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A TALE OF TWO STUDIES
Establishing Google & Bing Click-Through Rates

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OVERVIEW

An organic click-through rate (CTR) on search engines is one of the best metrics to measure user engagement on the Internet. Google and Bing have more influence than ever before, controlling over 95% of all search engine queries. An organic Page 1 ranking for a relevant, popular keyword can drive millions of dollars in new business.

In search, it is not only the case that CTRs drive engagement, but it is speculated that search engines use click-through metrics to help determine which results are relevant. That means if you are posting relevant content in relevant ways, your organic search engine rankings will be, in a way, self-perpetuating. This helps users find the content that answers their queries.

Digital Relevance™ conducted this study on user behavior to help define the impact of Page 1 search engine rankings. However, for Bing and Google, the user experience is ever changing. There have been algorithm updates, a new user interface, increased mobile search, the addition of social signals, and blended search engine results pages (SERPs) with videos, news, places, images, and shopping results. As Bing and Google are constantly working to improve the user experience, we expect even more changes that will have a significant impact on search behavior.

As SERPs continue to evolve, does a constant CTR behavioral pattern emerge? How many more organic visits can I expect to receive as my website increases its position in the SERP for any given keyword? Our study attempts to answer these questions by finding CTRs using actual client data.

This particular study was first designed by Paul Davison of Digital Relevance™, Director of Client Success, to serve as a model to help make projections for our clients. It is our intent to make this study as transparent as possible so that organic SEOs and marketers may see how we determined our results. This study will be an on-going project that will be compared with future SERPs and other CTR studies.

WHAT'S INSIDE:

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Section 1 »

DEFINITION OF TERMS

CLICK-THROUGH-RATE (CTR): The percentage of users who click on a given domain after entering a search query. In this study, CTR is calculated as total visits divided by total searches for a given keyword over a stable period.

SEARCH ENGINE RESULTS PAGE (SERP): The listing of web pages returned by a search engine after a search query is made.

ABOVE THE FOLD: Refers to the top half of a SERP, positions #1-5.

BELOW THE FOLD: Refers to the bottom half of a SERP, positions #6-10.

ORGANIC RESULTS: The listing of web pages in the query results that are not paid advertisements.
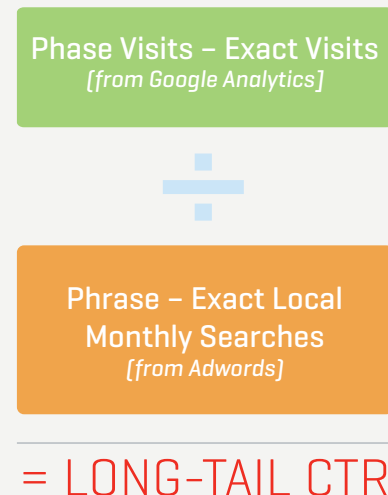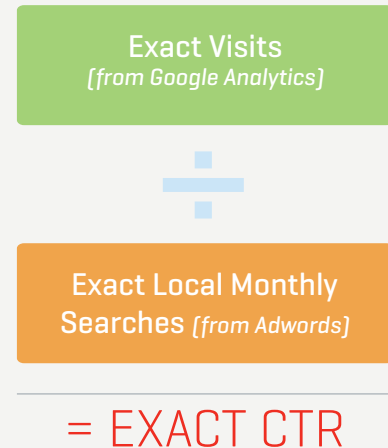
PAID RESULTS: Advertisements on search engines that appear in the query results, typically at the top or right side of the page.

BLENDED SERPS: A search engine results page with images, videos, news, places, and/or shopping results included within the listings.

BRANDED KEYWORDS: A keyword phrase that has a word directly associated with the given company's name. Example: "Gibson guitars" is a branded keyword phrase while "guitars" is not.

LONG-TAIL TRAFFIC: Visits to a given domain from all keyword phrases that include the primary term except for the primary term by itself. Example: if "cars" is the primary term, then the long-tail would be traffic associated with terms like "fast cars," "used cars," "cars for sale," etc. The term "cars," by itself, would not be included in long-tail traffic.

HALO-EFFECT: The many long-tail or related keywords that rank in SERPs in addition to the primary keyword. Also referred to as the "umbrella effect" and "keyword association effect."

Exact Visits
(from Google Analytics)

÷

Exact Local Monthly
Searches *(from Adwords)*

= EXACT CTR

Phase Visits – Exact Visits
(from Google Analytics)

÷

Phrase – Exact Local
Monthly Searches
(from Adwords)

= LONG-TAIL CTR

Section 2 »

STATEMENT OF PURPOSE / MAIN RESEARCH QUESTIONS

The main objective of this study, first and foremost, is to better understand user CTR behavior and to help quantify ROI from SEO campagins. We attempted to do this by answering the following questions:

1» What is our observed CTR curve for organic U.S. results for positions #1-10 in Google SERPs?

2» What is our observed CTR curve for organic U.S. results for positions #1-10 in Bing SERPs?

3» How do the CTR curves for Google and Bing compare with each other?

4» What amount of long-tail click-through can we expect for a keyword that has a stable rank in its SERP?

5» What impact do images, videos, news, places, and shopping results have on user behavior?

Section 3 »

ASSUMPTIONS

1» The reporting instruments used were sufficiently accurate to make valid conclusions.

2» Non-branded keywords provide a more accurate measure of user engagement. Non-branded keywords were used in these studies.

> *Non-branded keywords provide a more accurate measure of user engagement. Non-branded keywords were used in these studies.*

Section 4 »

LIMITATIONS

1» The sample consisted of major retailers and enterprise groups who are all clients of Digital Relevance™. Therefore, the results may not generalize to other populations.

2» The design of this study was behavioral, measuring one period in time. Therefore, causal relationships were not addressed and interpretations must be qualified.

3» The sample of keywords had stable positions in the SERP for a certain period of time. All keywords in the Google study had stable positions for 30 days. The Bing study included keywords with stable positions ranging from 7 to 30 days, due to the fact that Bing Advertising Intelligence reports daily search volumes, while Google Adwords does not. This introduces the possibility of a systematic difference in CTR for certain keywords that are stable.

Section 5 »

RECENT STUDIES

The last two major CTR studies were conducted by Optify and Enquiro. Optify's study was conducted in the holiday season of 2010 from a variety of business-to-business websites. The study published by Enquiro Search Solutions was conducted in 2007 using survey data and eye-tracking research. It was the result of a business-to-business focused survey of 1,084 pre-researched and pre-selected participants. Both studies observed Google as its search engine; the CTR curves for each study are shown below.

TABLE 1:

GOOGLE SERP POSITION	OPTIFY* [Dec 2012]	ENQUIRO [2007]
# 1	36.4%	27.1%
# 2	12.5%	11.7%
# 3	9.5%	8.7%
# 4	7.9%	5.1%
# 5	6.1%	4.0%
# 6	4.1%	4.1%
# 7	3.8%	4.1%
# 8	3.5%	3.2%
# 9	3.0%	2.8%
# 10	2.2%	3.6%

*distribution of clicks in top 20 organic positions

It is important to note that in Optify's curve, a click-through rate is defined as follows: Given that a user clicks on a top 20 organic ranking, the click-through rate is the percentage of users that clicked on each position. Digital Relevance™ defines its curve as follows: For any given search, the click-through rate is the percentage of users that click on each position in the top 10 organic results. The key difference here is the given information in each calculation. Optify's top 20 curve sums to 100% and shows the CTR curve only considering those who clicked on a top 20 organic result. Therefore, the curve must be adjusted because not all searches result in a click. Users often re-query, click on a paid advertisement, exit the page, go on to page two, or click on one of the shopping, news, places, videos, or images results.

It is also important to note that Optify's study was conducted during the holiday season of December 2010. It is possible that Google makes changes to its rankings during the holiday season that many believe have a significant impact on user behavior as well as the inherent change in user intent. Therefore, one should not blindly compare the CTR curves between these studies, but note their differences, especially in how they were calculated.

Section 6 »
METHODOLOGY

We can now calculate the Exact and Long-Tail click-through for that keyword.

PARTICIPANTS

To generate an accurate model, Digital Relevance™ analyzed the user behavior of more than 170,000 visitors across 624 non-branded keywords (324 were used in the Google study and 300 in the Bing study). The sample set that was used came from a databank of over 10,000 keywords and were chosen based on the strict criteria of a stable ranking period. These keywords were derived from Slingshot's group of over 200 major retailers and enterprise clients.

The Google and Bing studies shared 108 keywords in common and utilized 91 of the same clients. This study calculated CTR based on United States searches only.

INSTRUMENTS

» Authority Labs
» Google Adwords Keyword Tool
» Bing Advertising Intelligence Excel Add-in
» Google Analytics

PROCEDURES

In this section, we illustrate our research procedures so that the study may be replicated and so the reader may see how we determined our results.

FINDING STABLE KEYWORDS

In order to isolate each keyword to a specific position in the top 10, a tool called Authority Labs was used to identify keywords with stable positions in the SERP. As an example, the word "cars" held a stable rank at Position 2 for June 2011.
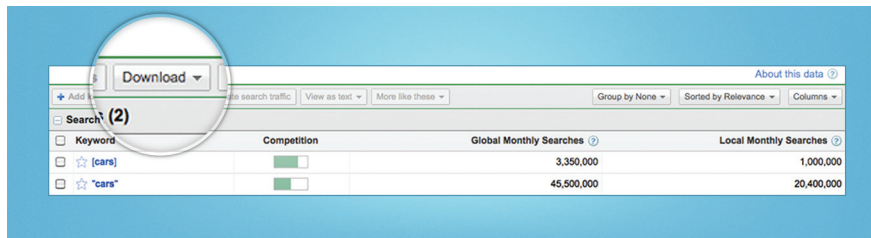

> *Digital Relevance™ analyzed the user behavior of more than 170,000 visitors across 624 non-branded keywords.*

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FINDING KEYWORD-SPECIFIC SEARCH VOLUMES

To find the number of U.S. searches for a certain keyword, we consulted the webmaster tools for Google and Bing.

Google provides an Adwords Keyword Tool, which was used to report monthly search volumes. Using this tool, the number of exact and phrase local monthly searches was found. It is important to note that all keywords have different monthly trends. For example, a keyword such as "LCD TV" would typically spike in November, just before the holiday season. If one looks at searches for that keyword in May, during a time when the search volume is not as high, the monthly search average may be overstated. Therefore, it was necessary to download the .csv file from Adwords, which separates the search data by month for more accuracy.

By extracting "Phrase" and [Exact] data from the Google Adwords Keyword Tool, we can calculate the long-tail click-through for the keywords associated with a head term holding a stable rank in the SERP.

| Phrase | — | Exact | = LONG-TAIL |
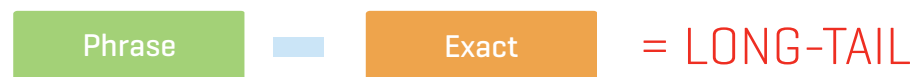
Bing provides an Advertising Intelligence Exel add-in, which breaks down the number of U.S. searches by day. Bing does not provide search volumes for alternate query occurrences of a keyword used in all phrases as Google does. Thus, we were unable to calculate the long-tail CTR for Bing.

Both tools are widely used by marketers and SEOs, and are the most accurate tools freely available for search volumes.

FINDING KEYWORD-SPECIFIC SEARCH TRAFFIC

Using Google Analytics, we found the actual number of visits over the stable period for each keyword.
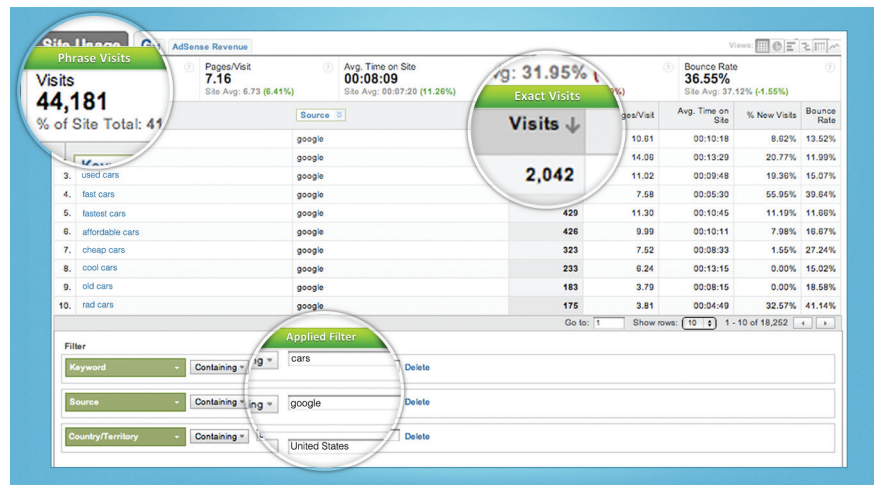
In Google Analytics, it is necessary to specify "non-paid" visits to include only organic results and to filter for U.S. visits. This reflects the fact that the reported Google and Bing search volumes were for U.S. searches.

CALCULATIONS

| # of visits | ÷ | # of searches | = EXACT CTR |

The number of visits is obtained from Google Analytics. The number of searches, for Google, is obtained from the Google Adwords Keyword Tool. The number of searches, for Bing, is obtained from the Bing Advertising Intelligence Tool.

| Phase Visits – Exact Visits *[from Google Analytics]* | ÷ | Phase – ExactU.S. Searches *[from Adwords]* | = LONG-TAIL CTR |

The number of Phrase and Exact visits was obtained from Google Analytics. The number of Phrase and Exact searches was obtained from the Google Adwords Keyword Tool.

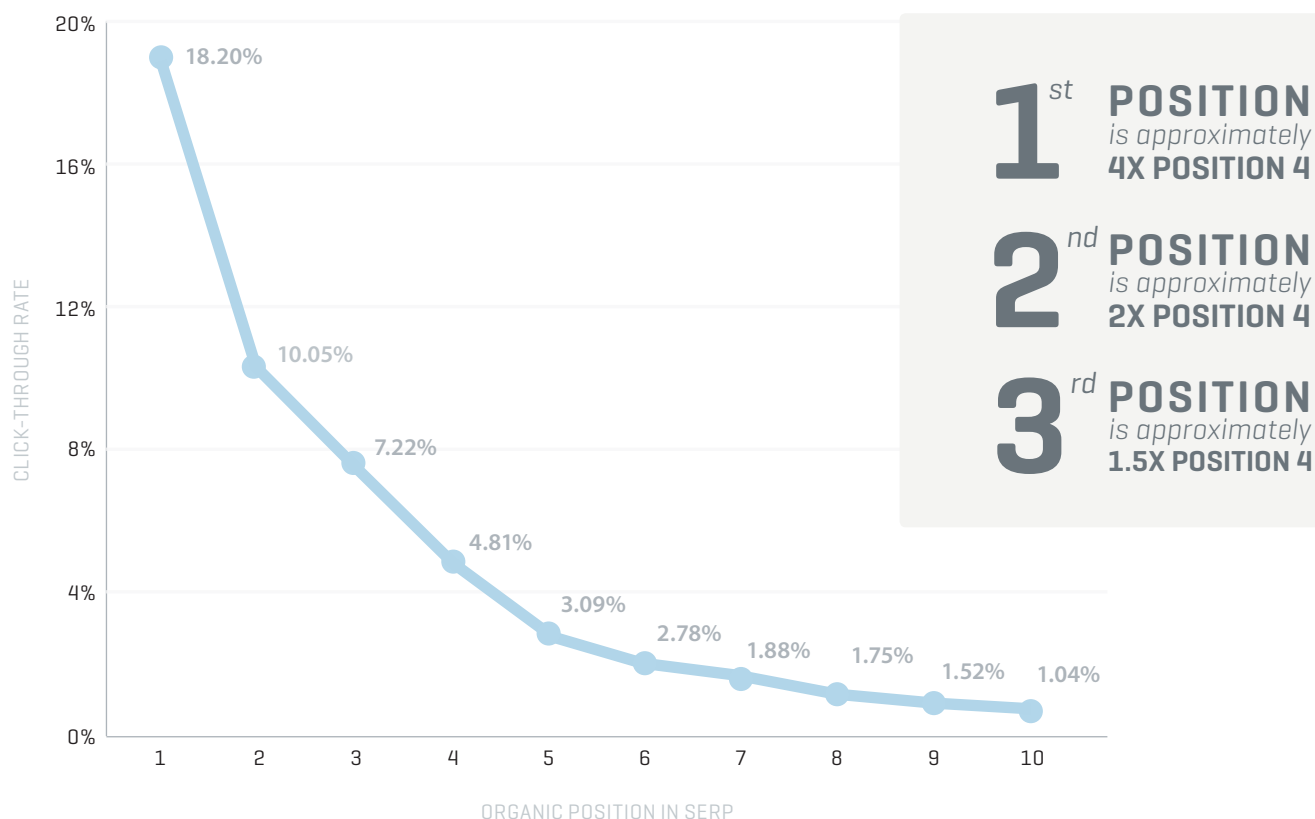Long-tail CTR was not calculated for Bing.

Section 7 »
RESULTS & DISCUSSION

1. WHAT IS OUR OBSERVED CTR CURVE FOR ORGANIC U.S. RESULTS FOR POSITIONS #1-10 IN GOOGLE SERPS?

Based on our sample set of 324 keywords, we have observed the following curve for Google Exact Keyword CTR:

GOOGLE CLICK-THROUGH RATE

CLICK-THROUGH RATE

- 18.20%
- 10.05%
- 7.22%
- 4.81%
- 3.09%
- 2.78%
- 1.88%
- 1.75%
- 1.52%
- 1.04%

ORGANIC POSITION IN SERP

1st **POSITION**
is approximately
4X POSITION 4

2nd **POSITION**
is approximately
2X POSITION 4

3rd **POSITION**
is approximately
1.5X POSITION 4

We observed an 18.20% average CTR for a No. 1 rank and 10.05% for Position 2. Average CTR for each position below the fold was observed to be below 4%.

An interesting implication from our CTR curve is that for any given SERP, the percentage of users who click on an organic result in the top 10 was found to be 52.32%. This is typical user behavior, as many Google users will window shop the SERP results and search again before clicking on a domain. These results can be used as a baseline model and is most useful for showing the relative CTR for increases in each position.

1st is approximately 4x position 4, 2nd is approximately 2x position 4, and 3rd is approximately 1.5x position 4. Using these relative increases, marketers can better asses the value of an increase in rank from any position in the SERP.

2. WHAT IS OUR OBSERVED CTR CURVE FOR ORGANIC U.S. RESULTS FOR POSITIONS #1-10 IN BING SERPS?

Based on our sample set of 300 keywords, we have observed the following curve for Bing Exact Keyword CTR:

BING CLICK-THROUGH RATE

> *We observed a 9.66% average CTR for a No. 1 rank and 5.51% averge for Position 2.*
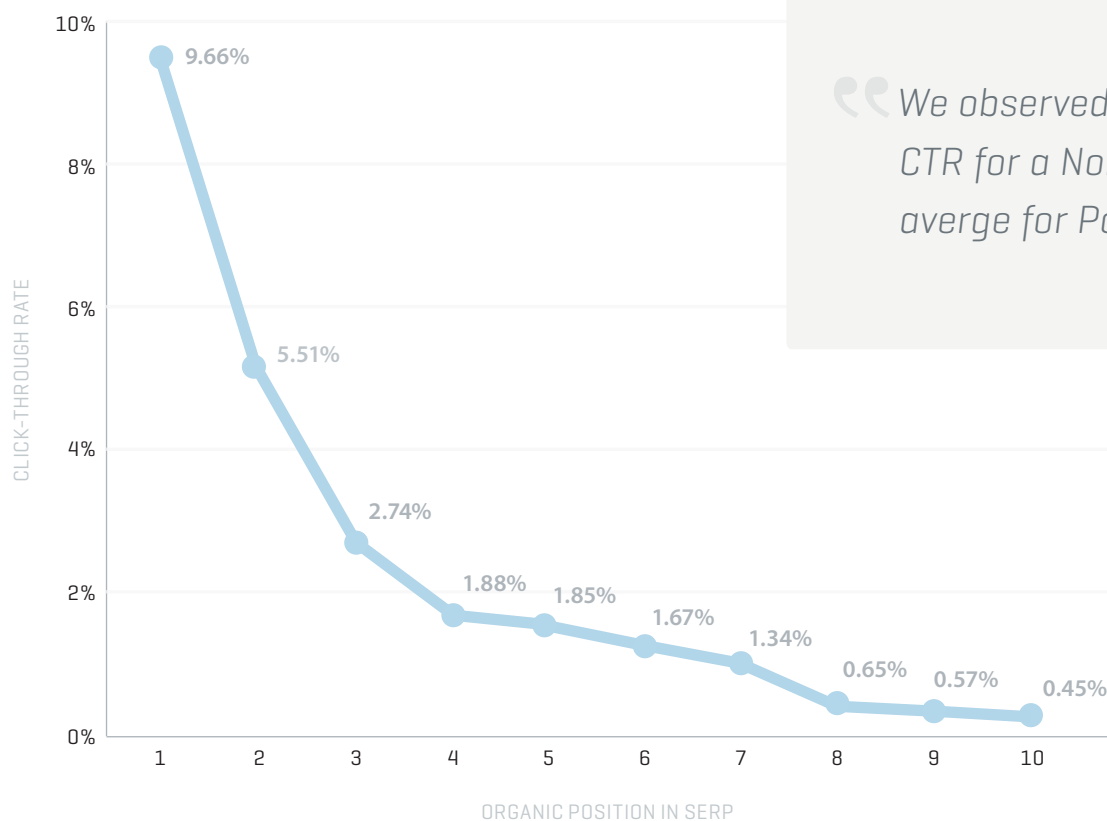
We observed a 9.66% average CTR for a No. 1 rank and a 5.51% average CTR for Position 2. Average CTR for each position below the fold was below 2%.

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3. HOW DO THE CTR CURVES FOR GOOGLE AND BING COMPARE?

Based on our sample set of 300 keywords, we have observed the following curve for Bing Exact Keyword CTR:

GOOGLE VS BING CLICK-THROUGH RATE
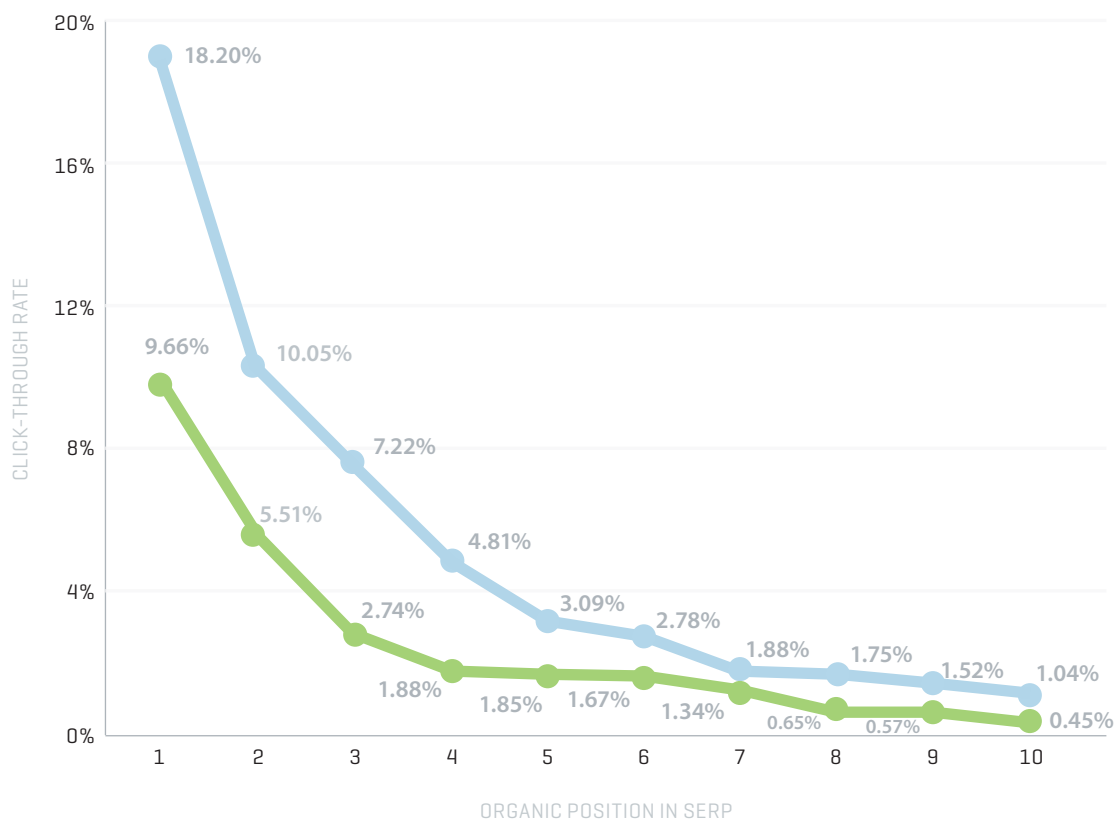
SERP POSITION	GOOGLE CTR STUDY	BING CTR STUDY
# 1	18.20%	9.66%
# 2	10.05%	5.51%
# 3	7.22%	2.74%
# 4	4.81%	1.88%
# 5	3.09%	1.85%
# 6	2.76%	1.67%
# 7	1.88%	1.34%
# 8	1.75%	0.65%
# 9	1.52%	0.57%
# 10	1.04%	0.45%

Our R&D team was surprised to see click-through rates significantly lower for Bing, especially since both studies were conducted using data over the same time period *(January 2011 to July 2011)*, had 108 keywords in common, and used the same group of 91 clients.

If so few users are clicking on Bing organic results after a search, where are they going? Possibilities include "related searches" on the sidebar, re-queries, Page 2, one of the tabs at the top, a paid result, or the images, videos, news, shopping, local listings results within the SERP.

Does this mean that Google's results are more reliable? There is plenty of heated debate over this issue, but whether or not Bing users actually abandon their searches more doesn't necessarily mean that Google's results are more reliable; it just may be a behavioral issue. This is an implication from comparing the CTR curves, but we must first acknowledge that the demographic of users for each search engine is very different.

Every month, roughly 117 million searches are made for "google" in Bing. It's hard to fathom why one would search for a search engine while using a search engine, but let's face it, users are aware that Bing and Google provide very different results. To put this number in perspective, consider the fact that, on average by month, only 55 million searches are made for "google" in Google and 4 million searches are made for "bing" in Google. It's an interesting behavioral observation, to say the least, that even though Google controls 65% of the search market, there are still an alarming number of users who use Bing on a daily basis to get to Google.

> *Every month, roughly 117 million searches are made for "google" in Bing.*

Bing is the default search engine on Internet Explorer, which is still the world's most popular web browser, mainly because it comes standard on all Windows operating systems. This could explain why so many users search "google" in Bing to get to Google's homepage. They simply choose to stay with Internet Explorer instead of using an alternative web browser, like Firefox or Chrome. Also, changing the default search engine on Internet Explorer from Bing to Google is no easy task. The fact that Bing is the default search engine for over 38% of all users significantly affects user behavior. The lower click-through rates could be attributed to Bing users abandoning their results and heading to Google. Perhaps users are trying their searches and then re-querying in Google.

Specifically optimizing for Bing is still important, especially since the demographic of users is different. Hit-wise carried out a study, which showed that 58% of Bing users are female, whereas only 45% of Google users are female. It also found that most Bing users are age of 35 or older. This is incredibly valuable information for marketers because it affects the target audience. If you have a product geared towards females or an older group, Bing may be more valuable to you.

4. WHAT AMOUNT OF LONG-TAIL CLICK-THROUGH CAN WE EXPECT FOR A KEYWORD THAT HAS A STABLE RANK IN ITS SERP?

For each keyword with a stable position in its given SERP, we found the percentage of click-through for all long-tail terms that stem from the keyword over the same period. For example, if "cars" ranked at Position 2 for June 2011, then how much traffic could that domain expect to receive from "new cars," "used cars," or "affordable cars"? The reasoning is that if you rank second for "cars," you are likely to drive a lot of traffic for those other keywords as well, even if those other positions are unstable. This is due, in part, to the "halo effect." We were hoping to find an elegant long-tail pattern, but we cannot prove that long-tail CTR is directly dependent on the exact term's position in the SERP. This suggests that the universal effect of having the primary term in a stable rank is uncertain, but still relevant.

We observed an average long-tail range of 1.17% to 5.80% for each position. The average long-tail CTR associated with each primary keyword with a stable rank (#1-10) was found to be 2.75%.

Long-tail CTR is one of the results of a dynamic campaign that should not be ignored. By creating relative content, links that people will click, a dynamic site architecture, and social networking, your campaign can have a powerful marketing strategy that is more than just click-through rates from primary keywords.

GOOGLE SERP POSITION	# OF KEYWORD PHRASES	LONG-TAIL GOOGLE CTR STUDY
# 1	43	5.80%
# 2	32	3.19%
# 3	31	2.43%
# 4	34	4.58%
# 5	33	1.17%
# 6	30	1.49%
# 7	31	1.82%
# 8	30	2.27%
# 9	30	1.68%
# 10	30	3.46%

> *The average long-tail CTR associated with each primary keyword with a stable rank (#1-10) was found to be 2.75%.*

5. WHAT IMPACT DO IMAGES, VIDEOS, NEWS, PLACES, AND SHOPPING RESULTS HAVE ON USER BEHAVIOR?

Starting in May 2007, news, video, local, and book search engines were added to Google SERPs and now include images, videos, shopping, and places results. Do blended SERPs have lower click-through rates? One would think that because these results often push high-ranking domains towards the bottom of the page, CTR would indeed be lower for blended SERPs. However, a counter-intuitive hypothesis would suggest that because certain SERPs have these blended results inserted by Google, they are viewed as more credible results and that CTR should be higher for those blended SERPs.

Our hypothesis was that Google click-through behavior would be significantly different for blended SERPs versus non-blended SERPs. We analyzed our sample set and failed to prove that there are significant differences in user behavior regarding blended versus non-blended results. The effect of blended results on user behavior remains to be seen.

GOOGLE SERP POSITION	BLENDED SERP CTR	NON-BLENDED SERP CTR
# 1	16.9%	20.9%
# 2	10.1%	10.0%
# 3	9.3%	5.4%
# 4	5.5%	3.6%
# 5	3.5%	1.5%
# 6	2.8%	2.4%
# 7	1.9%	1.5%
# 8	1.9%	0.8%
# 9	1.7%	1.0%
# 10	1.0%	0.7%

Section 8 »
DESCRIPTIVE STATISTICS

Here are some additional statistics that describe the keywords used in our sample set:

EXACT KEYWORD CTR - GOOGLE STUDY

GOOGLE SERP POSITION	AVERAGE CTR *[exact]*	RANGE OF VALUES	STANDARD DEVIATION
# 1	18.2%	[2.43% - 76.37%]	12.82%
# 2	10.1%	[2.86% - 51.15%]	9.01%
# 3	7.2%	[0.59% - 30.00%]	5.92%
# 4	4.8%	[0.77% - 13.04%]	3.03%
# 5	3.1%	[0.25% - 8.23%]	1.98%
# 6	2.8%	[0.00% - 8.89%]	2.05%
# 7	1.9%	[0.00% - 6.67%]	1.72%
# 8	1.8%	[0.00% - 6.15%]	1.58%
# 9	1.5%	[0.00% - 3.57%]	1.04%
# 10	1.0%	[0.00% - 2.82%]	0.79%

EXACT KEYWORD CTR - BING STUDY

BING SERP POSITION	AVERAGE CTR *[exact]*	RANGE OF VALUES	STANDARD DEVIATION
# 1	9.66%	[0.31% - 36.43%]	7.68%
# 2	5.51%	[0.18% - 60.00%]	12.91%
# 3	2.74%	[0.00% - 13.04%]	3.01%
# 4	1.88%	[0.00% - 15.11%]	3.06%
# 5	1.85%	[0.00% - 13.07%]	2.69%
# 6	1.67%	[0.00% - 6.25%]	1.51%
# 7	1.34%	[0.00% - 9.09%]	2.06%
# 8	0.65%	[0.00% - 5.00%]	0.91%
# 9	0.57%	[0.00% - 1.89%]	0.56%
# 10	0.45%	[0.00% - 1.23%]	0.32%

The Exact CTR tables suggest that click-through rates for higher positions are more volatile than lower positions. The CTR range for positions above the fold (1-4) were much wider and had a higher standard deviation than those below the fold. This speaks to the enormous advantage of ranking in the top four positions and how user attention is focused less towards the bottom of the results page.

LONG-TAIL CTR - GOOGLE STUDY

BING SERP POSITION	AVERAGE CTR *[exact]*	RANGE OF VALUES	STANDARD DEVIATION
# 1	5.80%	[0.00% - 30.16%]	7.24%
# 2	3.19%	[0.00% - 23.08%]	5.04%
# 3	2.43%	[0.00% - 11.30%]	3.07%
# 4	4.58%	[0.00% - 44.55%]	8.23%
# 5	1.17%	[0.00% - 6.80%]	1.36%
# 6	1.49%	[0.00% - 10.08%]	2.14%
# 7	1.82%	[0.00% - 11.87%]	2.63%
# 8	2.27%	[0.00% - 19.77%]	4.20%
# 9	1.68%	[0.00% - 19.99%]	3.67%
# 10	3.46%	[0.00% - 34.83%]	6.92&

The long-tail CTR table suggests that a clear pattern for terms associated with the primary keyword phrase is very difficult to determine, which speaks to the importance but uncertainty of the "halo effect."

Section 9 »
CONCLUSIONS

The key takeaways from the two stu

1. By studying user behavior throu
    positions in search engines. Hig

2. For Google SERPs, the observed

3. For Bing SERPs, the observed C

4. Relative CTRs across each posi
    CTR of 18.20% for position 1 an
    from 10 to 1 will generate appr

5. We observed a significantly high
    results are more reliable, as ma
    from our CTR studies, as we do

6. The "halo effect" of long-tail CT
    when estimating traffic to your

7. An interesting implication of the
    organic search result on page 1
    with the organic rankings on the
    or entering another search phra

8. Rank is not everything. It is imp
    effective Content, Link-graph O

CONNECT WITH US!

Contact Aaron Aders, Market Research Director & Co-Founder at Digital Relevance™, at *aaron@relevance.com* if you have questions on Digital Relevance™ services. Contact *research@relevance.com* if you have questions about this study.

Office » 888.603.7337
Facebook » www.facebook.com/digitalrelevance
Twitter » @drelevance

digitalrelevance™

8900 Keystone Crossing, Suite 100
Indianapolis, IN 46240

888.603.7337 TOLL-FREE
317.575.8852 LOCAL
317.575.8904 FAX

info@relevance.com

relevance.com