Preface

IF YOU HAVE ANY ROLE in building, deploying, or operating computer systems, you need to understand privacy and security. Whether you're a programmer, a Web designer, a network engineer, or a technical manager, you need to concern yourself with the matter of trust, specifically, whether your customers can trust the systems you provide for them. Privacy and security aren't arcane areas of computer science anymore. If your users cannot trust your systems, your users will eventually stop using your systems.

This book was written to help you develop systems that people can trust. A subtle but important point can be found here: the problems that we address in this book aren't just technical problems. They're not about computers misbehaving. Our computer systems are used by people just like you and me. Users of these systems have families. They have concerns. They have plans. They have information that they consider private.

If people cannot trust systems we provide for their use, they'll tend not to use them to their full potential. If we want our systems to succeed—not just in terms of market penetration, but in terms of real and substantial changes in the way that people live, work, and play—we must encourage people to make the most of what we're offering. If we want our systems to succeed, we must make them worthy of trust.

As the 21st century gets underway, security in computer systems is all the rage. Computer security vendors offer every product and service imaginable. Each year, security-related purchases increase. Yet, every year we're seeing more failures, and the cost of such failures continues to rise.

We're clearly doing something wrong, but we need not abandon all hope.

Perhaps instead of increasing budgets to train our overworked systems developers in the latest products and techniques for providing security, we should step back to take a larger view of the big picture. When seeing the larger picture, we can view our problems from a different—wider—perspective.

This book was written with a specific goal of providing perspective. In identifying the target audience, I have also taken a wider view. The rise of the Web has dramatically changed the landscape of our system development staff. Rather than being made up of focused programmers with degrees in computer science or electrical engineering, trying to get software to behave on a particular system, our development teams now often include graphic designers, text markup folks, and many others with completely different backgrounds.

A problem that now faces us is a sometimes tremendous gap between the literature of computer science and the developers of our computer systems.

Our literature can help us to understand many of the problems that we're now facing and can provide us the insight we need to battle the problems of security and privacy successfully. Often, solutions are within our grasp, if we dare to see things from a broader perspective and to make applications of lessons learned in other contexts.

It is my hope that this book will serve to stimulate thinking, to encourage a greater interest in the research literature, and to promote the development of systems that we'll be proud to say we built, not just today, but decades from now.

Acknowledgments

I am deeply indebted to my predecessors in computer science, the many engineers and scientists who have developed systems and who have written about what they have learned. Their papers, books, and presentations have helped us to understand the problems we face in computing and how to find solutions. I hope this book is worthy of being counted in this tradition. The Usenet community welcomed me as a teenager, and many Usenet participants have helped stimulate the kind of critical thinking that would later help me formulate the basis of this book.

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Cartoon illustrations were provided by my grandfather, Charles Bowen. I'm very happy to have worked with him on this project.

Finally, I wish to thank my wife Nicole for her tireless support, thoughtful remarks, and endless forbearance. I can only hope that I make life as interesting for her as she makes it for me.