

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

Benjamin Edelman

www.benedelman.org

May 2006

Agenda

- What are we talking about?
- Specific examples
- Protection and testing
- Loyalty programs
- Q&A

“Spyware”

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THE BROADBAND PHONE COMPANY™

A Typical Infected PC

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October 2005

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

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April 2005



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February 2006

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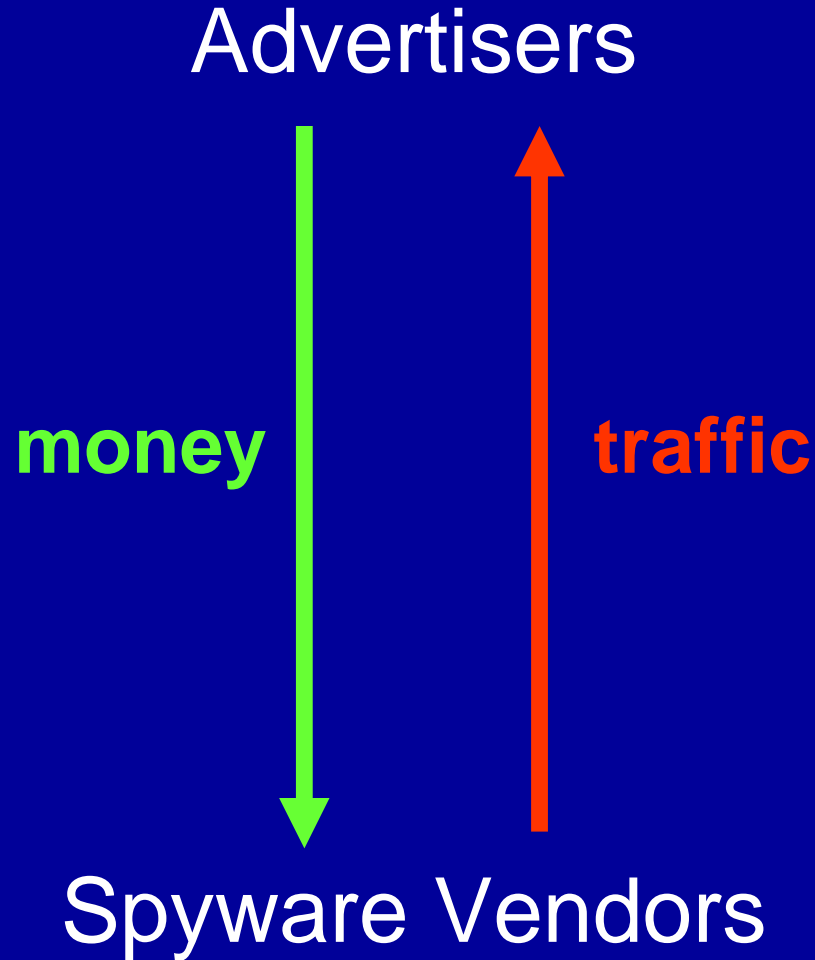
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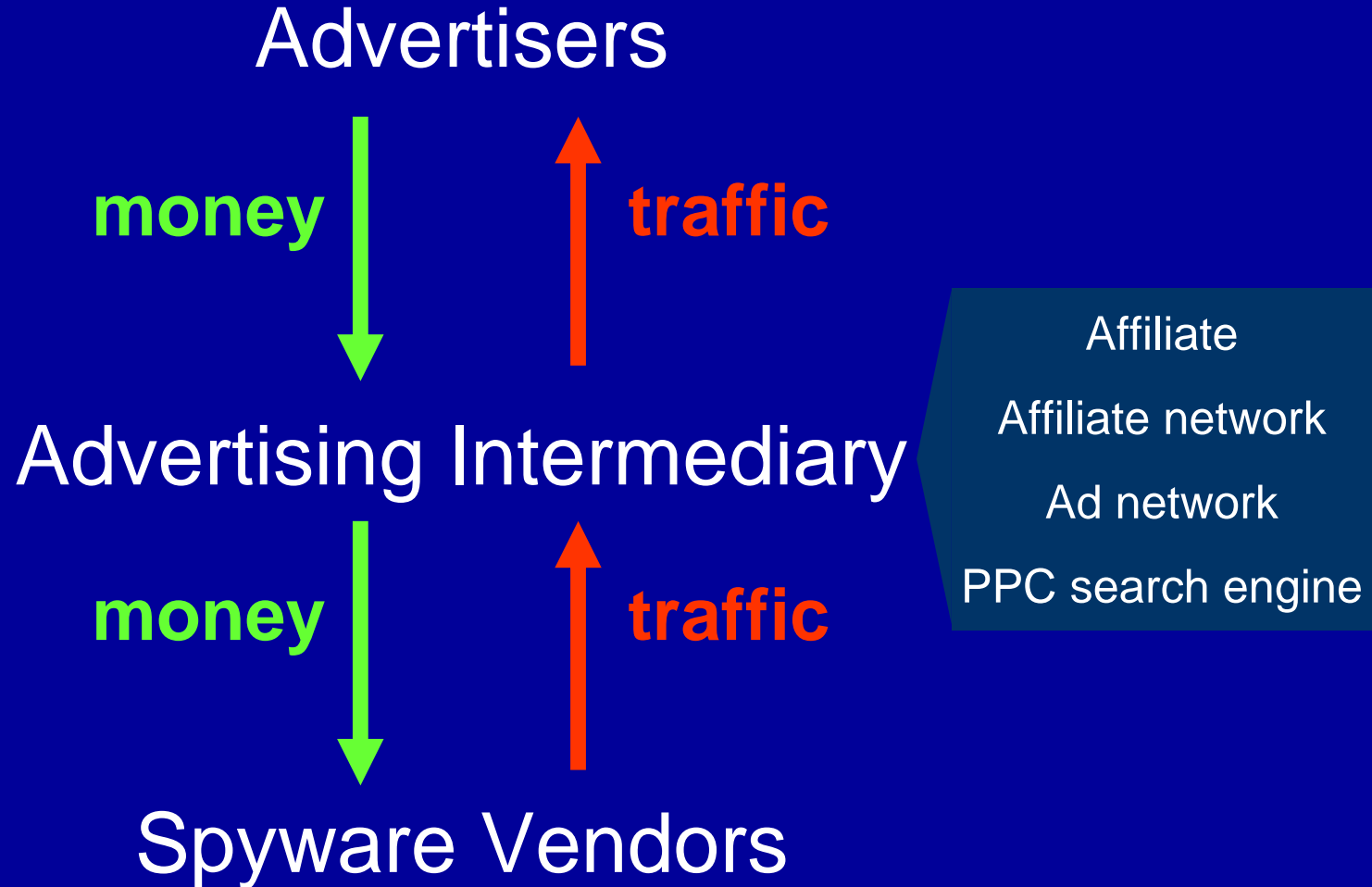


The Spyware Business Model

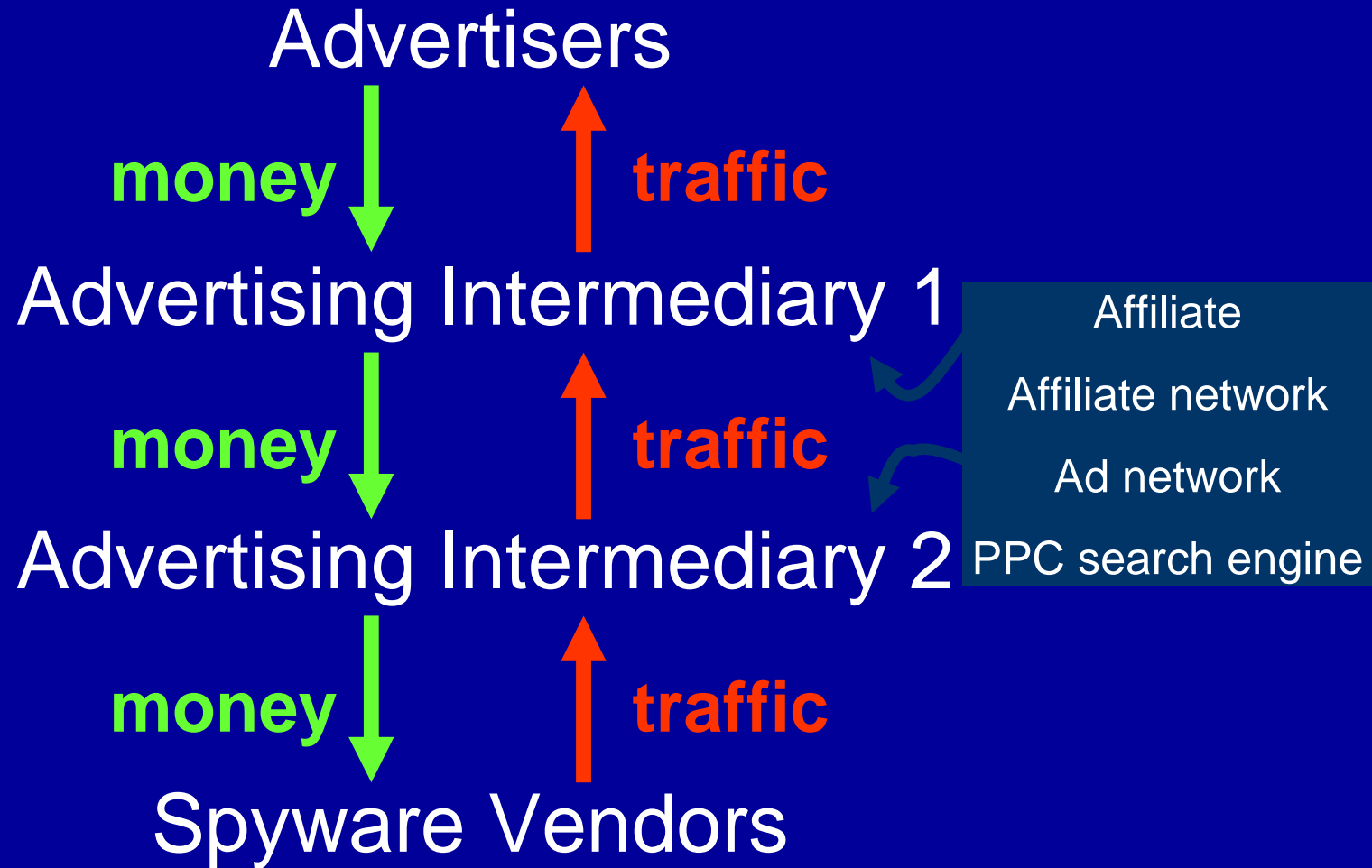
Revenue Sources



Revenue Sources

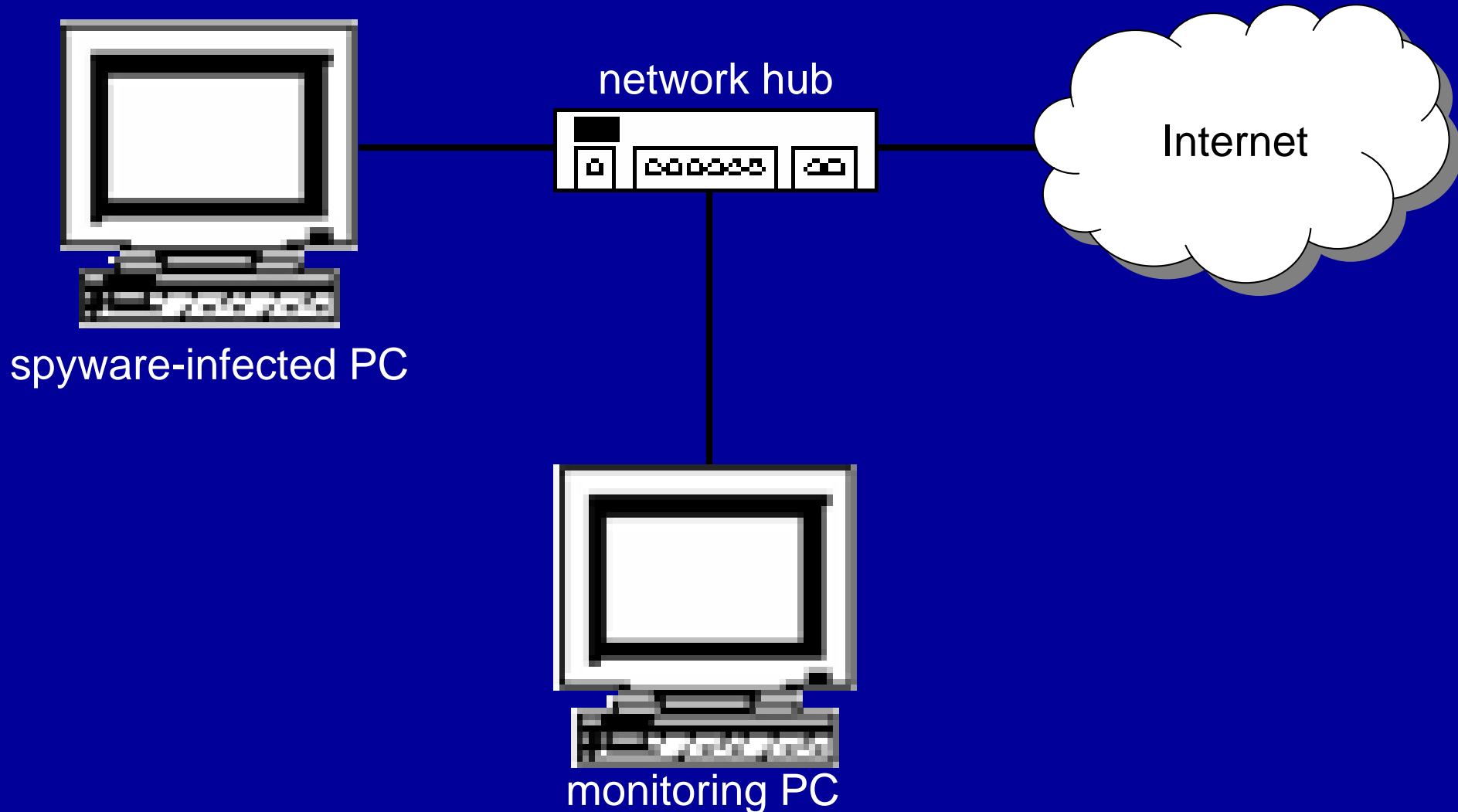


Revenue Sources



Investigation Methods

Investigator's Tools: Packet Sniffer





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BUSINESS

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May 2006

Understanding the Chain of Redirects - Verizon

→ GET /imp/servlet/ImpServe?urlContext=http://www.tipany.com...
&transponderID={8D0526ED-F7CB-4005-9191-6C9A9D0F557B} 1
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 2
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 ... 3

← HTTP/1.1 302 Found ...
Location: http://www.verizonwireless.com/b2c/affiliate?...

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

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Address [http://www.walmart.com/rollbacks?ref=+500501.500682&search_constraint=0&search_query=rollbacks&sourceid=19081171230847785823](#) Go Links >>



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ROLLBACK

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ROLLBACK

\$499.00



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ROLLBACK

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Was: \$296.62

April 2006

Done | Start | C:\Documents and Set... | Buy.com - Flash Cards... | Search results for r... | Untitled - Windows Me... | 5:25 PM

Understanding the Chain of Redirects - Walmart

```
→ GET http://a.targetsaver.com/adshow ... 1
http://www.buy.com/retail/specialty_store_1.asp?loc=14575...
← HTTP/1.1 200 OK
http://www.targetsaver.com/redirect.php?clientID=113.167
↓
→ GET /redirect.php?clientID=113.16777729.1804289383&finalURL=...
← HTTP/1.1 302 Found
Location: http://targetsaver.com/redirect1.php?clientID=113... 2
↓
← http://www.easilyfound.com/a/2.php?cid=1029 3
↓
→ GET /a/2.php?cid=1029 4
← <script><!-- function clicktoit() {
        document.forms[0].submit();} --></script> ...
<body onload="Javascript:clicktoit()">
<form action="/a/3.php" method="get"> ...
↓
→ GET /a/3.php?cid=1029 5
← Location: http://click.linksynergy.com/fs-bin/click?id=MCVDO...
↓
← http://click.linksynergy.com/fs-bin/swat?lsnsig=I020ToJJ8rI&... 6
↓
← http://www.walmart.com/reflect.gsp?sourceid=2301369222076574... 7
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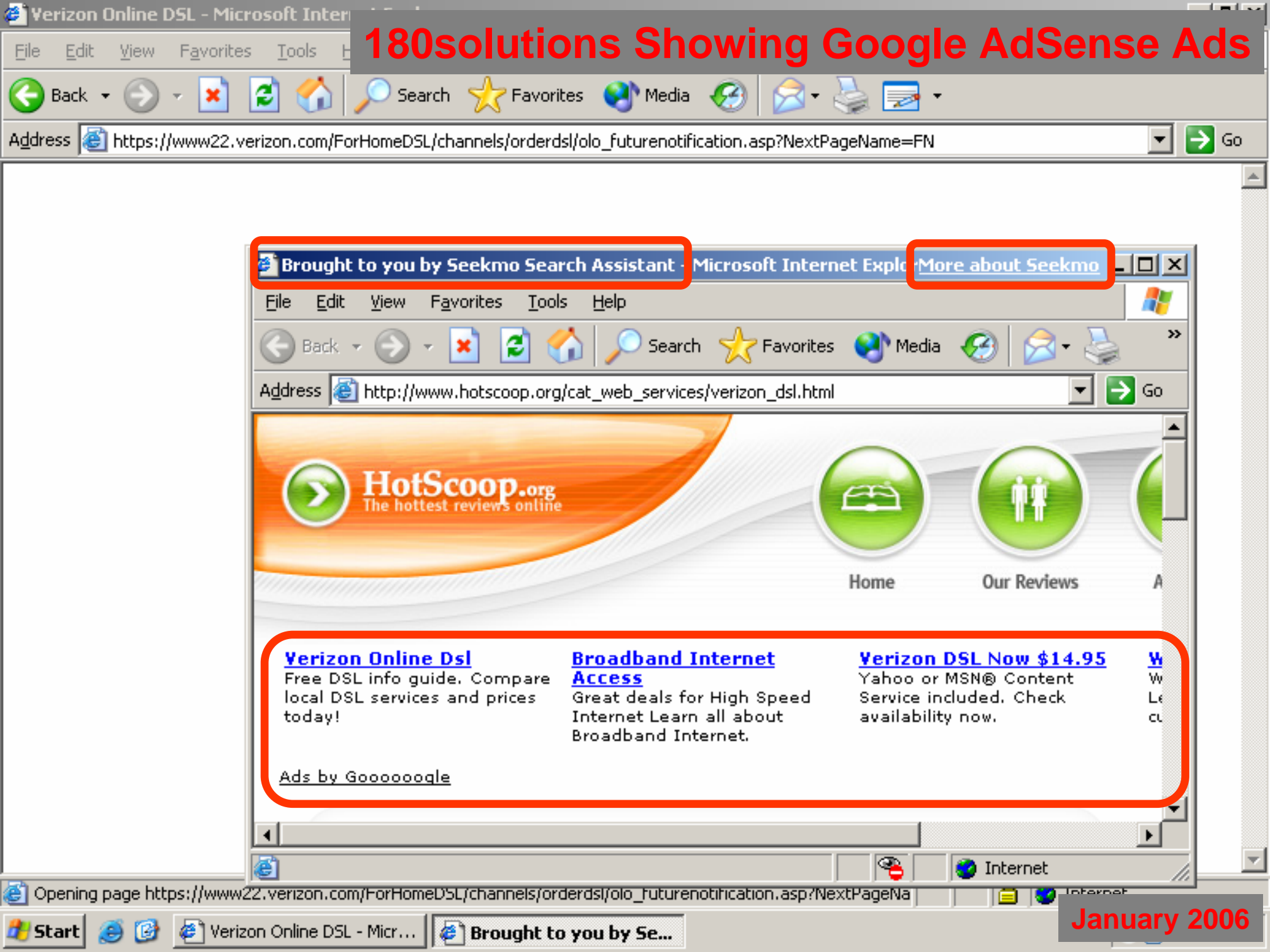
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Windows Task Ma...

5 Internet Explorer

The Best Off

January 2006

Brought to you by the Zango Search Assistant - Microsoft Internet Explorer

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March 2006

My Documents iWatchNow Media Center

C:\Documents and Settings

File Edit View Favorites

Back

Address C:\Documents and Settings

Name

- index.dat
- bedelman@adopt.hotbar[1].txt
- bedelman@kanoodle[1].txt
- bedelman@bestoffersnetwor...
- bedelman@btg.btgrab[2].txt
- bedelman@cliks[1].txt
- bedelman@doubleclick[1].txt
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- bedelman@smartbargains[2].txt
- bedelman@42435556[1].txt
- bedelman@ehg-lowermybills....
- bedelman@hitbox[2].txt
- bedelman@server.iad.liveper...
- bedelman@tooltips.hotbar[1]...
- bedelman@www.lowermybills...

Free PC Wallpapers

Understanding the Redirects – Yahoo Click Fraud

→POST /showme.aspx?keyword=%2esmartbargains%2ecom+...
Host: tv.180solutions.com

1

←ad_url: ... value=http://popsearch.nbcsearch.com/metricsdomains.php?search=smartbargains.com

→GET /metricsdomains.php?search=smartbargains.com
Host: popsearch.nbcsearch.com

2

←HTTP/1.1 302 Found
Location: http://ww2.ditto.com/red.php?mc=T%2FgSdHBNM%2Bg2%2...

→GET /red.php?mc=T%2FgSdHBNM%2Bg2%2B3AyiVWsqV5cRprOptbkiRRrZ...
Host: ww2.ditto.com

3

←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...

→GET /d/sr/?xargs=15KPjg1%2DpSgJXyl%5FruNLbXU6TFhUBPycz2tpk%5...
Host: www24.overture.com

5

←HTTP/1.1 302 Found
Location: http://www.smartbargains.com/default.aspx?aid=47&t...

Yahoo Click Fraud via Spyware

Yahoo PPC Advertisers *Including Smart Bargains*

money ↓ ↑ traffic

Yahoo Overture

money ↓ ↑ traffic

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PPC Advertisers

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Yahoo (Overture)

money ↓ ↑ traffic

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money ↓ ↑ traffic

trafficeengine.net

money ↓ ↑ traffic

SideFind

“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

“Loyalty Programs”: Installations

Installations are not the only characteristic to care about!

“Loyalty Programs”: Installations



Clearly Compromised
(Widespread nonconsensual
installations.)

Mixed History
(Some exploits. Pushy
bundles. Pushy installs.)

“Clean”

“Loyalty Programs”: Installations

Clearly Compromised (Widespread nonconsensual installations.)	Mixed History (Some exploits. Pushy bundles. Pushy installs.)	“Clean”
CashBackBuddy PersonalMoneyTree / RebateRetriever TopRebates / WebRebates ShopAtHomeSelect	Ebates <small>(paid Direct Revenue for installs in 2005)</small>	iGive Upromise

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.
 - Infect some PCs. Browse your site. Watch what happens. Investigate.

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”

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

Benjamin Edelman

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