Recipe For A **Cookie**

"You have zero privacy anyway," is the ominous message emblazoned across the first page of Cookie Central (http://www.cookiecentral.com). The quote, which is attributed to Sun Microsystems' CEO Scott McNealy, quickly conveys a concern that many PC users have about Internet cookies, perhaps the single most misunderstood Web site component.

Internet cookies generally are simple, benign bits of data that Web sites store on your computer. If you use Internet Explorer, your virtual cookie jar is the C:\WINDOWS\COOKIES folder. The cookies in this folder are **persistent**

cookies. They remain on your computer until they reach an expiration date, at which point your computer deletes them. Until that date arrives, these cookies serve an important purpose, though you usually can't tell just by looking at one.

Double-click a cookie file to open it in Notepad. At first the cookie may look like gobbledygook, but there is a purpose to this jumble. To help us make sense of cookies, we enlisted the help of Ronnie Schwartz, a senior programmer at RustyBrick (http://www.rustybrick.com), a New York-based Web site development company.

The Jennifer Furniture Cookie

The first two lines of a cookie show its name-value pair. Such pairs look different from cookie to cookie. In this case, the ShoppingCart merely indicates the cookie's function, which is to assist online shopping.

The second line is a randomly generated, unique figure for your personal shopping cart.

The third line indicates the portion of the site for which this cookie is valid; the backslash after the site name means that the cookie works for the entire site, not just the shopping page.

The numbers following the third line depend on the browser you're using to view the site; these figures may represent the time the server created the cookie, the cookie's expiration date, security data, or any number of other things. As you can see, cookies comprise only simple text. These aren't executable files, so they don't pose a virus-like threat. Instead, they permit useful activities on a site.

ShoppingCart
026129d8e560f2e2bb486280044a563f
jenniferfurniture.com/
0
3636193152
29498263
981451584
29496846
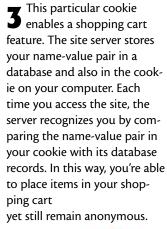*

Jennifer Furniture's Server

1 Cookies begin their work as soon as you access a Web site. As an example, load the Jennifer Furniture (http://www.jenniferfurniture.com) site. After you press the ENTER key, your computer requests the Web page from the target Web site's server. During this request your browser searches your computer for any cookies related to the target Web site; if you already have a cookie, it's sent along with your browser's initial request.

2 The site's server recognizes you as a new guest because your computer didn't send any cookie information along with the initial request. As a result, the site's server generates a cookie that's placed on your computer. On the left is an example of a Jennifer Furniture cookie.

3 This particular cookie enables a shopping cart feature. The site server stores your name-value pair in a database and also in the cookie on your computer. Each time you access the site, the server recognizes you by comparing the name-value pair in your cookie with its database records. In this way, you're able to place items in your shopping cart yet still remain anonymous.

4 If a site programmer wanted to, he could program the cookies to help the server track the advertisements and products you click during your visit. He could store this tracking information next to your anonymous name-value pair in the database and use it to develop a detailed (but still anonymous) user profile that monitors your behavior.

When Cookies Go Bad

Though Jennifer Furniture does *not* record your clicking history, many other sites use cookies to track every click you make. Using this information, marketers can more precisely target specific products to your tastes and increase the chance that their ads will make a sale. Other sites threaten to use cookie data for purposes that make privacy advocates squirm.

One example is DoubleClick, a major online advertiser that promotes a plethora of products on thousands of Web sites. The company's widespread presence lets its database track every click users make on scores of different sites, quietly developing extremely detailed profiles of countless, yet anonymous surfers.

When DoubleClick bought an offline direct-mailing advertising company and nearly combined its online database store with real names and addresses, Internet privacy advocates cried foul. Though the company's plan failed (primarily due to consumer and stockholder backlash), it showed that there are ways to abuse cookie capabilities.

These days, browsers have updated and adjustable security options that let users detect all cookies. Such security measures let you accept cookies from trusted sources and refuse cookies from unfamiliar companies. These features let you reap the benefits of cookies while empowering you to fend off cookies that could be hazardous to your Internet health. ∎