Chapter 4

Improving the Shopping Experience in B2C E-Commerce Systems using Rich Internet Applications

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ABSTRACT

One of the main uses of the internet is e-commerce. Companies conducting business online across a broad range of consumer goods and services from books to travel are operating in an increasingly competitive environment. Rich Internet Applications (RIAs) are a new generation of internet applications. RIAs combine the advantages of desktops and Web applications. RIAs incorporate behavior and features of desktop applications such as animations, multimedia content and client-side computing. In Web applications, RIAs allow to the users to do interactive data exploration through visual attractive interfaces. RIAs solve disadvantages presented in traditional Web applications like continuous updating Web pages and processing overload on Web server. Therefore in a software development context, the RIAs have a great acceptance as solution in data-processing. RIAs can improve the experience of moving through an e-commerce application by removing extra navigation steps, reducing interface complexity, and presenting relevant, meaningful information to the user in the most appropriate visual format. Advances available with RIAs are enhancing the customer experience, driving revenue, and increasing customer loyalty. In this book chapter, the authors cover the reasons for incorporating RIAs in B2C e-commerce systems.

DOI: 10.4018/978-1-4666-1619-6.ch004
INTRODUCTION

RIAs can improve the overall client experience and provide the continuity that is lacking in many of today’s e-commerce Web sites. Today, when a customer arrives at a Web site and he is faced with the task of finding a product, there are really two ways this can be accomplished, by browsing or searching. If the Web site has a relatively small or highly focused product offering, browsing can be an effective way to navigate. However, if the retailer offers a wide variety of products, particularly ones with very different characteristics, then searching may be a more effective option. A well designed RIA provides the consumer with a seamless shopping experience, visually guiding the user from one step to the next. In addition, specific RIA-driven tools can be used to enhance the e-commerce experience, these include: 1) Product Selectors that help users sift through large volumes of data and easily narrow results down to just their area of focus; 2) Configurators allow users to build and configure their own products and to immediately visualize the customizations that they have made, 3) Integrated Video, many fashion retailers today are exploring adding captured video from fashion shows to their Web sites for consumers to view at their leisure. This presentation of complete looks, often with overlays that provide detailed product info and a “buy it now” option, encourages the purchase of multiple items at once; and finally 4) Streamlined Shopping Cart, from the initial impulse to buy, a shopper generally has to complete a series of steps that require Web pages to be submitted and loaded just to add an item to his cart. This process can be frustrating and can easily lead the buyer to become distracted and dropping out. Making small improvements that help users place items into their carts, switch back and forth between the cart and the store, and process their transactions, can help shave several percentage points off the abandonment numbers. As well, adding features such as drag and drop item selection, slide-out shopping carts that are always present, and advanced single-screen checkouts for more tech savvy users will help improve the overall shopping experience.

In this book chapter, we covered the reasons for incorporating RIAs in B2C e-commerce systems. Firstly, we covered the main features and limitations of current Web application in order to develop B2C e-commerce systems. For instance, many B2C e-commerce systems allow users to configure their own customized products. However, it is difficult because the Web application has to represent the complexity of presenting to a user all the possible valid combinations of product options, essentially allowing that user to create one item from tens, hundreds or thousands of options. Representing this complexity includes indicating required elements, indicating both valid and invalid combinations, indicating selected trouble-causing elements and their proper resolution, providing cost information for each individual selection and the total cost (as it changes), and probably most importantly, enabling users to visualize the end result. Furthermore, we covered the main reasons for incorporating richness into B2C e-commerce systems. With a rich B2C e-commerce system, both the retailer and shopper experience a number of benefits, including: 1) Lower drop-out rates, 2) Larger average order size and an increase in the number of items sold, 3) Increased site stickiness and customer loyalty, 4) Ability to create a brand experience online, 5) Fewer returns, 6) Wider Reach, 7) A more responsive and reliable shopping experience, 8) More product information, and 9) Choice of channels. Also, we review the RIA technology spectrum for developing B2C e-commerce systems. We describe and explain the RIA-based two trends for the development of B2C e-commerce systems: (1) JavaScript-based frameworks such as Mootools, Prototype, JQuery, Dojo, Qooxdoo, Rico, Ext JS, X-Library, among others and (2) non-JavaScript-based frameworks such as Flex, Java FX and Laszlo to mention a few. Next, we discuss the use of RIAs as a way
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