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## SEARCH ENGINE MARKETING JOURNAL



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# Search Engine Marketing Journal

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# A Letter from the Publisher

Dear Search Marketing Friends and Colleagues,



This issue of SEMJ.org has taken great leaps forward thanks to the valuable contributions of our editors and authors. SEMJ.org continues to see more participation from large corporations and has started to bridge a gap between industry and universities. Last year SEMJ.org started a few projects that continue to evolve. For example, we began a university initiative to create links between universities that offer search marketing in their curriculum and our industry. We have more announcements to come this year about this initiative's progress.

At the beginning of the year SEMJ.org formed an advisory board to help guide the journal's content and editorial policies. The appointments for this advisory board will be announced in a future issue. The advisory board will consist of a strong balance of leaders from industry and universities. The direction of content and editorial guidelines, like the search marketing industry, will remain one of constant change, and it takes visionaries to keep our content relevant and timely.

With continued contributions from small and large companies, universities, and individuals, the journal will naturally contain a good balance of papers to cover the many areas of search. In this issue we feature papers that inform our readers of fundamental concepts and forward-looking strategies for their business.

Last year was an extraordinary one for SEMJ.org and the research journal. Besides adding valuable new editors and media partners, our readership and paper submissions continue to grow in the U.S. and overseas. SEMJ.org has remained committed to its philosophy of publishing strategic papers on search marketing. Strategic ideas require an enormous amount of research and effort. In the rapidly changing field of search marketing, companies need a trusted resource for strategic ideas rather than relying strictly on tactical information about our industry. Tactical ideas usually are reactionary. Companies must find the correct balance between implementing tactical and strategic ideas within their organizations. Through our valued editors and authors we will continue to provide content to help plan your strategic road forward.

As always, thanks to our editors and authors for their extraordinary work and help with making this publication a success.

Sincerely,

A handwritten signature in black ink that reads "Sean A. Gollhofer". The signature is written in a cursive, slightly slanted style.

Sean A. Gollhofer,  
Founder and Publisher

P.S. If you have thoughts on these or other issues, please email us at [editors@semj.org](mailto:editors@semj.org)

# The Coming Evolution in Affiliate Marketing: A Focus on Quality

Will Martin-Gill, Steve Hartman, Umesh Lalchand, Jarrod Schwarz and Chad Wehrmaker; eBay Inc.

**Abstract**—Affiliate marketing—a multibillion dollar industry and one of the fastest growing segments of online marketing—has seen fewer studies during the past decade than other channels, like search engine marketing or search engine optimization. Much sought-after performance data from advertisers has been scarce, as affiliate program management is generally outsourced and internal teams tend to be small. When eBay brought its affiliate program in-house last year, the company gained valuable insights from performance data analysis. These insights suggest advertisers may be able to improve ROI and performance by evolving their programs to better calculate and compensate for the value delivered by their affiliates.

**Category-** Affiliate Marketing

## INTRODUCTION

The affiliate marketing opportunity is perhaps the best kept secret in the online ad space. Projected 13% year-over-year increases through 2012<sup>1</sup> make the \$6 billion+<sup>2</sup> industry one of online advertising's fastest growing segments.

Yet surprisingly, fewer studies have been published on affiliate marketing by advertisers and industry analysts like Forrester or Jupiter than almost every other Internet marketing channel. Internet Retailer data shows most (almost 80%) of the top 100 online retailers outsource their affiliate programs<sup>3</sup>. As a result, detailed affiliate performance data is scarce, as many companies lack the internal teams to develop detailed analyses on data beyond typical affiliate click and conversion metrics.

When eBay brought its affiliate program in-house in April 2008 and created the eBay Partner Network, it gained direct access to affiliate performance data. After analyzing this new information, the company has begun to rethink some of the traditional notions of affiliate marketing.

## A FOCUS ON AFFILIATE QUALITY

Affiliate programs are generally designed to pay affiliates

<sup>1</sup> Source: Jupiter Research US Online Affiliate Marketing Forecast, 2007 to 2012

<sup>2</sup> Marketing Sherpa Affiliate Marketing Report 2007

<sup>3</sup> Source: eBay analysis on 2007 Internet Retailer Top 500 Guide data. The figure is an estimate based on 80 out of 100 top retailers that reported who they used to manage their affiliate marketing programs

only for leads and sales, and the belief—borne out in payment structures—is that all leads and sales are the same.

The basic thinking is that all non-fraudulent activity is of average quality, and therefore all affiliates are paid equitably, with notable exceptions being the volume tiers found in most programs, and bonuses offered to well-known affiliates. The more sales and leads an affiliate sends a merchant (or the better known he is), the better he must be, and the more the merchant will pay.

This approach can lead to suboptimal results for advertisers who overpay for larger volumes of lower-quality traffic, as well as lost opportunity for affiliates who may do a better job of sending more valuable traffic, albeit at lower volumes.

However, beyond conversion rates, relatively little has been written about, or has been done to manage, the quality of the traffic that affiliates send advertisers. Most of the writing, thinking, and action in the affiliate space has been focused on how to attract and retain affiliates.

When advertisers do attempt to manage affiliate program effectiveness or quality, they primarily use broad brushstrokes at the program level, such as changing pricing and cookie latencies. Little is done to measure and reward quality and performance at an individual affiliate level, other than perhaps taking action on conspicuously fraudulent affiliates and manually bonusing certain top affiliates.

eBay's findings, described below, show how using affiliate performance data to revise the traditional program model can benefit both the advertiser and the affiliate.

*Not all leads are created equal.* In a pay-per-lead affiliate program, a merchant makes an estimate of the lifetime value of a new customer and pays an affiliate a portion of that value. But just as years of traditional marketing have shown how some customers are worth more to a company than others, it turns out that the average quality and value of customers delivered by an affiliate can vary significantly and consistently as well.

Some affiliates—known as incentive affiliates—pay customers to register, leading to new sign-ups from customers who seek the reward but do little else. Others might attract audiences with lower purchasing power, or by highlighting items of low value. As one example, an affiliate site appealing to buyers of value-priced, entry-level DVD players will very likely yield customers with a lower lifetime value than affiliate sites that cater to videophiles who are

# Web Analytics 2.0: Empowering Customer Centricity

Daniel Waisberg and Avinash Kaushik

**Abstract**--This two-part paper begins by describing the essential practices of Web Analytics — the first steps toward understanding visitor behavior. For this purpose, we present a Web Analytics process created by the authors and based on industry best practices.

Part I details each step, from defining goals and Key Performance Indicators (KPIs) to collecting, analyzing, and then taking action based on the data. Instead of presenting a single case study, we include many real-life examples throughout the article. This approach directly connects each type of analysis to its practical application.

Part II — to be published in a future SEMJ issue — proposes a pioneering concept: the next generation of Web Analytics, or Web Analytics 2.0. This holistic approach integrates data from more wide-ranging sources: clickstream information from the website plus multichannel analysis, testing, competitive analysis, and the customers' voice. This new type of analytics is especially valuable because it provides a more in-depth approach to improving both the customer experience and website profitability.

**Category**-- Web Analytics

## INTRODUCTION

Web Analytics is the science and art of improving websites to increase their profitability by enhancing the customer experience. It is a science because the analyst uses precise methodology, statistics, and data mining techniques. It is an art because, like a brilliant painter, the analyst draws from a diverse pallet of colors (data sources) to find the perfect mix that will yield actionable insights.

Improving a website requires a deep level of creativity, balancing user-centric design, promotion, content, images, and more. The analyst must walk a fine line, accounting for the needs of website designers, IT personnel, marketers, senior management and customers.

By now, website managers are aware that visitor acquisition is a multi-faceted endeavor, using email, mail, affiliate marketing, and of course, search. With each vehicle, they have become better at finding the right visitor to bring to their websites. For example, every website now has a Search Engine Optimization (SEO) strategy that helps them rank well on search engine organic results. They are also aware that Pay-Per-Click (PPC) campaigns can be effective at driving relevant visitors. **Acquiring visitors is only the start of the process rather than, as many marketers believe, the end.**

Jim Sterne and Matt Cuttler provide an excellent explanation of the value analysts can bring to websites in the following illustration [2]:

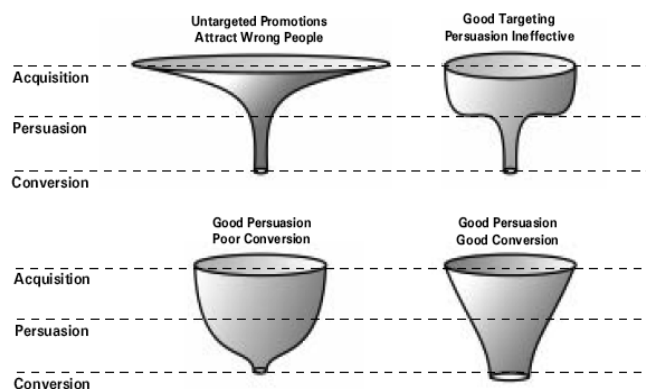


Fig. 1. Customer Life Cycle Funnel

The web analyst's responsibility is to enable insights that will move visitor behavior from the scenarios at the top left to the ideal situation shown at the bottom-right. The first scenario (top left) represents a website that receives a high number of visitors but is not very successful in persuading them to convert, or take an action that is the website owner's objective. In the best scenario (bottom right) only a small percentage of visitors leave the website without converting. Therefore, **Web Analytics can be defined as the act of increasing a website's relevancy and persuasion to achieve higher conversion rates.**

## WEB ANALYTICS PROCESS

The objective of Web Analytics is to understand and improve the experience of visitors, while increasing revenue for the online businesses. Among other techniques, this can be done by studying the ways that visitors navigate a website. According to the Web Analytics Association [6], the official definition of Web Analytics is "the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage."

**Web Analytics is not a technology to produce reports; it is a process that generates a continuous cycle of website optimization.** Based on the field's best practices, a framework for analyzing website performance should include the following steps:



Fig. 2. The Web Analytics Process

This process enables the website owner to measure customer acquisition costs against profits, to understand how the most profitable visitors are behaving in the website, and to improve the site's performance and profitability. Next, we discuss each step in detail.

### A. Defining Goals

One question is critical in defining a website's goals: Why does the website exist? Each website will have its own unique answer. For example, an ecommerce website should sell products, a support website should answer a customers' questions, and a news website should provide informative content. Each website owner must define success according to his or her own objectives and revisit those goals periodically.

Website objectives are the critical input to identify metrics that will accurately reflect the success of this channel. **The website should be accounted for in the same way as any other business expense; investment must be measured against return.**

One of the key evolutionary trends in the last couple of years is the ability to measure success, regardless of your website's goals. In the earliest days of the web, a business could only measure the effectiveness of ecommerce sales. Now we can measure effectiveness in many ways, both online and offline — driving social media campaigns, or knowing the dollar value of online customer support, or quantifying the effectiveness of a nonprofit website or even a blog. The only requirement is a precise definition of the business goals.

### B. Defining Metrics (KPIs)

Goal achievement is measured by creating Key Performance Indicators (KPIs). These metrics will show whether the website is getting closer to its objectives or not. It is common knowledge in the Web Analytics community that information is not worth collecting if it does not generate insight.

**There should be an action linked to each KPI proposed for any website.** For example, if we measure the marketing cost per visitor, there should be two related actions for this KPI: one for a decline in the number and one for an increase.

Steve Bennett, former Intuit CEO, is known to push everyone to **identify what he calls "the critical few": priorities, goals, metrics, KPIs, anything.** If the business were on the line, how would you know whether things are going well or badly? Cutting through the clutter of data, what are the "critical few" metrics? Almost all of us have too many things we measure, too many bits of information that distract us and steal our precious time and attention. But everyone probably has at most three "critical few" metrics that define his or her existence.

One important characteristic of a KPI is that it is highly adjustable: each company, department, or person should have its own KPIs, and these should be defined according to company or personal objectives. One common division of KPIs across an organization is by hierarchy: upper-management receives reports on the overall achievement of the website's goals; middle management receives reports on campaign and site optimization results; and analysts receive detailed and technical reports on website performance. Stated another way, **there should be a clearly defined relationship between the company's goals and what each level of the organization is measuring.**

Good KPIs should contain four attributes:

1. **Un-complex:** decisions are made by people in several departments, and with different backgrounds. If the web analyst is the only person who can understand the KPIs, then it is unlikely that decision makers across the company will use the information.
2. **Relevant:** each organization is unique, even companies that seem like they might be in the same business. Avinash [3] uses the example of Best Buy and Circuit City. You might think that both companies should or would or could measure their online success with similar metrics. However, the only thing they have in common is the fact that they sell large-screen TVs on their website. Everything else is different: their business models, their priorities, and how each intends to use the web in its multi-channel portfolio.
3. **Timely:** good metrics must be provided promptly so that decision makers can make timely decisions. Even excellent KPIs are useless if it takes a month to get the information but your industry changes every week.
4. **Instantly useful:** it is vital to understand quickly what the KPI is, so that others can experience the first blush of insight as soon as they see the number.

One good example of a KPI that meets all of the preceding criteria is bounce rate (the percentage of single page-view visits). It is un-complex because it is easy to understand and explain. It is relevant because it identifies where marketing dollars are wasted and which pages under-perform. It is timely because it is a standard report, easy to find in all Web Analytics tools. And it is instantly useful because the website owner can look at it and know exactly what needs attention. If you see a 25 to 30% bounce rate, then instantly you know things are fine. If you notice a page with a 50% bounce rate, then you know it needs attention. If a campaign or keyword shows a 70% bounce rate, you know that there is a fire.

You can access many metrics. But only KPIs that meet all four criteria yield actionable insights that will have a positive impact on your business.

### C. Collecting Data

Data collection is crucial to analysis. It is vital that data be collected accurately and saved either locally or externally for further analysis. The following are four main ways of capturing behavior data from websites.

#### i. Server Logs

Each time a website visitor requests information — for example, when a visitor clicks a link to go to another page — the server registers that request in a log file. The log file can have several different formats, but the W3C Extended Log File Format, which is the most common, saves the following information: the IP address of the computer that requested information; the date and time at which the transaction was completed; the time taken for transaction completion the number of bytes transferred; the record of whether a cache hit occurred; and the referrer data. Server log analysis has several advantages:

- The website owner owns the data (as opposed to JavaScript Tagging described in the next section), and has full control over the privacy of the information;
- Server logs are available for past dates. This enables the website owner to reanalyze past campaigns and reprocess data when new questions come up;
- Web crawler behavior is also recorded in server logs. For example, crawlers from search engines visit the website to index them for display in search results.

The following is a description and visualization of how the Web Logs are collected [3]:

1. Customer types a URL into a browser.
2. Request comes to one of the web servers.
3. The web server creates an entry in the log.
4. Files for the page are sent back to the customer.

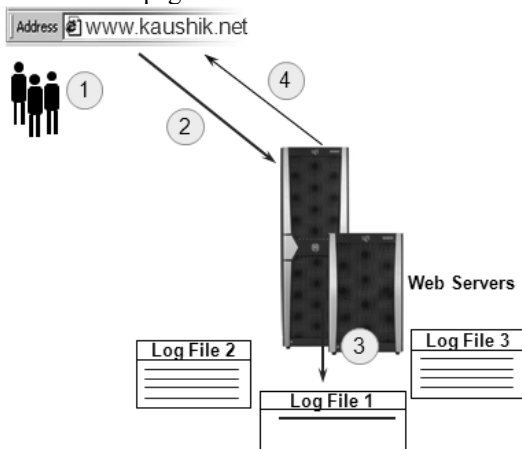


Fig. 3. Log File Data Collection Visualization

#### ii. JavaScript Tagging

This technology consists of including a snippet of JavaScript code on every page of a website. Every time a visitor opens a

page, this JavaScript is activated and the visitor information and actions are saved in a separate file on a third party server. This method has several advantages:

- It counts every visit (to a website, unless the customer closes the page before the script is loaded. In contrast, server log records are affected by the “cached pages” that may be used by a Proxy (the network connection provider) or by the user’s own browser. Cached pages allow the visitor to see previously stored information without registering any request in the server log. So cached information seen by the visitor is not available when you analyze server logs, but JavaScript tagging can still capture this data.
- JavaScript is not read by crawlers, and this creates a cleaner set of data. Crawler activity generates a high amount of traffic in a server log that is not representative of customer behavior. Crawlers can be excluded from the analysis; however that exclusion is a time-consuming task and many types of crawlers are not easy to differentiate from human visitors.
- The analytics resources are outside the company — the company does not have to process and save the data internally.

The following is a description and visualization of how JavaScript Tagging works [3]:

1. Customer types URL into a browser.
2. Request comes to one of the web servers.
3. Web server sends back the page, which includes a snippet of JavaScript code.
4. As the page loads, it executes the JavaScript code. This captures information about the visitor’s session, sending it back to the data collection server.
5. On receipt of the first set of data, the server can then send additional code to the browser to set additional cookies or collect more data.

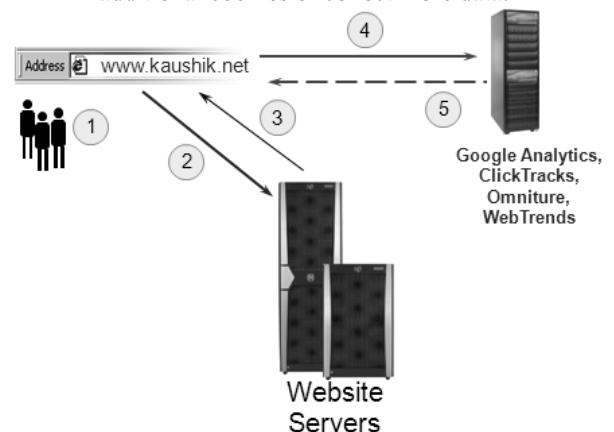


Fig. 4. JavaScript Tagging Data Collection Visualization

### iii. Web Beacons

This technology can be used to measure banner impressions and click throughs. Although not often used, web beacons still can be found on the web. One great benefit and common usage of web beacons is in tracking customer behavior across different websites. Web beacons help to understand how banner ads perform across multiple websites, where they could be seen by the same or different sets of customers. Because the same server is collecting the data, reading the cookies and doing the tracking, a web beacon enables an advertiser to track the same visitor anonymously across multiple sites in the ad network, as well as to track different visitors to the same site.

The following is a description and visualization of how Web Beacons are used [3]:

1. Customer types URL in a browser.
2. Request comes to one of the web servers.
3. Web server sends back the page along with code for a “get” request to a third-party server that asks for a 1x1 pixel image, or web beacon.
4. As the page loads in the visitor’s browser, it executes the request for the web beacon, sending data about the page view back to the third-party server.
5. Third-party server sends the web beacon image back to the browser, along with code that can read cookies and capture anonymous visitor behavior data.

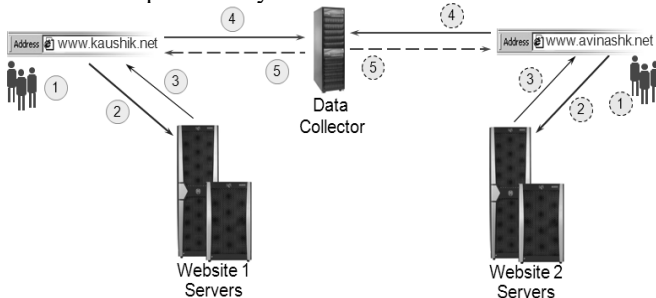


Fig. 5. Web Beacon Data Collection Visualization

### iv. Packet Sniffing

Packet sniffing is an advanced technology that adds hardware or software into the data path. It is most commonly used for multivariate testing. The biggest advantage to packet sniffing is that there is no need to tag pages — all the information goes through the packet sniffer and is captured there directly.

The following is a description and visualization of how packet sniffing works [3]:

1. Customer types URL in a browser.
2. Request is routed to the web server, first passing through the software or hardware based packet sniffer that collects the attributes of the request.
3. The packet sniffer sends the request on to the web server.
4. The requested file is sent back to the customer’s browser, but it is first passed through the packet sniffer.
5. The packet sniffer captures information about the page that

is going back, stores that data and sends the page on to the visitor’s browser. Some vendor-supplied packet-sniffing solutions will also append a JavaScript tag that can send more data about the visitor back to the packet sniffer.

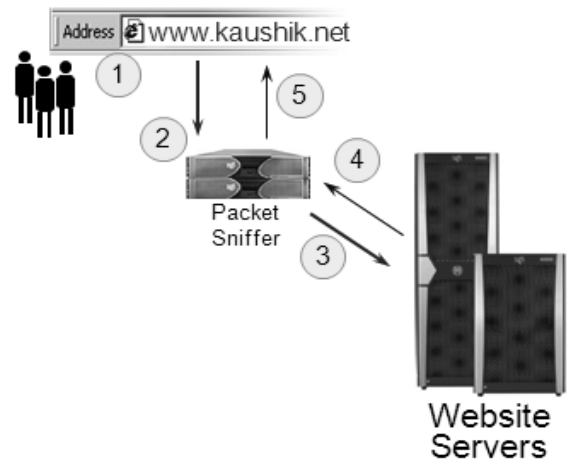


Fig. 6. Packet Sniffing Data Collection Visualization

### D. Analyzing The Data

To understand customer behavior from the data, the web analyst should follow a few initial steps. In this section, we identify approaches that convert the raw data into insight. **These approaches will be helpful in optimizing any website.**

#### i. Start from the Basics

Every web analytics tool presents a summary report, or a group of basic metrics, that is available immediately after logging into the tool. For example, Google Analytics shows the following chart:

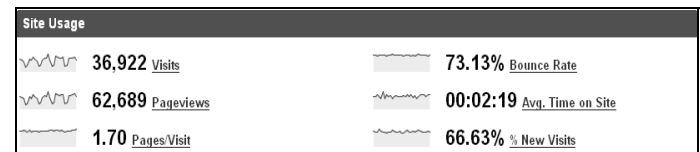


Fig. 7. Google Analytics Basic Metrics

The preceding chart shows the following metrics:

- **Visits:** the number of sessions on your website and number of times someone interacted with your site.
- **Bounce Rate:** the percentage of single page-view visits (this metric can also have different definitions, such as a visit that lasts less than 5 seconds).
- **Page Views:** the number of pages that were requested in all visits.
- **Pages/Visit:** how many pages were seen, on average, in each visit.

- *Average Time on Site*: how long people stayed on the site.
- *% New Visits*: how many sessions were from people who visited your site for the first time. The preceding numbers will vary from industry to industry, so there is no absolute benchmark for a website owner to use for comparison purposes. The best way to proceed is to follow the trend over a longer period of time, using as much data as possible to understand if the website is improving or not.

A high number of page views on the website is a good sign in most cases, except, for example, for support websites, where the customer wants to find the information fast. New website design or programming technologies (such as Flash and AJAX) can make the page-view metrics obsolete. However, time-on-site might be a good indicator of visitor engagement in these cases.

The bounce rate can reflect the quality of traffic you are acquiring, and if it is the right traffic for you. It helps you home in on where or how your website is failing your visitors. Bounce rate is almost instantly accessible in any web analytics tool. It's easy to understand, hard to misunderstand and can be applied to any of your marketing efforts (banner ads, PPC, or email)

## ii. Understanding Traffic Sources

Another standard report in any web analytics tool is the traffic sources report. It usually shows the percentage and absolute number of visitors that came from each type of source. The following is an overview chart as represented on Google Analytics.

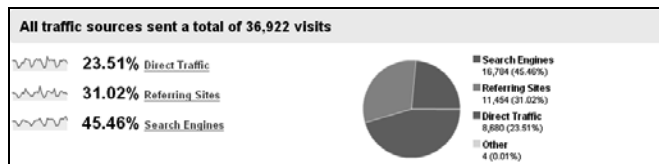


Fig. 8. Google Analytics Traffic Sources Summary

The definitions of the terms used in the chart above are:

- *Direct Traffic* represents visitors that show up on the website by entering the website's URL directly or clicking on a bookmark. In some cases incoming links may pass through badly coded redirects or improperly coded ad campaigns. This traffic may also be registered as direct. When looking at the direct traffic metric, a website owner can understand how much traffic she or he is getting from people who value the website highly enough to know the URL or have it bookmarked.
- *Referring URLs* are other websites that link to the website being analyzed. These links could be the result of banner ads, marketing campaigns, or from blogs that are interested in your website's topic. Referring URLs

help a website owner to identify traffic sources that were not previously known. Depending on the value being generated by any specific referrer, an intentional marketing relationship between the parties may be entered into. The referring URL data also offers hints for why a particular visitor might be interested in the site.

- *Search Engines* (Google, Yahoo!, MSN, Ask, and others) will include both organic and paid traffic (PPC/SEM) in the referrer information along with the query terms that generated the search results that the user clicked on. Search is the vehicle that most Internet surfers use to find their destination, so this is a critical report for all websites to analyze. Analyzing the keywords that were used by visitors to get to the website can indicate their intentions and purposes.
- Other includes campaigns on the website that have been configured accurately, such as: email, direct marketing, and so on. This information can be used to analyze and optimize campaigns.

It is crucial to drill down to specific websites or keywords) that send traffic. Both of these areas help to understand critical customer intent.

## iii. Act on the Data and Save Money

In the past, website managers could choose their landing pages and have the luxury of deciding where the visitors would start their visit. Today, this control is lost. Search engines decide the website's landing page. People search (or click through from a link on another 'site) and go directly deep into the 'site.

The top entry pages report in the following figure shows how many people are entering on each website page, and this naturally indicates the top landing pages. By adding the bounce rate to your analysis, you have an indicator of how engaging each of your landing pages is. In this analysis, you would compare each entry page's bounce rate to the site's average bounce rate, as a benchmark.

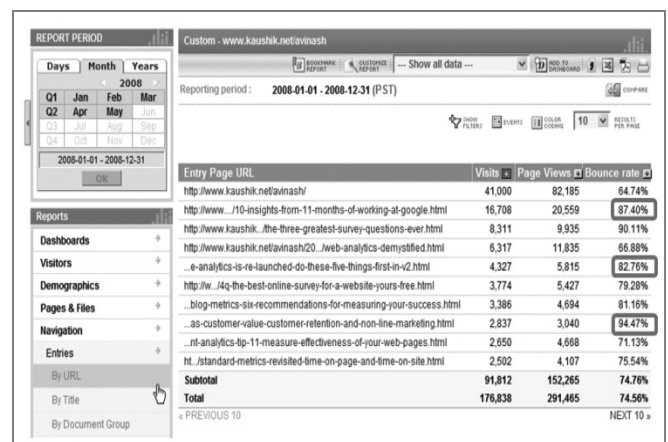


Fig. 9. Yahoo! Web Analytics Top Landing Pages

Web analysts should initially look for the entry pages with the highest bounce rate. Because the bounce rate figure measures single page view sessions, it is a good indicator of unengaged, low-quality interaction with the ‘site.

Pages with a high bounce rate are not delivering on the promise that originally brought those visitors to the website. The pages in the top ten entry pages report need particular attention. Once those pages are fixed, the website has an increased likelihood that visitors will go deeper into the site, and possibly become conversions.

A similar analysis is useful for the keywords that bring traffic from search engines, as shown in figure [10]:

Inbound activity	Visits	Inbound totals	Visits (%)	Bounces	Bounce rate
www.google.com					
avinash+kaushik	382	382	4.37 %	156	40.84 %
working+at+google	252	252	2.89 %	203	80.56 %
avinash	251	251	2.87 %	116	46.22 %
occam%27s+razor	219	219	2.51 %	133	60.73 %
survey+questions	212	212	2.43 %	196	92.45 %
customer+survey+questions	79	79	0.90 %	68	86.08 %
competitive+intelligence	79	79	0.90 %	68	86.08 %
web+analytics+tools	71	71	0.81 %	35	49.30 %
working+for+google	69	69	0.79 %	62	89.86 %
occam+razor	57	57	0.65 %	20	35.09 %

Fig. 10. Microsoft adCenter Analytics Top Keywords

A top keywords report is even more interesting, because the keyword that was searched for implies the visitor’s intent. The visitors are telling you why they are coming to the ‘site, and keywords with high bounce rates show where the site did not meet their intention. It could be that the website is ranked for the wrong keywords, or it could be that the pages that these visitors are landing on don’t include the right calls to action.

**iv. Data Visualization, Site Overlay**

Numbers, metrics and spreadsheets are still overwhelming for many people. This means that purely numerical data often needs to be visually represented. The ‘site overlay’ report, or ‘click density’ report that is present in most analytics tools, shows an image of the number of clicks for each link on the page.

Web analysts should look for heavy clusters of clicks, particularly the top two or three most clicked links. The next step is to reconcile this information against those links that you want visitors to click. A second analysis looks at links that ultimately drive high conversions and asks questions such as: do more people convert if they click to a product comparison from the home page, or if they go directly to a product page?

It is also valuable to follow the click trail further around the site from the most heavily clicked links and see what these visitors do next. Walk in their shoes; experience the site through the customer’s eyes.

**v. Focus on Outcomes**

Most Web Analytics efforts fail to catch on, and only a few companies are truly data driven. Most people in the company only notice that thousands of reports can come out of the Analytics tool. Web analysts tend to focus on visits and visitors

plus tracking parameters and all kinds of nuance — everything except outcomes.

As mentioned in the KPIs section, Web analysts should push themselves to find the “critical few” important metrics for the site. These essential metrics will be strongly linked to the overall objective of the website’s existence. For a blog, it can be the number of visitors who visit the speaking engagements page and attend one of those events. For a non-profit, it may be use of the site’s search functionality to look for a volunteering opportunity. For an ecommerce website, it will be the bottom-line numbers: revenue, conversions, average order value, products sold, repeat customers, etc.

To be sure they have focused on the right metrics, analysts should ask the following questions:

- Visitors are coming to the website, but is it having any impact on the bottom line?
- If there is an impact on the bottom line, is the website converting well enough?
- What is selling and what is not? Why is it selling? How much of it?

It is fundamental for website survival to understand the customer. This is the only way to understand what actions will help you improve and keep pace with the competition.

**vi. Implementing Change, Improving Actionability**

As concluded by Phippen A., Sheppard L., Furnell S. [4], collecting data is just the beginning:

[...] all the data gained is useless unless the data is understood and the findings are applied. The emphasis therefore should be on Web *intelligence* – the information gleaned from a Website should be analyzed and applied in a relevant context.

In talking to marketers, sales people, website owners and management, it becomes clear that Web Analytics is considered as hard as climbing Mount Everest. However, to get to the top, one has to start, and the best way to begin is by taking one step at a time. Showing website improvement at each step along the way makes the next step more and more welcome.

We have shown several analyses that could be used to improve website performance. Convincing stakeholders of the importance of Web Analytics is fundamental to implementing any change. Web analysts should work to get everyone in the organization excited about using data — make it appealing! From experience, we recommend five approaches:

1. **Surprise people:** employees are always looking for ways to solve their problems. Receiving a hundred spreadsheets packed with data doesn’t solve a problem, In fact, it can seem like just one more problem. One way to help employees is to approach them informally

and discuss their data needs. After a Web analyst understands how to help, a short email message with a single piece of valuable information could quickly gain the employee's good will.

**2. Measure impact, not visits:** when approaching data consumers, a Web Analyst should always show them

outcomes: how much money the website is making; how many leads the website received, how many conversions of various type; how the site drives traffic to offline venues, and so on. Everyone immediately understands outcomes, but it takes a long while to explain what a unique visitor is.

- 3. Promote other employees:** convince one decision-maker to listen to you and help him or her to improve whatever she or he is responsible for. After one success, that decision maker will spread the word that a data-driven decision improved the website by X%. This helps to convince others that data will help their efforts as well.
- 4. Use both customers and competitors:** free competitive information can be found on the web. This data can be used to compare websites and convince managers that a competitor is doing a better job in specific areas. In addition, Web analysts can use free customer survey tools on the 'site and get direct feedback from visitors about what annoys them and what is truly helpful.
- 5. Involve others:** if the website is running split testing, run a contest with a prize for the winning page; hold internal conferences to educate employees about Web Analytics; encourage colleagues to ask questions and look to you to solve data problems.

## CONCLUSION

The big question is this: how can a website manager convince visitors to buy a product or read an article? And the answer is: look at the data and understand what is happening on the 'site. Listen to customers and optimize the website to better serve them. After all, they are the reason that the website exists.

**Customers should tell us what to do, not consultants, friends or feelings. Data and online surveys are the place to look for customers' needs.**

Note: In the second part of this article we will discuss the importance of using additional sources of data to understand customer behavior and overall website performance as compared to competitors. While clickstream analysis is an important approach to understanding customer behavior, it explains only what is happening. In the following article we will focus on the "how much", the "why", the "what else" and, finally, the "gold"! **This will be a new way to think about**

**web data, a new way to think about the sources of data, and a method to build a complete picture of customer behavior on our websites.**

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# Case Study: Reducing the Business Risks of a Website Redesign While Increasing Conversions

Chris Goward and Raquel Hirsch, WiderFunnel.com

**Abstract--B-to-B software company used a Conversion Rate Optimization strategy to redesign their website and ensure the new site would improve their lead-generation conversion rate. By running A/B/n experiments on the home page and evaluation download page, the company was able to get statistically valid results quickly. The test results increased the conversion rate by 170%. In this paper, we discuss the techniques we used and make recommendations on best practices for performing conversion optimization strategies.**

**Category -- Conversion Rate Optimization**

## INTRODUCTION

### THE PROBLEM: MAXIMIZING THE SOFTWARE DOWNLOAD CONVERSION RATE

Safe Software, Inc. develops spatial ETL (extract, transform and load) technology solutions that help GIS (Geographic Information Systems) professionals and organizations solve their data interoperability challenges.

Safe Software's business model relies heavily on its website to drive new business. The website is the company's primary lead-generation channel. Each month, thousands of tech-savvy GIS professionals visit the website for a free download that lets them evaluate its flagship product, FME software. The inside sales team subsequently follows up to close business.

In 2007, the company decided they needed to redesign their website to update messaging and the offering to increase the percentage of visitors who download the free evaluation version of FME software.

## CHALLENGES

We had to be careful about making changes to the website that might negatively impact the free evaluation download rate – the key metric in their business model.

Based on web traffic analysis, the company had determined a need to redesign the home page and evaluation download page so they would perform better than the current ones. They faced the challenge of launching the new website with a fully tested home page and evaluation download page certain to deliver higher conversion rates.

## THE SOLUTION

The company ran conversion optimization experiments in parallel with its website redesign planning and content development.

Using the proprietary Kaizen Method™ [1] planning process, we first took a macro view of all of safe.com conversion funnels, evaluated their business goals and delivered a plan identifying prioritized Funnel Experiment opportunities and outlining hypotheses for how website changes might influence trial software download conversion rates.

Two of the company's primary concerns were ensuring the experiments would quickly deliver results ahead of the web redesign schedule and that the test results would deliver information the web design firm could absorb into the site redesign.

## THE LIFT MODEL FOR EVALUATING CONVERSION FUNNEL PAGES

We evaluated both test pages based on what we call the LIFT™ (Landing Page Influence Function for Tests™) model, which evaluates conversion funnel pages based on six conversion rate influence factors:

1. Value Proposition. What are the combination of benefits and costs related to the offering on the page?
2. Relevance. How closely aligned are page content and layout to the visitor source media or pages?
3. Clarity. How efficiently do page content and layout communicate the offer, value proposition and call to action?
4. Anxiety. Which elements on the page cause a visitor anxiety and apprehension?
5. Distraction. How focused is the page content on an optimal number of offers or calls to action?
6. Urgency. How effectively do the messages on the page trigger feelings of urgency in the visitor?

# Analyzing the Relationship between Bounce Rates and Conversion Rates

Brian Lewis, EngineReady.com

**Abstract**—In addition to analyzing bounce rates and conversion rates, marketers can identify additional opportunities for conversion improvement by studying the relationship between a page's bounce rate and its conversion rate. Usually there's an inverse relationship between those two metrics: as the bounce rate of a page increases, the conversion rate decreases. This paper demonstrates how to find pockets of opportunity by plotting web pages' bounce and conversion rates in an XY scatter chart and examining pages that have an anomalous bounce rate to conversion rate relationship.

**Category**—Conversion Rate Optimization

## INTRODUCTION

Two of the most widely used metrics for measuring a landing page's effectiveness are bounce rate and conversion rate. Remember that bounce rate is the percentage of visitors entering that page who left the site without going to other pages. Conversion rate is the percentage of visitors to that page that converted to customers.

Usually there's an inverse non-linear relationship between a page's bounce rate and its conversion rate: as the bounce rate of a page increases, the conversion rate decreases. If a high percentage of visitors are bouncing off your landing page and exiting your site, that page will not be very successful at converting visitors to buyers.

Conversely, if the page has a low bounce rate, in general that means we're doing a good job of identifying with the visitor's needs and are in a better position to get the visitor to buy our product or service. Graphically, if you plotted the bounce rates and conversion rates for your website's landing pages, you'd expect the results to look something like Fig. 1.

So why is it important to be concerned with bounce rates if the primary measurement to evaluate success is the number of conversions?

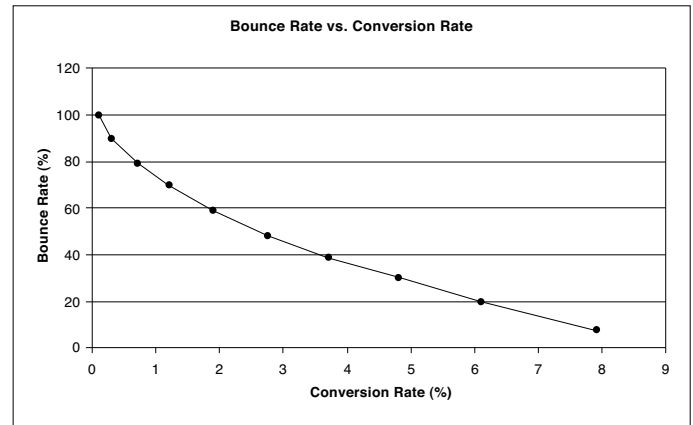


FIG. 1. TYPICAL BOUNCE RATES VERSUS CONVERSION RATES

## THE BOUNCE CONVERSION GRID

As will be demonstrated, the relationship between a page's bounce and conversion rates can provide clues even for pages that already convert well.

It's best to think of bounce rate as a measurement of visitor engagement, while a page's conversion rate should be viewed as a transaction rate defining buying potential.

Fig. 2 at the top of the next page shows a plot of a site's conversion rate and bounce rate for every landing page on its site. Each blue point on this chart corresponds to the conversion rate and bounce rate for a particular landing page in the website.

Notice that in general, the points on the chart follow a path from the upper left to the lower right, confirming the belief that as bounce rate falls, conversion rate tends to increase.

However there are pages that seem to fall on the outer reaches of that general inverse relationship pattern. Identify potential opportunities for conversion improvement by segregating this data into quadrants as seen in Fig. 3 on the following page.

# HTML and CSS: Ignoring the Basics Can Hurt You

Ted Ulle – Converseon

**Abstract**—Several key features of HTML and CSS are under-appreciated and infrequently used. By employing these basic features more effectively, an organization can increase visitors from search engines. In addition, they will free more internal resources for core business tasks.

This paper examines some of the most overlooked areas, and combines several of them to create a CSS Toolkit. This approach to mark-up can speed web publishing, avoid errors and reduce bloated code—especially in situations where an organization needs to coordinate a team approach to the final production of its source code.

Many web publishers fail to understand the medium that they are using. By embracing the key disciplines of web mark-up, any organization can enjoy better search engine traffic and lower bandwidth costs, as well as faster development time and easier maintenance of its web properties.

**Category** --Web Development and Site Architecture

## INTRODUCTION

The first web server and client software were introduced by Sir Tim Berners-Lee in 1990, adding the World Wide Web to the existing open Internet [1]. Almost from the beginning, online authors were impatient to see their content published. That impatience has caused many to bypass some HTML basics. After all, web browsers are forgiving of bad mark-up and they recover from many errors quite gracefully.

But the most observant authors soon noticed that search engine indexing does not forgive errors in the same way that a browser does. Stated more academically, Information Retrieval (IR) algorithms have different requirements than do visual or aural rendering software.

Although search engines are continually improving their error-recovery routines, how the routines work is closely held private information—and it is not likely to become public knowledge. Thus, sending the clearest possible mark-up signals to a search engine can be a significant help for any organization that wants to see its web content fully indexed and accurately returned in search results.

## HTML IS NOT A LAYOUT LANGUAGE

HTML, or HyperText Mark-up Language, conforms to a much older and more senior ancestor, SGML—Standard General Mark-up Language. SGML is an international

standard for the description of marked-up electronic text [2]. The essential point is one that many web authors fail to appreciate — that the “M” in both cases stands for “mark-up”.

The underlying assumption of HTML is that a document already exists and the web publisher is *adding* mark-up.

HTML is not intended to be a layout application, although it may sometimes seem to be for users of WYSIWYG (What You See Is What you Get) editors, such as MS FrontPage®, Expression Web® or Adobe Dreamweaver®. By limiting attention to the mere visual arrangement of elements on the screen, a web publisher often misses a significant opportunity to send important IR signals to search engines.

Further, through lack of diligence about mark-up errors, an author can make entire sections of a web page impossible for search engines to index properly.

## VALIDATING YOUR MARK-UP

The W3C (World Wide Web Consortium) is the standards body for HTML and CSS. On their website at w3.org the W3C provides free validation tools for both HTML and CSS [3][4]. These tools or one of their derivatives can be invaluable for anyone publishing web content that they hope to see well-represented on the search engines.

While today’s search engines do not reward websites with better ranking simply because their mark-up is 100% valid, good ranking can definitely be jeopardized by certain types of mark-up errors. To compound the matter, many of these errors are not easily seen through a visual inspection.

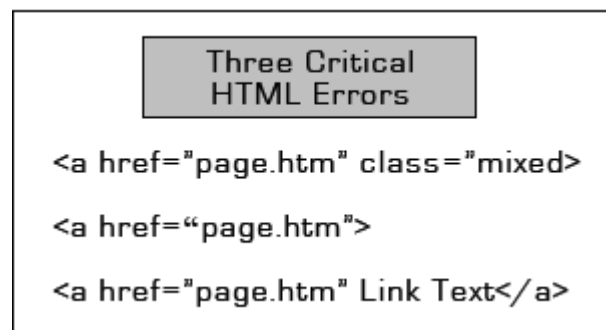


Fig. 1: Three errors that can cause poor indexing

Common problems [Fig.1] that cause search engine trouble may include a missing close-quote, or the accidental use of “smart” quotes in source code. An accidentally deleted angle

elements such as H1, P and LI. In this oversight, publishers fail to make use of an easily available and rather significant economy for their source code.

If common HTML elements are not given rules in the main style sheet, then those rules must be defined on every page. This oversight causes unnecessary code bloat and can create mark-up that is nearly an absurdity. It also increases the chance for style inconsistencies from page to page.

For example, when correctly utilized an H1 tag is commonly used only once on any given web page because a document ideally has one primary heading. This means that rarely is there a reason to include a class or ID attribute in the H1 tag itself, and yet even a small survey of published web pages reveals this practice to be quite common. While there is no ranking problem created in the search engines, nevertheless, this practice can cause unnecessary code bloat and complicate development, slowing down time-to-publish.

### USE SPAN AND STYLE SPARINGLY

One easily abused bit of mark-up is the span tag. A close relative is the overuse of inline style attributes. These two mark-up approaches are most definitely handy, but they also can cause code bloat when overused. If there is frequently a need for one-time style rules, this may indicate poor planning in the main external style sheet.

When creating mark-up on the fly, it can be tempting to quickly make the visual layout look the way you want by using one of these two 'no fuss' approaches. However, it is essential to know whether an exception to the established style sheet rule-set is truly required.

Introducing many exceptions to the standard appearance of a website's pages begins to build a subtle, almost subliminal feeling of chaos. While an average website visitor might not be consciously aware of the variations, the toll is often noticed as a lower sense of authority, trust and professionalism—and that can lead to lower conversion rates.

When a new style rule is definitely needed, the cascade itself is the publisher's biggest CSS asset. The following rules of thumb [Fig.3] will utilize the power of the cascade. They can guide your optimization of any CSS code, and help you to avoid the need for extensive refactoring the CSS later in the website's lifecycle.

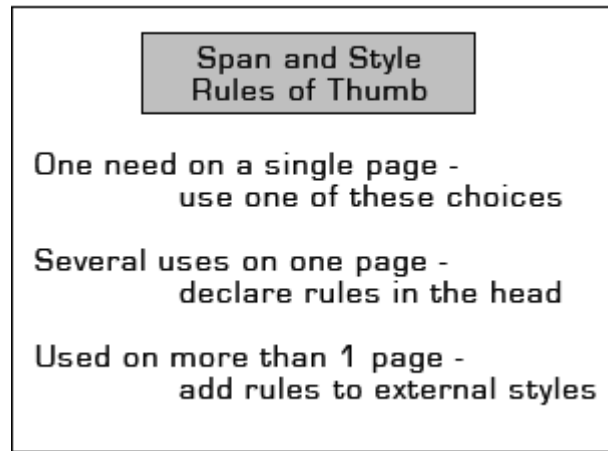


Fig. 3: Rules of thumb for span and style

### FIGHT CSS BLOAT WITH MULTIPLE CLASSES

There is a CSS syntax that is relatively uncommon on web pages but offers development teams a major tool for controlling code bloat that occurs over time. On a high-traffic website, code bloat can gobble up bandwidth and increase costs. This exceptional CSS tool gives us the ability to declare more than one class in a given element, with no limit on number. The syntax is simple and supported by all major browsers. Multiple class values can be listed for one attribute by using a single space as a separator:

```
<p class="feature run marked inset">
```

The rule sets for all the classes in the space-separated list will be executed, with values in a later class overriding the values for any selectors shared with earlier classes.

### THE CSS TOOLKIT

The syntax for multiple classes enables us to create a kind of CSS Toolkit in the external style sheet.

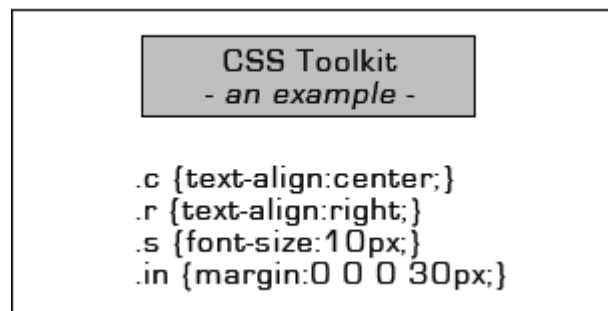


Fig. 4: The CSS Toolkit

Any specific rules that have widespread application on the website can be included in the external toolkit and by choosing short and easily remembered class names, bandwidth and development time are further minimized.

# Scalable Content Optimization

Will Critchlow, Distilled.co.uk

**Abstract**--Websites may have a number of reasons for needing to develop scalable strategies for optimizing content. In some cases, the sheer volume of content is enough, in others it is the user-generated nature of the content leading to a lack of control over on-page optimization. As users become ever more responsible for generating the web's content and as large websites reach the boundaries of human input, it will become increasingly important to consider ways to make traditional tactics scale. As we will see, this is less about researching and optimizing for individual key-phrases and more about considering the portfolio of words and phrases driving traffic to a large website and improving the aggregate performance.

A number of examples show that these considerations are already forming a part of the tactics and strategies at some of the largest web properties. By watching the elements that work, we find tactics that can be applied to many different kinds of sites and ways of thinking that benefit websites of any size. A variety of tactics will be presented that can be used to form a cohesive scalable optimization strategy.

**Category**--Search Engine Optimization (SEO)

## LATEST SEARCHES LEADING TO A PAGE

It is common for small amounts of search traffic to arrive on deep pages on large websites or user-generated pages after carrying out a search for phrases that don't appear as phrases on the page. Sometimes they only appear in links to the page and sometimes the words making up the phrase appear separately.

In these circumstances, where a small number of visitors have found the page by delving deep into the search results, it is worth finding a way to include the phrase in the page. Scribd.com is an example of a website that algorithmically includes recent searches to this page in the page text to reinforce real keyphrases out of the user-generated content.

You can make this technique especially powerful when you consider pages that have received significant traffic from the second page of search results. This traffic can be identified by the "start" parameter (start=10 for second page) in the referring URL from Google and similar parameters from the other engines. By dynamically optimizing them for the target phrase (and increasing internal linking at the same time), you bump some of the portfolio onto the first page of the results for a large boost in traffic. This is really a form of dynamic keyword research and, as well as the method outlined above, you can use internal search data to serve a similar purpose.

## ALIGNING INTERNAL AND EXTERNAL METRICS

We have mentioned using on-site search data to examine website architecture and even on-page content. Other ways of using internal and external data together include counting submissions to social media websites as *favoring* a piece of content on your website (and in the other direction, when someone marks a page on your website as a *favorite* you can be more aggressive with your "share this" social media buttons).

By using data about pages that are popular in the aggregate (either via analytics data, internal search or via popularity in internal favorite systems), but that receive less natural search traffic than they should, you can identify pages that deserve more prominent internal linking. This identification can be achieved via a "hidden gems" page linked off the homepage, for example. In a similar way, if you identify popular pages with low bounce rates and high favorite rates that have not been submitted to popular social media websites, you can both create a useful resource for your power users and help your website get more social media traffic by exposing this data.

## DEALING WITH POOR USER-GENERATED CONTENT

It is an unfortunate fact that, on average, visitors to websites don't write great content. While there may be well-written content created every so often, it is still highly likely that your user-generated content is poorly titled, untagged and misclassified. We will outline some guidelines on what you can do to improve the quality of user-generated content.

The first step in the process is to encourage users to create well-classified content in the first place—a use of user interface design in SEO. By making it easy and enticing to complete all upload fields users are more likely to create complete data. A great example of this is the "percentage complete" information that the social media website LinkedIn.com displays about your profile—leading to an almost competitive need to finish the process. Other areas this can help include encouraging better headlines (with tips and real-time progress bars) and encouraging users to leave comments.

Even with these measures in place, there will be sub-optimal presentation of user-generated content. In these situations, we can look at two possible solutions: fixing content through the input of other users and algorithmic input.

Encouraging other users to retag or re-title poorly optimized content is beneficial, though difficult to scale. By the nature of user input—the proportion of the user base prepared to carry out these tasks is low.

# Understanding Social News: Case Study Using Reddit.com

Alexis Ohanian, Co-Founder, Reddit.com and Sean Golliher, SEMJ.org

**Abstract**—Content producers, large and small, are trying to understand social news as a way of sorting the most interesting content found on the web. Even with the tremendous growth of these “social news” websites, what fundamentally determines success or failure hasn’t changed: the content itself. If content publishers want to do well on social news websites (often considered the “patient zero” of viral links), the first place they should look at is the content they’re producing.

**Category** -- Social Media Marketing

## INTRODUCTION

We will discuss the brief history of social news websites and provide examples and guidelines for how to effectively use them. In particular, we will discuss some effective ways to use Reddit.com and general guidelines for participating in social news communities. Reddit.com is a news website where community members -- not editors -- determine what appears on the front page. It is a 24–7 rising and falling list of the most interesting content on the web. Anything with a url (e.g., news articles, blog entries, YouTube videos, and Flickr photos) can be submitted. With a well-crafted headline, these items can end up on the front page. The community uses up and down arrows to vote links up or down, floating the best content to the top. But Reddit is unique in that the front page is similar to an accelerated Top 40 list for interesting content—links are constantly shuffling up and down based on votes and their age.

## BACKGROUND

Social news describes websites where users can submit content and vote on articles, news stories, and other URLs. One of the original social news ‘sites, called Slashdot, was created in 1997 and is still operating. Since late 2003 new social news ‘sites like Digg and Reddit have emerged and continue to experience rapid growth. The growth of many social news websites can be exponential. In general the number of users on a successful social news ‘site grows at an exponential rate due to the viral nature of the websites.

It is estimated that there are close to 400 social news websites in the U.S. alone [2]. Many of these social news ‘sites follow the same principles and algorithms as Reddit.com or Digg.com. However, each website may have slight variations

in its techniques for determining the most popular news story within a community. These variations in requirements or algorithms are attempts to prevent users from manipulating their social news platform, making sure content with truly diverse interest to the community rises to the top.

## CONTENT IS PRIMARY LOCATION IS SECONDARY

On Reddit, there’s little tolerance for mediocre content; it won’t stick around long enough to get any significant traffic. This has made Reddit an unattractive target for companies offering pay-for-exposure services, because ultimately, getting (and staying) on the front page of Reddit means having quality content.

Six months ago, Redditors (users of www.Reddit.com) first got the chance to create and restyle their own Reddits. This turned Reddit into a platform for communities to easily share and discover the best new content. In the six months since, unique monthly visitors have more than doubled to 4.9 million. Below is a graph of unique monthly visitors to Reddit.com since September of 2008:

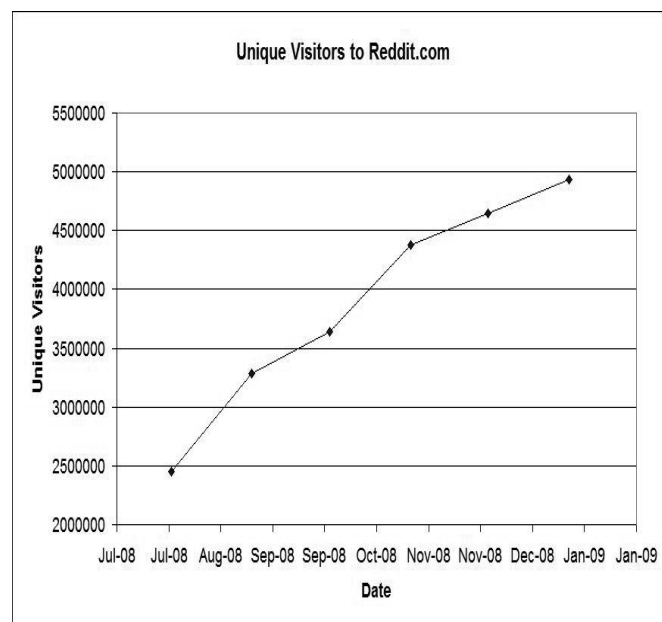


Fig. 1. Graph showing estimated number of Reddit’s unique visitors since July 2008. Data provided by Reddit.com

## PATENT ABSTRACTS

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These patent abstracts and references are listed to provide information about recent patents in search marketing and search technology. The full text can be found at <http://www.uspto.gov>

### GOOGLE® PATENTS

**7,499,940** **March 3, 2009**

#### **Method and system for URL autocompletion using ranked results**

Inventors: **Gibbs; Kevin A.** (San Francisco, CA)

Assignee: **Google Inc.** (Mountain View, CA)

Appl. No.: **10/987,294**

Filed: **November 11, 2004**

#### ABSTRACT

A set of ordered predicted completion strings are presented to a user as the user enters text in a text entry box (e.g., a browser or a toolbar). The predicted completion strings can be in the form of URLs or query strings. The ordering may be based on any number of factors (e.g., a query's frequency of submission from a community of users). URLs can be ranked based on an importance value of the URL. Privacy is taken into account in a number of ways, such as using a previously submitted query only when more than a certain number of unique requestors have made the query. The sets of ordered predicted completion strings is obtained by matching a fingerprint value of the user's entry string to a fingerprint to table map which contains the set of ordered predicted completion strings.

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**7,487,145** **February 3, 2009**

#### **Identifying language attributes through probabilistic analysis**

Inventors: **Gibbs; Kevin A.** (San Francisco, CA), **Kamvar; Sepandar D.** (Palo Alto, CA), **Haveliwala; Taher H.** (Mountain View, CA), **Jeh; Glen M.** (San Francisco, CA)

Assignee: **Google Inc.** (Mountain View, CA)

Appl. No.: **10/987,295**

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**7,483,881**

**January 27, 2009**

#### **Determining unambiguous geographic references**

Inventors: **Egnor; Daniel** (New York, NY), **Greenfield; Lawrence Elias** (Brooklyn, NY)

Assignee: **Google Inc.** (Mountain View, CA)

Appl. No.: **11/024,977**

Filed: **December 30, 2004**

#### ABSTRACT

A system receives a search query that includes a set of search terms, determines whether at least one of the search terms corresponds to the name of a geographic area, and determines whether the geographic area corresponds to an unambiguous geographic area when at least one of the search terms corresponds to the name of the geographic area. The system performs a local search, based on one or more of the search terms, to identify documents associated with the geographic area when the geographic area corresponds to an unambiguous geographic area.

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Date: March 23-27

Location: Hilton New York

[www.searchenginestrategies/newyork](http://www.searchenginestrategies/newyork)

Search Engine Marketing Training Workshop - Denver

Date: April 27

Location: Omni Interlocken Resort

[www.searchenginestrategies/denver](http://www.searchenginestrategies/denver)

Search Engine Marketing Training Workshop - Atlanta

Date: May 5

Location: Omni Hotel CNN Center

[www.searchenginestrategies/atlanta](http://www.searchenginestrategies/atlanta)

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Date: June 8-10

Location: Metro Toronto Convention Centre

[www.searchenginestrategies/toronto](http://www.searchenginestrategies/toronto)

Search Engine Strategies – Hamburg

Date: June

Location: Sofitel Hamburg Alter Wall

[www.searchenginestrategies/hamburg](http://www.searchenginestrategies/hamburg)

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[www.searchenginestrategies/sanjose](http://www.searchenginestrategies/sanjose)

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Location: Hilton Chicago  
[www.searchenginestrategies/chicago](http://www.searchenginestrategies/chicago)

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Location: Arabella Sheraton Grand Hotel

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Date: May 18-19  
Location: New Connaught Rooms Covent Garden

SMX – Seattle  
Date: June 2-3  
Location: Bell Harbor International Conference Center

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Date: June 3-4  
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Date: July 2-3  
Location: Sentosa Island Resort

SMX – Sao Paulo  
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