Enabling Technology and Functionalities of Shopping Portals

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INTRODUCTION

An electronic marketplace (e-marketplace) is a virtual space where buyers and sellers exchange goods and services (Bailey & Bakos, 1997). An e-marketplace that searches for and aggregates information from multiple vendors and presents information of related products and services to individual consumers is an example of a business-to-consumer (B2C) shopping portal. Many smart online shoppers start from a shopping portal that provides the added ability for a shopper to compare prices, read reviews, find deals, and even create a wish list or apply for credit cards. Examples of such sites include Yahoo! Shopping, bizrate.com, shopzilla.com, nextag.com, and the marketplace function of amazon.com, where new and used books from online vendors and individuals are listed and sold.

As those e-marketplaces are bringing about structural changes to how businesses are conducted online, interest in these markets has significantly increased (Ratnasingam, Gefen, & Pavlou, 2005). To help both marketing practitioners and system designers gain an understanding of the factors contributing to the success of any online shopping portal, this article discusses the enabling technologies of a Web portal and the key functionalities of these B2C shopping portals. This article reflects the current state of research and will shed light on future avenues of exploration.

BACKGROUND

The Web owes its growth to HTML, the HyperText Markup Language. Due to its open-platform and nonproprietary nature, it became the standard language of the World Wide Web. It uses markup tags to format text and other elements in a document that can be displayed on a wide range of Web browsers. Since January 2000, XHTML (eXtensible HyperText Markup Language) has replaced the last version of HTML (v. 4.01) to become the W3C (World Wide Web Consortium) recommended standard for Web site development.

HTML and Client Side Scripting

Even though HTML was a primary tool in creating Web pages, it has its limitations. HTML pages are static pages. The widespread use of the Internet by businesses and other organizations demanded dynamism of Web sites. A dynamic Web page enables different content to be displayed at different times, for different users, on different browsers, and in response to different user actions. A shopping portal is a dynamic Web application that includes personalization, search engines, member databases, shopping carts, user feedback forms, and customer rating and merchant reputation databases, among others. The technologies enabling these functions in a shopping portal include client-side scripting, server-side scripting, and server-side programming.

Interactivity of a Web page can be achieved through the use of client-side scripting such as JavaScript. Scripts are embedded in HTML documents between a pair of <script> and </script> tags. The typical output of a script is some text, images, or other elements inserted into the Web page in which the script is embedded. For example, once a user is logged into Yahoo!’s shopping portal, a function written in JavaScript generates a message that says “Welcome, (user name).” JavaScript can also create such eye-catching effects as rotating banners or slide shows as well as performing data validation on a form.

The use of client-side scripting provides a certain level of interactivity without increased traffic to the server. However, two major limitations with client-side scripting are that not all scripting languages are supported by all browsers and that the code is visible to the client on the Internet and thus could pose a potential security problem. Mobile and handheld devices may not interpret client-side scripts. Server-side scripting and programming resolve these problems and provide added capability in database operations.

Server-Side Applications

Server-side scripting functions as the following: when the server receives a request for a Web page containing server-
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