

TARGETED TECHNOLOGY: DATA ANALYSIS IN INTERNET DEVELOPMENT AND DELIVERY

BY ALAN PAYNE

Just as marketers analyze many customer factors to develop a new store or product design, marketers should research and analyze customer data in Web site development and maintenance. Step-by-step, this article explains the opportunities available, but often not utilized, in targeted online marketing.

Data analysis is a key component that can allow businesses with e-commerce to gain an advantage in delivering customer-oriented content and options. Gone are the days of flaming logos and rollover buttons. Enter the need for Web sites that truly connect with customers and make pertinent offerings, while at the same time providing detailed information for future marketing and business decisions.

Millions of dollars are spent testing traditional media to determine message strategy, color schemes, profitable contact lists and media effectiveness. In addition, consumer behavior studies and ethnographic research are performed to determine best lighting, product locations and promotions that influence the customer the most and result in higher sales. Now that the Internet has established itself as part of a company's strategic plan, it is imperative that the same development efforts and dedication be given to its Web site.

Similar to brick and mortar stores and offices, Internet sites need to be built with an understanding of the customer's needs and wants, as well as what unique value your company can offer them to come into your site, buy something and later return to buy again. An imperative step in an Internet site's effectiveness and profitability is that it is targeted to meet the needs and demands of its customers, whether these demands are implicit or explicit. The old adage of a successful business used to be location, location, location. Possibly the new adage for e-commerce will be value, value, value.

Better Web sites mean that companies add value to customers' experiences. They have easier navigation, broader product

offerings and any number of solutions for a company's customer. This information can be found in a company's database and research. Since Internet sites are on a digital (computer) platform, most companies are, by default of Internet architecture, generating some type of log files (records of Internet clicks), registration information, sales information or even complaint information. Unfortunately, some companies do not realize that this information can provide valuable insights, which would allow a company to present a relevant offer to customers and generate higher revenues.

Max Kilger Ph.D., a chief researcher for Symmetrical, a media and marketing information company, and a veteran at helping companies utilize data, says, "Probably the most important concept that marketers and communications people should understand about data and data analysis is that data is like gold ore residing, almost hiding, in business and marketing data are the keys to understanding the consumer purchase relationship, that like a fingerprint is both unique to your business as well as an essential, un-detachable part of your enterprise. The goal of data analysis is to mine that gold ore, to extract the precious metals from it that ultimately drive the success of your business (Kilger, 2001).

As a company recognizes the opportunity to put collected data to use, there are some simple steps that can be used to maximize the investment of resources in making Web sites more customer-oriented and profitable. These steps include:

1. Get to know your customers.

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2. Build your site to your customer s specifications.
3. Implement mechanisms and techniques to continue to listen to and observe your customers.

Each of these steps is important and can be implemented in varying degrees depending on the needs of a company s customers, budget and business plan scope.

Get To Know Your Customers

Before a company is able to build (or rebuild) its Web site to meet the needs and demands of customers, it is important to know who those customers are and what they want. Gathering information can include many qualitative and quantitative methods. For the purpose of this article, it should be emphasized that data can be collected through multiple techniques from Web users, including log files and simple site information, or it could be based on advanced programming and scripting. What is important for this article is not in the gathering techniques (because we would need advanced programming information), but in what types of data to collect and then utilize.

There are three key areas in which to gather and analyze data:

- n Personal Data
- n Behavioral Data
- n Transactional Data

Personal Data: This may seem basic, but unfortunately many organizations do not know the name, age, gender, zip code or other personal information that could be beneficial in knowing who is visiting their stores or organizations not to mention their Web sites. Personal data can be gained through registration, surveys, sales or third-party research firms.

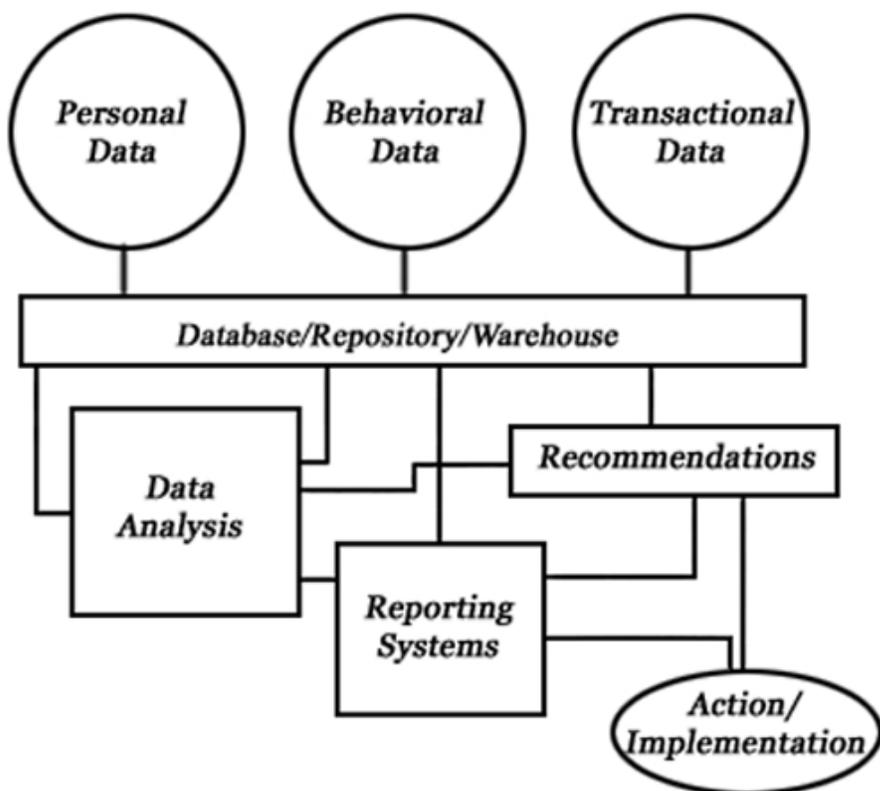
Knowing basic demographic information is a

good starting point. If your company doesn t know this information, begin by getting it. Once obtained, this information can be added to, refined and utilized to provide insights.

Behavioral Data: Behavioral data monitors how customers act and respond at a site. Similar to watching shoppers at a traditional brick and mortar store, customers can be observed by monitoring their click streams, what products they looked at, how long they looked and how often they come back. This information will allow the company to identify areas that can be developed to add value for customers.

Transactional Data: Gathered through financial and informational transactions with customers, transactional data complements personal and behavioral data and can be used with the other types of data (as seen in the figure below) or on its own in the development of e-metrics and financial measurement.

Gathering and analyzing personal, behavioral and transactional data can lead to a new understanding of customers and how they behave on a site and with a business. Insights from this data may



Personal data, behavioral data and transactional data are saved in a database. This data can then be analyzed through statistical methods ranging from averages and percentages to advanced data mining techniques. The resulting analytics can then be returned to the database, providing triggers for product recommendations on Web sites or call centers and informing reports for management decision making.

come from simple averages or indicators, or they may be combined with internal or external data mining analysis or used in recommendation engines. What are important to identify are those key elements that can be changed to make the customer s experiences better.

Build Your Site to Your Customer's Specifications

Once the data is analyzed, a company can identify areas or problems on its Web site that will improve the customer experience. For example, if a company can identify that 90 percent of its site visitors are new to the Internet, then the company learns that it needs to offer simple navigation for its customers.

To increase site usability, Framingham, Mass.-based

Questions that might be asked through data analysis include:

- n Who is the average customer on the site?
- n Where and why are customers leaving their shopping carts?
- n Who are the most profitable customers?
- n Which items sell the most to our most profitable customers?
- n Are customers getting confused on the site?
- n Do investors read press releases or do they prefer audio clips?

Staples.com (www.staples.com) wanted to know where on the site customers expected to find certain products. Staples.com conducted research in which they surveyed and collected data from customers, determining that customers look for the same items in different locations on the Web site than in the stores (Wagner, 2001).

Staples solution to this learned information was to design a new site not on the old model of how the stores are internally designed, but on how the different customers expected to find products online. Colin Hynes, Staples.com s director of usability explains, You may find that 40 percent [of your customers] think [printer cartridges] should be in one category, and 45 percent say it should go in another. If you didn t know that, you could have up to 55 percent of your customers looking for something in the wrong place. Obviously, that s a huge dissatisfier [sic] that could cause you to lose sales (Wagner, 2001).

Another company with a pattern of implementing new Web features based on customer research is Dodgeville, Wis.-based Lands End (www.landsend.com). Deb Runde, administrator of

investor relations, says Lands End places a high value on the data collected from customers and that they use the information to identify ways to better enhance the overall customer experience (Runde, 2001).

Identified as a leader in implementing data based Web features, it is important to consider why Lands End is aggressive in developing cutting-edge techniques. Runde explains, We have different departments that meet and identify areas that we can offer a better experience to the customer, that is what drives the development of the technology.

Lands End launched its first Web site in 1995 as an informational portal to communicate with customers (Cotlier, 2001). Since then, their site has continually evolved and now offers a set of features that uses many varieties of data analysis and collection techniques. One example of a data based tool on their Web site is called, My Model (www.landsend.com).

My Model is a tool that allows site users to create a three dimensional figure that represents a customer s particular body build, weight and height. The customer can then click on different articles of clothing to see how it looks on their model. This is an excellent example of a data collection tool that asks the customers to enter specific data data that is then used to improve the experience. Customers can save the model and reuse it over and over again each time they visit the site.

In a Catalog Age article, Tracy Schmit, e-commerce business manager for Lands End says, We recognized that our online customers were asking the same questions about fit, color and other product details as our catalog shoppers. The 3-D model gave them a good idea how the clothing fit them. We not only gave them a sizing chart, but we also gave them a way to virtually try on the product (Cotlier, 2001).

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Both Staples.com and Lands End have utilized analysis of customer data to develop and implement features on their Web sites creating added value for their customers. As noted earlier, data analysis can be basic and it can require modern techniques, but the deployments will vary depending on what is needed for a particular site s customers.

Predicting with Data

There are different techniques used by different companies to build predictive models. A popular model is known as collaborative filtering and looks at past purchase data. Conjoint analysis is another method that uses advanced surveying of customer preferences and not historical data.

There are many techniques that can and should be utilized in data analysis. No one technique can be used to investigate all uses. The most common tasks for data analysis include: classification, estimation, prediction, affinity grouping, clustering and description. These tasks can be determined using a variety of software programs that are on the market and can either be used in stand-alone systems such as traditional statistical packages or as (semi) automated engines in server-side packages. A company needs to research which methods match their needs, as well as financial and personnel resources.

It is important not to learn of a particular model or analytical buzzword and decide that is what your company needs. Analytical models change and evolve over time and may be known by different names to different people. What is important is to define what is needed and then work on identifying the appropriate technique to best answer the question.

Implement mechanisms and techniques to continue to listen to customers

Andrew Borts, an information technology project leader with Boca Raton, Fla.-based Palmbeachjewelry.com (www.palmbeachjewelry.com) adds, Marketers and management need to work with the development team to spec out new features and to make sure that not only are the new additions beneficial to customers, but that we build in the mechanisms to gather even better data than we had before (Borts, 2001).

As companies and organizations create and deliver sites built on the data and insights of specific customers, it is important not to fall into the trap of updating a site and then waiting a few years or months for the next update. It is imperative that dedication be given to continually apply data analysis in the maintenance of a Web site.

For example, Atlanta-based Delta Airlines re-launched its Web site in February of 2000 with several customer-driven enhancements. In direct response to customer research, the hard to remember and non-intuitive address of www.delta-air.com was changed to www.delta.com (Goetzl, 2000). In addition, Delta

streamlined navigation and moved highly demanded customer features such as flight reservations and arrival status to the home page making them easier for the customers to access (Delta Airlines, Annual Report, 2000, and site history).

Serving all of Delta's customers is a central theme shared by Delta CEO Leo Mullin in a July 2000 article in Forbes magazine. In addition to implementing changes based on customer information to its main Web site, Delta Airlines continued to analyze data and determined that they had several different customer groups coming to one Web page. In response to this, Delta Airlines created various programs and specialized Web pages to meet the demands of the different customer groups (Corcoran, 2000).

Darryl Bolduc, e-mail program manager for Delta.com, says that utilizing customer data is a high priority. One of the largest initiatives that we have at Delta is to only ask our customers their information once. If I have someone sign up for e-mail communications, I only want to ask their name and email address. We are relying on our data to fill in all of the other information. Delta is utilizing data analysis to determine if the customer is a business or leisure customer, as well as their frequent flier status so as to provide pertinent information and valid offers leading to a potentially higher conversion rate (Bolduck, 2001).

Conclusion

Companies can benefit greatly by data analysis. By watching and learning from visitor behaviors, companies can very quickly identify areas where they can improve. Fred Niel, vice president and general manager of Palmbeachjewelry.com, says, For many years in the catalog business we would have to wait months to get data on mailings, offers or conversion rates, but on the Web site we know these things almost instantaneously. The data we collect from our site and our visitors allow us to make effective up-sells, cross-sells, and develop contact strategies that maximize our marketing dollars and increase the average spend of each of our customers (Niel, 2001).

Data analysis is a key component that companies can utilize to learn how to increase the value of the Web offerings to its customers. It is important to learn from the data, get to know customers, identify Web features that will improve the benefit to customers, and turn this new data into better information for increased value interactions and a more profitable lifetime value of each customer.

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