Preface

During the past two decades, advances in computer technologies combined with telecommunication technologies have lead to the development of the Internet and its most popular application, the World Wide Web (WWW). During the past decade, many firms have benefited from the technologies of WWW better know as Web-Enabled Technologies. Through the use of Web-Enabled Technologies, organizations have managed to reach customers and suppliers throughout the world in ways that in the past would have been impossible. Web-Enabled technologies have allowed firms of all sizes and types to find new strategic opportunities or to improve their strategic posture through the use of these new technologies. At the same time, organizations have begun utilizing Web-Enabled technologies in support internal organizational functions, particularly in the area of communications and information dissemination related activities.

Like many other new technologies, Web-Enabled technologies have offered organizations many opportunities and trends as well as controversies and challenges. The primary focus of this book is to provide up-to-date research and practical findings related to Web-enabled technologies and their applications and managerial issues in modern organizations. The contributed chapters by many international researchers and managers in this book include coverage of many timely and important issues related to the overall management of Web-Enabled technologies in organizations. The coverage provided in this book ranges from development issues of Web-Enabled technology applications to the issue of training and viability of these technologies. The following paragraphs provide a chronology of the chapters of this book and their coverage of issues and applications.

Chapter One entitled “Web-Enabled Technologies Assessment and Management: Critical Issues, Challenges and Trends” by Mehdi Khosrowpour and Nancy Herman of the Pennsylvania State University (USA), provides an overall discussion of the Internet and WWW evolution and contemporary critical issues of the Web-Enabled technologies. The chapter reports on the findings of a study conducted by the authors of this chapter in determining the critical issues of the Web-Enabled technologies in modern organizations. Finally, the chapter reports a list of 20 critical issues ranked by many expert researchers and industry leaders, the issues of “Bandwidth and Latency” being ranked the number one critical issue and “Hype” being ranked as one of the least critical issues.

Chapter Two entitled “Developing Applications for the Web: Exploring Differences Between Traditional and World Wide Web Application Development” by Nancy L. Russo of the Northern Illinois University (USA), examines the nature of Web-Enabled Technology application development processes and its evolution in organizations during the past decade. The chapter discusses the issues of
opportunity as well as risks associated with Web-based applications and how poorly designed and/or poorly implemented and maintained Web sites can tarnish an organization’s reputation. The chapter also discusses the fact that although many people have the ability to put up a Web site, they may not have the skill, knowledge or training to ensure that the site is of the necessary level of quality in terms of aesthetics, functionality, or security. The chapters also examine the nature of Web application development in particular, the issue of the who and the how of Web development and discuss the role of methodologies in the Web development process.

Chapter Three entitled “Planning for Effective Web-Based Commerce Application Development” by Ming-te Lu, and W.L. Yeung, both of Lingnan University, Hong Kong (Hong Kong), provides the important issues of careful planning and preparation that are needed for organizations to achieve their intended goals and objectives for their utilization of Web-Enabled technology applications. The chapter proposes a framework for planning effective Web-based commerce application development based on prior research in hypermedia and human-computer interfaces and recent research on Web-based commerce. The framework regards Web application development as a type of software development project. At the onset, the project’s social acceptability is investigated. Next, system feasibility is carried out. If the proposed project is viable, its Web-page interface is examined both from the functionality, contents, and navigability points of view. The use of the framework will contribute to more effective Web-based commerce application development.

Chapter Four entitled “Managing Web Technologies Acquisition, Utilization and Organization Change: Understanding Sociocognitive Processual Dynamics” by Mathew J. Klempa, an Information Systems Consultant (USA), presents a new perspective on web technologies acquisition, utilization, organization change and transformation. A contextualist analysis is processually based, emergent, situational, and holistic, marrying both theory and practice. This chapter’s paradigm affords a substantive analytical tool to the practitioner for understanding and managing not only web-based IT acquisition, utilization and organization change, but all IT-based recursive, organization changes and transformations. The chapter also discusses the use of the IT acquisition and utilization paradigm for organization diagnosis, as well as customization of organization change interventions. The chapter suggests further typologically based research venues.

Chapter Five entitled “The Five Stages of Customizing Web-Based Mass Information Systems” by Arno Scharl, University of Economics and Business Administration (Austria), discusses the issue of Web-enabled standard software for electronic commerce, incorporating adaptive components which can reduce the barriers between productive data processing and dispositive data processing like market analysis, Web-tracking, or data warehouses. This chapter presents a conceptual research framework for analyzing the evolution of electronic markets as well as their business ecosystem represents the foundation of a document-oriented
modeling technique for analyzing and designing (adaptive) Web-based Mass Information Systems. A Java prototype based on this meta-model is presented which supports cooperative efforts of academic research, IS departments, top-level management, and functional units to map and classify individual and aggregated customer behavior.

Chapter Six entitled “Viability Through Web-Enabled Technologies” by Dirk Vriens, University of Nijmegen (The Netherlands) and Paul Hendriks, University of Nijmegen, (The Netherlands) discusses the role of the Internet and associated technologies in paving the way for new types of businesses, new types of consumer behavior and new types of services in organizations. This chapter examines the issue of “viability of organizations” and importance of Web-enabled technologies by questioning the true role of these technologies on the viability of the organization, and the strategies that maintain this viability. The chapter also provides extensive discussion of how organizations can systematically approach the assessment of their viability through Web-Enabled technologies through a “systematic approach” that consists of three elements. First, it involves an elaboration of the notion of viability as far as organizations are concerned. Secondly, it includes a description of the specific features of Web-Enabled technologies. Thirdly, it presents a framework that ties viability to the specific features of Web-Enabled technologies so that an individual organization can use it to assess the impact of the technology. This may be called a “generic framework.”

Chapter Seven entitled “World Wide Wait” by Fui Hoon Nah and Kihyun Kim both of the University of Nebraska-Lincoln (USA), discusses the issue of communications delay and problems associated with communications speed and connections. The chapter claims that in light of the current communication limitations and difficulties, users sometimes equate the “WWW” acronym with “World Wide Wait”! Although information technology for supporting the infrastructure of WWW is continually being updated and improved, it is still not able to satisfy industry requirements and demand. The chapter also provides an extensive study usage pattern of WWW as well as topics related to speed of Internet access such as bandwidth, Internet connection alternatives, and technology to speed up WWW access. In addition, the chapter reports on experimental research that measured and analyzed users’ “tolerable” waiting time in accessing the WWW. Based on the results of the study, the chapter suggests guidelines for web designers regarding page size restrictions in web development.

Chapter Eight entitled “A Matter of Necessity: Implementing Web-Based Subject Administration” by Paul Darbyshire, Victoria University of Technology and Andrew Wenn both of Victoria University of Technology (Australia), describes the design and development of a Web Based Learning Administration (WBLA) system that initially the authors of the chapter developed to complement work they began on Web Based Learning. The project was based on WBLA systems that were designed for a multi-campus of the Victoria University of Technology. The chapter discusses a development framework and a model for designing WBLA applica-
tions and the details of the architecture of the WBLA. Finally, the chapter provides the summary of some responses to a trial of the system and suggestions for future enhancements.

Chapter Nine entitled “Web-Based Competency and Training Management Systems for Distance Learning” by Tammy Whalen and David Wright both of the University of Ottawa (Canada), examines the major impact of Web-Enabled technologies on how corporate training departments manage employee training. Through the use of competency and training management systems such as the SIGAL system used by Bell Canada, organizational training plans can be efficiently communicated throughout the organization, training needs can be linked to the performance evaluations of individual employees, and on-line training materials can be conveniently delivered to employees at their desktops. The chapter predicts that training management systems will evolve to incorporate analytic tools that can calculate the return on training investment, evaluate the impact of training on job performance, and determine the impact of training on corporate profits. Finally, the chapter discusses the value to companies of using a Web-based system for competency and training management, using the case of Bell Canada as an example of how companies are implementing these tools today.

Chapter Ten entitled “Electronic Commerce in Egypt” by Sherif Kamel, American University in Cairo (Egypt) reports that as the world converges into a global village where supply and demand interacts across nations and continents, electronic commerce represents an opportunity for many countries around the world. Egypt, one of the rapidly growing economies among the developing world, has thoroughly invested in transforming its society to deal with the information-based global market economy of the coming century. This chapter demonstrates Egypt’s vision with regard to electronic commerce and its possible utilization in its developmental and planning processes. Moreover, the chapter discusses the role of the government, the public and the private sector facing the challenges and opportunities enabled by electronic commerce, and how Egypt places the new enabled information and communication technologies as tools that can help in the nation’s development process.

Chapter Eleven entitled “Managing the Business of Web-Enabled Education and Training: A Framework and Case Studies for Replacing Blackboards with Browsers for Distance Learning” by Mahesh S. Raisinghani, University of Dallas (USA) and David Baker, Digital Think, Inc. (USA), discusses the role of interactive learning applications in a multi-sensory learning environment that maximizes the way people retain information. This accelerates learning and permits novices to perform like experts while they learn new skills. Powerful authoring systems enable vast amounts of information to be compiled quickly and presented in compelling and meaningful ways. In addition, these applications are easy and inexpensive to update. With interactive multimedia, everyone sees the same information and is exposed to identical learning environments. The reliability of
instruction, quality of information and presentation of material is consistent from user to user and from session to session. This chapter provides a framework for distance learning and distributed learning and two case studies of a web-based synchronous learning environment in two organizations with different corporate cultures.

I hope the diverse coverage of issues provided in the book will contribute to the existing literature and knowledge of Web-Enabled technologies management in organizations. The coverage provided in this book should be useful to both information technology managers and researchers in obtaining a greater understanding of the issues surrounding these technologies. It is my expectation that this book and its coverage will assist organizations in managing these technologies more effectively and leading them to discover innovative ways of utilization and management of Web-Enabled technologies in modern organizations.

Acknowledgments

Putting together a book of this magnitude requires a tremendous cooperation and assistance by everyone involved in the project. The first phase of an editing a quality book includes the process of identifying quality contributions and good reviewers. Each chapter of this book was carefully selected after each author(s) provided a proposal for their intended chapter. All submitted chapters were subjected to the rigorous blind review process, and based on the reviews and recommendation of the reviewers, the included chapters in this book were accepted. Authors of the accepted chapters were asked to revise their chapters based on the requirements of the reviewers. In some instances, chapters were revised 3-4 times before the chapter was finally accepted. Personally, I would like to express many thanks to my contributing authors for their excellent contributions to this book and also for assisting me in the review process. The second phase involves the constant interaction with production and copy editors associated with all productions activities of the book. In this area, I would like to express many thanks to my managing editor of Idea Group Publishing, Ms. Jan Travers for all her hard work, dedication and patience. I would also like to thank our assistant managing editor at Idea Group Publishing, Ms. Amanda Stauffer for her excellent contribution to the review process. Many thanks also go to my copy editor, Ms. Brenda Zboray Klinger, our cover design artist, Connie Pletz and our typesetter, Ms. Tamara Gillis. My warmest thanks are due to my wife Beth Peiffer for her support, wisdom, encouragement, understanding and patience. Finally, much gratitude goes to all my students who have taught me a lot during the past 20 years!