want you to take an active role in making things change for the better in the software industry.

I wrote many of the essays included here during the past decade in my role as editor-in-chief and co-columnist (with the late and great Winston Royce) of *Manager of IEEE Software*. When appropriate, I have updated the original essay with new comments to bring it up-to-date, but most stand on their own and still apply today. The fact that most of these essays apply as much today as they did when first written bears testimony to my claim that the industry is making relatively little progress with respect to its practices. I have of course also added numerous new essays to capture my recent thoughts.

I envision two types of readers of this book: practitioners and students.

- For practitioners, this book serves as an agent of change. When you are frustrated by the lack of progress in your organization, you will likely find an essay or two here that supports your claim that something must be done. Feel free

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to use them to support your case. Do not feel like you are unable to make changes because of your specific role in the organization. As an executive, a middle manager, a first-line manager, or an individual contributor, you have that same frustration with the inability to make things happen, to change the way the organization “has always done something.” Regardless of your role or title, talk to others, find colleagues who also want to see change happen, and then make it happen.

- In academe, most of these essays make great starting points for debates in graduate or advanced undergraduate courses. Have two students each take opposite viewpoints on the issue described in an essay. Have them debate their respective positions in front of the class. Or have them write their own essays taking both perspectives. I have on occasion asked individual students to take both positions by themselves. The exercise helps reinforce objectivity, and the usual lack of absolute truths. To assist this, I have added “seeds for debate” to the end of every essay.

Section 1 provides essays that address the state of the software industry as a whole. I spent most of my industry career as a manager, so Section II presents a series of essays dealing with the challenges facing most managers in the software industry. Most of the practical research that I have done (I have also done my share of impractical research!) has been in the area of requirements, i.e., the field devoted to ensuring that software is built to address real needs of real customers. And, thus, Section III is a collection of essays on requirements. After spending around half my career in industry and half in academe, I have developed somewhat of a curmudgeon’s view of the value of research as performed at most academic institutions. It is with that attitude that I present the essays of Section IV. Finally, in Section V, I view software development from a more philosophical perspective.

Just a final reminder: You *can* make a difference!

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My parents (Hannah and Barney Davis of Freehold, New Jersey), and my children (Marsha of Boulder, Colorado, and Michael of Colorado Springs) have been instrumental in shaping me into the person I am. But, more important than anybody else is my wife and best friend for 28 years, Ginny, who has supported me through good times and bad, who gives me the strength to keep trying to make a difference in this complex world (as she tries to do the same), who gives me support when I am downtrodden, and who gives me love all the time. Thank you, dear!



