Preface

This book, Managing Internet and Intranet Technologies in Organizations: Challenges and Opportunities, brings together 12 essays that present real issues faced by organizations when they implement Internet and intranet technologies. We consider both intra-organizational as well as inter-organizational research. The book is separated into three distinct sections. The first section concentrates on intranet technology and its use within an organization. The second section addresses inter-organizational uses of Internet technology and includes research on business-to-business and business-to-consumer electronic commerce. Finally, the third section analyzes technical issues facing organizations. Following is a detailed look at each of the sections.

The first section on intra-organizational use of intranet technology consists of four papers. Rens Scheepers and Jeremy Rose, in “Organizational Intranets: Cultivating Information Technology for the People by the People,” provide an introduction to intranet technology. Using a case study of a large telecommunications company in South Africa, the authors emphasize key challenges of implementing intranet technologies in an organization. In the second chapter, “Service Quality in the Virtual World: The Case Of Extranets,” Beverley Hope looks at measurements of success in extranet systems. An extranet “is a private network that uses Internet protocol and the public telecommunication system to securely share part of a business information or operations with suppliers, vendors, partners, customers, or other businesses.” An extranet is a type of intranet that is extended to stakeholders outside the organization. The author extends our understanding of service quality, interface issues and Web usability to service quality in the virtual world. Dr. Hope uses the example of extranets to provide dimensions of service quality applied to the virtual world. The author also provides quality recommendations for implementing extranets in organizations. In a more specific application of intranet technology, Katia Passerini, Mary Granger and Kemal Cakici look at issues involved in the implementation of Web-based instruction in organizations. They present a review of the status of web-based education and their relationship in other types of distance education. The paper evaluates the perceived advantages and disadvantages for key stakeholders such as institutions, students and faculty. The authors also report on the results of an on-line survey conducted in a major East Coast university. The authors report that “expected disadvantages [of Web-based instruction] are in most cases lower than forecasted, except for the cases in which the Web is used as a substitute tool for instruction,” and “faculty are interested and eager to use Web-based instruction in all its forms.” The next paper also looks at the impact of Internet technology on education. Ashu Guru and Fui Hoon (Fiona) Nah, in “Effect of Hypertext and Animation on Learning,” use concepts of “flow” and “media richness” to construct a model to explain the effect of hypertext and animation in the Web-based learning environment.

The second section looks at the use of Internet technology in an inter-organizational setting. Five papers are presented in this section. “Managing Value Creation...
in the Digital Economy: Information Types and E-Business Models,” by John C. McIntosh and Keng Siau, investigates the role of information in the digital economy. They emphasize that the focus should not be on the management of information technology but on the manner in which different types of information can be used to create value. A classification scheme for information types and how to use these types for analyses in four e-business models is discussed. The efforts of nine cities in eight European countries to develop a ‘service infrastructure’ for organizations to efficiently deliver electronic services is previewed by Åke Grönlund in his chapter, “Building an Infrastructure to Manage Electronic Services.” Dr. Grönlund found that the overall process was largely unstructured and improvised. He concludes that there is lack of strategic leadership in the field of electronic services in local European governments.

The next three chapters of this section evaluate more specific issues in the area of electronic commerce. I. Hakan Yetkiner and Csilla Horváth, in “Macroeconomic Implications of Virtual Shopping: A Theoretical Approach,” present the economic implications of Internet shopping in a Ricardian equilibrium framework. They conclude that in the future, Internet shopping will have a significant role to play in the economy because more and more people will shop on-line. In a more applications-oriented approach to Internet technology, Raymond Panko in “M-Commerce: Mobile Electronic Commerce,” looks at the next frontier of electronic commerce—mobile electronic commerce. Significant improvements in wireless technology led to small handheld access devices and personal digital assistants which constitute a major portion of mobile electronic commerce. This chapter looks at trends, potential applications and problems in the area of “m-commerce.” The last chapter in this section is, “ERP + E-Business = A New Vision of Enterprise System,” by Betty Wang and Fui Hoon (Fiona) Nah. Wang and Nah argue that the enterprise resource planning (ERP) model which connects organizational processes with one end-to-end application, may not be sufficient for today’s fast-moving, interconnected enterprises. They extend the ERP model to electronic business (or e-business) and provide a new model that integrates the ERP model with tight business-to-business connections.

The third section consists of a collection of essays that focus on technical issues in Internet and intranets in organizations. Raymond R. Panko, in “Security: The Snake in the E-Commerce Garden,” addresses one of the most important issues in Internet and Web-based systems. The paper provides an overview of different attacks that hackers may attempt against companies and methods used to combat each attack. The paper describes methods like the “denial-of-service” attacks and security mechanisms that include firewalls and authentication, to name a few. The paper evaluates the potential risks from lawsuits should a company experience a security breach. In the next paper, “Managing Web Site Performance and Reliability,” Ross Lumley provides a number of different approaches to building reliable and high-performance Web sites. Dr. Lumley describes methods that include load distribution and load balancing and provides examples of how they can be effectively used to enhance Web site performance and reliability. In the final chapter of the technology section of the book, John Artz presents an overview of data warehousing, an emerging technology that extends capabilities of relational databases. A large number of companies analyze their Web server’s Web log. This log provides information regarding visitors to a specific page or site. Web logs are
With every publication there are many individuals and groups who are due thanks. This publication also benefits from the many contributions—not only from the guest authors but also editors, reviewers, and support of loved ones. I would like to take this opportunity to acknowledge those persons who have contributed so much to the development, shaping and subsequent publishing of Managing Internet and Intranet Technologies in Organizations.

It is always difficult to know where to begin, but begin I must. So I would express my warm appreciation to the reviewers of the many articles submitted. These individuals were responsible for the difficult task of evaluating, commenting, asking for further information and reading for clarity that is always a difficult task. Their valuable contribution of time and energy is appreciated. I especially want to add my sincere thanks to Nina McGarry, Beverley Hope, Mary Granger, Ross Lumley, Katia Passerini, Srinivas Prasad, and Rens Scheepers.

The authors who gratefully submitted articles for review also deserve recognition. It is always a difficult task to offer your work for comment and then find that someone, somewhere will comment. As authors you soldiered the effort well and I look forward to working with you again in the very near future.

Special thanks are due to my wife, Anju, and son, Rudra. Their continued support and encouragement were with me throughout and helped to sustain me. I also would like to thank my parents Purnendu and Gouri Dasgupta for their support throughout my education that has continued into my professional career.

The entire Idea Group Publishing team made compiling the effort fun and informative. Michele Rossi provided with me with a time schedule to work within and helped me focus on the project during the long summer months of 2000. Mehdi Khosrowpour, the editor-in-chief of Idea Group Publishing, is recognized for offering me the opportunity to undertake such a large production of editing essays on Internet and Intranets. Thank you all.

I would be remiss if I did not recognize the support provided in the form of time and materials by the Department of Management Science, School of Business and Public Management, The George Washington University. Erik Winslow, Sergio D’Onofrio and Emilie Artiga, all of whom knowingly or unknowingly helped me in compiling this collection of chapters. My graduate assistants Richa Kohli, Rupan Sood, and Li Xiao facilitated this effort.

Thanks to all and I look forward to working with you again.