

UNDERSTANDING MOBILE COOKIES

SUMMARY

Mobile advertising is essential for brands and advertisers to reach the millions of users who use smartphones and tablets in their everyday lives. However, there is a lot of confusion around how cookies track and optimize mobile campaigns, especially in comparison to the desktop environment. Cookie tracking can work in specific situations on mobile devices, but other tracking methods are needed to more reliably track ad campaigns across environments. It is not exactly accurate that “cookies don’t work on mobile.”

More precisely, cookies don’t work *across* mobile environments, which is necessary to meet the needs for tracking and optimizing digital campaigns. Asking vendors and partners tough questions about conversion tracking, mobile targeting, and frequency capping will help ensure buyers understand and can trust the data they get back from their campaigns.

UNDERSTANDING MOBILE COOKIES

“Cookies don’t work on mobile” is a commonplace belief in the digital advertising ecosystem. However, this statement isn’t completely accurate which has caused much confusion in the marketplace, as different players say different, often conflicting, things.

Campaign managers use cookies as the common way to track and optimize campaigns on desktop. However, reliance on cookies is not as effective on mobile due to the limitations of cookie functionality that vary by device and environment as well as the fragmentation of user’s activity between native applications (“apps”) and mobile web. Other tracking methods have been developed to overcome these challenges, because cookie tracking alone on mobile is of limited utility.

In thinking about mobile cookie availability and usefulness, it is helpful to divide the mobile world into browsers/websites and mobile apps.

Most **mobile web browsers** accept first-party cookies (e.g., a cookie whose domain is the same as the domain of the visited website. For example, a cookie whose domain is news.com placed by http://www.news.com.) Different mobile browsers behave differently when it comes to accepting third-party cookies (that is, cookies whose domain is different from the visited website—for example a cookie whose domain is advertisinginfo.com placed on http://www.news.com.)

By contrast, **mobile apps** use a technology called a “webview” to display online content such as a website or an ad. Cookies can be stored within a webview similar to the way they are stored in a browser setting. However, any given webview (and, therefore the cookies stored in it) is unique per application. Mobile apps therefore cannot share cookie information with each other or with the device’s mobile web browser. Each app has its own private space on the device, commonly referred to as a “sandbox” environment.

AVAILABILITY OF COOKIES ON APPS AND BROWSER, FOR ANDROID AND IOS

	APPS (WEBVIEW)		MOBILE SAFARI*	BROWSER / CHROME
1st Party Cookies				
3rd Party Cookies				
	What does it mean? Cookie support limited to sessions in the same app <ul style="list-style-type: none"> Click based conversions View based conversions Data synchs 		What does it mean? Same cookie behavior as online Safari <ul style="list-style-type: none"> Click based conversions View based conversions Data synchs <p><small>* Note that installed browsers can behave differently. E.g., Chrome on iOS will support 3rd party cookies</small></p>	
	What does it mean? Cookie support identical to most online browsers <ul style="list-style-type: none"> Click based conversions View based conversions Data synchs 			

MOBILE COOKIE ALTERNATIVES

The limitations of cookie tracking on mobile devices have led to the creation of many alternative methods of tracking. The approaches vary in methodology, implementation, and scale.

The four most common solutions that are emerging in today's marketplace include:

- 1) Client/Device Generated Identifier:** A device identifier (ID) set and/or made available by the operating system. Examples include: Apple's Identifier for Advertisers (IDFA), Google's Android_ID, Universal Device ID (UDID) and MAC Address. Users may or may not be able to control or change a device-generated identifier.
- 2) Statistical ID:** A server-side algorithm for identifying a device or user based on the values of a combination of standard attributes passed by the device. Typical device attributes include: device type, operating system, user-agent, fonts, and IP address. Those attributes change over time due to device changes or updates.
- 3) HTML5 Cookie Tracking:** Involves storing a cookie-like file in HTML5 local storage on the device. These are similar to traditional cookies, but can only be set or retrieved when the browser is open and running.
- 4) Universal Login Tracking:** Requires consumers to log into different experiences using a preexisting login rather than create a unique one for that experience. This type of tracking is limited to specific vendors, but enables companies with this type of universal login to gather data across applications and devices.

FIVE QUESTIONS TO ASK YOUR DATA VENDORS

When working with your mobile advertising partner make sure you understand how they operate by asking some of these questions.

1. **Can you track ad campaigns in mobile applications?** If so, what targeting technologies do you use? Do those differ from what you use for mobile web?
2. **Can you track ad campaigns on mobile web?** Do you use cookies for that? If so, how do you navigate the limitations on browser acceptance of third-party cookies?
3. **Which browsers and operating systems does your tracking solution work in?** Which are on your road map? Which are you not planning to support?
4. **If you do use cookies for tracking on mobile, what is your estimate for the cookie life expectancy on mobile web browsers?** How does that affect your ability to generate reliable metrics?
5. **Have you tested to verify the accuracy of your tracking or targeting solution?** What were the results?

DEFINITIONS

Mobile Environments

- **Android Operating System:** A mobile-based operating system developed by Google.
- **iOS Operating System:** A mobile-based operating system developed by Apple to run exclusively on iPhone, iPad, and iPod devices.
- **Mobile Web:** A website that is viewed through a device's web browser.
- **Mobile App:** An application that is designed to run on various mobile devices, such as smartphones and tablets.
- **WebView:** A browser view within an app that can display web content.
- **WebKit:** A browser layout engine that is used by a WebView to render web content.
- **Software Developer's Kit (SDK):** A pre-packaged piece of code that developers can incorporate into their work in order to avoid having to develop it from scratch.

Metrics

- **Impressions:** The count of ads that are served to a user.
- **View Throughs:** A measure of the number of conversions within a number of days (often 30 days) after a user viewed an ad, but did not click.
- **Click Throughs:** A measure of the number of clicks on an ad.
- **Conversions:** A measure of users who click through and complete a specific action on a website, such as a purchase, a newsletter signup, an app download, etc.

Cookies

- **Cookie:** A small text file deployed to a browser by a visited website or advertisement that can contain information such as login settings, user preferences, geographic, and demographic information.
- **First-Party Cookie:** A cookie whose domain is the same as the domain of the visited website. Example: cookie domain is news.com placed by http://www.news.com.
- **Third-party Cookie:** A cookie whose domain is different to that of the visited website. (example: cookie domain is advertisinginfo.com placed on http://www.news.com.)

Learn More at iab.net/mobilecookies

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About iAB.

On behalf of more than 500 leading media and technology members, The Interactive Advertising Bureau is dedicated to the growth of the interactive advertising marketplace, of interactive's share of total marketing spend, and of its members' share of total marketing spend. Learn more at iab.net

This IAB: Digital

Simplified was excerpted from "Cookies on Mobile 101" a new educational paper. Both documents were created by IAB's Mobile Ad Operations Working Group, which is dedicated to improving the operational efficiency of mobile advertising.

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