

Is the Sky Falling on Cookies?

Understanding the Impact of Cookie Deletion on Web Metrics

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Executive Summary

The Atlas Institute addresses the recent survey-based studies on cookie deletion with an analysis that compares self-reported cookie-deletion estimates with the cookie “lifespan” of survey respondents. The behavioral data confirms that people who report deleting their cookies on a regular basis generally have short cookie lifespans. However, the analysis reveals some remarkable disparities between user responses to cookie deletion and their actual behavior. For example, 4 out of 10 respondents who claimed to delete their cookies weekly or monthly actually had cookie lifespans more than double their survey response. This Digital Marketing Insight explains the impact of cookie deletion on conversion tracking. We present a best practice to correct for the bias of cookie deletion on reach and frequency reporting. We also examine the implication of cookie deletion on profile and behavioral targeting.

Background

Consumer privacy on the web has drawn a lot of attention recently. Fear of spyware and identity theft has heightened consumer anxiety. As a result, Internet cookies have come under increased public scrutiny. Jupiter recently announced survey results in which 39 percent of the respondents claimed to delete their cookies at least monthly. Their report—along with a host of others—has cast many questions on the metrics and technologies that rely on cookies.

Source	% of Users Reporting They Delete Cookies at Least Monthly
Belden	39.0% — 46.5%
RedEye	55%
Nielsen NetRatings	43.7%
Jupiter	39%

Table 1: Results from recent cookie deletion surveys

It’s clear that there is heightened public awareness and concern over online privacy issues, and this public perception likely has an impact on cookies. The studies have produced some shocking and consistent numbers. However, it’s important to point out that the studies have all been based on surveys. Surveys can be valuable tools that often identify trends but don’t always correctly quantify the size and rate of the changes. The intent of our study was to examine how well survey responses matched behavior. Just like people often believe they have better credit ratings than they really do, or that they claim to get a certain amount of exercise each week, measuring true behavior can yield different results.

Measuring Behavior vs. Survey Responses

The Atlas Institute compared cookie-deletion survey responses with the average cookie “lifespan” of the survey respondents. In this case, “lifespan” means the duration between the first and last instance that Atlas saw the respondent’s cookie. The Atlas cookie lifespan is an excellent proxy for the stability of a user’s cookie because Atlas serves ads and tracking pixels on behalf of more than a thousand advertisers across thousands of sites, translating to almost 100 billion impressions, clicks, and page-views each month. Below are the results from the survey and lifespan analysis:

How Often Do You Delete Internet Cookies?	% of Respondents	Lifespan of Respondent Cookies					
		0 Weeks	0-1 Week	1-2 Weeks	2-4 Weeks	4-8 Weeks	8+ Weeks
Every week	42.6%	17%	33%	10%	11%	8%	21%
Every month	13.7%	0%	15%	15%	12%	12%	46%
3 months +	43.7%	2%	14%	2%	5%	9%	68%
Overall	100%	8%	23%	8%	9%	9%	43%

Table 2: Comparing self reported vs. true behavior

Responses to the survey question were very similar, if not more dramatic, than surveys by Jupiter, Nielsen, and others. Over half the respondents (56%) claimed to delete their cookies at least monthly. The “3 Months Plus” segments were respondents that answered deleting their cookies: every 3 months, every 6 months, less than once per year, or never. The cookies with lifespans of zero are cookies that Atlas has only seen once. They are likely people who have set their browsers to reject third-party cookies or have installed software that has the same effect. When comparing the lifespan of the respondents’ cookies to their responses to the survey, the true behavior of the respondents was revealed. Overall, you can see that survey responses were in fact correlated to the actual lifespan of respondents’ cookies.

Though the survey responses correlated with behavior, there were notable exceptions across the board. 40% of people who claimed to delete their cookies weekly had cookies that lived longer than two weeks, while 46% of people who said they delete their cookies every month had cookies that lived longer than two months. It’s also fair to point out that there were a significant number of people whose cookies lived far shorter than their responses. For example, 30% of users who said they delete their cookies monthly had cookie lives shorter than two weeks. This disparity between perception and behavior highlights the lack of control users have over their cookie acceptance.

The analysis above confirms that cookie deletion is a concern. However, the analysis illustrates the complexity of this issue, and stresses the value of behavioral data to understand the true nature of consumer trends.

Measuring Behavior Over Time

As part of our analysis, we also wanted to understand how consumer behavior has changed over time as spyware and cookie issues have become increasingly publicized. If there was a significant shift in consumers deleting their cookies, we would witness a growing proportion of impressions being delivered to short-lived cookies (i.e., lifespan of less than 30 days). Over the past six months, Atlas has not seen dramatic increases in the percentage of impressions delivered to short-lived cookies. Despite the publicity around spyware and the increasing popularity of over zealous anti-spyware software, the percent of impressions that have shifted from stable cookies to short-life cookies amounted to a 0.5% drop in the last 6 months.

What This Means for Advertisers

The Effect of Cookie Deletion on Conversion Tracking

Much of the attention on cookie deletion has led to concern over losing conversion data. Widespread cookie deletion translates to an undercounting of conversions (both click and view-based). However, Atlas regularly conducts a time analysis on conversions, often referred to as “Time-to-Convert Analysis.” We have consistently found that the vast majority of conversions, generally 70%–90%, occur within a 24-hour window of the corresponding click or impression. Thus, even in a future where users are deleting cookies once a week, cookie-based conversion reporting will capture a large majority of conversion activity.

The Effect of Cookie Deletion on Reach and Frequency

Atlas has long recognized that users who reject or regularly delete their cookies will cause an overestimation of reach and an underestimation of frequency. Atlas Reach & Frequency reports have long contained a statistical filtering methodology that corrects for this bias. Our reach metrics are not a simple count of cookies. Rather, we base the analysis on massive samples of stable cookies that we know have been “alive” for some period of time. Consequently, we are able to minimize the impact of cookie deletion and provide reliable reach and frequency reporting at very granular levels. We believe that this technique of basing reach and frequency on stable cookies is a best practice that every marketer and publisher should employ.

The Effect of Cookie Deletion on Profile and Behavioral Targeting

Profile and behavioral targeting (e.g., reaching car shoppers on run of network inventory) allow marketers to segment and reach audiences outside the traditional box of content targeting. Users that regularly delete their cookies will continually fall out of profiled segments. If the trend continues, that may translate to less available profile inventory, which could result in higher prices or under-delivery. Nonetheless, cookie deletion should not diminish the value of the targeted impressions that publishers are currently able to deliver. There’s even an argument that cookie deleting may actually increase the value of targeted inventory since recency is a dominant driver of effectiveness in behavioral targeting. The fact is, the impact of cookie deletion is already built into the targeted media that is available today. Our best advice is to continue buying targeted inventory so long as the volume and expense justify the effort.

More Research is Needed

The survey-based studies along with our behavioral analysis highlight a growing concern that can have an impact on technologies and methodologies for measuring digital marketing effectiveness. Most of the studies to date have been based on limited samples of users who have opted to fill out a survey concerning online privacy. We believe that a more complete and ongoing study based on consumer behavior is the best way to formulate a true picture of what’s going on. The Atlas Institute has launched several such studies, including one in partnership with the Advertising Research Foundation (ARF).

Is the Sky Really Falling on Cookies?

No. Cookie-based reporting and analysis continue to provide reliable metrics to measure and optimize online campaigns. Will technologies and methodologies need to continually evolve in order to keep pace with industry dynamics? Absolutely. Smart marketers must continue to employ new best practices like the reach and frequency filtering described above to ensure they maintain an accurate picture of their marketing effectiveness.

About the Atlas Institute

The Atlas Institute is the research and education arm of Atlas, a provider of accountable marketing tools and expertise for agencies, marketers, and publishers. The Institute publishes Digital Marketing Insights, a series of publications by Atlas senior marketing analysts and digital marketing experts that help our customers improve their digital marketing effectiveness. Many of these findings are also made available to the digital marketing industry at large. Each Digital Marketing Insight report is designed to help marketers more successfully build value with their customers, throughout the customer lifecycle: from awareness to acquisition and from retention to growth. The Atlas Institute also provides education in digital marketing to Atlas customers and partners. To view a full listing of the Atlas Institute’s Digital Marketing Insights, please visit www.AtlasSolutions.com/insights.