

Preface

When I decided to do a sabbatical with Symantec Research Labs Europe in the beautiful French Riviera, I was asked to work on a project about Voice over IP (VoIP) security. The goal of the VAMPIRE Project¹ was to understand the threats and vulnerabilities of VoIP systems, and to inform the direction of further research efforts. Although I was interested in this problem space, I only knew the subject from the point of view of a security researcher who has not studied VoIP itself in any great depth. As such, this project served as an ideal vehicle in educating me about VoIP security.

This book is the result of more than 18 months' work to learn what the challenges and opportunities are in securing VoIP. It is primarily addressed to students and researchers who want to learn about VoIP security, and is meant as both an introduction to the problem space and an extensive reference to related work as of early 2011. It is also intended as a case study on how to approach and map out a new research area.

The structure of this book reflects my learning process. We start by learning the lay of the land (Overview of VoIP Systems). We then proceed to find out what *actual* problems are encountered by VoIP systems by looking at reported vulnerabilities (Survey and Analysis of VoIP/IMS Vulnerabilities). Finally, we explore as much of the prior work in this space as I could find (Survey of VoIP Security Research Literature). The book concludes with some comparative analysis and practical recommendations for securing VoIP systems and infrastructures.

This work would not have been possible but for the support of several people. I would like to thank Marc Dacier, not only for arranging and managing my sabbatical at Symantec, but also for being a great colleague and friend. Thanks to Corrado Leita for sharing his office with me during that time, serving as a listening board, offering thoughtful suggestions, and generally putting up with me. Thanks to Susan

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Lagerstrom-Fife, Jennifer Evans and Jennifer Maurer at Springer for suggesting this project and making the process easy.

Finally, thanks to my wife, Elizabeth, and two daughters, Penelope and Julia, for tolerating my work schedule and quiriness during (and before) the conduct of the work and the authoring of this book². I'm sure you'll have to put up with me afterwards too!

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² For example, note the date of this foreword. Whoever writes a preface at 1am on Valentine's Day?



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