TRUE BOUNCE RATE
De-duping bounce rate to gain a more accurate benchmark of website visitor levels

By Marcos Richardson

What is bounce rate?

Bounce rate is a term and metric used within Web analytics systems; it is the measurement of visitors who enter a Web page and "bounce," or leave, the page without continuing to view other pages within the website. The bounce rate is usually measured as a percentage rather than an absolute value.

The calculation is Bounce Rate Equals Total Number of Visits Viewing One Page Divided by Total Number of Visits

What is this white paper addressing?

This white paper will discuss and provide a remedy for creating a website's "true bounce rate" in relation to one IT-related accessibility factor: page load speed.

It's important to filter short clicks from bounce rate reports to get a more accurate bounce rate figure because short clicks help identify technical issues that inflate bounce rates, which may equate to a potential loss of traffic and revenue. We will offer published research on whether bounce rate, or associated page load speed, affects user behavior in terms of traffic volumes and conversions.

A bounce may be registered for several user actions; this paper addresses clicking the back button (short click) to address the leading accessibility factor, page load speed. *Please see Appendix 1.0 for the full list of bounce rate identifiers.*

The remedy is a bounce rate measurement of the percentage of searchers who enter a website on a given page, but then leave without viewing another page "*within a humanly possible time frame.*"

The calculation is Bounce Rate Equals Total Number of Visits Viewing One Page Divided by Total Number of Visits Greater Than or Equal to the Average Variable Page Load Speed.

This calculation can be applied within all leading analytics packages such as Unica, Omniture, Webtrends and Google Analytics.

Helping online marketers and search experts

Bounce rate is widely acknowledged in the online marketing industry. The global average published by Google is 47 percent. *(Source: Google Analytics Benchmarking Newsletter. 2011, Volume 1, July 2011)*

A high conversion rate is the result of a low bounce rate, and conversion is what brings in customers and leads. The goal is to convert as many visitors as possible and bring down the bounce rate, increasing the likelihood of repeat business from landing page visitors.

Bounce rates are important for SEO services as a signal that the webpage may have some problems and therefore may need to undergo a website audit to improve its optimization and ultimately increase its ranking in search engines.

Accessibility is one of the key areas that make up the full SEO spectrum (authority, relevance and accessibility). SEO experts spend considerable time staying up to date with the search engine algorithms to apply methods for better crawlability and indexing. One core service is an SEO technical audit and this typically provides a list of page load issues, such as timed out requests (408 and 500s), along with the affected pages.

Consumers and businesses alike now expect only the best digital experience or else they will quickly move on.

The new bounce rate method has been advocated by Google in their recent Google Analytics update on July 25, 2012 that codes load time into a webpage to show adjusted bounce rate. *(Source: http://analytics.blogspot. co.uk/2012/07/tracking-adjusted-bounce-rate-in-google.html)*

Why is this important to marketers?

Bounce rate is an underused metric and can really help define whether a page is successful in terms of targeting from a search campaign (organic and paid) as well as other promotional techniques that drive direct or referral traffic, such as display and print. Extreme high bounce is immediately noticed; if one sees a bounce rate of more than 90 percent, we are drawn to it quickly and this starts the process of analyzing why the bounce is so high.

After placing a substantial part of their advertising in SEO and PPC, executives and marketing teams are tracking website traffic metrics to evaluate the ROI of that online marketing investment. Bounce rate is one metric that shows slippage and can equate to a substantial loss of potential sales.

It is within the budget holder's interest, after having spent time and money preparing the page, targeting an audience and implementing paid or organic keywords. If they see a 90 percent bounce, then time and money has been misplaced. The marketers should care because if they are failing, they need

to look at their targeting and implementation methods. Therefore, an accurate measure of bounce rate is important for decision making and measuring the campaign's success.

Do bounce rates affect search results?

YES
In April 2010 Google announced that page load speed matters and is taken into consideration in the SERPs results.

Currently on Google webmaster central blog...

"We encourage you to start looking at your site's speed — not only to improve your ranking in search engines, but also to improve everyone's experience on the Internet."

Posted by Amit Singhal, Google Fellow and Matt Cutts, Principal Engineer, Google Search Quality Team. *(Source: http://googlewebmastercentral. blogspot.co.uk/2010/04/using-site-speed-in-web-search-ranking.html)*

If search engines are listing pages with high bounce in high positions, then they are not giving the searcher what they are looking for.

However, arguably, search engines are not "strictly" using bounce rate as a quality scoring and ranking factor in the fullest sense of the meaning of bounce rate (Close the browser [window/tab], Type a new URL, Session Times Out, Clicks on a link that brings the user to an external site [see Appending *1]). Yet evidence points toward the tracking of the back button click action, coined as the "short click" directly associated with poor performing sites in terms of accessibility in which page load speed is a prime factor.

Do bounce rates or associated page load speed affect traffic results and conversions?
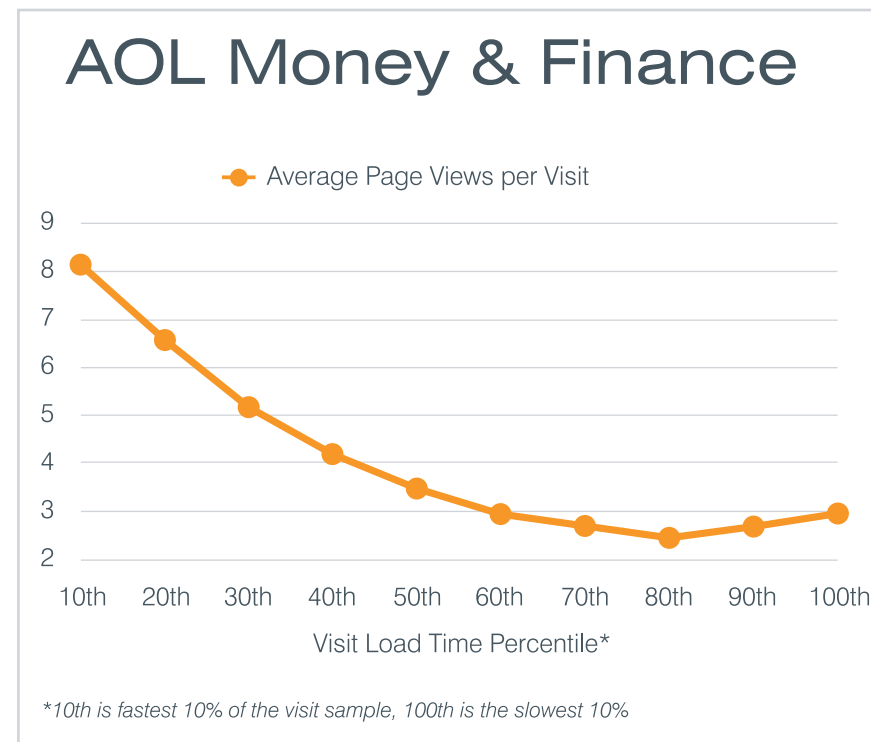
YES
Google performed an experiment on searches against a two-second change in site speed...

"The Google experiments demonstrated that slowing down the search results page by 100 to 400 milliseconds has a measurable impact on the number of searches per user, there are 0.2 percent to 0.6 percent fewer searches for changes under half a second!"

This daily impact of 0.5 percent is of real consequence at the scale of Google Web search and most Internet sites.

Bing found that a two-second slowdown changed queries/user by -1.8 percent and revenue/user by -4.3 percent

AOL Executive Speed Report computed the average load time across pages viewed for each visit (sending load time of the page back on clicks) concluded visits experiencing the fastest load times delivered the most page views per visit.

AOL Money & Finance

—●— Average Page Views per Visit

Visit Load Time Percentile*

*10th is fastest 10% of the visit sample, 100th is the slowest 10%

"Another Google experiment increased the number of search results per page from 10 to 30, with a corresponding increase in page load times from 400 milliseconds to 900 milliseconds. This resulted in a 25 percent drop off in first result page searches." *(Source: http://assets.en.oreilly.com/1/event/29/ Keynote%20Presentation%202.pdf)*

"Shopzilla performed a year-long performance redesign resulting in a five-second speed up (from approximately seven seconds to approximately two seconds). This resulted in a 25 percent increase in page views, a 7 – 12 percent increase in revenue, and a 50 percent reduction in hardware." *(Source http://blip.tv/oreilly-velocity-conference/velocity-09-philip-dixon-shopzilla-s-site-redo-you-get-what-you-measure-2305633)*

"The conversion rate increases 74 percent when page load time decreases from eight to two seconds." *(Source: Gomez.com real user monitoring data from search transactions involving 33 major retailers, and 3 million page views)*

How to implement the true bounce rate calculation

Accurately Measure Bounce Rate [Implementation Case study]
[First Hand Research by Marcos Richardson: Conveyed and Accepted by Google UK Executives at Google London HQ 2012]

In the following case study we concentrate on only one factor that influences bounce rate, namely, page load speed. The case study is based on Google Analytics.

Bounce rate calculation
A bounce occurs when a website visitor only views a single page on a website. This is the calculation.

Bounce Rate Equals Total Number of Visits Viewing One Page Divided by Total Number of Visits

$$R_b = \left(\frac{T_v}{T_e} \right)$$

Where
R_b = Bounce rate
T_v = Total number of visits viewing one page only
T_e = Total entries to page

Advanced segmentation to calculate more accurate bounce rate, eliminating short clicks
It is important to breakdown the factors on a website that could attribute to a bounce rate within your reporting efforts, such as external links, and apply link tracking and remove that traffic from your bounce rate. This particular method is the first step that should be taken to create a true bounce rate for your Web pages from an accessibility page load perspective.

Within this case study a search for "Brand Name prices" has the greatest probable conversion ratio due to the combined descriptive and branded element, and the user intent for the specific request on prices. For this reason, we are furnishing examples of advanced optimization techniques around this key phrase.

Step 1
First, look at the page to be analyzed and ascertain its loading time (page load speed).

There are many tools available to measure page load. Here are a few of the best...

PageSpeed,

YSlow,

WebPagetest.

Webmaster Tools with www.getfirebug.com

Pingdom

It is important to understand the page load information and configure the output for an accurate reflection of a real user's online experience. Page load measurement will measure many aspects of load, for example packets of information broken down into images, execution files like flash or coding, such technical elements as frames, and visual aspects like background and foreground embedded images. Much of this information can be zipped and released -- hidden within the browsing session. What one should look for is the actual page rendering speed that the user will see and experience.

For landing page "Brand Name prices" (We apply variable time and date testing to determine an accurate load time for the landing page in question.)

Website information

Total loading time:	4.2 seconds
Total objects:	9 (89.9 KB)
External objects:	0
(X)HTML:	1 (31.3KB)
RSS/XML:	0
CSS:	1 (10.9KB)
Scripts:	1 (41KB)
Images:	6 (6.7KB)
Plugins:	0
Other:	0
Redirected:	0

Step 2
Now, empowered with the knowledge that it would be humanly impossible to enter the website from this landing page and click-through to any other section of the website via this landing page within 4.2 seconds, create an advanced segment that calculates a visit which occurred in equal to or less than 3 seconds. *(Note: For some enterprise analytics systems, you may need to ask for a custom segment to be set up)*

Measure bounce rate of natural and paid keywords.

We want to optimize this page based on searches from the keyword phrase "Brand Name prices," so we apply a filter as per the example below (Using advanced segments in Google Analytics)


Step 3
This is the resulting output, which clearly shows that the landing page received 5,873 visits from the keyword phrase "Brand Name prices." Of these visits, 1,126 were too quick to be considered a definitive click-through with decisions or other on-page actions possible. Therefore, the bounce rate has a benchmark baseline of 19 percent for short clicks for the key phrase "Brand Name prices" on this landing page.
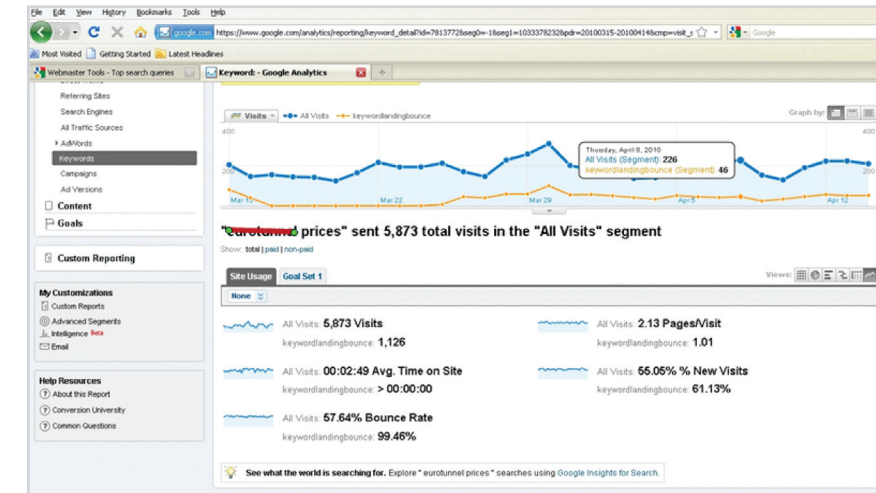
Obviously, a small positive shift in percentile click-through rate against a high volume keyword/phrase will have a greater impact in terms of traffic conversion than the same percentile change in a lower volume keyword/phrase. Thus, take a top-down approach to optimizing and measuring landing pages from keywords that have driven traffic to the website.

This method proves to be a good way to gauge bots, suboptimal analytics setup, click fraud, and back button (short click). Below, the stated bounce rate for the website is 60.17 percent. We estimate it to be closer to 40 percent.
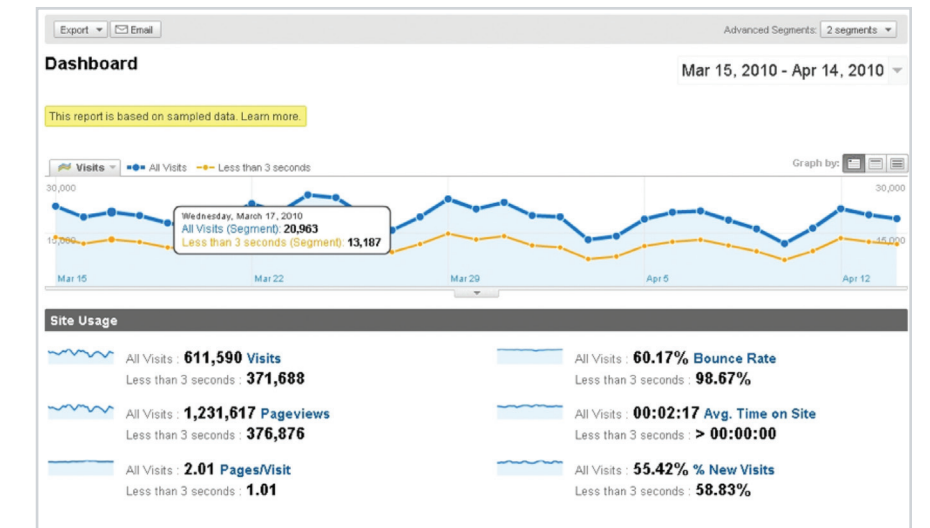

After presenting this data to the client, the "Brand Name prices" landing page was seen as successful so they decided to continue with the Brand Name prices campaign and reinvested in PPC and SEO.

ACTIONABLE INSIGHTS

Our true bounce rate logic can be implemented on all major analytics packages; however, customization may be required.

If you are already aware of slow page speed loading times, this method can be applied as a fast test on defined pages. A longer-term solution is to implement the new Google Adjusted bounce rate code on page. The "set-Timeout" function can be set up to the desired delay in accordance to page load speed.

The results are equivalent...
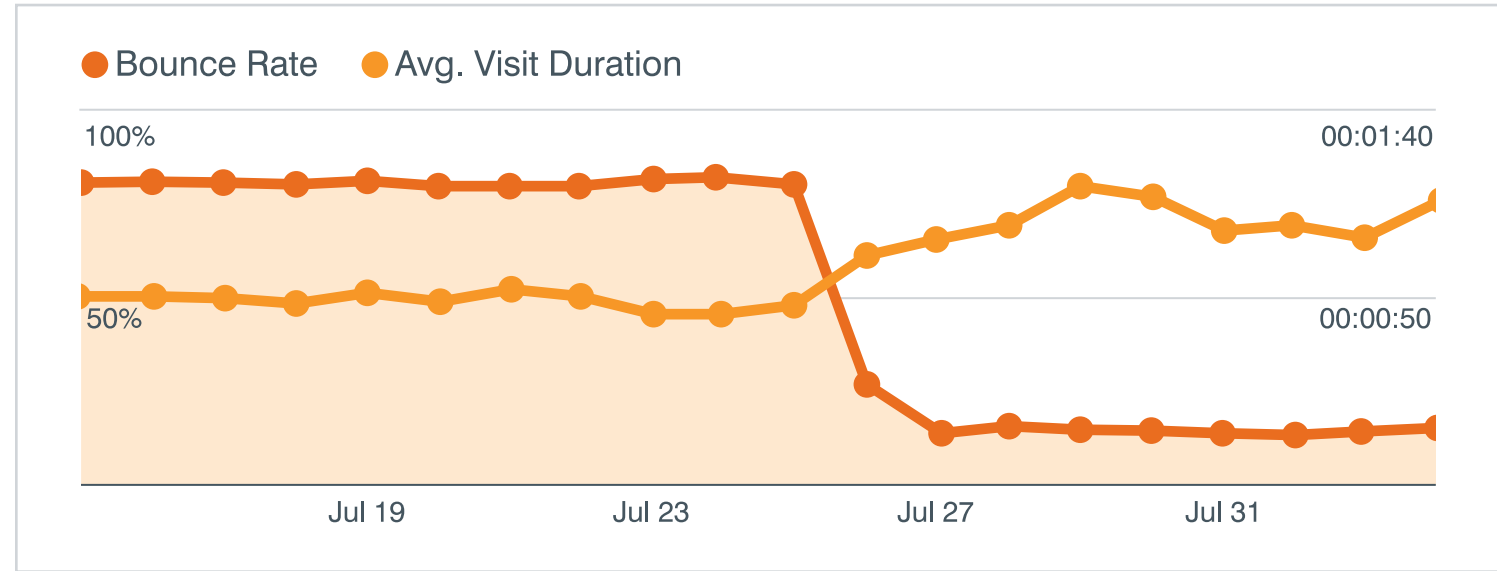
The bounce rate, which was nearly 80 percent, comes down to 14 percent. *(Source: http://www.quickonlinetips.com/archives/2012/08/google-analytics-adjusted-bounce-rate/)*

An analysis of navigation by funnel reporting to encompass dropout rates, exit pages and pre-exit pages should be conducted and compared to the bounce rate. Segmentation for deeper analysis can include the type of visitor (new or repeat) and source of the visit (campaign and country) against each page.

CONCLUSION

There is a clear need to reduce bounce rate as companies are paying search engines for the entire click-though. If your company or brand is not getting adequate traffic from paid search and your site visitor's bounce, or leave immediately, then it is obviously not a good return on ad spending.

It is understandable that a company's website bounce rate is accepted as standard; and in many cases, due to disbelief of its accuracy; it is not a metric relied upon for big decisions. However, a website is a portal for measuring marketing and creative success in terms of visitor numbers and actions. Time and money have already been spent on getting people to your website, so it makes sense to look a little more closely at the people who finally arrived but turned away.

Your company can now report a more accurate bounce rate to digital stake-holders on an ongoing and campaign basis. Whereas a campaign may have been deemed a failure in the past due to high bounce, the bounce rate can now show a more accurate picture and thus investment in continuing or launching a similar campaign may be more justifiable.

Creating a more accurate benchmark from a page speed perspective as a starting point allows for a good baseline to work from when preparing to put investment into UX, creative design, marketing targeting and conversion analysis.

It is in everyone's interest – the company, the searcher and the search engine – to ensure that Web pages load quickly and bounce rates are kept to a minimum.

It is Covario's pleasure to share our bounce rate formula with you...

Bounce Rate Equals Total Number of Visits Viewing One Page Divided Total Number of Visits Greater Than or Equal to the Average Variable Page Load Speed.

$$R_b = \left(\frac{T_v}{T_e} \right) \leq P_s$$

R_b = Bounce rate
T_v = Total number of visits viewing one page only
T_e = Total entries to page
P_s = Average Variable Page Load Speed

http://en.wikipedia.org/wiki/Bounce_rate

Appendix 1.0

It is important to breakdown the factors on a company website that could attribute to a bounce rate within the reporting effort, such as external links, and apply link tracking and remove that traffic from the bounce rate.

*1. Bounce rate is difficult to measure accurately.

A bounce may be registered for several user actions

• Click the back button (short click) [what this paper addresses]

• Close the browser (window/tab)

• Type a new URL

• Do nothing (session times out after 30 minutes or for when you have set your session cookies)

• Clicks on a link that brings the user to an external site (possibly a partner link or another internal company domain).
  - Account login that requires secure authentication and is on a separate domain.

Search engines create, deploy and advocate site speed tools
Site speed tools have been advocated by search engines for a long time with the release of the firebug plug-in in Webmaster tools and PageSpeed, YSlow,WebPagetest. Plus, there's a site performance lab among the other Webmaster Tools and at code.google.com/speed.

The SPDY protocol is a replacement for HTTP that can speed up the load times for Web pages. Just like on desktops, SPDY speeds up mobile browser performance.

On March 24, 2012, Google executive Mustafa M. Tikir announced that Google released a new Site Speed report, providing a view of essential information for measuring your site's page loading metrics: Avg. Page Load Time by Browser, Country/Territory and Page. Google notes that it has also updated the Intelligence Reports to include average site load times and all Page Timings metrics.

On April 24, 2012, Google released an update to its analytics suite – a new site speed report for Google Analytics is called User Timings. The report lets users track custom timings, and shows the execution speed or load time

of any hit, event or user interaction. *(Source: http://www.webpronews.com/google-analytics-gets-new-site-speed-report-user-timings-2012-04)*

On June 13, 2012, Google released a new version of PageSpeed Insights in its Chrome extension that analyzes site performance. Libo Song and Bryan McQuade of Google's PageSpeed Insights Team wrote in a joint blog post, "PageSpeed Insights for Chrome is a Developer Tools extension that analyzes all aspects of the page load, including resources, network, DOM and the timeline."

And http://code.google.com/p/namebench/ hunts down the fastest DNS servers available for your computer to use.

Server optimization for website loading speed
Many key terms have large volumes of traffic associated to them, and if your business holds top positions organically or pays for these terms, the company's website needs to be in a position to accept the traffic volumes without slowing to a halt.

The first thing companies need to ensure is that server capacity and speed can handle volume queries and seamlessly serve content, images and page load elements.

The following elements can be analyzed and implemented to help with page load speed for server optimization...

Decrease the white space by eliminating excess spaces
Consider using a caching service like Akami
Use efficient CSS selectors
Minimize cookie size
Serve static content from cookieless domain
Remove unused CSS
Combine external CSS
Minify JavaScript
Combine external JavaScript
Parallelize downloads across host names
Optimize order of styles and scripts
Optimize Images
Perform mutlivariate or A/B split testing on landing pages
Defer loading of JavaScript
Minimize redirects
Avoid CSS expressions
Serve resources from consistent URL
Minimize DNS lookup
Put CSS in the document head
Specify image dimensions
Leverage proxy caching
Enable gzip compression

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