The Noisy Query Layer:
How Brands Can Avoid Chasing Their Tails

Another Market Brew Whitepaper

Abstract

Search engines continue to segment the marketplace into more and more verticals, in an attempt to drive additional revenue streams from their pay-per-click (PPC) advertising model. This has created a growing amount of noise for brands as they attempt to deduce how the search results were curated. This noise has, in turn, produced a tremendous amount of overhead for brands and their online marketing efforts.

Brands can eliminate this noise by bypassing the query layer of a search engine and going directly to the scoring layer, where a clear, predictable signal exists. By optimizing their content and links to the scoring layer, brands can achieve consistent organic results.

Background

Pay-per-click (PPC) (also called cost per click) is an internet advertising model used to direct traffic to websites, in which advertisers pay the publisher (typically a website owner) when the ad is clicked[1]. Search engines have historically been largely supported by their PPC advertising model. In 2012, Google's total revenues were $46 billion – and $44 billion of that was PPC revenue[2].

Although search engines have an incentive to produce search results that are good enough to attract users to their search engine, they are even more interested in the ability to sell PPC ads. As a majority of markets have already been saturated on the Internet, the only way to increase PPC revenues is to either 1) increase bid pressure, or 2) increase the number of marketplaces for bids.

While increasing bids are a natural part of the PPC model, the margins of those advertisers have remained mostly constant. This has caused a "plateau" of sorts in the PPC revenues for existing markets, so search engines are relying on ever-increasing marketplaces that

[1]http://en.wikipedia.org/wiki/Pay_per_click. Wikipedia. 2013.
[2]http://investor.google.com/financial/tables.html. Google, Inc. 2013.

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advertisers can bid on. The only way to do that, in an already saturated marketplace, is to segment the market.

Luckily for search engines, user personalization is the easiest way to accomplish this. Features like geo-targeting, social network integration, past usage, and time of day all play integral roles in developing a more personalized, and thus more segmented market.

While user personalization is great (although this can be argued) for users, and segmenting the marketplace is great for search engines, this represents a significant problem for brands trying to determine how those search results were curated.

Issues with current methodologies

To understand why this is, first we need to inspect of how a search engine works. A search engine is made up of four major components:

1) **The Crawl Layer** – this is where a search engine collects its data. The data here is in very raw form and this layer is mostly built for speed.

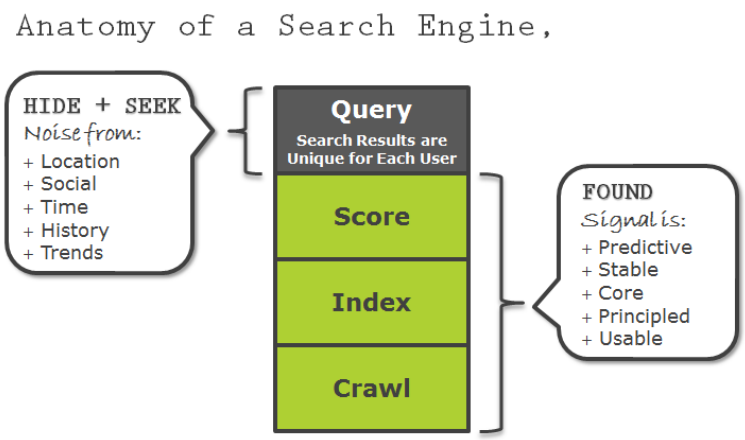

Figure 1.The anatomy of a search engine.

2) **The Index Layer** – this is where the search engine takes raw data and puts it into a retrievable form. This is what allows the search engine to start operating on its data in a practical fashion.

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3) **The Scoring Layer** – this is where a search engine calculates the hierarchy of the Internet. All of the standard, core algorithms are applied here in every search engine. The scoring process provides the basis for every resulting user query.

4) **The Query Layer** – this is where the real-time searching is performed. It is also where all of the user personalization is done, effectively splitting the scoring layer into thousands of pieces.

Today, brands use a wide array of tools to determine how the search engine algorithms are scoring their content. The majority of those tools derive their raw data from the query layer of the target search engine. Besides the legal risk of violating the search engine's terms of service by "scraping" this data, there exists an even greater risk for brands that can devastate the CMO's bottom line.

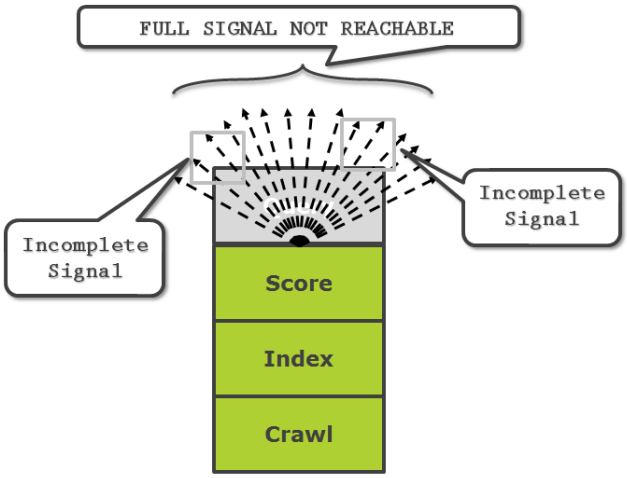

Figure 2. The noisy query layer contains incomplete and inaccurate data for brands.

When brands use the data from the query layer, they are working with at best, incomplete data, and at worst, inaccurate data. This is because the data is only a representation of a few users, and represents only a tiny segment that the search engine has produced for the purpose of generating different marketplaces (in order to generate more PPC revenue).

Solution

In order to achieve the most stable, consistent signal from a search engine, the brand MUST get at the scoring layer for its data. Instead of sourcing data from a noisy environment, from the query layer, brands should source their data from the stable layer, or the scoring layer.

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There are a number of technical advantages that you get from doing this:

1) **A consistent signal** – because the scoring layer is not constantly changing like the query layer, the signal is much more stable.

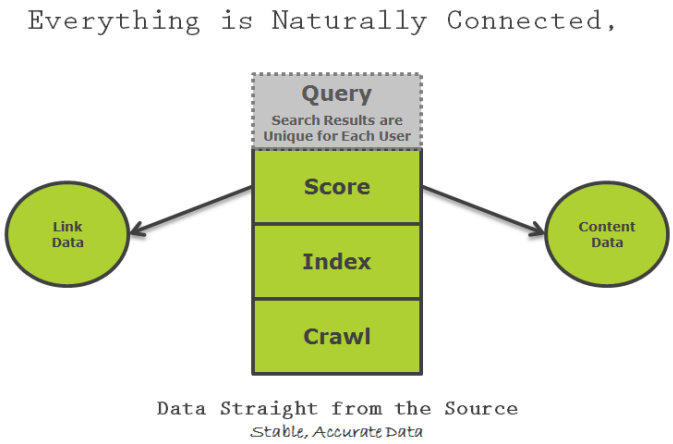

Figure 3. The stable and predictable scoring layer.

2) **More accurate data** – because the data is logically connected at this layer (content and links), there is no need to splice disparate data here. All of the relationships are already baked into each and every calculation.

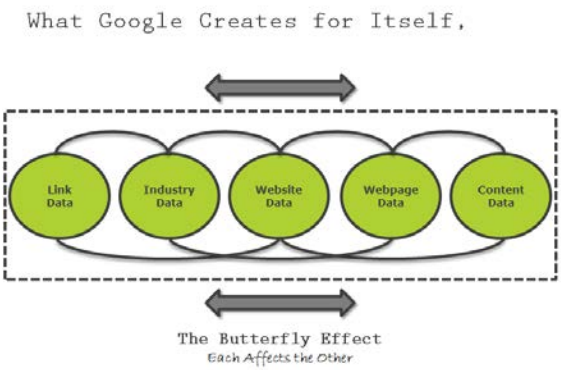

Figure 4. All search engine data is subject to "the butterfly effect".

In addition, search engine data is subject to "the butterfly effect" – changes in content affect link scoring, and vice versa. Brands need to be able to navigate these complex relationships so they can see not only the data, but *how that data was calculated*. This leads to not only more predictable data, but *more prescriptive solutions*.

Conclusion

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As you can see, without sourcing data directly from the stable scoring layer, CMOs and their brands are subject to a dangerous predicament: the more they spend on tools, the noisier their environment becomes.

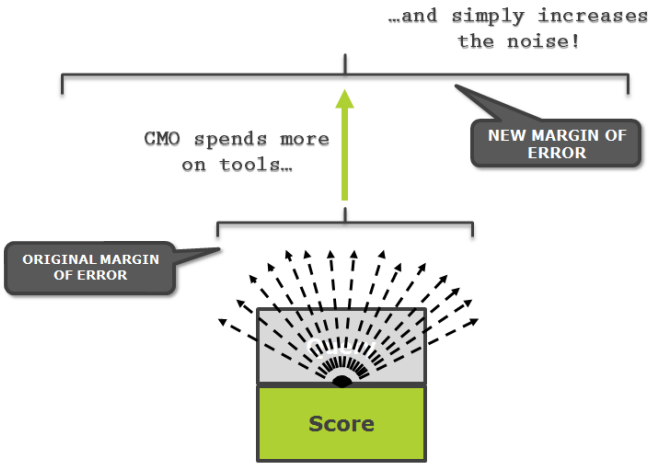

Figure 5. Brands are stuck in a "catch-22".

Line engineers are familiar with this concept – if a signal needs to be amplified, the point at which amplification is applied is critical. If the amplification is applied at the source, before noise is added, then the signal-to-noise ratio is increased. But if the amplification is applied too late, where noise has already infiltrated the line, the engineer is actually adding more noise.

Even more insidious is the fact that the marketplace has become filled with vendors trying to hide this noise with flashy dashboards that incorporate many disparate signals – most of them filled with this query layer noise.

In reality, this solution only increases the noise for the CMOs and their brands. This is because each single-point solution has its own noise signature, and by crossing these signals and making them appear as if they are related, the dashboard is simply creating a bigger masking affect.

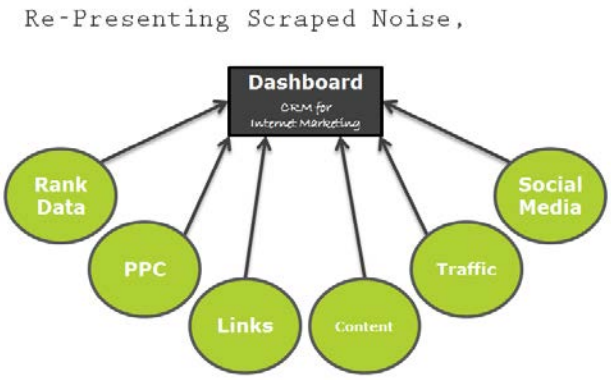

Figure 6. The trend has been to hide the noise.

As you can see, it is vital that brands source their data from the stable scoring layer – for more than one reason. Not only can they achieve greater cost efficiencies, but their data will be more accurate and predictable.

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Better yet: more prescriptive – as future changes by search engines require brands to understand *how their data was calculated.*

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