Adtech Shenanigans in 2015

Benjamin Edelman
About me

- Associate Professor, Harvard Business School
  - Teaching: starting and running .COM’s
  - Research: Internet architecture and business opportunities, especially vis-à-vis law and regulation
- Consulting: advertising fraud, privacy, compliance
  - Clients: Advertisers, ad networks, regulators, publishers, investors.
  - My standard terms: I can share information derived from public sources. All my material today is from public sources.
- I speak only for myself.
Plan for today

• Blinkx update
• Other adware
• The broader adtech ecosystem
Why is the Internet a wild west?

- New, fast-changing
  - Cheat where no one is looking
  - Exploit others’ perpetual optimism
- Long chains of intermediaries
  - When each step only charges a few percent...
  - Lots of finger-pointing when something goes wrong
- Doing business at a distance
  - Can be hard to find the perpetrator’s location
  - Perpetrators can create new identities if caught
  - Law enforcement interest when victims are distant?
What ads does Blinkx adware show?
You are just one click away from starting the download...

Requirements and Specs

<table>
<thead>
<tr>
<th>License</th>
<th>Freeware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size / Time</td>
<td>1.09 Mb / 30 Seconds</td>
</tr>
<tr>
<td>Requirements</td>
<td>No special requirements</td>
</tr>
<tr>
<td>OS</td>
<td>Windows 7, Vista, XP, 2000</td>
</tr>
<tr>
<td>Last Updated</td>
<td>Dec 2nd, 2013</td>
</tr>
</tbody>
</table>

The player is available for download and it is Recommended to view multimedia content.

- Richer, more immersive user experiences
- Experience the web at its fullest
- Beautiful HD video, faster graphics rendering, and high performance
- Bug fixes and security enhancements

Install

Download

updateplugins.com is distributing an install manager that will manage the installation of your selected software. In addition to managing your selected software, this install manager will make recommendations for additional free software that you may be interested in. Additional toolbars, browser add-ons, game applications, anti-virus applications and other types of applications. You are not required to install any additional software.

This ad served by Severe Weather Alerts. Click here to learn more.
Enjoy unlimited instant streaming of movies and TV shows. Anywhere, anytime.

Start your 30-day free trial

Amazon Prime also includes unlimited FREE Two-Day Shipping on millions of
How do Blinkx adware programs get onto users’ computers?
attracting users

convincing users to install adware

making adware

brokering adware traffic

selling advertising to advertisers

fake Flash Player

Kickass.to

StormWatch

Blinkx Verti Techn’y Group

Blinkx

Blinkx

Blinkx affiliate networks

Blinkx “provides the monetization engine for this application and others like it”
The wider world of modern adware
ironSource

Delivering digital products across all devices

ironSource is the world leading platform for software discovery, distribution and delivery, connecting people and apps across platforms and devices.

About IronSource

**mobile**Core

Distribution and monetization for mobile apps

**install**Core

Installer-based platform for desktop products

**display**Core
installCore

World’s leading software installation platform for premium publishers

Employing cutting edge technologies covering a wide range of fields, the installCore platform offers an optimal solution for the distribution, delivery and monetization of software.

installCore Website

installCore Eco System

SOFTWARE DEVELOPER
ADVERTISER

APP

INSTALLCORE PLATFORM

TARGETING
DELIVERY
ANALYTICS

SOFTWARE DEVELOPER
PARTNER

APP

END USERS

APP

APP

APP
download google chrome

Google

About 37,000,000 results (0.28 seconds)

1. google.com - Download Google Chrome
   - How to Install Chrome: Learn more about how to install Chrome for free on your computer.
   - Get Chrome for Mobile: Browse fast on your tablet & phone by downloading Chrome for mobile.
   - Chrome Apps & Extensions: Discover great apps, games, extensions & themes for Chrome.
   - Features: Learn more about the fast, simple, & secure browser built for the web.

2. Download Google Chrome® - Downloadb.net
   - Chrome is still fast and loaded with new standard support. – PCMag
   - Download the New Version - Get the Latest Chrome® - 100% Free Installation

3. Chrome - Google
   - A browser that combines a minimal design with new technology designed to improve the user experience. Includes download and documentation.
   - Chrome Browser: Google Chrome is a browser that combines a minimal design with ...
   - Browser: Chrome for Education. Get a secure and modern browser for ...

Download and install Google ... Signing In
Welcome to the Downloadb Download Manager

This will download and install the software on your computer. Click "Next" to continue.

Quick Specs

<table>
<thead>
<tr>
<th>File Name</th>
<th>ChromeSetup.exe</th>
<th>Version</th>
<th>latest</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Size</td>
<td>860000</td>
<td>Date Added</td>
<td>-</td>
</tr>
</tbody>
</table>

Google Chrome Browser

Step 1 of 4

Downloadb
Terms of Use | Privacy Policy
Google Chrome

Make your selection to continue...

Get Astromenda new-tab add-on for easy access to your favorite sites & Astromenda games app to play games. If you choose to install the add-on, it will be installed on all browsers and will set your homepage(s) and default search to it, and we will perform the necessary adjustments to carry out your choices, and will protect your browsers from unauthorized changes.

Click here to customize the installation.

END USER LICENSE AGREEMENT

[Last updated December 31, 2013]

This End user license agreement ("Agreement") constitutes the full and final agreements with regards to your use of the Astromenda Software.

We are glad that you chose to participate in our activities and to be a part of the Astromenda community. Please take the time

By clicking "Accept", I acknowledge I have read and agree to the End User License Agreement, the Privacy Policy, and to install Astromenda add-on and Astromenda games app, or my choices above.

Step 2 of 4

Decline

Accept
Google Chrome

Make your selection to continue...

Framed Display software provides helpful content and tools to enhance your web browsing experience. Framed Display administers the following exclusive offers, coupons, website ratings, reviews, multi-site searching, related search results, and comparison shopping.

Additional features may be auto-enabled after installing. Framed Display content includes advertisements and is not affiliated with any underlying websites.

Browser settings will be adjusted at install. User info is collected and shared for ad relevance and other purposes. Uninstall Framed Display with Add/Remove Programs. Please review all terms before installing.

By clicking "Accept" you agree to the End User License Agreement and Privacy Policy of Framed Display. This product is compatible with Windows and may install on IE and/or Firefox.

END USER LICENSE AGREEMENT

BY INSTALLING THE SOFTWARE, YOU AGREE TO THE FOLLOWING TERMS AND CONDITIONS, WHICH INCLUDE AN ARBITRATION AGREEMENT, CLASS ACTION WAIVER, DISCLAIMER OF WARRANTIES, AND LIMITATION OF LIABILITY.

The terms set forth in this End User License Agreement (this "Agreement") are conditions

Step 2 of 4

Decline

Accept
RegClean Pro cleans such invalid registry entries using its advanced scan engine. It not only fixes invalid registry entries, it also defragments the registry, keeping it streamlined for smoother system performance. You don't have to be a computer expert to use this RegClean Pro. RegClean Pro also includes Advanced System Protector for complete data protection.

By clicking "Accept" you agree to install RegClean Pro and to its End User License Agreement and Privacy Policy. This product is compatible with your Windows operating system and can be removed anytime via the Add/Remove programs utility.
Google Chrome

Driver Support

Whether you just plugged in a printer, webcam or other device, if you are in the process of re-installing Windows, or just plain troubleshooting a device-related issue, we can help find the correct device driver for your system.

Driver Support provides an innovative way to diagnose issues with your PC, resolve those issues through support and driver matching technology, and optimize your PC’s performance.

Driver Support’s access to a robust, industry leading database makes it the most accurate driver and software matching system available.

Our matching technology means you never have to worry about whether your driver is the correct one for your device.

By clicking “Accept” you agree to install DriverSupport and to its End User License Agreement and Privacy Policy. This product is compatible with your Windows operating system and can be removed anytime via the Add/Remove programs utility.

Step 2 of 4

Decline  Accept
Google Chrome

Highly recommended

Update Windows Drivers

Install missing or out of date Windows Drivers for improved PC performance.

Update Drivers

Your Software is downloading...

24%

Step 3 of 4

Download
Terms of Use | Privacy Policy
Backing up your computer doesn’t need to be complicated! MyPCBackup uses a small desktop application to backup all of your computers to the cloud. Your files are constantly backed up and you can access them at any time from any device in the world. Click ‘Play’ on the video to see what MyPCBackup can do for you. MyPCBackup will back up the files and folders that you choose. Once the initial backup is complete, MyPCBackup will automatically save any changes to the files or any new files added. You can set your backup schedule and MyPCBackup will run in the background, without you having to do anything.

By clicking “Accept”, you agree to install MyPCBackUp and to its End User License Agreement and Privacy Policy. This product is compatible with your Windows operating system and can be removed anytime via the Add/Remove programs utility.

Step 2 of 4

Decline

Accept
Thank you. Your download is complete.

You have successfully downloaded Google Chrome.
Click on "Install Now" to install it now.

Update your PC with the correct Windows Drivers

CONTINUE >>

Install Now
IronSource Closes Pre-IPO Investment Round of Up to $100 Million

Israel-based IronSource closed an investment round of $80 million to $100 million from a consortium of American, European and Asian investors, according to a person familiar with the matter, ahead of an initial public offering slated for the second quarter of 2015.

The software company, founded in 2009, has hired JPMorgan [JPM +0.10%] and Morgan Stanley as its advisers for the IPO, which is estimated to have a valuation $1.5 billion.

IronSource's software manages downloads and optimizes the process to create a better installment success rate. The company's annual revenue totaled around $260 million. Alongside its PC-based business, the company has expanded its mobile offerings in the last year and its mobile business now generates tens of millions of dollars a year in revenue.

IronSource currently employs 370. The company plans to expand its offering and revenue streams through acquisitions before the planned IPO, the person said.
Unwanted Software Policy

At Google, we believe that if we focus on the user, all else will follow. In our Software Principles, we provide general recommendations for software that delivers a great user experience. The policy below expands upon those general recommendations by providing a list of basic criteria for user-friendly software on the web. Software that violates these principles is potentially harmful to the user experience, and we will take steps to protect users from it.

We've found that most unwanted software displays one or more of the same basic characteristics:

- It is deceptive, promising a value proposition that it does not meet.
- It tries to trick users into installing it or it piggybacks on the installation of another program.
- It doesn't tell the user about all of its principal and significant functions.
- It affects the user's system in unexpected ways.
- It is difficult to remove.
- It collects or transmits private information without the user's knowledge.
- It is bundled with other software and its presence is not disclosed.

Transparent Installation and Upfront Disclosure

- As part of the install flow, any bundled software must be clearly disclosed. No software should be installed silently without the user's permission. The name and principal and significant functions of every piece of software that will be installed should be visible to the user, and the user should be able to skip the entire bundled software or offer as well as individual components of the bundle.

- Before and during the install process, the software must not engage in any deceptive behaviors. Some examples of deceptive behaviors include:
  - Making false or misleading claims about the state of the user's system. For example, misleading claims related to antivirus protection, system performance, system optimization, a new version of a plugin, etc.
  - Claiming or implying to be official software from a company or a partner of the company if that is not the case.

Keeping Good Company

- If any program includes any third-party software, the author is responsible for obtaining proper bundling authorization from the third party.
- If software is offered as part of a bundle, all programs included in the bundle must follow the guidelines above.
Ad networks and exchanges

Web Site -> ad network -> Advertiser

payment
ad space

Yahoo
RightMedia
AppNexus
Google

ad network

Web Site -> ad network

ad network

Web Site

Web Site

...
So much that can go wrong...

- Invisibility
- Inventory counterfeiting
- Injection
- Laundering
[ad farm creates 14 ads and zero content]

GET http://intadserver101.info/adsidu.php?size=300x250&pub_url=
HTTP/1.1 ...
Referer: [ad farm URL]
HTTP/1.1 200 OK ...

<iframe src="http://ib.adnxs.com/tt?id=3807703&size=300x250&referrer=
http://facebook.com" ... width="300" height="250"></iframe>

facebook.com HTTP/1.1 ...
HTTP/1.1 302 Found ...

Under Pressure From Buyers, 
Fraud-Plagued AppNexus Girds For 
Battle

by Zach Rodgers  //  Wednesday, October 15th, 2014 – 8:30 am

Share:  

The digital ad sector has made some tangible progress in the war 
on fraudulent ad impressions, thanks to new detection methods 
and improved hygiene from many sell-side platforms. But one of 
the biggest exchanges has added rather than subtracted invalid 
impressions, and buyers are complaining.
Criteo charging advertisers for traffic they already had
adware injection into YouTube

IFRAME'ing Healthiwoman

click here

auto reload after 60 seconds

Blinkx’s Grab Media in Traffic Laundering
Why such a mess?

- Long supply chains
- Plausible deniability
- Ad network complacency
- Ad buyer complacency
- Excessive trust in (mis)measured performance
Adtech Shenanigans in 2015

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more examples: http://www.benedelman.org