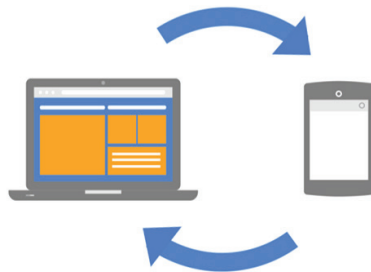**Google AdWords**

Calculating Cross-Device Conversions

The consumer journey has become more complex, spanning multiple devices, channels, and media types. Because 90% of people start an activity on one device and finish it on another[1], it's especially important to capture how marketing influences actions across phones, tablets, and desktops. To help marketers fully measure the impact of their ads and drive more conversions, Google launched cross-device conversion tracking in AdWords for search and display advertising.

Cross-device conversions start as a click on an ad from one device and end as a conversion on another device (or in a different web browser on the same device). In order to measure cross-device conversion statistics, we use aggregated and anonymous data from users who have previously signed into Google services. This allows us to provide marketers with highly accurate and granular reporting on cross-device behavior without compromising user privacy.

Let's look at an example to further understand how we calculate cross-device conversions in AdWords:

An online bookstore receives 100 ad clicks for a new novel they're promoting. There are several steps we take to determine how many of these 100 ad clicks will eventually turn into cross-device conversions.

We start by looking at a marketer's ad clicks that led to cross-device conversions from users who have previously signed into Google services. Next, we expand the model to show how many cross-device conversions a marketer would report if all of their AdWords clicks and conversions came from previously signed-in users. We can do this by customizing our cross-device calculation model based on several factors unique to each marketer to optimize the accuracy of the model for each campaign and ad group. Finally, we only surface the reporting if we are 95% confident that

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[1]http://www.google.com/think/research-studies/the-new-multi-screen-world-study.html

it reflects the real cross-device user behavior. For example, an account showing 100 cross-device conversions would need to be 95% confident that the real result is between 90 and 110. Here's what happens in more detail:

1. Observe cross-device conversions from previously signed-in Google users.

For those ad clicks that later turned into purchases, we know which device, or browser on that device, a consumer was using when they clicked an ad, and whether they were using a different device or browser at the time of conversion. Traditional conversion tracking is tied to a single browser, so in the past, marketers couldn't recognize the conversions that happened on other devices or browsers.

For the bookstore we mentioned, we would look at how many ad clicks came from previously signed-in users, and how many of those clicks resulted in conversions from that user on another device or browser. Our system credits the last Google ad click with the conversion. For example, if a user clicks an ad on their mobile phone and then clicks another ad for the same marketer on their laptop before making a purchase, that conversion will be credited to the laptop ad click within AdWords. This step allows us to observe cross-device conversions, while making sure we do not duplicate reporting for other cookie-based conversions within AdWords.

2. Create a customized model to calculate the cross-device conversions for all ad clicks.

Next, we look at signals that come from the Bookstore's AdWords click and conversion pixels to understand how often the purchasing, or converting, consumers are previously signed into Google services. At this point, we have two important pieces of information — the baseline of observed cross-device conversions and an understanding of the percentage of ad clicks and conversions from previously signed-in users.

Now we calculate an expected cross-device conversion rate for all of the other ad clicks that come from traffic that is not previously signed in.

Our model considers, and is customized, based on a number of important factors:

- **Country** — Login rates can differ by country. For example, if half of the online bookstore's clicks come from Canada, and the other half from the United Kingdom, the clicks from each country will have a slightly different expected result.

- **Conversion type** — Advertisers use many different conversion types (leads, purchases, etc.), and performance statistics for each might vary significantly. In this example, we customize the model specifically for the conversion of book sale. However, we could also account for other conversion types, such as a newsletter sign-up.

- **Date** — Rates for previously signed-in clicks and conversions can vary over time based on many factors, such as whether or not you use a Google login for your site, so we constantly update our model.

- **Click and conversion device** — Device type impacts both whether a user logs into Google services at click time and at conversion time. A visitor to the online bookstore might be more likely to have signed into a Google service on a desktop device at click time compared to their mobile device. The model accounts for these variations.

3. Use the model to report the overall cross-device traffic, while only showing the data when we are confident about accuracy.

At this point in the example, we have the necessary information to show the Bookstore how many cross-device conversions their AdWords campaigns are driving.

If we observed 6 book purchases from previously signed-in users across mobile devices, we might use the other signals available to calculate the actual number of cross-device conversions is 10.

The final step is to only report data that meets our strict confidence thresholds. That means we only report cross-device conversion data when we have at least 95% confidence that the calculation is within 10% of the actual value. If we do not meet this stringent bar, we will not report any cross-device conversions.

Improving Coverage of Cross-Device Metrics

Google will automatically provide cross-device conversions as often as possible. However, there are steps you can take to increase the coverage of the metric within your account:

- **Add the conversion tracking code to all of your sites and apps** — this applies to all of the relevant conversion pages *across* all devices — mobile, desktop, and tablet — as well as your apps.

- **Use cross-account conversion tracking** — if you have more than one account targeting users in the same market. Remember that you can also simplify your tag management with Google Tag Manager when you implement cross-account conversion tracking.

- **Allow AdWords tags to register all transactions, not just those directly from Google** — if you use a container tag, sometimes it will selectively fire only if the user came directly from Google. This will eliminate our ability to provide cross-device reporting.

- **Set an appropriate conversion window length** — choose a length of at least 30 days to show the longer term value you get from multi-device users. Conversions across devices take longer on average than standard conversions*. This will also help you discover more 'upper funnel' keywords that tend to start as a mobile click and convert later on another device.

- **Add a G+ sign-in to your site** — to increase the Google sign-in rates on your pages and further improve the accuracy of your results.

AdWords cross-device conversion data is available globally for advertisers to measure how mobile marketing impacts conversions. To get started, just use conversion tracking, and once enough data has been collected, reporting will appear in the All Conversions column to help you measure the moments that matter.

*Based on Google internal data comparing click to conversion time decay between same device conversions and cross-device conversions