

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

Benjamin Edelman

[www.benedelman.org](http://www.benedelman.org)

May 2006

# Agenda

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

# “Spyware”

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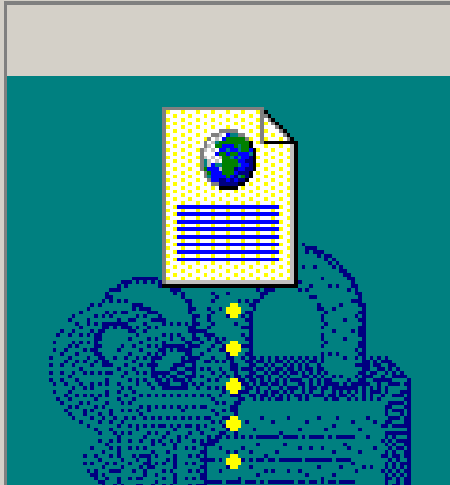
- Nonconsensual installations
  - Exploits
  - Huge bundles
- Poor disclosures
- Would anyone *really* agree?

# Installation methods

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

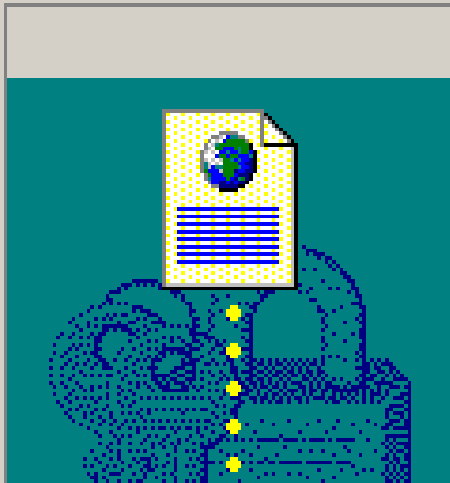
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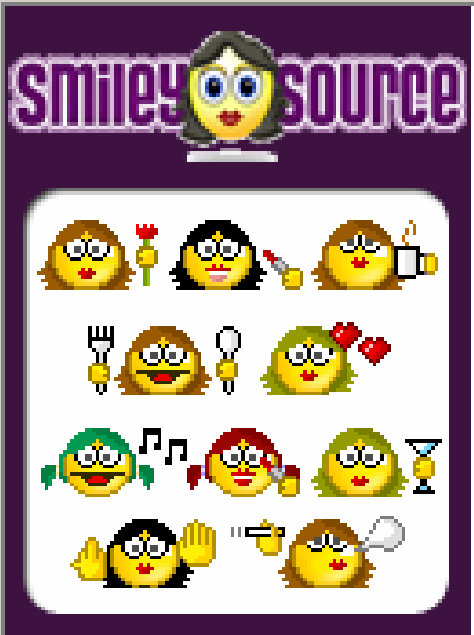
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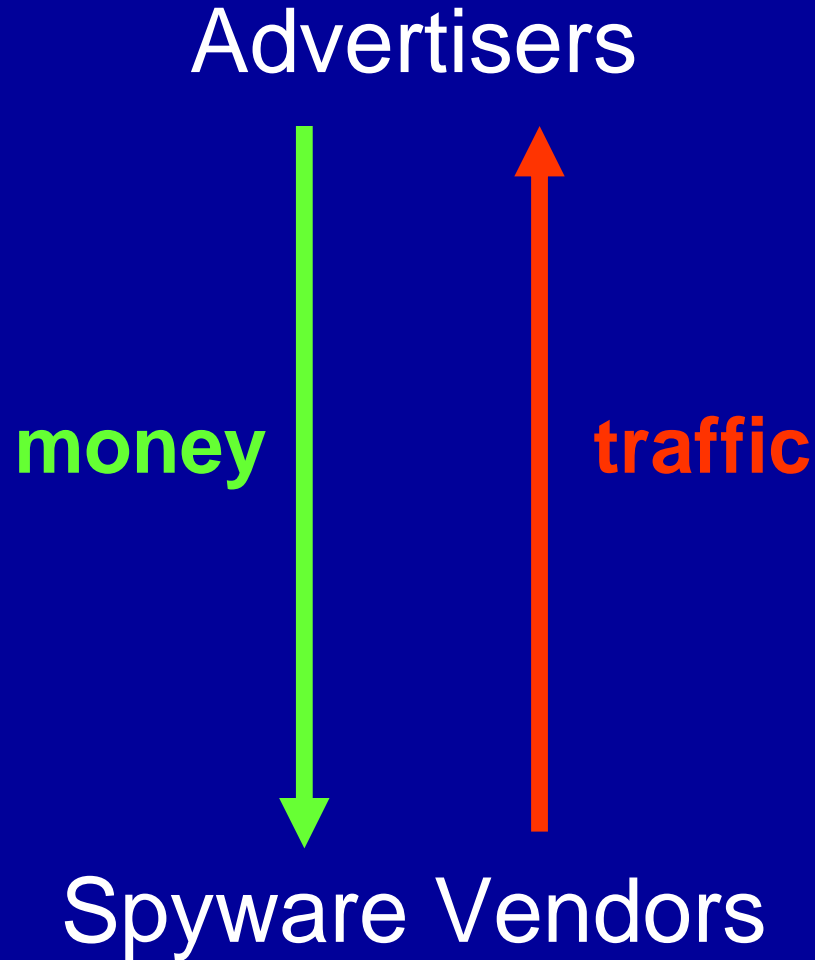


# The Spyware Business Model

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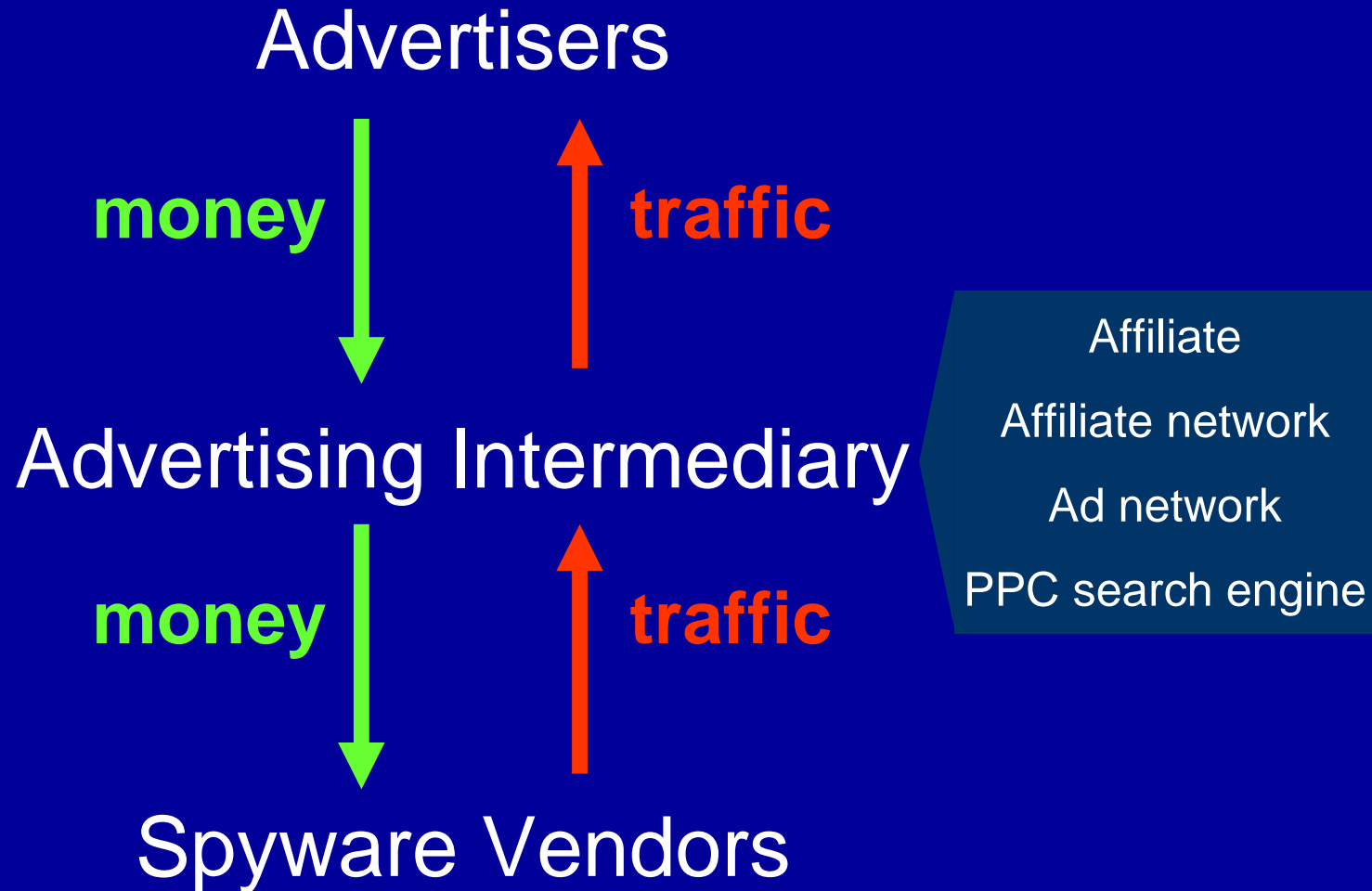
# Revenue Sources

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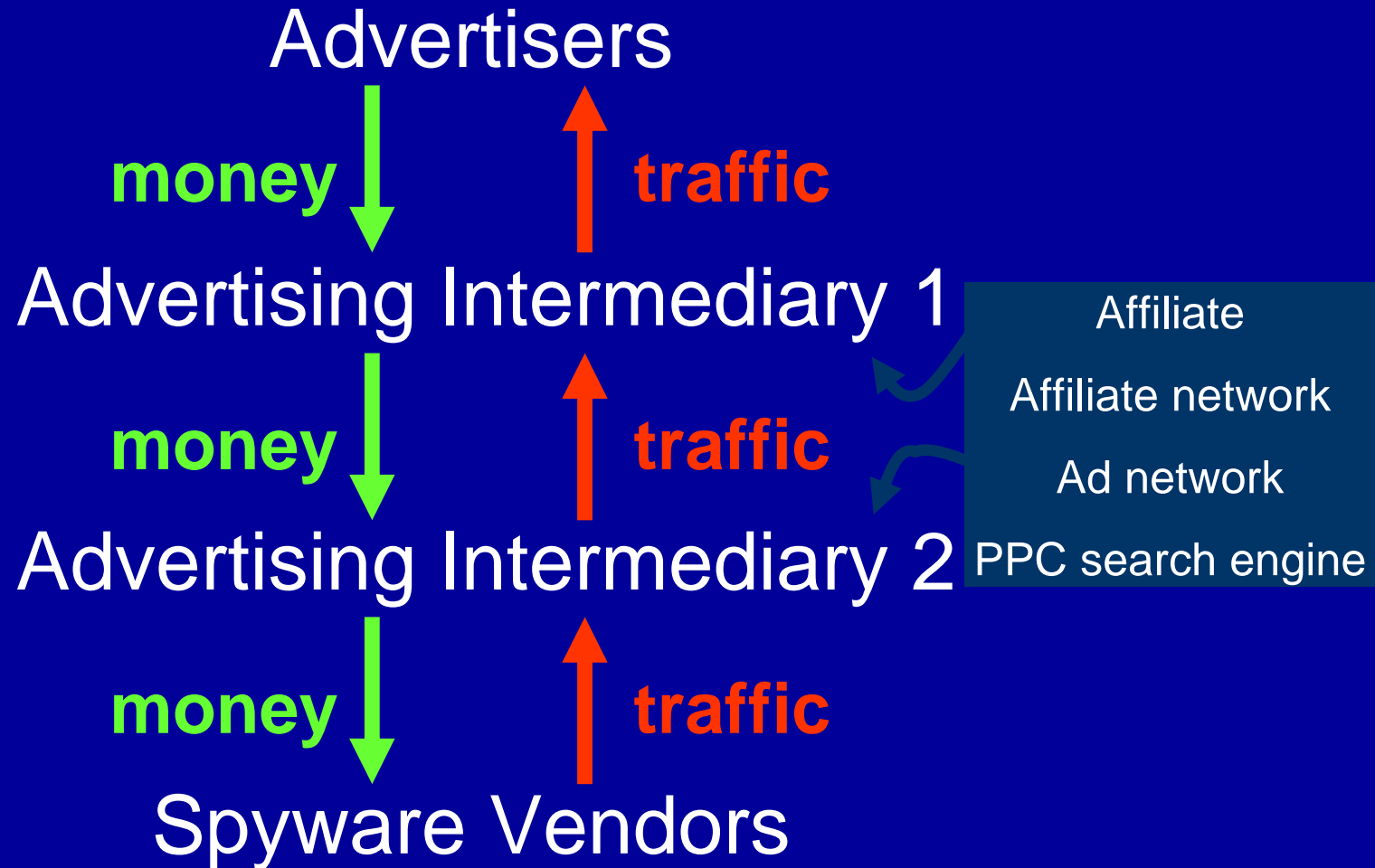
# Revenue Sources

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# Revenue Sources

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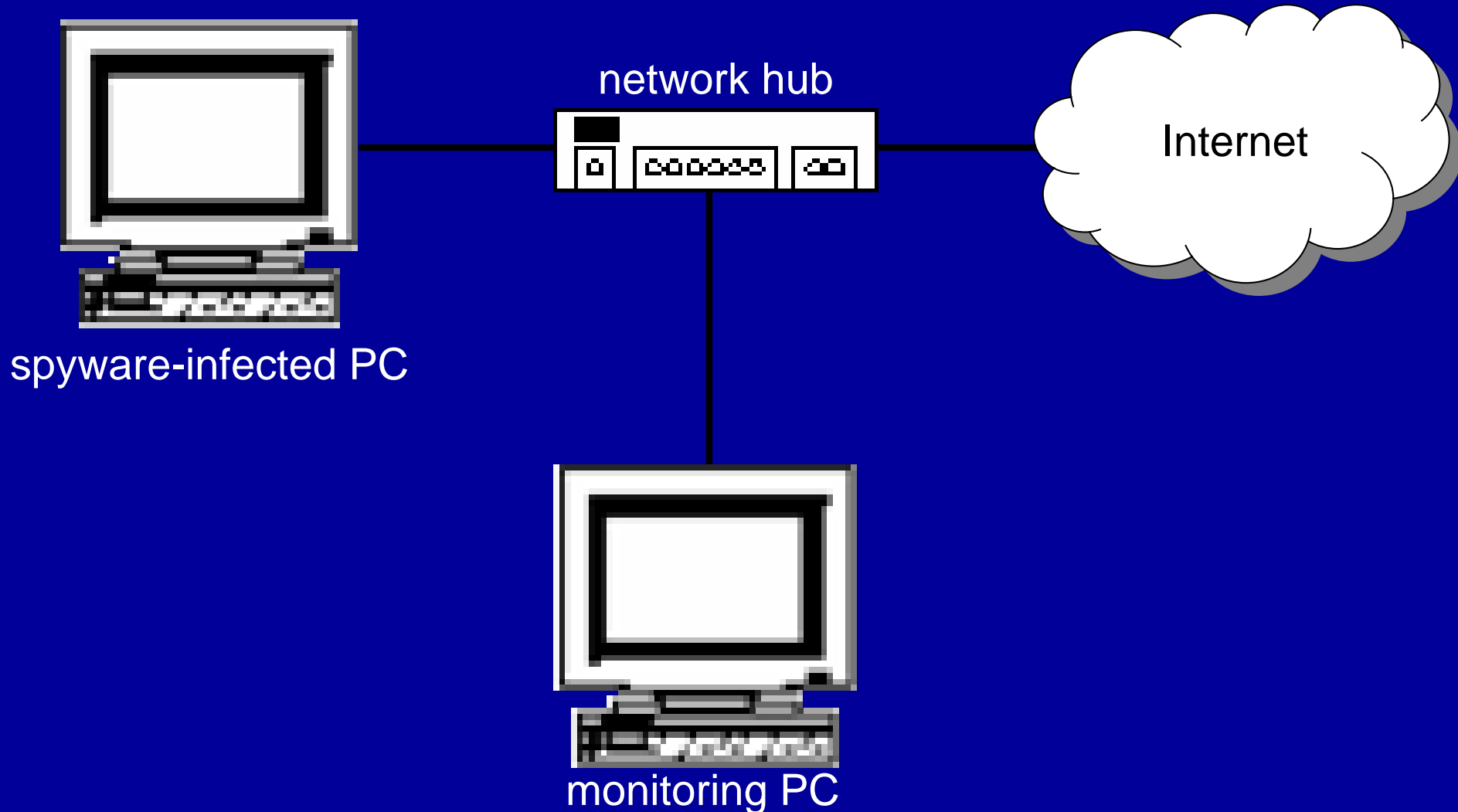
# Investigation Methods

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# Investigator's Tools: Packet Sniffer

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May 2006

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→ 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  
Location: http://clickserve.cc-dt.com/link/click?lid=  
4100000009135925

→ GET /link/click?lid=4100000009135925&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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# Understanding the Chain of Redirects - Walmart

→ GET <http://a.target saver.com/adshow> ...  
http://www.buy.com/retail/specialty\_store\_1.asp?loc=14575...

1

← HTTP/1.1 200 OK

http://www.target saver.com/redirect.php?clientID=113.167

→ GET </redirect.php?clientID=113.16777729.1804289383&finalURL=...>

← HTTP/1.1 302 Found

Location: http://target saver.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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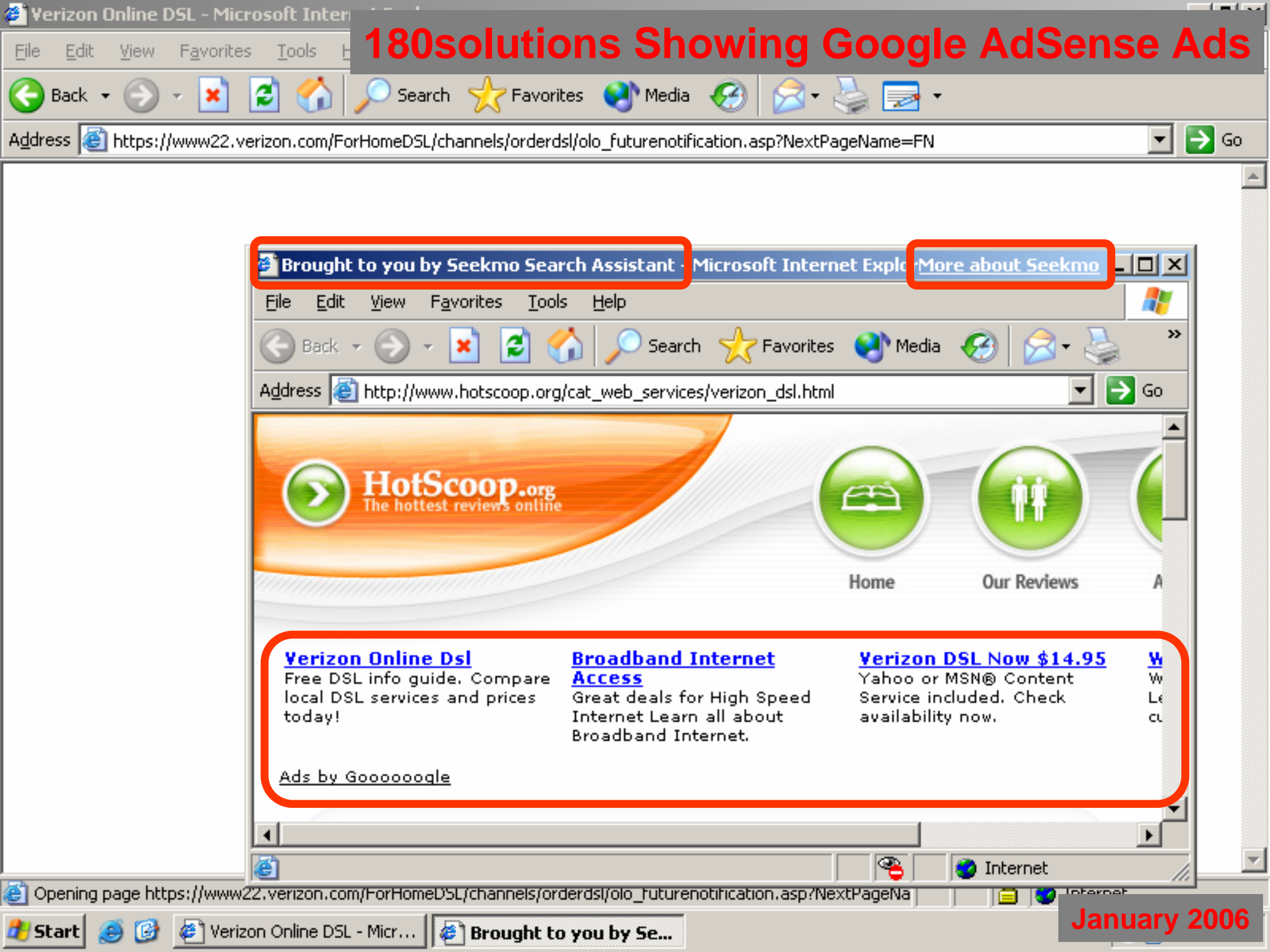
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March 2006

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1

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→GET /metricsdomains.php?search=smartbargains.com  
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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

**Ditto**

money ↓ ↑ traffic

**Nbcsearch**

money ↓ ↑ traffic

**180solutions**



Failure to disclose that these are sponsored links

SideFind

powered by IS

computers Find

[Buy a Dell Computer - Official Site](#)  
Buy a computer at Dell. Up to 1/3 off instantly on select...

[PCs for Less from Dell](#)  
Get a free flat panel upgrade and instant savings on select...

[Name-Brand Computers on eBay](#)  
Visit eBay Electronics for high-quality computers. Discover

Red Cross in its relief efforts for Hurricane Katrina. A

Start Browsing for Products & Services

Home & Home Office  
Computers, printers, TVs and other [consumer electronics](#) and accessories for you and your family.

Small Business  
Technology solutions for businesses from 1 to 200 employees.

# SideFind Serving Yahoo PPC Ads

PPC Advertisers

money ↓ ↑ traffic

Yahoo (Overture)

money ↓ ↑ traffic

81.201.104.136

money ↓ ↑ traffic

trafficeengine.net

money ↓ ↑ traffic

SideFind



# “Loyalty Programs”

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- 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

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*Installations are not the only characteristic to care about!*

# “Loyalty Programs”: Installations

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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

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- 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

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- 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?

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- Affiliate Merchants
- Affiliate Networks
- Affiliates
- Banner ad buyers
- Pay-per-click advertisers

# What Can Affiliate Merchants Do?

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- 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?

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- 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?

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- 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

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