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701 E. Chocolate Avenue, Hershey PA 17033-1117, USA
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ITB7551

Chapter 13

Impacts of Software Agents in eCommerce Systems on Customer's Loyalty and on Behavior of Potential Customers

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Most of the software agents only perform simple product price comparisons; some support the purchase of products or the negotiation over multiple terms of a transaction, such as, e. g., warranties, return policies, delivery times and loan options. Auctions help to find an effective pricing mechanism in electronic commerce. The active technologies enabling customers to purchase efficiently force the merchants to offer high personalized, value-added and complementary services. The techniques such as rule-based matching or collaborative filtering provide contents that are appropriate to the customer's preferences or analyze past purchases of other clients. The one-to-one marketing may be especially useful for sophisticated products demanding explanation or to enable cross-selling of other products. The merchants might achieve additional reduction of transaction costs (especially transport, storage and safety measures) using electronic money systems.

INTRODUCTION

Electronic commerce on the Internet introduces a new marketspace for large numbers of relatively unknown companies often offering substitutive products and

Previously Published in *Challenges of Information Technology Management in the 21st Century* edited by Mehdi Khosrow-Pour, Copyright © 2000, Idea Group Publishing.
This chapter appears in the book, Strategies for eCommerce Success by Bijan Fazlollahi.

services. The merchants profit from reductions in costs, time and unsold stock. Customers browsing and ordering products over the Internet are attracted by increasing convenience and speed of procurement.

Suppliers offering substitutive products in the marketspace need to acquire new customers and sustain ongoing business relationships. Actually, most merchant's sites are passive catalogs of products and prices with mechanisms for receiving orders from buyers (Dasgupta et al., 1998). The pull strategy is also applied in auctions available over the Internet, where the offerer waits passively for bids. The new-push technologies for electronic commerce including software agents enable customers to compare a bewildering array of products efficiently and automatically. Switching costs for customers and, thereby, their loyalty to previous suppliers in the marketspace decline.

Using the Internet the producers profit from reduction of costs through direct sales (non-intermediation) and through staff reduction. The dimension of such cost reductions and consequently the possibility to offer price discounts is the same for all suppliers involved in e-commerce. Therefore, the key elements to successful long-term relationships between merchants and buyers will be the offering of personalized and value-added services, such as one-to-one marketing services, discounts, guarantees and savings coupons. Additional cost reductions, especially for small-value products, may be achieved by using electronic payment systems. This is especially true for merchants.

In this chapter, we will analyze possible consequences of new push and pull technologies in e-commerce for customer's loyalty. The active technologies enabling customers to purchase efficiently and force the merchants to offer high personalized, value-added and complementary products and services. We will provide some examples of such services and of personalization techniques sustaining one-to-one relationships with customers and other actors involved in e-commerce. Finally, we will discuss the additional cost and benefits for suppliers and customers using electronic payment systems.

CHANGE BARRIERS FOR CUSTOMERS IN ELECTRONIC COMMERCE

The Internet-based World Wide Web provides a great opportunity to compare better products and services. Consumers as well as competitors may quickly gain detailed and up-to-date product information. Especially, suppliers of digital products (software, financial products, consulting services) over the Internet are in fear of declining customer's loyalty. Customers compare the catalogs of products of diverse merchants and producers and conduct transactions independently of their geographic localization. There are three crucial basic factors responsible for limited loyalty of consumers in e-commerce: convenience, time, and cost of the

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