CHAPTER 1

Introduction

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The emergence of electronic commerce as a distinct area in business is seen by many researchers and executives as the most important commercial trend of our time. With the rapid adoption of networking technology by companies, the world is witnessing amazing changes in the way that business is done. Electronic commerce has been redefining all facets of business in a revolutionary manner. It is crucial to the effective functioning of organizations, especially in a world where companies have to deal with suppliers, customers, partners and their own units distributed across the world. The new business reality created by electronic commerce is no longer a projected vision of technocrats. It is a new “world order”, with millions of dollars exchanged between parties daily. Electronic commerce is already playing a significant role in determining corporate strategy and in creating value. It is also already playing an important role in changing society as we know it today.

To be competitive in today’s marketplace, companies need to expand commercial activities beyond national borders. The global network of electronic infrastructure has played a significant role in this expansion but the technology itself is not the factor driving the business revolution. The revolution is driven by the interaction of information technology and customer demand. Customers are not only adapting to new technologies, they are demanding more and more global competition.

The new business reality created by electronic commerce calls for appropriate research and scholarship. Instead of playing a catch-up game with this unknown monster, it is necessary that conscious and deliberate initiatives be made by academics and leaders in industry to tame it. It is also necessary that appropriate texts be created to teach students and the general public how to understand and cope with the new reality created by electronic commerce.

Doing Business Electronically addresses this goal. By providing an overview of the major areas of electronic commerce from both a scholarly and an industry perspective, this volume contributes towards closing the gap that currently exists in this area. Some of the questions that the authors address are:

- how do companies cope with issues of integrity and security?
with real time electronic transactions, what are the implications for new and existing financial institutions?

- how do we preserve intellectual property rights in a global, information-intense market?
- how can companies achieve effective performance by streamlining information flows?
- how can networked communities benefit from global collaborative systems?
- what do the high tech offerings of multimedia technology imply for next generation marketing?
- how should academic researchers and corporate managers address these issues?

Doing Business Electronically is primarily intended as a textbook for graduate level students taking courses in electronic commerce. Courses in this area are currently being introduced in many schools of business around the world, at both undergraduate and graduate levels. This book can stand alone or supplement a more introductory textbook in electronic commerce.

As a collection of research work in electronic commerce, Doing Business Electronically can also be used as a support text for courses in marketing, business strategy, management of information systems, organizational change, project management, product innovation, and international management. All of these - and more - are areas where there is a growing awareness of the key role of electronic commerce in business. In fact, one of the major advantages of this book is that it can be used by lecturers to expand the applicability of an undergraduate text to graduate students by exposing them to the electronic commerce implications of their discipline.

Doing Business Electronically will also appeal to anyone who owns or has access to a computer. It can be of interest to vendors who wish to sell on the World Wide Web. It could also be of interest to managers who are developing their companies’ electronic commerce strategies, establishing their organizations’ WWW sites, or responding to customers who prefer to communicate with the company electronically.

The collection of readings on electronic commerce in this book covers the general issues, major technologies, and processes that are associated with electronic commerce. In addition to scholarly work by leading researchers, two cases by industry executives are included. The geographic distribution of the contributors gives a transnational perspective on electronic commerce. Contributors represent Australia, Denmark, Greece, Malaysia, United Kingdom and the USA.

The book consists of five sections: General Issues in Electronic Commerce; Commerce on the World Wide Web; Electronic Data Interchange; Electronic Banking; and Industry Case Studies.
1.1. General Issues in Electronic Commerce

This section introduces a range of general issues associated with electronic commerce. Charles Steinfield, Robert Kraut and Alice Chan open the section by introducing a key issue in electronic commerce; that is, its complex effect on buyer-seller relationships. Their chapter discusses two opposing possibilities: (i) that data networks may “free” the market by enabling more ephemeral transactions between buyers and sellers; and (ii) that they will restrict or even “enslave” players by locking them into existing relationships from which it is technologically difficult to escape. The chapter reviews the literature in this area suggesting conditions under which the second scenario is more likely to occur.

Al Lederer, Dinesh Mirchandani, and Kenneth Sims, continue the theme of changes to buyer-seller relationships in Chapter 3 by exploring the specific expectations that sellers have of the electronic marketplace. Based on a survey of over two hundred companies that conduct their business in an electronic shopping mall, the authors conclude that competitiveness is the major benefit that companies expect to gain as a result of their electronic commerce activities and that this expected benefit predicts their differentiation and focus strategy.

In Chapter 4, Stefan Klein takes a global perspective of the dilemma raised by Steinfield, Kraut and Chan; that is, whether electronic commerce leads to a more open or a more constrained market. Using auctions on the web as its focus, it concludes that their emergence does, indeed, lead to a more open market but only under specific conditions.

The issue of security, as a crucial element in buyer-seller relationships in electronic markets, is discussed by Neal Shaw in Chapter 5. Shaw proposes a framework for using security policies, demonstrating how it could be used to achieve competitive advantage in different segments of the electronic commerce market.

1.2. Commerce on the WWW

This section introduces a range of issues associated with commerce on the World Wide Web (WWW or the Web). In Chapter 6, Celia Romm and Jeanne Wong discuss the strategy of establishing organizational web sites. An Australian case study is used as a basis for proposing a generic model for conceptualizing the process of organizational Web site development.

Another strategic issue related to business on the Web is the importance of understanding cultural factors that influence the purchasing behavior of consumers who are shopping at electronic malls. Most important among these factors, according to Rex Pereira in Chapter 7, is information about cultural factors that affect consumers’ involvement in the buying decision, customers’ perceived risk, customers’ income and credit, and customers’ mode of learning.

In Chapter 8, Bill Pergioudakis, Panagiotis Miliotis, and George Doukidis take a unique perspective on Web commerce by looking at the electronic procurement of the public sector in the Mediterranean region. They outline a two-phase model for
introducing electronic procurement, with particular emphasis on related European initiatives in this area. Also focusing on European electronic procurement activities, Andrew Slade uses the case study ELPRO (Electronic Procurement in Europe) in Chapter 9. The author investigates how to provide electronic means of placing contracts from very large public bodies with suppliers across the world.

1.3. Electronic Data Interchange

This section discusses a range of issues associated with electronic data interchange (EDI). This technology is described in Chapter 10, with a range of real life examples from different industries in which this technology has been implemented. The author, Dave Whiteley, then proceeds to outline an EDI Maturity Model which formalizes the process of implementing EDI in organizations and incorporates it with a re-engineering of the company’s supply chain.

The second reading in this section, Chapter 11 by Rob MacGregor, Deborah Bunker and Philip Waugh, focuses the discussion of EDI on small business. The major assertion made by the authors is that many premises upon which EDI systems are designed and implemented in small businesses are based on incorrect assumptions concerning the nature, implementation, and use of this technology in small business. The authors call for a realization that EDI can be an “enslavement” technology of small firms by larger ones and consequent reluctance on the part of small firms to use this technology for this reason.

1.4. Electronic Banking

This section focuses on electronic banking as a major subcategory of electronic commerce. Chapter 12, by Boon Lee, focuses on payment methods, particularly those with a potential application to electronic commerce. Following a review of recent trends in the use of noncurrency payment methods in developed countries, the chapter focuses on the implications from these emerging technologies for the future development of electronic banking.

Kristeen Heimann and Dan Glasson, in Chapter 13, build on the theoretical issues raised by Lee by taking a more practical approach. The major rebuttal of the Heimann and Glasson chapter is to outline the major challenges and ideal solutions for electronic banking. The authors’ conclusion is that, in order to meet its objectives, an electronic banking system needs to be available around the clock, flexible, secure, and high performing at both high and low peak times.

1.5. Industry Case Studies

The last section of the book introduces two electronic commerce case studies. The first case study by Celia Romm and Farida Peranginangin, in Chapter 14, describes the electronic banking planning process of the central bank of the Republic of
Indonesia. The case study, written by an executive of the bank, reviews the planning process of this major electronic commerce system, comparing it to models of IT planning in the public and private sector.

Chapter 15, the second case study in this section, describes in detail the introduction of electronic commerce applications to one of Australia’s largest companies. Karl Rommel, Head of Electronic Commerce at BHP Ltd, discusses the range of electronic commerce technologies used by the company, the process of implementing them, and some of the outcomes, both positive and negative, that have resulted from these initiatives.