

Getting the Most Out of Cookie Based Metrics

A Crash Course in Cookies

Adam Canissario, December 2008

The Basics

To fully understand how cookies work, it is important to first understand what cookies do. Cookies – packets of text, not programs, are sent back and forth to a server and browser each time content is requested. This functionality allows digital marketers to identify, verify and track user behavior online. The data gives web designers the ability to determine which pieces of a website to improve. Additionally, cookies let individuals maintain customized online preferences such as shopping cart functionalities and personalized webpage layouts. The result, more often than not, is a better online user experience. This paper focuses on the first topic – the implications of cookies on web analytics.

Cookies are the foundation of modern web analytics tools. However, few understand the intricacies of cookies: exactly what they are, how they work and how to leverage them. Further still, some worry that cookie deletion is negatively impacting the credibility of web analytics by creating inaccuracies. The purpose of this paper is to address these concerns.

Since cookies are simple data files – often a random alphanumeric string – they cannot harm a user's computer. Still, there are privacy concerns over the window that cookies open into user behavior online, but this concern is lessened by the fact that cookies do not usually contain personally identifiable information.

Some other facts that are helpful in understanding cookies:

- Cookies can be blocked or deleted by a site visitor, or they can be set to expire by the server.
- Cookies can be “persistent” or “session based.” Persistent cookies stay on a user's computer for a pre-determined period of time or until the user deletes them. Session based cookies last only for the duration of a site visit.
- Cookies can be “first party” or “third party.” The former refers to cookies identified as the domain a user is on, and the latter to those that are identified differently than the domain a user is viewing. For example, the site CookieExample.com could set a first party cookie (from the domain CookieExample.com), but for various other reasons (described below) they could also use a third party cookie (from the domain XYZcookie.com).
- While a lot of data is stored in cookies, the most common components are anonymous identifiers, dates and times, persistency settings and domains.

Examples of Where Cookie Types Are Commonly Utilized

		Persistent			
		Shopping Sites Personalized Homepages		Web Banners Informational Sites	
First Party		Banking Sites Government Sites Recently Viewed Functionality		<i>Not Commonly Leveraged</i>	Third Party
		Session Based			

The Issues

Reports vary in findings, but cookie deletion ranges from 3% to over 30% depending on the methodology used for the study, vendor, industry of the web property, and time period. So, why should we care about the debate surrounding cookie deletion? Well, if the number of visitors who partake in voluntary cookie deletion or rejection is significant it would mean that cookie-dependant tracking applications misrepresent website traffic and all supporting metrics. The debate revolves around the usefulness of cookie based metrics when deletion rates for cookies have become so questionable.

There is general consensus among industry experts – cookie deletion rates are inherently hard to measure. That being said, each specific service offers estimates based on its own settings, but even these figures can be misleading. Cookie deletion rates depend heavily on the type of user visiting a site. Every site, depending on its industry (i.e. the average length of its buying cycle) and user base (i.e. tech savvy versus not), will have varying cookie deletion rates. This inconsistency makes it difficult to accurately predict what percentage of a site’s user base contributes to cookie deletion.

Further complicating the issue is the discrepancy associated with comparing web data from various sources. It seems that every group supplies different answers. However, ad-servers, website analytics platforms, and other cookie-dependant web metrics providers disagree because they are measuring different things (i.e., clicks vs. click-throughs). These two sources are not meant to be compared against one another; they are relative and directional. Because each analytics tool has different methods for tracking and measuring online actions, one cannot perform an apples-to-apples comparison (it is worth noting that disparities are compounded by a mechanism known as filtering). While the industry is working to standardize these methods (and hopefully achieve consistent and comparable values across tools and vendors), the tools and practices currently utilized are still new and need time to mature and solidify.

Cookie Problems

Some systems, like Atlas, an ad-serving platform, utilize cookies to track user behavior associated with an ad they have been served. These systems have the ability to manage their reported cookie-dependant data to compensate for cookie deletion. However, it is essential that enough valid data be gathered.

It is important to understand which cookies are most susceptible to cookie deletion. First party cookies, those which are set by the domain a user is on, are less likely to be blocked because they are generally considered secure. Third party cookies, which are set by a different domain than the site being viewed (a common and legitimate practice among web analytic tools and ad-servers), are more frequently blocked by browsers or quarantined by spyware removing software like Lavasoft's AdAware. Additionally, advancements in browser privacy controls have made third party cookies increasingly susceptible to deletion, though they remain a popular method for compiling online metrics.

Omniure's original 207.net cookie is one of the most infamous examples of third-party cookie deletion. Even though the 2o7.net cookie was a harmless piece of text, it was perceived as a malevolent program and was subsequently blocked or deleted by its respective predatory applications (e.g., AdAware). Presently, the best solution for this conundrum is to mask third party cookies as first party cookies, which decreases the odds of being blocked by browsers or deleted by antispyware. In many cases, Omniure now utilizes this solution (though it is often believed that Coremetrics pioneered this practice).

Coping with Cookies

Right now you are probably asking yourself, "How can I ever hope to deal with the plethora of issues surrounding cookies?" This question has a variety of answers and they are surprisingly simple and effective, but require a good amount of creative thinking:

- **Develop Solid Key Performance Indicators (KPIs):** KPIs do more than just track the performance of a site – they keep the owner(s) focused on the site's goals and objectives. It is easy to forget the purpose of your site when drowning in a sea of data, but KPIs ensure that you keep that purpose (or purposes) in mind on a regular basis. In addition to keeping your actions on track, they measure the success of your actions. Well thought out KPIs help turn a good site into a great one.
- **Trend Data:** While web analytics is not a precise science, trending helps analysts determine, with a fair amount of accuracy, the impact that marketing efforts have had on a website's performance. Did a media campaign increase traffic? Did the refreshed copy increase search engine optimization performance? Has the new site navigation generated more content consumption or less? Trending certain metrics and key performance indicators helps you determine answers to these questions and many more.
- **Consider Panel Solutions Where Appropriate:** Panels can be quite valuable when used to compliment or supplement available cookie dependant data. A panel's value-add is that they contain actual user demographics and provide the data necessary to determine unique audiences with relative accuracy. Panels are not always the ideal

solution; points of contention often include small sample sizes, misrepresentative panels and high costs.

- **Assume Cookie Deletion Causes:** While it is difficult to accurately predict cookie deletion, making certain assumptions about how or why a cookie might fail in advance allows marketers to setup certain safeguards and/or practices that might mitigate cookie deletion and its impacts.
- **Utilize Data With The Highest Quality Level:** When analyzing raw cookie-level data, leverage techniques that account for cookie deletion. This is a dynamic solution; components of it may change on a case-by-case basis.
- **Consolidate Analytics Platforms:** Unfortunately, some sites have evolved over time to incorporate numerous analytics platforms. Some pages on a single site are tracked with WebTrends tags, other pages contain Omniture tags, and secondary site components (like syndicated content or media) contain DoubleClick tags. As a backup, some of the pages on the same site have Google Analytics installed. This creates a tremendous amount of confusion – they all track different components, and, on occasions where these services are recording the same type of event, they may track the same event differently. Where possible, web analytics platforms should be consolidated in an effort to minimize data fragmentation, inconsistencies and, subsequently, to alleviate confusion.

Conclusion

Marketers who are impacted by cookie deletion need to have a robust solution set available to aid them in a wide variety of situations. The most effective web analytics solutions do not rely on one practice, but on a mix of tactics. To employ these tactics, one should understand cookies and the breadth of available web analytics tools. Properly incorporating these techniques into an analysis that relies on web analytics data can render cookies an exceptional tool. Keeping the above information in mind will help you manage a considerable amount of cookie related issues.

About the Author



Adam Canissario is an Analyst with Razorfish and specializes in Web Analytics. By staying on top of the most innovative practices, Adam has helped a variety of Fortune 1000 clients realize the benefits of properly implementing and leveraging web analytics.

For questions, Adam can be reached at adam.canissario@razorfish.com.

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Razorfish

821 2nd Avenue, Suite 1800
Seattle, WA 98104
Phone: 206.816.8800
Fax: 206.816.8808