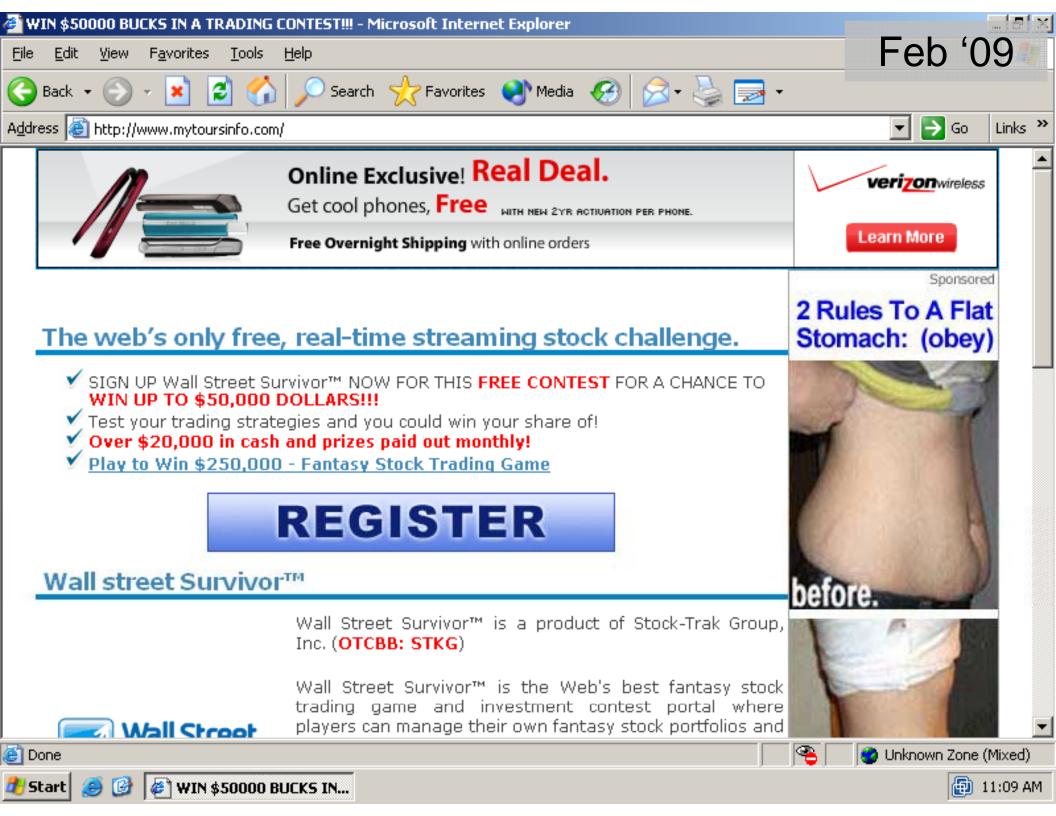
Unexpected Challenges in Measuring Online Advertising ROI

The promise of online advertising

- Targeted, controlled placements
- Measured impressions, clicks & conversions
- Robust optimization

Banner ads gone bad



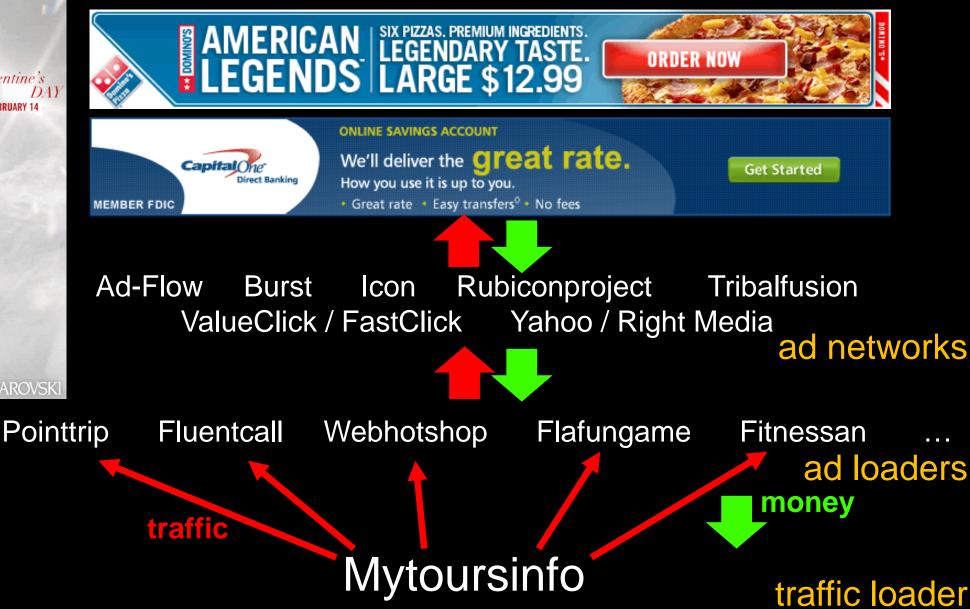
```
GET / HTTP/1.1
Host: www.mytoursinfo.com
HTTP/1.1 200 OK ...
<html> ...
<script src="/js/counter.js" type="text/javascript"> ...
<script src="/js/stat.js" type="text/javascript"></script>
GET /js/stat.js HTTP/1.1 ...
HTTP/1.1 200 OK
document.write("<iframe width=0 height=0</pre>
   src='http://www.pointtrip.com/florida_tour.html'>");
document.write("<iframe width=0 height=0</pre>
   src='http://www.fluentcall.com/pda_phones.html'>");
document.write("<iframe width=0 height=0
   src='http://www.webhotshop.com/shopping.htm'>");
document.write("<iframe width=0 height=0</pre>
   src='http://www.freebiespack.com/freebies_insider.htm'...
document.write("<iframe width=0 height=0
   src='http://www.onlinemoneytrading.net/forex_trading.h...
```

```
GET / HTTP/1.1
Host: www.mytoursinfo.com
HTTP/1.1 200 OK ...
<html> ...
<script src="/js/counter.js" type="text/javascript"></script>
<script src="/js/stat.js" type="text/javascript"></script> ...
GET /js/stat.js HTTP/1.1 ...
HTTP/1.1 200 OK
document.write("<iframe_width=0 height=0 src='http://www.pointtrip.com/florida_tour.html'>");
document.write("<iframe width=0 height=0 src='http://www.fluentcall.com/pda_phones.html'>");
document.write("<iframe width=0 height=0 src='http://www.webhotshop.com/shopping.htm'>");
document.write("<iframe width=0 height=0 src='http://www.freebiespack.com/freebies_insider.htm'>...
document.write("<iframe width=0 height=0 src='http://www.onlinemoneytrading.net/forex_trading.ht...
document.write("<iframe width=0 height=0 src='http://flafungame.com/top_fun_games.htm'>");
document.write("<iframe width=0 height=0 src='http://www.multimediasolutions.in/digital multimed...
document.write("<iframe width=0 height=0 src='http://www.bxbex.com/Featured Schools/index.html'>...
document.write("<iframe width=0 height=0 src='http://www.ramblepace.com/denmark_travel.htm'>");
document.write("<iframe width=0 height=0 src='http://www.journeyidea.com/journey_tips.htm'>");
document.write("<iframe width=0 height=0 src='http://www.go-bay.com/search/cs_location.php'>");
document.write("<iframe width=0 height=0 src='http://www.willhealthy.com/willhealthy.htm'>");
document.write("<iframe width=0 height=0 src='http://www.fitnessan.com/bu.htm'>");
document.write("<iframe width=0 height=0 src='http://www.investdady.com/vc.htm'>");
document.write("<iframe width=0 height=0 src='http://www.9truck.com/semitrucks.htm'>");
document.write("<iframe width=0 height=0 src='http://www.healthykey.com/Bacteria-Improves-Your-I...
document.write("<iframe width=0 height=0 src='http://www.volcars.com/hybrid.htm'>");
GET /bu.htm HTTP/1.1
Host: www.fitnessan.com
HTTP/1.1 200 OK ...
<iframe ... width=728 height=90 src=http://www.fitnessan.com/code 728 90.htm>
```

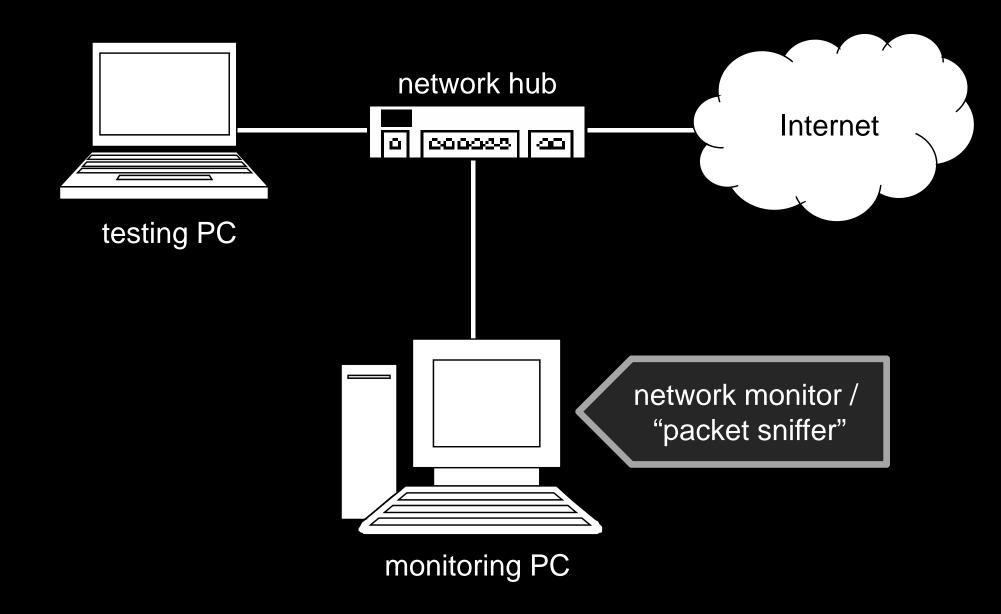


Relationships

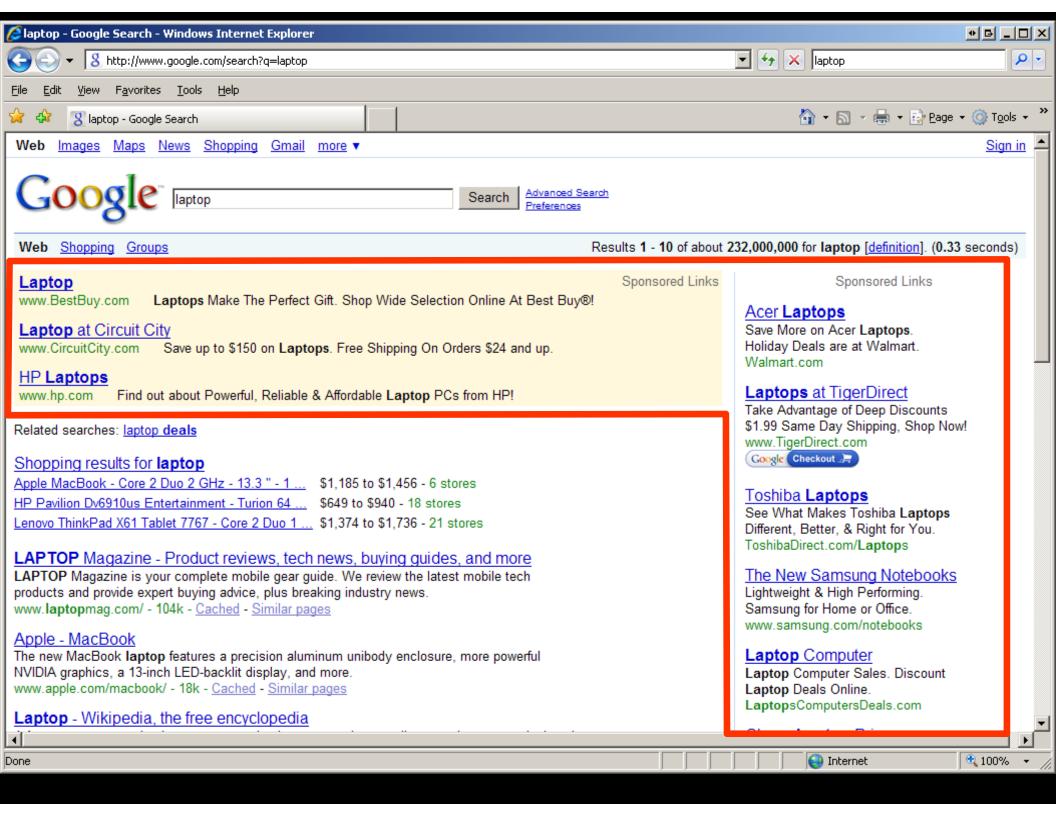
advertisers

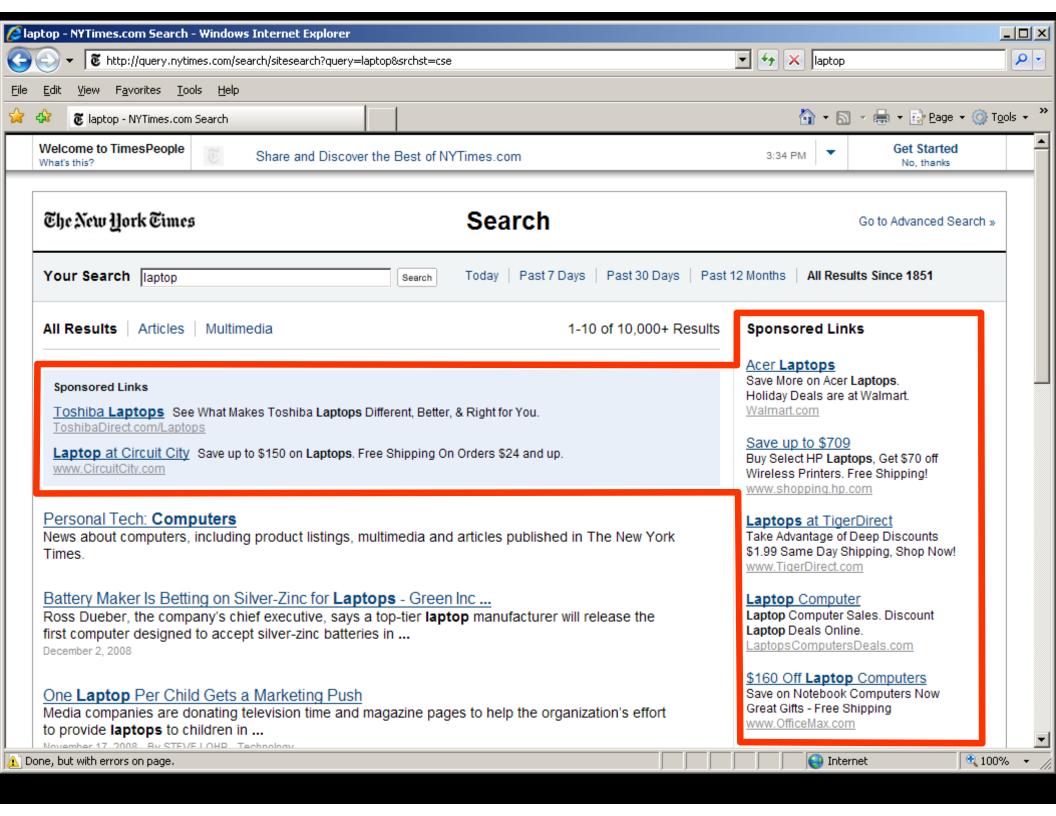


Investigator's tools



Paying per click





Click fraud

Syndication fraud Inflating CPC conversion rates



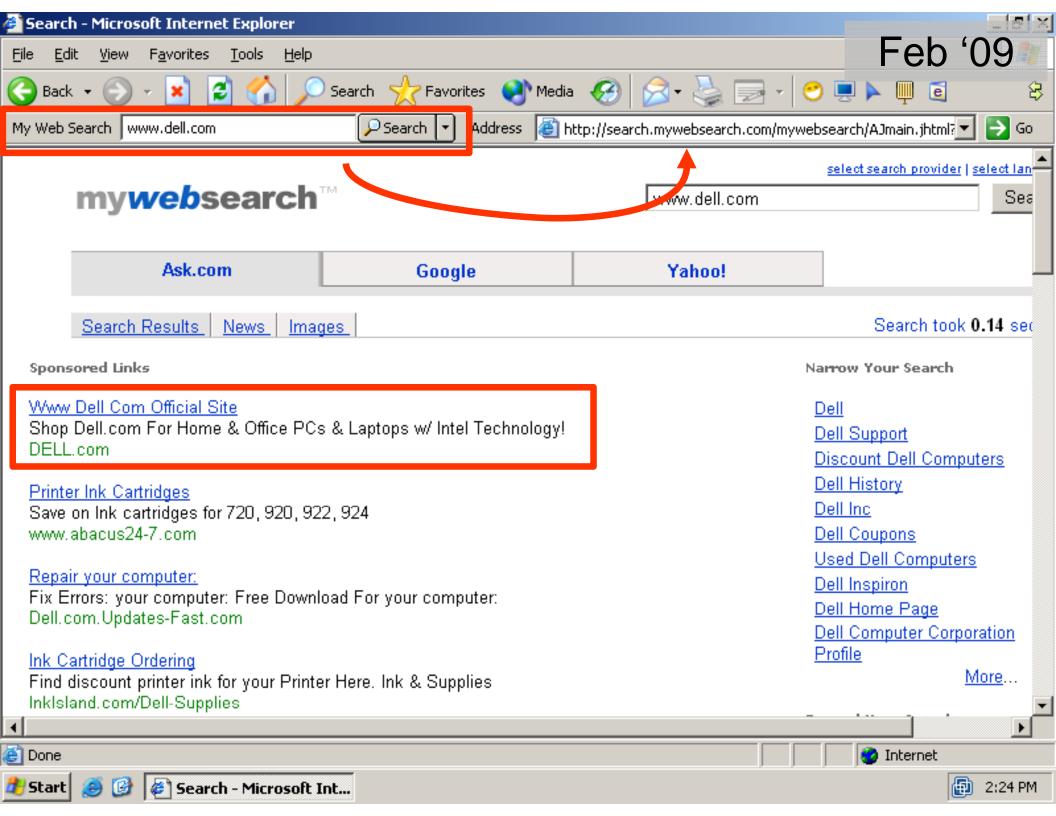
Toolbar Features:

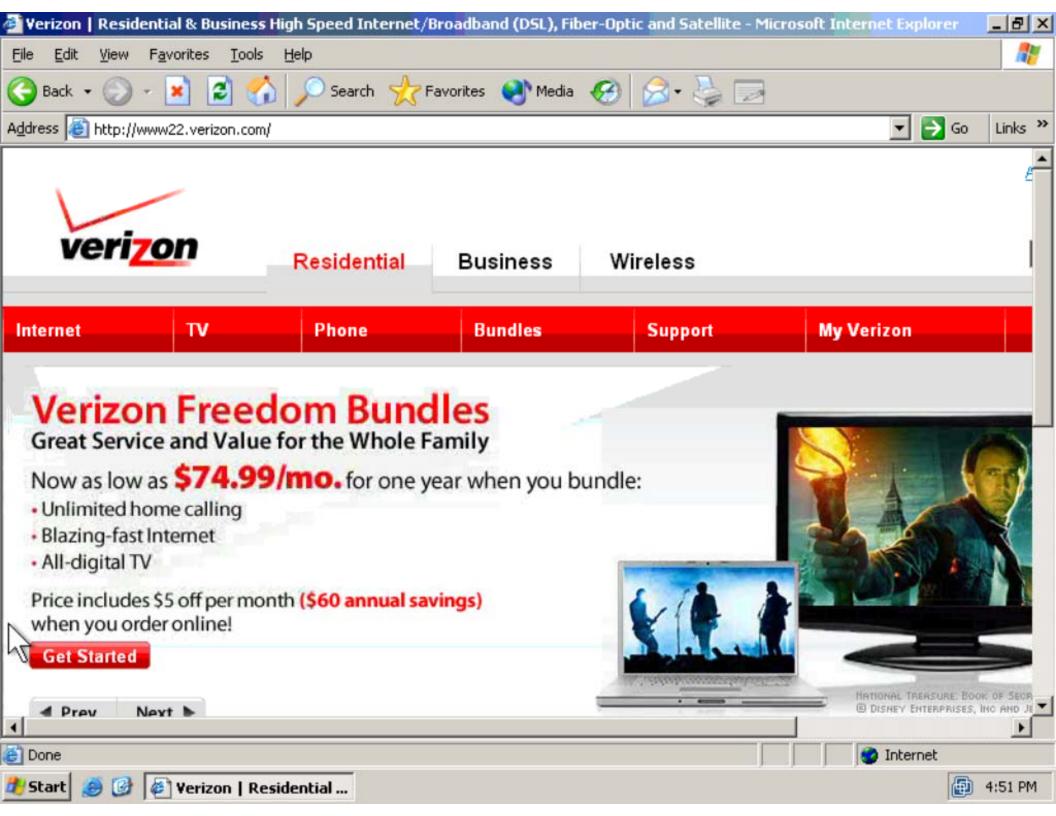
- Works with most IM, Email & Blog applications as well as social sites like My Space and MSN Spaces!
- Bonus: Also includes cursors, screensavers, e-cards, the MyWebSearch® search box and Search Assistant - relevant search results in response to misspelled or incorrectly formatted browser address requests.
- No Spyware. No Adware. We take pride in our products!

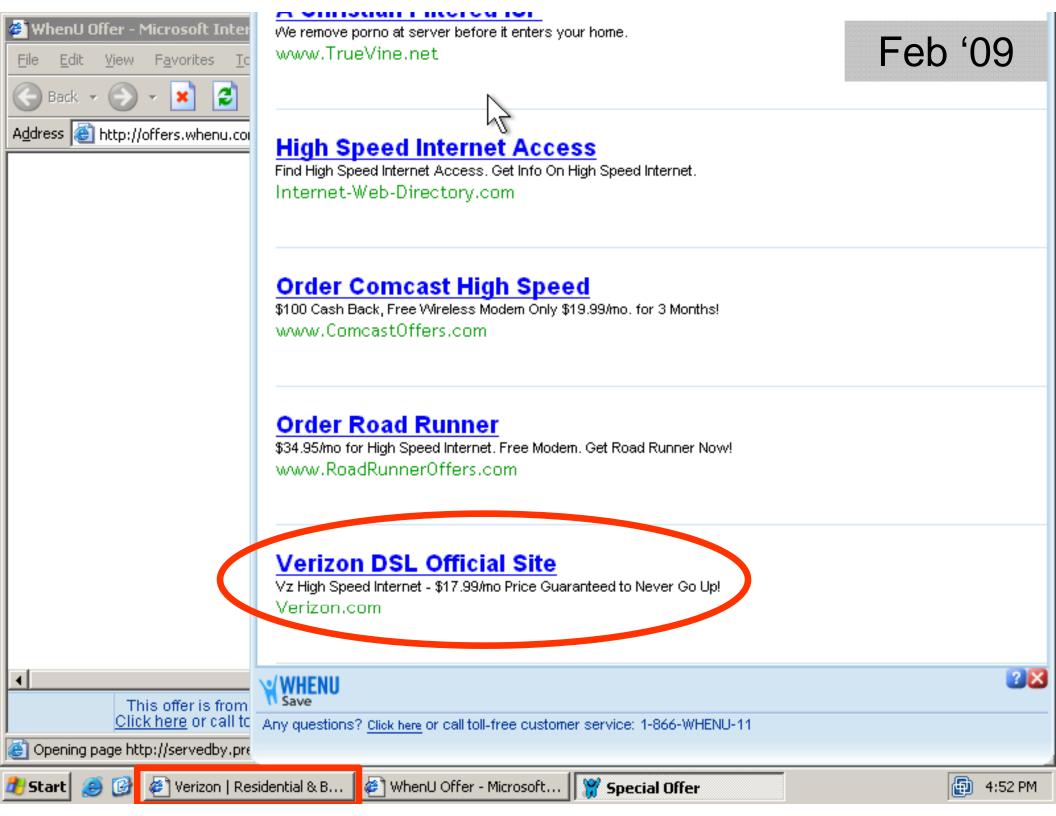
Click Here!

Please read carefully. By clicking the "Click Here" button above and downloading Smiley Central, I accept and agree to abide by the <u>End User License Agreement</u>









WhenU-Google Relationship

Google Advertisers e.g. Verizon money traffic Google traffic money **J** Infospace Idearc Media / Superpages traffic money _ Localpages traffic money WhenU

```
All @ Brands
```

```
GET /iframe3? ...
```

Host: ad.yieldmanager.com ...

HTTP/1.1 200 OK

Date: Mon, 29 Sep 2008 05:36:02 GMT

• • •

<iframe src="http://allebrands.com/allebrands.jpg"</pre>

. . .

```
GET /allebrands.jpg HTTP/1.1 ...
Host: allebrands.com ...
```

. . .

```
<a href='http://allebrands.com'>
<imq src='images/allebrands.JPG'></a>
<iframe src ='http://click.linksynerg</pre>
```

click?id=Ov83T/v4Fsg&offerid=144797.1 Microsoft OneCare 3&

subid=0' width ='0' height = '0'>

<iframe src ='http://www.microsoftaffiliates.net/t.
aspx?kbid=9066&p=http%3a%2f%2fcontent.microsoftaffil
iates.net%2fWLToolbar.aspx%2f&m=27&cid=8' width='0'
height='0'>

<iframe src ='http://send.onenetworkdirect.net/z/41/
CD98773' width ='0' height = '0'>

Symantec

McAfee

AdWords Terms & Conditions

Customer understands and agrees that ads may be placed on any other content or property provided by a third party ("Partner") upon which Google places ads ("Partner Property"). Customer agrees that all placements of Customer's ads shall conclusively be deemed to have been approved by Customer unless Customer produces contemporaneous documentary evidence showing that Customer disapproved such placements in the manner specified by Google.

Customer understands that third parties may generate impressions or clicks on Customer's ads for prohibited or improper purposes, and Customer accepts the risk of any such impressions and clicks. Customer's exclusive remedy, and Google's exclusive liability, for suspected invalid impressions or clicks is for Customer to make a claim for a refund in the form of advertising credits for Google Properties within the time period required under Section 7 below. To the fullest extent permitted by law, refunds (if any) are at the discretion of Google and only in the form of advertising credit for only Google Properties. Nothing in these Terms or an IO may obligate Google to extend credit to any party.

Why advertising fraud?

- Strong financial incentives
 - Reliable payment, "clean" money
- Easy pseudonymity
- Limited investigations of partners
- Limited incentives to uncover fraud
 - Ad agencies
 - Ad networks

"10% of spend"

Limited actions to obtain restitution

Responses

- Revise insertion orders to clarify expectations.
- Audit traffic records & insist on proof of work done.
- Compare ad networks based on quality.
- Negotiate out of ad networks' one-sided T&C's.
- Clarify responsibility between advertiser & agency.
- Demand repayment / sue. (Feasible? Cost-effective?)
- Pay more slowly -> penalties when caught.
- Do nothing. "Cost of doing business."

More examples: www.benedelman.org