THE UNIX® INDUSTRY

Evolution, Concepts, Architecture, Applications, and Standards

Ed Dunphy

QED Technical Publishing Group

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Preface

The UNIX® Industry was written over the last three years, during which time I worked at Sun Microsystems. Because Sun focuses solely on the UNIX market, it was necessary for me to become as knowledgeable as possible about both the technology and business aspects of UNIX. As I learned, I realized that most of the sources of UNIX information were highly technical, oriented specifically towards technical end users and software developers. I became aware of the need for a higher-level, more business-oriented analysis.

My career in computing began in the early 1970s, a period when mainframes were the norm and time-sharing was still somewhat new. Over the next two decades, as my career evolved from systems design and programming to marketing and business, I became more interested in how technology could be applied to business problems. I realized that tremendous opportunities lay ahead for UNIX as a result of the industry shift toward open systems—opportunities that would benefit not just programmers and technicians but also systems managers, purchasing managers, and executive decision makers, as well as marketing, sales, and support specialists.

I frequented the bookstores and libraries seeking more in-

formation about UNIX, but I could not find the sort of industry and technology overview I was looking for. So I decided to write my own book, not only for myself but for others like me who wanted a broader understanding of UNIX technology and industry from a management and business perspective.

Thanks are due to the many people who helped me along the way. I would especially like to thank James Callan of the Albert Consulting Group for his continuous support as a collaborator on this project. There are many people who read the book and offered advice and insight. Acknowledgements and thanks go to Todd Bernhard, Collette Moquette Ricks, Colleen Sullivan, and Gina Davis for their support early in the project. I'd also like to thank the following individuals for their feedback on reviewing early drafts of the manuscript: Gordon Short (Hitachi), James Spitze (The Systems Consulting Consortium, Inc.), George Symons (Procase), Mike Dierker (Independence Technology, Inc.), and Lewis Brentano (Infocorp). Thanks also to Eric Herr, Pat Harding, Norm Eaglestone, Andy Hall, Xavier Candia, Masood Jabbar, Charlie Simmons, Marleen McDaniel, Herb Hinstorff, and many others at Sun. I would also like to thank Roger Gourd, vice president of engineering for the Open Software Foundation, Inc., who read the manuscript and provided insight and perspective that balance my Sun-nurtured views. I would also like to thank all the vendors who provided input and feedback. Finally, a special thanks to my brother Charles H. Dunphy Jr. for working with me from the first draft manuscript and throughout the project, and to my wife Janet and my family for their ongoing support and encouragement.

It is my hope that readers of UNIX industry will gain a fundamental understanding of UNIX concepts and deeper appreciation of the relevance of UNIX, open systems, and leading-edge technology on information systems strategies, on end users, and on the computer industry in general.

The author also acknowledges the support of Sun Microsystems, Inc., for permission to access Sun's computers in the development of this work, and for permission to use graphics icons in its illustrations.

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Introduction

This book has been written at a critical time in the evolution not just of the UNIX operating system but of the UNIX industry as a whole. It provides a comprehensive overview of one of the most exciting stages in the evolution of the computer industry. It is hoped that the reader will benefit by obtaining a wide business perspective of these changes and their practical significance.

This book has been developed specifically for managers, executives, users, and sales and support professionals in the computer industry who have a basic level of computer literacy. It will also serve as a thorough overview of the UNIX industry and technology for college students who desire a broader understanding.

Today's computer market is experiencing major change caused by a movement toward open systems and what some have called free market computing. Only in the last few years has this phenomenon begun to move out of the research labs and into the world—out of the realm of marketing and sales hype and into commercial reality. A new, consistent language, or paradigm, of computing is emerging. It is difficult to keep abreast, let alone stay on the front lines, of the technology, the trends,

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