

RESEARCH BRIEF (Click Fraud)

Date: 6/30/2005

Topic: Click Fraud — Our research indicates that as much as 30% of paid search traffic may be fraudulent.

We recently released the audio recording of our clinic on this topic. You can listen to a recording of this clinic here:

Click Fraud (Windows Media Audio)

<http://meclabs.com/cgi-bin/pl/pl.cgi?c5w>

Click Fraud (RealMedia)

<http://meclabs.com/cgi-bin/pl/pl.cgi?c5r>

This research brief will answer the following questions:

1. [What is click fraud?](#)
2. [How significant is the problem of click fraud?](#)
3. [How do you avoid click fraud?](#)



FINDINGS

1. What is click fraud?

Click fraud is generally defined as any paid-for click that originates in a malicious attempt to drain an advertiser's budget. Especially for high-priced search terms, advertisers will sometimes attempt to drive up their competitors' marketing costs by clicking on their ads.

Click fraud is sometimes also motivated by revenue generated by pay-per-click (PPC) engines' affiliate networks. Here, an affiliate is driven by simple greed to run up multiple fraudulent clicks.

Most PPC search engines have systems in place that identify click fraud and then subsequently do not charge the advertiser for the fraudulent clicks. Google, the largest PPC-driven engine, seems to be able to detect rapid, successive clicking from the same person or IP address. However, individuals

or organizations conducting click fraud are using more advanced cloaking technologies that may circumvent these preventive systems.

Google often issues refunds and adjustments based on reported click fraud. The company has also recently implemented more advanced human-based and technology-driven click fraud detection mechanisms.

In the majority of click fraud cases that we have investigated, we have found that click-fraud criminals are using rolling-IP distributed attacks from multiple countries. In addition, it appears that they may have organized human click-fraud campaigns using low-cost third-world labor.

On Google, "impression fraud" is another equally problematic form of click fraud. Impression fraud occurs when criminals manipulate the number of page impressions for a given search term. When an advertiser's relative click-through rate (CTR) decreases, his or her search term can be suspended because of low CTR performance. This creates a window of opportunity for other advertisers. By committing impression fraud, they are able to obtain higher search rankings at lower costs due to the crippled competition.

The revenue that is generated by click fraud varies greatly depending on whom you ask. However it is widely believed that if click fraud were completely eliminated, all of the major PPC engines would suffer a significant blow to revenues and share prices. It is important, however, that these PPC companies realize that maintaining the trust of their advertisers is vital to the long-term health of the industry.

2. How significant is the problem of click fraud?

SEMPO (Search Engine Marketing Professional Organization) recently did a study that shows that many advertisers don't recognize click fraud as a significant problem:

Survey: The Problem of Click Fraud				
Statement	All Advertisers	Advertisers of < 500 Employees	Advertisers of 500+ Employees	Agencies
This is a significant problem we have tracked	6%	10%	0%	4%
It is a moderate problem we have tracked	19%	21%	15%	30%
We have not tracked it much, but we are worried about it	45%	36%	58%	43%
It is not a significant concern	26%	28%	23%	23%
Never heard of it before	5%	5%	4%	0%



What You Need To UNDERSTAND: Of those who recognize that click fraud may be a significant problem (70%) only 25% of all advertisers have tracked click fraud.

Source: <http://www.sempo.org/press/click-fraud.php>

To further illustrate the current perception regarding click fraud, we have included a number of excerpted quotes from industry experts and the major press:

"Search engine traffic is among the most valuable traffic to a web marketer due to the state of mind of a searcher. Click fraud, charging marketers for poor quality non-converting clicks, could poison the well..."

-Kevin Lee
SEMPO.org

"Click fraud is the biggest threat to the Internet economy..."

-George Reyes
Chief Financial Officer
Google, Inc.

(As quoted in the Wall Street Journal)

"Anyone who says this is not a real challenge is kidding you..."

-John Slade,
Senior Director of Product Management
Yahoo, Inc.

(As quoted in the Wall Street Journal)

We decided to test click fraud. In an attempt to "defraud" Google's AdSense system (the content-based, affiliate-driven element of AdWords), we created a search term that would not receive any other bids. In this way, we could rest assured that our "fraud" would only hurt ourselves.

We bid on the term "daurf kcilc" ("click fraud" spelled backwards) and created an ad:

The Latest Spy Equipment

Bug Your Neighbor

Literally

www.marketplacesnapshot.com

We then attempted to create an AdSense page that would serve this ad:

<http://www.marketplacesnapshot.com/duarfkilc.html>

However, we never managed to get the AdSense account to serve our ad for "daurf kcilc", even though it was the only ad for that search term.

So we moved on to just searching for "daurf kcilc" on Google's main site. Now we were able to pull up our ad and attempt to run up fraudulent clicks. Here are the results of those efforts:

Attempted Click Fraud on Google AdWords		
Click Fraud Attempt	Successive Clicks	Clicks Registered by Google
Individual clicking on the ad	10	0
Individual clicking on the ad with Anonymizer	10	1
Clicking on the ad with a different computer, same IP address	10	1
Clicking on the ad with a different computer, different IP address	10	1



What You Need To UNDERSTAND: Based on this test, it does not appear that a competing individual or company could do too much damage to someone simply by clicking on your ad over and over.

These results were encouraging. However, they do not address the larger problem of individuals or companies defrauding the PPC system with more sophisticated software or organizational efforts (such as third-world labor).

South African search firm Incubeta.com has developed a unique click-tracking tool that creates and measures a unique click ID for each click. This ID is created based on a number of characteristics that they believe to be statistically significant. This tool was used in creating the three campaigns below.

Specifics of these tested campaigns included:

- All three campaigns ran over a ten day period.
- Duplicates were determined by comparing IP address, language, browser settings, referring URL, time of click, operating system, browser plug-ins, and country.
- Campaign A was implemented for a finance company with a high-end (\$1.00-\$2.00) cost-per-click (CPC), Campaign B was for a travel company with a mid-range (\$0.20-\$0.30) CPC, and campaign C was for a "jobs" company with a low (\$0.05-\$0.15) CPC.

Documented Click Fraud for Three Google AdWords Campaigns			
	Campaign A	Campaign B	Campaign C
Total Clicks	34,763	12,790	4,184
Duplicate Clicks	10,268	1,257	349
Alleged Click Fraud	29.5%	9.8%	8.3%
Clicks Billed By Google	34,758	12,671	4,130
Google Credits	- 5	- 119	- 54
Non-Credited Fraudulent Clicks	10,263	1,138	295
Cost to Advertiser	\$15,394.50	\$284.50	\$29.50



What You Need To UNDERSTAND: This random sample showed as much as 29.5% fraud. Fraud increased as the bid price increased. Google only seemed to detect a very small percentage of fraud.

KEY POINT: Data indicates that the potential for significant click fraud increases proportionately to the bid price.

This data clearly indicates that click fraud may be a larger problem than the major online search engines admit. Until more information becomes available, PPC advertisers will have to remain vigilant against the dangers of PPC fraud.

3. How do you avoid click fraud?

A business owner can combat click fraud and impression fraud in a number of ways:

1. Carefully monitor rapid drops in website conversion with corresponding spikes in paid search traffic. This type of rapid change in metrics could indicate someone or something is manipulating your search campaign. Large amounts of click traffic with no new sales or leads often indicate click fraud, particularly if you have historical data that shows a higher average website conversion rate from the same core search terms.
2. Implement a click-fraud tracking tool. There are several monitoring tools that will look for irregular patterns in your click traffic and flag potential fraud. We have listed a number of these tools in the Literature Review at the end of this report.
3. Be aware of impression fraud. Pay attention to the search terms that have been deactivated in your Google account because of apparent low conversion. If the campaigns have been running for some time successfully and suddenly some of your key terms have been deactivated, it may indicate impression fraud.
4. Report any click fraud to Google so that their fraud team can attempt to identify the source of the fraud. Google has various click fraud screening tools that monitor all click traffic, and they have even more advanced screening tools that their staff uses to identify the source of click fraud. Like SPAM, we believe much of the click fraud comes from just a handful of criminals.
5. Monitor your overall site traffic on a daily basis. By utilizing an accurate web analytics tool you can monitor the quality of your overall traffic and infer potential problems based on trends.
6. The more a PPC engine depends on affiliates for its traffic, the more susceptible it will be to fraud. Traffic quality tends to be better on Google, Yahoo!, and Lycos, for example, because each of these sites has its own branded destination where consumers go to search. However, smaller PPC engines often rely exclusively on partner sites for traffic.

Until more conclusive data becomes available, marketers must remain vigilant against the ongoing potential of lost marketing revenue to click fraud. The aforementioned techniques will help you combat click fraud, which will enable your PPC campaigns to produce the optimum return on investment for your company.

We will continue to evaluate click fraud and will release further research as it becomes available.



RELATED MEC REPORTS:

PPC Ad Copy Tested:

<http://www.marketingexperiments.com/see/1114>

Avoiding Unprofitable PPC Campaigns:

<http://www.marketingexperiments.com/see/1088>

Google AdWords Tested, Part 2:

<http://www.marketingexperiments.com/see/1035>

Google AdWords Tested:

<http://www.marketingexperiments.com/see/1033>

Google AdSense Tested:

<http://www.marketingexperiments.com/see/1032>

Overture Tested:

<http://www.marketingexperiments.com/see/1055>

PPC for Subscription-Based Sites:

<http://www.marketingexperiments.com/see/1057>

Small PPC Engines Tested:

<http://www.marketingexperiments.com/see/1067>

5 Paid Search Engines Tested:

<http://www.marketingexperiments.com/see/1058>



As part of our research on this topic, we have prepared a review of the best Internet resources on this topic.

Rating System

These sites were rated for usefulness and clarity, but alas, the rating is purely subjective.

* = Decent | ** = Good | *** = Excellent | **** = Indispensable

Click Fraud, an Industry Crisis, or Blip on the Search Engine Marketing Landscape? ****

<http://www.sempo.org/press/click-fraud.php>

India 's Secret Army of Ad Clickers ***

<http://meclabs.com/cgi-bin/pl/pl.cgi?sia>

Google CFO: Fraud a Big Threat ***

http://money.cnn.com/2004/12/02/technology/google_fraud/

Exposing Click Fraud ***

<http://meclabs.com/cgi-bin/pl/pl.cgi?sec>

Lost Per Click: Search Advertising & Click Fraud ***

<http://searchenginewatch.com/searchday/article.php/3387581>

Click Fraud: A Legal Look ***

<http://searchenginewatch.com/searchday/article.php/3503376>

Attorneys Seek Advertisers for Click Fraud Class Action ***

<http://www.clickz.com/news/article.php/3506721>

Click Fraud in the Spotlight ***

<http://www.clickz.com/news/article.php/3489021>

Click Fraud: What It Is, How to Fight It ***

<http://clickz.com/experts/search/strat/article.php/3483981>

Google and Overture Define Click Fraud ***

<http://www.clickz.com/news/article.php/3453201>

Google Sues AdSense Publisher for Click Fraud **

<http://www.clickz.com/news/article.php/3440341>

Programmer Arrested in Alleged AdSense Extortion Plot **

<http://www.clickz.com/news/article.php/3329381>

Coping with Fraudulent PPC Traffic **

<http://searchenginewatch.com/searchday/article.php/2159721>

Wired News: BlowSearch Tackles Click Fraud **

<http://www.wired.com/news/culture/0,1284,67873,00.html>

Wired News: Click Fraud: Problem or Paranoia **

<http://www.wired.com/news/culture/0,1284,66845,00.html>

New Attacks and Defenses in Click-Fraud War **

<http://meclabs.com/cgi-bin/pl/pl.cgi?sna>

A Brief History of Click Fraud **

http://www.alchemistmedia.com/CPC_Click_Fraud.htm

How to Stop Click Fraud (Or at Least Get a Refund) **

<http://www.marketingsherpa.com/barrier.cfm?currentID=2775>

Clicks2Customers **

<http://www.clicks2customers.com/>

KeywordMax **

<http://www.keywordmax.com/>

ClickDefense.com **

<http://www.clickdefense.com/>

ClickDetective **

<http://www.clickdetective.com/index.htm>

AdWatcher **

<http://adwatcher.com/>

Authenticlick.com **

<http://authenticlick.net/>

Click Authority **

<http://www.clickauthority.com/>

Click Sentinel **

<http://www.clicksentinel.com/>



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