Chapter VII

Improving the Web Experience Through Real-Time Analysis: A Market Basket Approach

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The previous chapter introduced the evolution of the information economy as it addressed the progress of commerce from “brick and mortar” to “click and mortar” corporate initiatives. The key to the success of this process lies in the management of data by transforming it into usable information and applying appropriate business strategy. This chapter provides a natural extension to this topic as it describes the process by which organizations can achieve success on the Internet through the use of data, technology and sound management tactics.

E-commerce vendors face two important challenges: driving up purchases and maintaining customer loyalty. However, only 2.7 percent of browsers buy from any given Web site and only 15 percent of those buyers return to buy again (Forrester Research, Inc.). To succeed, e-marketers must find ways to keep visitors on their sites. They must make the visitors’ experience convenient, satisfying and personally relevant. Above all, they must entice Web visitors to come back for more.

To accomplish this, e-commerce vendors must have information. For instance, who is your online audience? What attracts them? What retains
them? Are your company’s online investments (spending on advertising, e-commerce, site development, etc.) paying off? How can you achieve your company’s business objectives through a Web site?

These questions, and more, are becoming increasingly common as the Internet continues to quicken the pace of business around the world. However, many enterprises aren’t finding the answers they need. Instead, the tools required to uncover this information either aren’t being employed, or are being used at their most basic level.

This means that businesses that want to leverage the Internet still have a long way to go to realize their objectives. Meanwhile, there seems to be a consensus that there are a number of key benefits to replicating marketing practices in e-business, including:

- Increased customer loyalty
- Increased customer stickiness
- Increased impulse purchases
- Increased cross-selling

We will explore a solution available today that software engineers can implement to help e-marketers achieve the benefits of bringing brick-and-mortar marketing to the Internet. It’s a technology that extends traditional market basket analysis techniques to the Internet through progressive collaborative filtering techniques and item affinity detection.

**AN INTRODUCTION TO INTERNET PERSONALIZATION**

The purpose of this chapter is to introduce a new type of Internet personalization, Item Affinity. First, we will introduce the basic concepts surrounding personalization, including traditional rules-based personalization and the more progressive collaborative filtering techniques. Then, we will introduce item affinity personalization and look at the concepts and benefits of market basket analysis, which forms the basis for item affinity recommendations. We will compare the benefits and liabilities inherent to the two approaches, construct likely user scenarios for two Web sites, and then discuss the configurations that must be specified to extend the flexibility of item affinity detection for making meaningful, real-time recommendations in the information-rich environment of the Internet.
IT and Business Can Succeed in BI by Embracing Agile Methodologies
Alex Gann (2011). *International Journal of Business Intelligence Research* (pp. 36-51).
www.igi-global.com/article/business-can-succeed-embracing-agile/55587?camid=4v1a