Chapter XIII
E–Business Technologies in E–Market Literature

Nikos Manouselis
Agricultural University of Athens, Greece

ABSTRACT

E-business processes are implemented through existing, as well as novel technologies. This book chapter focuses on the field of electronic markets (e-markets), and studies the technologies and solutions that are applied and proposed in this field. In particular, the chapter reviews e-market literature in order to identify which are the technological trends that have appeared in the e-markets field during the last decade. A conceptual model that allows for the classification of e-market research literature according to a number of technical topics is first introduced. Then, e-market literature is reviewed, and the technologies that seem to be attracting more research attention are identified. Representative contributions are discussed, and directions for future research are indicated. The overall aim of this chapter is to provide a blueprint of the literature related to e-business technologies for e-markets.

INTRODUCTION

According to the 2005 report of the United Nations Conference on Trade and Development (UNCTAD, 2005), e-commerce continues to grow in all sectors. In the United States (the largest e-commerce market), e-commerce is still most prominent in manufacturing and wholesale trade, but on the other hand, growth rates are highest in retail trade (B2C) and services. In the United States, the largest global e-commerce market, e-commerce sales have continuously grown during the last years. With a growth rate (24.7%) significantly higher than for total retail trade (4.3%), the share of e-commerce in total retail trade is also growing. The latest available figures indicate that its share has more than doubled (UNCTAD, 2005). Eurostat data (http://epp.eurostat.cec.eu.int/) show that for the European Union (EU), e-commerce sales over the Internet increased from 0.9% in 2002 to 2.2% in 2004. Compilations by

the OECD suggest that online sales represent a small but growing share of total sales in most EU member countries, and that there is solid growth in B2C e-commerce (OECD, 2004).

As a result, numerous electronic markets (e-markets) are continuously being deployed. For instance, the European Observatory of e-Markets eMarketServices (http://www.emarketservices.com) has listed, until January 2006, about 905 e-markets from various business sectors. E-markets aim to facilitate information exchange and support activities related to business process management and transactions. They are characterized by a frictionless and very low-cost flow of information between buyers and sellers. Moreover, they allow sellers to reach a wider consumer base, and buyers to have access to a large number of sellers. E-markets are therefore expected to create economic value for buyers, sellers, market intermediaries, and for society as a whole (Bakos, 1998; Grieger, 2003).

In e-markets, proposed technologies and solutions vary from simple online catalogues that provide more information about products to interested customers, to sophisticated collaborative project management and supply-chain-management environments (Dai & Kauffman, 2002b). They address various technical topics, such as architectures, interoperability, services, protocols, data management, and networking. Nevertheless, there has not been, so far, a comprehensive overview of the technologies proposed, the dimensions addressed, or the solutions tested. This chapter aims to cover this aspect by providing a blueprint of research literature and e-business technologies for e-markets.

An attempt to review and classify published research in this field can be an interesting and useful contribution to e-business researchers, managers, and practitioners/implementers. It can answer questions such as the following: which technical topics attract more attention in the field of e-markets? What are the proposed technologies and solutions? What are possible future direc-

tions of their development? Within this context, the aim of this chapter is to provide an overview of recent technological contributions in the field of e-markets. More specifically, it reports results from a study of e-market research that has been published during the past decade in scientific journals. The results provide interesting insight about the technologies for e-business processes in e-market environments, and outline implications for practice and research.

The chapter is structured as follows. The "Background" section provides some background on e-markets, as well as an overview of relevant studies. "Methodology" presents the methodology followed in order to identify and classify e-market literature around technical topics. "Results" presents and discusses the results of the classification and reviews representative contributions. Finally, "Conclusion" provides the conclusions of this study and outlines some implications for related research.

BACKGROUND

E-Markets

In the influential paper of Malone, Yates, and Benjamin (1987), e-markets have been defined according to the traditional market paradigm: structures that coordinate the flow of materials or services, through supply and demand forces, as well as through external transactions between different individuals and firms. Market forces determine the design, price, quantity, and target delivery schedule for a given product, which will serve as input into another process. The buyer of the good or service compares its many possible sources, and makes a choice based on the best combination of these attributes. Another prevailing definition, which has a more technological focus, was given by Bakos (1991): an electronic marketplace (or electronic market system) is an interorganizational information system that

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/business-technologies-market-literature/28642

Related Content

Big Data Analytics With Service-Oriented Architecture
Triparna Mukherjeeand Asoke Nath (2017). *Exploring Enterprise Service Bus in the Service-Oriented Architecture Paradigm (pp. 216-234).*
www.irma-international.org/chapter/big-data-analytics-with-service-oriented-architecture/178072

Functional Requirements - Web Content Management
Len Aspreyand Michael Middleton (2003). *Integrative Document and Content Management: Strategies for Exploiting Enterprise Knowledge (pp. 409-414).*
www.irma-international.org/chapter/functional-requirements-web-content-management/24087

Evaluating E-Learning from an End User Perspective
Robert Costello (2014). *Frameworks of IT Prosumption for Business Development (pp. 259-283).*
www.irma-international.org/chapter/evaluating-e-learning-from-an-end-user-perspective/78781

Critical Issues to Consider when Evaluating Inter-Organizational Process Integration Configurations
Frank G. Goethalsand David J. Newlands (2012). *Information Systems Reengineering for Modern Business Systems: ERP, Supply Chain and E-Commerce Management Solutions (pp. 81-98).*
www.irma-international.org/chapter/critical-issues-consider-when-evaluating/63246

Enterprise Resource Planning Under Open Source Software
Ashley Davis (2010). *Business Information Systems: Concepts, Methodologies, Tools and Applications (pp. 1571-1589).*
www.irma-international.org/chapter/enterprise-resource-planning-under-open/44156