Understanding Spyware and Its Effects on Your Brand and Your Marketing Pound

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www.benedelman.org

May 2006
Agenda

• What are we talking about?
• Specific examples
• Protection and testing
• Loyalty programs
• Q&A
“Spyware”
Why Not “Adware”?

• Nonconsensual installations
  – Exploits
  – Huge bundles
• Poor disclosures
• Would anyone really agree?
Installation methods

- Bundles
- Misleading ActiveX popups
- Ads in other vendors’ spyware
- Security exploits
- Worms / bots

→ www.benedelman.org
Claria ActiveX Installers

April 2005

Do you want to install and run "(after accepting our agreements) PrecisionTime/DateManager, free 10 second GAIN ad-supported downloads that display (i) exact time/date, and (ii) GAIN-branded pop-ups and other ads based on websites you view? Click here to read our agreements. Click Yes to accept" signed on 3/29/2005 10:49 AM and distributed by:

GAIN Publishing

November 2005

Do you want to install and run "Aquatica Waterworlds screensaver, a free 10 second ad-supported download that displays stunning, realistic aquarium backgrounds and animated 3-D fish, and GAIN-branded ads based on websites you view? First click here to read our agreements, then click yes to accept them" signed on 9/22/2005 6:12 PM and distributed by:

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End User License Agreement ("EULA")
(Last Revised November 15, 2005)

NOTICE TO USER: THIS END USER LICENSE AGREEMENT ("AGREEMENT") APPLIES WITH RESPECT TO SOFTWARE APPLICATIONS PROVIDED BY 180SOLUTIONS, INC. AND ITS AFFILIATES (REFERRED TO IN THIS AGREEMENT AS "WE" OR "180"). PLEASE READ THIS AGREEMENT.
You are about to install SmileySource

Smiley Source allows you to add fun "smiley" icons to your email and messenger. It's a great way to add more personality to your messages!

Get FREE Supreme Toolbar Search Tools to make online searching easier and faster. The Supreme Toolbar also includes a separate Supreme Desktop Search to make desktop searching easier.

The Best Offers Network software is included in this installation. This software provides you with offers (in-page or in a separate window) based on the web sites that you visit.

Best Offers Network respects your privacy. None of the information gathered or transmitted by the software is personally identifiable. If you view adult content, you may receive ads of that nature, but only while at such sites. By installing the software you agree to the terms linked below.

Click here to read the Best Offers Network End User License Agreement

Click here to see Supreme Toolbar and Desktop Search End User License Agreement

- I have read and accept the terms of these agreements
- I do not accept the terms of these agreements

Next >

March 2006
The Spyware Business Model
Revenue Sources

Advertisers

Spyware Vendors

money

traffic
Revenue Sources

Advertisers

money → traffic

Advertising Intermediary

money ← traffic

Spyware Vendors

Affiliate
Affiliate network
Ad network
PPC search engine
Revenue Sources

- Advertisers
  - Advertising Intermediary 1
    - Advertising Intermediary 2
      - Spyware Vendors
  - Affiliates
    - Affiliate network
    - Ad network
    - PPC search engine

- Money flow:
  - Green arrows: Money
  - Red arrows: Traffic
Investigation Methods
Investigator’s Tools: Packet Sniffer

spyware-infected PC

network hub

monitoring PC

Internet
Enter your location

Please enter the location for the area where you plan to use your phone the most so we can give you accurate information about wireless pricing, coverage, customer service, and offers near you. Click submit to continue.

Choose location by zip code

Enter Zip Code

Or, choose location by city/state

Select a state

Search for cities
Host: xadsj.offeroptimizer.com
HTTP/1.1 200 OK ...
url="http://gdlckjoe.com/clk.aspx?l=3984&c=2319&s=WirelessFM"; width=800; height=600; ...

GET /clk.aspx?l=3984&c=2319&s=WirelessFM HTTP/1.1 ...
Host: gdlckjoe.com
HTTP/1.1 301 Moved Permanently
Location: http://clickserve.cc-dt.com/link/click?lid=41000000009135925

GET /link/click?lid=41000000009135925&mid=MOCAR HTTP/1.1 ...
Host: clickserve.cc-dt.com ...
HTTP/1.1 302 Found ...
Location: http://www.verizonwireless.com/b2c/affiliate?...
Direct Revenue Promoting Verizon

Verizon

money ↓

Performics

money ↓

Gdlckjoe.com

money ↓

Direct Revenue

traffic ↑

traffic ↑

traffic ↑
Walmart Promoted by Direct Revenue via Targetsaver, Easilyfound, and LinkShare

803 items found for “rollbacks”

Narrow Your Results

Departments

For the Home
- Air Conditioners & Filtration
- Appliances & Housewares
- Bed & Bath
- City Living Collection
- Decor
- Furniture
- Luggage
- Massage, Spa &

Top Sellers

These top sellers were found in your search results.

Keys
Ovation Serenade 7-Person Hot Tub Spa Package With Stereo

ROLLBACK
$2,998.00

Polaroid 7” Dual-Screen Car DVD Player w/ Game Controller & Built-in Games

ROLLBACK

Bounce 'Round 5-in-1 Ultimate Sports Arena

ROLLBACK
$174.88
Was: $296.62

April 2006
Targetsaver Promoting Walmart

Diagram:
- Walmart
  - money
  - traffic
- LinkShare
  - money
  - traffic
- Easilyfound
  - money
  - traffic
- Targetsaver
  - money
  - traffic
Ordinary Yahoo PPC Ads

November 2005

Yahoo! Search Results - Microsoft Internet Explorer

Search Results

Results 1 - 10 of about 701,000,000 for computers - 0.14 sec. (About this page)

Also try: dell computers, gateway computers, apple computers, hp computers

Buy a Dell Computer - Official Site
Buy a computer at Dell. $579 Dimension E510 desktop after savings with free 512MB memory upgrade at Dell Home. Details here.
www.dell4me.com

Great Savings on Dell Business Computers
Buy computers. Shop Dell Small Business for amazing savings on a huge selection of Dell computers, from powerful desktops to cutting-edge notebooks. Software and peripheral savings, too.
www.dell.com

Computers at CircuitCity.com
Buy the desktop or laptop you need for school, home or work today at CircuitCity.com. Free shipping on orders $25 and up or, buy it online and pick it up at any Circuit City store.
www.circuitcity.com

SPONSOR RESULTS

Desktop Computers from CDW
CDW has the solutions for your business - custom configuration of your PCs, servers...
www.cdw.com

Shop for Computers at TigerDirect.com
Huge selection of discounted computers at super low prices at TigerDirect.com. Order...
www.tigerdirect.com

Metareward.com: Computer
Free desktop when you complete six sponsored offers. All computers brand name and...
www.metareward.com

Durabook - Rugged Pc Laptop Computers
Rugged PC laptop computers with AMD turion or Intel centrino mobile technology. Drop...
www.durabook.com

Computers at HPshopping.com
Shop for HP and Compaq

November 2005
180solutions Serving Google AdWords Ads

PPC Advertisers

money

Google

4,600+ URLs (as of June 2005)

money

180solutions

money

traffic

traffic

traffic
New and Used Cars

The largest selection of car dealership resources across the United States. It shouldn’t be hard to find a car dealership and the vehicle you’re looking for. The way dealerships are set up, they have a vested interest in getting you to pick a car from them. This network of dealerships listed by city makes the whole process of finding a car dealership easy. Choose from the resources listed to find a dealership in your city that is right for you.

Arrowhead Honda...
Click here to save $200 and take a free online virtual test drive. The...
www.arrowheadhonda.com

F&I Central - Free...
Free car dealership software. Why pay for software when you can get it...
www.fnicentral.com

AutoExplorer...
Dealership Management Software. Buy here pay here, Web site designs...
www.autoexplorer.com

Chrysler 300/300C...
AutoTruckToys.com has aftermarket accessories for the new Chrysler 300...
www.300superstore.com

Best Deal at New Car Insider

2006 Mazda 3
Free Shipping at New Car Insider

Description | Best Deals
--- | ---
Sedan, Coupe / Hatchback, Mazda, 2006
Yahoo Click Fraud via 180solutions, Nbcsearch, Ditto, and Yahoo Overture
Understanding the Redirects – Yahoo Click Fraud

1. POST /showme.aspx?keyword=%2esmartbargains%2ecom+...
   Host: tv.180solutions.com
   ad_url: ... value=http://popsearch.nbcsearch.com/metricsdomains.php?search=smartbargains.com

2. GET /metricsdomains.php?search=smartbargains.com
   Host: popsearch.nbcsearch.com
   HTTP/1.1 302 Found
   Location: http://ww2.ditto.com/red.php?mc=T%2FgSdHBNM%2Bg2%2B...

3. GET /red.php?mc=T%2FgSdHBNM%2Bg2%2B3AyiyVWsqV5cRprOptbkiRRrZ...
   Host: ww2.ditto.com
   HTTP/1.1 302 Found
   Location: http://ww2.ditto.com/click.php?mc=T%2FgSdHBNM%2Bg2...
   Location: http://www24.overture.com/d/sr/?xargs=15KPjg1%2DpS...

4. GET /d/sr/?xargs=15KPjg1%2DpSgJXyl%5FruNLbXU6TFhUBPycz2tpk%5...
   Host: www24.overture.com
   HTTP/1.1 302 Found
   Location: http://www.smartbargains.com/default.aspx?aid=47&t...
Yahoo Click Fraud via Spyware

Yahoo PPC Advertisers
- money
- traffic

Yahoo Overture
- money
- traffic

Ditto
- money
- traffic

Nbcsearch
- money
- traffic

180solutions
- money
- traffic

Including Smart Bargains
Failure to disclose that these are sponsored links
“Loyalty Programs”

- The rebate “loyalty” concept
- Web-based shopping portals
- “Reminder” services ... like spyware in their
  - Nonconsensual installations
  - Revenue model
  - Incentive divergence between networks and merchants
Installations are not the only characteristic to care about!
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearly Compromised</td>
<td>(Widespread nonconsensual installations.)</td>
</tr>
<tr>
<td>Mixed History</td>
<td>(Some exploits. Pushy bundles. Pushy installs.)</td>
</tr>
<tr>
<td>“Clean”</td>
<td></td>
</tr>
</tbody>
</table>
"Loyalty Programs": Installations

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>(Widespread nonconsensual installations.)</td>
<td>(Some exploits. Pushy bundles. Pushy installs.)</td>
<td></td>
</tr>
<tr>
<td>CashBackBuddy</td>
<td>Ebates (paid Direct Revenue for installs in 2005)</td>
<td>iGive Upromise</td>
</tr>
<tr>
<td>PersonalMoneyTree / RebateRetriever</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TopRebates / WebRebates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ShopAtHomeSelect</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

but see next slide!
“Loyalty Programs”: Operations

- Triggering on organic traffic.
- Triggering on PPC traffic.
- Triggering on other affiliates’ traffic.

Why pay affiliate commissions on traffic you already paid for?
“Loyalty Programs”: Recommendations

• Remember business objectives.
  – Overall business profits
  – Not merely making the affiliate program bigger
• Want loyalty to merchant, not to “loyalty program.”
• Consider effect on margins.
• Consider effect on other marketing channels.
• Push for flexibility.
  – Consider: Web listings only. → e.g. Fat Wallet
    Exclusion from software download.
  – If you can’t get that flexibility, consider why not.
What Can We Do?

- Affiliate Merchants
- Affiliate Networks
- Affiliates
- Banner ad buyers
- Pay-per-click advertisers
What Can Affiliate Merchants Do?

• Choose affiliate network carefully.
  – Enforcement? Quality control?
• Accept affiliates carefully.
  – “Know your affiliates.”
• Read online discussions with affiliates and with other affiliate managers.
• Run tests.
What Can Affiliate Networks Do?

• Revenue at any cost? Or some limits?
  – Short-term revenue versus long-term quality.
• Know your partners, affiliates, and syndicators.
• Serious efforts at enforcement. Not just “See no evil, speak no evil.”
  – Hands-on testing.
  – Automation: Crawlers, robots.
• Performance guarantees: SLA contracts, bounties?
• Remember Yahoo in *New York v. Intermix*.
What Can Affiliates Do?

- Choose merchants and networks carefully.
- Look for cheaters. Warn merchants.
- Vmware testing
- Messages boards
- “&afsrc=1”
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