Chapter XIV

Product Catalog and Shopping Cart Effective Design

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Abstract

The increasing integration of the Web into our trivial daily activities has become one of the prevailing trends in our days. Buying online is considered significantly more convenient than other modes of shopping, at least for some product categories. An online shop practices its potential for convenience and time efficiency when it becomes easily familiar. In many studies, consumers have indicated that their least favorite sites are those that fail to support a quick and easy shopping experience. Typically, these sites have repeatedly demonstrated significant design problems. This chapter is about identifying the design features that assure the effectiveness of two of the most crucial e-Shop components: the product catalog and the shopping cart.
Introduction

The online Product Catalog or Electronic Product Catalog (EPC) is e-Shops’ interactive front-end to potential customers. It offers a listing of all available products, combined with classification and retrieval support, in addition to interfaces to other e-Shop services. Formal definitions of electronic product catalogs vary in scope. Timm and Rosewitz (1998) define them as systems, which “…allow customers to browse through multimedia product representations and get relevant information concerning the product...”, while Segev et al. (1995) describe them more broadly as “…a virtual gateway to a company through which customers obtain product information, order goods and services, make payment, access customer support, provide feedback, and participate in other corporate activities, ...” A term very closely related to the electronic product catalog is what Nielsen et al. (2000a) reference as “Category Pages,” described as “...those mid-level pages in an e-Commerce website that help customers find the product listing pages—and thus the products they want to buy.” In fact, in this framework it is the combination of category pages along with the product listing pages that amount to the meaning of an electronic product catalog. Ceri et al. (1999) claim that electronic product catalogs can be seen as Web information systems that, in addition to laying emphasis on the presentation of products/services, contain some standard functionality regarding navigation, searching, selection and ordering of products (Koch & Turk, 1997).

Online product catalogs have their origin in paper-based product catalogs, which provide the convenience of home shopping and contain colorful and structured representation of products. Over time, product catalogs have changed their styles along with the carrier of information for which they were created and CD-ROM based catalogs came into play, which compared to their paper-based predecessors, offer sophisticated search functionality, as well as multimedia product presentation. Online product catalogs materialize the paper-based catalog metaphor (Nielsen, 1993), but, due to the fact that they provide a much more powerful source of information on products, and that purchase decisions are usually made on this information, they are considerably more effective. As in a physical store, merchandise in an online store can be grouped within logical departments to make locating an item simpler. And while in most physical stores each product is kept in one place only, a Web store has the advantage of including a single product in multiple categories, just as easily (for example, running shoes can be listed as both “footwear” and “athletic gear”).

In its simplest, primitive form an electronic product catalog is a listing of goods and services. At the time of their first appearance on the Web, catalogs were simple static HTML lists. Operations such as editing an item’s listing, deleting or inserting an item required editing the HTML code of one or more pages. The large commerce sites handling big volumes of products, require sophisticated navigation aids and effective product organization, and thus use dynamic forms of product catalogs which retrieve contents from one or more databases. Dynamic catalogs can feature multiple photos of each item, detailed descriptions and a search mechanism that allows customers to check item availability. Yet surveys have indicated that the search for products in e-Shops is a cumbersome process. Customers have trouble finding the products they are looking for, and many abandon the online search before buying. This shows that there is great