Preface

Electronic commerce and its various applications from online auctions to business-to-business buying is revolutionizing organizations in the 21st century. Consumers worry about security, and businesses continually need to improve online services and add value-added services to stay competitive. Businesses of all size, from the Fortune 500 to small businesses, are all getting into the business of electronic commerce. The following book is a compilation of essays about the most recent and relevant aspects of e-commerce. The authors of the following chapters discuss the most current theories for business thinking about e-commerce and practical suggestions for improving existing e-commerce initiatives. The research is the most up-to-date and is useful for academicians who are teaching and studying the trends within the electronic commerce industry. As electronic commerce throughout the world reaches into the billions and even trillions of dollar industry, the research contained in this volume will prove to be invaluable to business persons, researchers, teachers and students alike.

Chapter 1 entitled, “Cyber Shopping and Privacy” by Jatinder N.D. Gupta and Sushil K. Sharma of Ball State University (USA) focuses on privacy issues that arise in cyber shopping. The authors address the fundamental questions of how an online shopper can keep information about his/her Internet browsing habits safe and how to insure safe buying. The authors specifically review the recent publications on privacy that have appeared in various journals.

Chapter 2 entitled, “Structural Influences on Global E-Commerce Activity” by M. Lynne Markus of City University of Hong Kong (Hong Kong) and Christina Soh of Nanyang Technological University (Singapore) argues that global information management researchers should not lose sight of structural conditions related to business-to-business and business-to-consumer e-commerce activity. The authors discuss the implications of structural conditions, namely physical, social and economic arrangements, that shape e-commerce. The authors argue that these conditions vary from location to location and are not necessarily based upon natural culture.

Chapter 3 entitled, “Social Issues in Electronic Commerce: Implications for Policy Makers” by Anastasia Papazafeiropoulou and Athanasia Pouloudi of Brunel University (United Kingdom) examines how social concerns such as trust and digital democracy pertain to all levels of Internet and electronic commerce policy. The authors discuss different scenarios that influence the construction of an effective and socially responsible strategy for electronic commerce.
Chapter 4 entitled, “Identifying Motivations for the Use of Commercial Web Sites” by Thomas Stafford of Texas Women’s University and Marla Royne Stafford of the University of North Texas (USA) applies the perspective of uses and gratifications to better understand the factors motivating commercial Web site use and identifies a new media use gratification unique to the Internet called socialization. The research reports the results of a two-part study that begins with the identification of 179 motivations for Web usage and ultimately reduces those to five primary factors. The authors discuss these factors and their implications.

Chapter 5 entitled, “Signalling Intentions and Obliging Behavior Online: An Application of Semiotic and Legal Modeling in E-Commerce” by James Backhouse of the London School of Economics and Edward K. Cheng of Harvard Law School explores the semiotic and legal aspects of online contracts. The paper creates a model of the contract creation process and applies it to electronic commerce in intangible goods. Since electronic commerce extends beyond any jurisdiction, the need for high level abstraction and model comparison is bound to increase. This paper addresses those needs.

Chapter 6 entitled, “Customer Loyalty and Electronic Banking: A Conceptual Framework” by Daniel Tomiuk and Alain Pinsonneault of McGill University (Canada) presents a conceptual framework that helps to understand and assess the impacts of information technology on customer loyalty in retail banking. The authors define customer loyalty and identify its antecedents. They conclude that because it reduces the amount of face-to-face interactions customers have with bank personnel, online banking is likely to lead to lower levels of loyalty of communally-oriented customers and to higher levels of loyalty for exchange-oriented customers.

Chapter 7 entitled, “Electronic Commerce and Strategic Change Within Organizations: Lessons from Two Cases” by Robert Galliers of the London School of Economics and Sue Newell of the University of London (United Kingdom) reviews and contrasts the experiences of two major companies in attempting significant change projects incorporating information and communication technologies. The chapter points out that although much attention is currently focused on e-commerce industry transformation and inter-organizational relations, e-commerce can also impact complex internal relations and communication.

Chapter 8 entitled, “Trust in Internet Shopping: Instrument Development and Validation Through Classical and Modern Approaches” by Christy M. K. Cheung and Matthew K. O. Lee of the City University of Hong Kong (China) proposes a theoretical model for investigating the nature of trust in the specific context of Internet shopping. The instrument discussed represents a rigorously developed and validated instrument for the measurement of various important trust related constructs.

Chapter 9 entitled, “Electronic Broker Impacts on the Value of Postponement in a Global Supply Chain” by William Robinson of Georgia State University and Greg Elofsen of Fordham University (USA) investigates whether adding a market-making electronic broker to a supply chain increases the value of postponement. The authors test the relation by comparing the results of agent-based
simulations that vary between early and late differentiation strategies and the use of an electronic broker.

Chapter 10 entitled, “Internal Audit of Internet-Based Electronic Commerce Transactions: A TQM Approach” by Haider H. Madani of King Fahd University of Petroleum and Minerals (Saudi Arabia), addresses the nature of electronic commerce transactions and the control considerations associated with them. The thesis of the chapter is that the Internet-based electronic commerce transactions introduce an unfamiliar set of risks to the business setting, which can be minimized through a Total Quality Management (TQM) framework that enhances the internal audit effectiveness and efficiency. This framework is based on five principles: activity analysis, control analysis, evaluation analysis, risk assessment and continuous improvement. This approach provides appropriate monitoring of business practices and internal controls to ensure audit effectiveness and efficiency.

In Chapter 11, entitled, “Electronic Commerce Acceptance: A Study Comparing the United States and the United Kingdom,” Donna McCloskey from Widener University (USA) and David Whiteley from Manchester Metropolitan University (UK) address the issues of what consumers buy, what factors motivate them to buy via the Internet and what keeps them from shopping more. The chapter reports the results of a survey carried out in both the United States and the United Kingdom that was aimed at discovering what people bought online, why they did or did not use Internet e-commerce, any differences in activity between the USA and the UK and what might persuade people to take part in online shopping in the future.

Chapter 12 entitled, “Intelligent Software Agents in Electronic Commerce: A Socio-Technical Perspective” by Mahesh Raisinghani of the University of Dallas (USA), Chris Klassen of The Software Construction Company (USA) and Lawrence Schkade of the University of Texas at Arlington (USA) investigates software agents as possessing goal-directed and possessing abilities such as autonomy, collaborative behavior, and inferential capability. These agents can take different forms, and can initiate and make decisions without human intervention and have the capability to infer appropriate high-level goals from user actions and requests and take actions to achieve these goals. The intelligent software agent is a computational entity that can adapt to the environment, making it capable of interacting with other agents and transporting itself across different systems in a network.

Chapter 13 entitled, “Impacts of Software Agents in E-Commerce Systems on Customer’s Loyalty and on Behavior of Potential Customers” by Juergen Seitz, Eberhard Stickel and Krzysztof Woda of Viadrina University (Germany) analyzes the possible consequences of new push and pull technologies in e-commerce, which are jockeying for customers’ loyalty. The active technologies enabling customers to purchase efficiently and force merchants to offer highly personalized, value-added and complementary products and services in order to stay competitive. This chapter
provides examples of such services and of personalization techniques, which aid in sustaining one-on-one relationships with customers and other actors involved in e-commerce. Finally, it discusses the additional cost and benefits for suppliers and customers using electronic payment systems.

Chapter 14 entitled, “Internet Payment Mechanisms: Acceptance and Control Issues” by Ulric Gelinhas and Janis Gogan of Bentley College (USA) reviews several mechanisms of online payment mechanisms. It assesses the control issues associated with each of them, and the authors use the Diffusion of Innovations theory to assess the perceived benefits and risks of each of the payment mechanisms. It concludes that the success of online payment mechanisms is largely due to their perceived relative advantage, compatibility and trialability. It further concludes that these perceived characteristics are in turn affected by consumers’, bankers’, merchants’, and regulators’ understanding of the security and control surrounding them.

Chapter 15 entitled, “Approaches to a Decentralized Architecture for an Electronic Market—A Study for the Air Cargo Business” by Freimut Bodendorf and Stefan Reinheimer of the University of Erlangen-Nuremberg (Germany) proposes a decision support model for electronic markets using software agents. The model is based on the value chain concept applied to interorganizational information technology (IT), and the consideration of new coordination mechanisms to increase the efficiency of business processes. The proposed framework is used to design an electronic air market. In recent years, the companies of the air cargo arena have neglected to adapt to their customers’ needs in a timely manner. This chapter suggests that the decentralized implementation of software agents to support the transaction processes will support users and allow them to accomplish the needed phases involved in business transactions ranging from information gathering to negotiation.

Chapter 16 entitled, “A Web Usability Assessment Model and Automated Toolset” by Shirley Becker, Anthony Berkemeyer and Natalie Roberts of the Florida Institute of Technology (USA) speculates that an e-commerce site will be most useful when consumer usability attributes (e.g., performance, design layout, navigation) drive its development. This chapter describes a web usability assessment tool that is being developed to provide usability feedback on a particular Web site. This tool incorporates a set of usability attributed with user profile data and organizational goals for ongoing assessment of the effectiveness of a Web site.

Chapter 17 entitled, “Categorizing the Supplier Content of Public Web Sites,” by Dale Young of Miami University of Ohio (USA), identifies the supplier communication and supplier diversity content on public Web sites of the firms on the 2000 Fortune 500 list and creates a categorization scheme for that content. The chapter concludes that public Web sites are largely underutilized as a means of interacting with potential suppliers from a diverse population. The chapter also indicates the most common supplier diversity content for prospective suppliers on Fortune 500 public Web sites: certification requirements, online applications and a contact name/title for the diversity manager.
Chapter 18 entitled, “Multi-Dimensional B2B Auctions for Electronic Commerce” by Marilyn T. Griffin and France Belanger of the Virginia Polytechnic University and Craig Van Slyke of the University of Central Florida (USA) argues that early online auctions were based on price alone, but businesses must now consider shipping, storage, financing and insurance costs. These multiple variables have increased the complexity of B2B auctions and have led to the implementation of multidimensional B2B auctions. This chapter discusses the development of these multidimensional auctions and predicts that B2B online business will become increasingly more saturated with auction mechanisms in the near future. The chapter further shows that B2B market places will only succeed if they offer value-added services and are able to meet their customers’ expectations in the areas of privacy, trust, and security.

Chapter 19 entitled, “Mobile Agents, Mobile Computing and Mobile Users in Global E-Commerce” by Roberto Vinaja of the University of Texas Pan American (USA) examines the implication of mobility in three aspects: mobile code, mobile hardware and mobile users. The chapter also analyzes the impact of mobility on electronic commerce in the areas of security issues, export controls, legal jurisdiction, taxation and international issues. Mobile agent technologies and mobile computers will play an important role in the new cyberspace economy; however, the chapter indicates that many issues must be addressed before this technology can be fully implemented and discusses these important issues.

Chapter 20 entitled, “Evaluation of Electronic Commerce Adoption Within SMEs” by Marco Tagliavini, Aurelio Ravarini, and Alessandro Antonelli of Universita Cattaneo (Italy) aims to support SMEs in choosing the most suitable electronic commerce approaches according to their peculiarities and strategic goals. First, it identifies five EC approaches that support various business activities. The chapter further describes the business variables involved in any e-commerce project and identifies four SME profiles characterized by different values of these variables. Finally, a cross analysis between the e-commerce approaches and SME profiles allows developing a framework and suggesting the most suitable e-commerce solution for each business profile. This paper provides SMEs with a simple, easy to use tool to perform a qualitative evaluation of e-commerce opportunities.

Chapter 21 entitled, “The Cost of Email Within Organizations” by Thomas Jackson and Ray Dawson of Loughborough University and Darren Wilson of the Danwood Group (UK) details a pilot exercise on the cost-benefit analysis of the use of internal email performed at the Danwood Group. This exercise was part of a larger endeavour to evaluate computer communication to help enhance performance throughout the organization. The chapter resulted in the creation of an internal email costing process showing when it begins to become a more efficient means of communication. In the study, the time taken to read, write and perform other functions with email were measured from a sample of employees. The email content was also monitored to determine which emails were business-related. It was found that nearly two-thirds of all emails were not business-related at the start of the research, but this decreased to a consistent 43% towards the end.
Chapter 22 entitled, “Electronic Commerce: Determining B2C Web site Functions,” by Bijan Fazlollahi of Georgia State University discusses requirements for web site functions from the point of view of both the firm and the customer. The firm’s business strategies and customer decision support needs are mapped into web site functionalities. Two existing web sites of firms in the building industry are analyzed for illustrative purposes.

Electronic commerce and its implementations—enterprise resource planning, online shopping, mobile agents—are prominent areas of research that are revolutionizing the face of organizations throughout this world. The collections of essays in this work detail the most important issues surrounding electronic commerce as they address the way different cultures deal with e-commerce and the different methods to implement electronic commerce. The chapters also look at electronic commerce’s impact on different types and sizes of organizations. The authors of this timely new book address issues important to consumers and providers in ways that will prove to be useful to academicians, researchers, students and business people alike.

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