GOT TRAFFIC?

An Evaluation of Click Traffic Providers

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The Web is traffic driven

Online businesses depend on traffic for revenue

Billions of Web pages

Hard for new/small businesses to gain exposure
Solution? Online Advertising

Pay to have traffic delivered to your site
Well-known pay-per-click providers are a popular option
    Google Adwords, Microsoft adCenter, etc.
But can be expensive per click, esp. for popular keywords
Alternatives

An alternative to PPC, less well known, is simply to buy bulk traffic.

Want 25,000 visits/month? No problem: $100 – Provide a URL to your site and you're done – Pick a category (e.g., "Cosmetics and Perfume") – Pick a country of origin (e.g., "UK").
Bulk Providers

• 100s of bulk traffic providers
• With so many businesses, they must have customers
  – Someone is buying this traffic to keep these providers in business
• But...What is the quality of traffic?
  – Click fraud, automated bots are rampant
  – Are these bulk providers too good to be true?
Traffic Sifter

Goal: Evaluate alternative traffic providers

Approach:
- Create a Web site
- Use various traffic services to advertise site
  - From legit (Google) ...
  - ...to suspicious (Revisitors)
- Analyze traffic using a variety of metrics
- Identify features to distinguish kinds of traffic
  - Access patterns, access sources, mouse movement, ...
**PPC vs Bulk traffic**

**PPC**
- Keyword based
- Auction based
- Not known in advance

**Bulk**
- Simple model
- Traffic is much cheaper, particularly for popular keywords

<table>
<thead>
<tr>
<th>Traffic Plan</th>
<th>Visitors</th>
<th>Visits per day</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic Plan 1</td>
<td>2,500</td>
<td>80 to 100 visits per day</td>
<td>$19.95</td>
</tr>
<tr>
<td>Traffic Plan 2</td>
<td>5,000</td>
<td>160 to 200 visits per day</td>
<td>$28.95</td>
</tr>
<tr>
<td>Traffic Plan 3</td>
<td>10,000</td>
<td>320 to 400 visits per day</td>
<td>$48.95</td>
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<tr>
<td>Traffic Plan 4</td>
<td>25,000</td>
<td>780 to 1000 visits per day</td>
<td>$99.95</td>
</tr>
<tr>
<td>Traffic Plan 5</td>
<td>50,000</td>
<td>1560 to 2000 visits per day</td>
<td>$189.95</td>
</tr>
<tr>
<td>Traffic Plan 6</td>
<td>100,000</td>
<td>3120 to 4000 visits per day</td>
<td>$349.95</td>
</tr>
</tbody>
</table>
Traffic Collection Framework

• Created a cosmetic site
  – Cosmetics reasonably popular search term

• Ran replicated versions of the same site on different hosts on EC2
  – Anonymous, easy to scale out
  – Registered many variants of “peachyskin.com” domain names, each pointed to an EC2 instance

• Purchased Web traffic from traffic providers

• Evaluate traffic using various metrics
Traffic Vendors

Purchased traffic from 3 categories

• High tier
  – Search Engines: Google + Yahoo

• Mid tier
  – Somewhere in between

• Low tier
  – Bulk sellers (5000/$30)
    • Revisitors, Handy Traffic

Targeted versus non-targeted
  – “Cosmetics” vs “Any”

Geographically targeted
  – UK-only vs. US-only
Closing the loop

How do services arrange for users to click on our site?

Peachyskin
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## Providers

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Traffic Claims</th>
<th>Cost</th>
<th>Total Clicks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revisitors</td>
<td>160/day 24hr unique</td>
<td>$28.95/mo</td>
<td>5000</td>
</tr>
<tr>
<td>Revisitors(U.K.)</td>
<td>160/day 24hr unique</td>
<td>$28.95/mo</td>
<td>5000</td>
</tr>
<tr>
<td>HandyTraffic</td>
<td>24hr unique</td>
<td>$24.95/mo</td>
<td>5000</td>
</tr>
<tr>
<td>HandyTraffic(U.K.)</td>
<td>24hr unique</td>
<td>$24.95/mo</td>
<td>5000</td>
</tr>
<tr>
<td>AeTraffic</td>
<td>Visitor unique</td>
<td>$69.65/mo</td>
<td>10000</td>
</tr>
<tr>
<td>Rent-a-list(U.K.)</td>
<td>½ unique</td>
<td>$27.50/mo</td>
<td>5000</td>
</tr>
<tr>
<td>Google</td>
<td>--</td>
<td>$10/click(max)</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$299.27</td>
<td></td>
</tr>
<tr>
<td>Google(UK)</td>
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<td>$10/click(max)</td>
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<tr>
<td></td>
<td></td>
<td>$283.17</td>
<td></td>
</tr>
<tr>
<td>Yahoo</td>
<td>--</td>
<td>$10/click(max)</td>
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<tr>
<td></td>
<td></td>
<td>$408.28</td>
<td></td>
</tr>
<tr>
<td>PeachySkin</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
Analyze Traffic Features

Traffic Volume
  – Are we getting what we pay for?

Traffic Quality
  – Do visitors examine the page, visit sub-pages?

Blacklists
  – Have the hosts sending traffic been marked for other malicious behavior?

Traffic Location
  – Where geographically is traffic coming from?

Timing
  – Does traffic timing match typical user workloads?
## Are we getting what we pay for?

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Visits</th>
<th>Clicks (24hr-uniq)</th>
<th>Purchased</th>
<th>Delivered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revisitors</td>
<td>3516</td>
<td>3395</td>
<td>5000</td>
<td>NO</td>
</tr>
<tr>
<td>Revisitors (UK)</td>
<td>3781</td>
<td>3274</td>
<td>5000</td>
<td>NO</td>
</tr>
<tr>
<td>HandyTraffic</td>
<td>4021</td>
<td>3431</td>
<td>5000</td>
<td>NO</td>
</tr>
<tr>
<td>HandyTraffic (UK)</td>
<td>4016</td>
<td>71</td>
<td>5000</td>
<td>NO</td>
</tr>
<tr>
<td>AeTraffic</td>
<td>13045</td>
<td>4019</td>
<td>10000</td>
<td>Yes</td>
</tr>
<tr>
<td>Rent-a-list (UK)</td>
<td>43</td>
<td>34</td>
<td>5000</td>
<td>NO</td>
</tr>
<tr>
<td>Google</td>
<td>113</td>
<td>100</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>Google (UK)</td>
<td>143</td>
<td>126</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>Yahoo</td>
<td>205</td>
<td>36</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>PeachySkin</td>
<td>34</td>
<td>30</td>
<td>--</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Vendors with visitors that visited an additional page besides "index"

- rent-a-list
- Adwords
- Adwords (U.K.)
- Yahoo
- None

Expect targeted traffic to have visitors interested in other pages on PeachySkin
Did Visitors Move their Mouse?

• We expect organic visitors to move their mouse
• Track the number of mouse movements on our site using JavaScript
  – Set delta of 20 pixels
• Aggregate the number of mouse movements from each vendor
Mouse Movement

- **Low:**
  - Traffic: Aetraffic
  - Visits: 13045
  - Mouse Moves: 4

- **Mid:**
  - Traffic: Rent-a-list
  - Visits: 43
  - Mouse Moves: 453

- **High:**
  - Traffic: Adwords
  - Visits: 113
  - Mouse Moves: 895
Mouse Statistics
Click Statistics
OS and Browser User Agents

Aetraffic (Low)

Adwords (High)

Rent-a-list (Mid)
Referrers

Yahoo (High)

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Rent-a-list (Mid)
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Summary

• Bulk traffic providers are an alternate model for attracting traffic to a site

• Goal of our study was to evaluate these providers
  – Purchased traffic to custom site from range of providers

• Analyzed traffic using a variety of metrics
  – Volume, mouse activity, internal accesses, timing, blacklisting, ...

• Bulk traffic very different from PPC traffic
  – Hard to be convinced it’s worth the money…
Thank You!

- Questions?