



Chapter VIII

Business-to-Business Electronic Commerce: Electronic Tendering

Ahmad Kayed and Robert M. Colomb
University of Queensland, Australia

While there are many proposals to automate the buying and selling process, there has been no actual attempt to automate the tendering process (sealed auction). This chapter contributes toward the steps to move in this direction. In this chapter, the benefits of an on-line tendering system are clarified, the tendering process is analyzed, the current attempts are surveyed, the competency of EDI and on-line auctions approach is criticized, and a framework solution is proposed.

INTRODUCTION

The number of businesses and individuals through the world who are discovering and exploring the Internet is growing dramatically. The Internet is a cheap, open, distributed, and easy-to-use environment which provides an easy way to set up shop and conduct commerce at any place in the world (Lim et al., 1998).

Technology development represents a powerful driving force for the establishment of new methods of managing and organizing public procurement processes. Future development will make it possible to automate the tender process (Blomberg and Lennartsson, 1997; Slone, 1992). Electronic tendering may contribute to increase efficiency and effectiveness of the procurement process in terms of costs, quality, performance, and time for both buyers and sellers. The sellers' efficiency and effectiveness will be increased

by applying electronic tendering techniques in terms of cuts to manpower costs, reduced administrative and transaction costs, improvements in tender quality, strengthened tender preparation capacity, simplified public market access, competitiveness, and high integration capability with internal and external systems (Blomberg and Lennartsson, 1997).

The use of electronic tendering reduces the processing time and cost of RFQ (request for quotes) (Madden and Shein, 1998; Shein, 1998). It allows analyzing the company's purchase activities, selecting the sellers more competitively, and reducing the time to get the best price. Since the Internet is open for all, buyers can order at any time and reach out to an array of qualified small and large businesses (Madden and Shein, 1998; Shein, 1998).

The development of an electronic infrastructure will create excellent opportunities for buyers to establish closer cooperation in many areas of great importance to them, such as coordinate tendering in order to increase their purchasing power and to minimize distribution and stock-keeping costs, exchange of supplier information, procurement plans, tender enquiry samples and technical specifications, legal and procedural aspects, etc. This cooperation between buyers may take place at any level in the community: locally, regionally, nationally, and even globally (Blomberg and Lennartsson, 1997).

This chapter is organized as following: Section 2 reviews the current efforts to facilitate on-line tendering. Section 3 analyzes the tendering process and reviews current related protocols. Section 4 discusses the related problems and points out what are still missing in electronic tendering. Section 5 discusses our framework for automating the tendering process, and Section 6 concludes the chapter.

ELECTRONIC TENDERING

Automating the tender process is a major goal for many international and governmental bodies. Many countries such as the USA, Canada, Europe, Australia, Mexico, etc. are adopting legislation to contend with some technological issues, mainly bonding and signatures. This will facilitate business on the Internet. Some examples are:

In the USA, General Electric Information Services Inc. produced Trading Process Network (TPN)(GEIS, Inc., 1999). TPN lets buyers prepare bids, select suppliers, and post orders to its Web site. Commerce One Inc. (1999b) allows the employees to access the Seller's Web catalogs, select items, and order them. Gateway (Business Gateway, 1999) is a mediator matching sellers and buyers. Suppliers and buyers go to the Business Gateway Web site (www.businessgateway.com) and fill out forms indicating what they have to

25 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-business-electronic-commerce/6137

Related Content

Analysis of Factors Affecting China's Cargo Insurance Demand Based on E-commerce Background

Xiaoping Liu, Hui Zheng, Yi Yang and Qing Wang (2019). *Journal of Electronic Commerce in Organizations* (pp. 16-29).

www.irma-international.org/article/analysis-of-factors-affecting-chinas-cargo-insurance-demand-based-on-e-commerce-background/218251

The Role of Individualization and Project Learning for Cloud Service Profitability

Alexander Herzfeldt, Thomas Wolfenstetter, Christoph Ertland and Helmut Krcmar (2018). *Journal of Electronic Commerce in Organizations* (pp. 64-82).

www.irma-international.org/article/the-role-of-individualization-and-project-learning-for-cloud-service-profitability/203667

Prediction of E-Commerce Credit Rating based on PCA-SVR

Zhuoxi Yu, Huansen Zhang, Zhiwen Zhao and Limin Wang (2016). *Journal of Electronic Commerce in Organizations* (pp. 74-86).

www.irma-international.org/article/prediction-of-e-commerce-credit-rating-based-on-pca-svr/156535

Towards a Benchmark in the Innovation of the Retail Channel

Milena Viassone (2015). *Successful Technological Integration for Competitive Advantage in Retail Settings* (pp. 220-238).

www.irma-international.org/chapter/towards-a-benchmark-in-the-innovation-of-the-retail-channel/126373

Getting Customers Online: Case Luxury Ferries Inc.

Reima Suomi (2006). *International Journal of Cases on Electronic Commerce* (pp. 85-106).

www.irma-international.org/article/getting-customers-online/1493