Boston Network Users Group

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Who is this guy?

501(c)(3) non-profit organization dedicated to the research and development of technologies for online anonymity and privacy

https://www.torproject.org
Who wants anonymity online?

- Normal people
- Law Enforcement
- Human Rights Activists
- Business Execs
- Militaries
- Abuse Victims
How many people want anonymity?

No idea. We’re an anonymity system.

However, the National Science Foundation has funded us to learn more:

https://metrics.torproject.org/
Tor hides communication patterns by relaying data through volunteer servers

Diagram: Robert Watson
Tor hides communication patterns by relaying data through volunteer servers

Diagram: Robert Watson
Tor hides communication patterns by relaying data through volunteer servers

Diagram: Robert Watson
Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.

— John Perry Barlow, “A Declaration of the Independence of Cyberspace”

February 8, 1996
China increases Internet control, takes down hundreds of websites
...applied theory...

Dear User,

Sorry, the requested page is unavailable.

If you believe the requested page should not be blocked please click here.

For more information about internet service in Saudi Arabia, please click here: www.internet.gov.sa

عفواً، الموقع المطلوب غير متاح.

إن كنت ترى أن هذه الصفحة ينبغي أن لا تُحجب تفضل بالضغط هنا.

لمزيد من المعلومات عن خدمة الإنترنت في المملكة العربية السعودية، يمكنك زيارة الموقع التالي: www.internet.gov.sa
... applied theory...
If You Can See It
You Can **Monetize It**

Evolved DPI – See what’s flowing through your network
Major ISPs agree to "six strikes" copyright enforcement plan

By Nate Anderson | Published 9 months ago

American Internet users, get ready for three strikes "six strikes." Major US Internet providers—including AT&T, Verizon, Comcast, Cablevision, and Time Warner Cable—have just signed on to a voluntary agreement with the movie and music businesses to crack down on online copyright infringers. But they will protect subscriber privacy and they won't filter or monitor their own networks for infringement. And after the sixth "strike," you won't necessarily be "out."
... applied theory...

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.541</td>
<td>50936 SYN</td>
<td>[SYN]</td>
</tr>
<tr>
<td>0.541</td>
<td>50936 [ACK]</td>
<td></td>
</tr>
<tr>
<td>0.542</td>
<td>Client Hello</td>
<td></td>
</tr>
<tr>
<td>1.030</td>
<td>50936 [ACK]</td>
<td></td>
</tr>
<tr>
<td>1.033</td>
<td>Server Hello</td>
<td></td>
</tr>
<tr>
<td>1.124</td>
<td>50936 [ACK]</td>
<td></td>
</tr>
<tr>
<td>2.079</td>
<td>TCP Previous segment</td>
<td></td>
</tr>
<tr>
<td>2.079</td>
<td>TCP Dup ACK 12#1</td>
<td></td>
</tr>
<tr>
<td>5.563</td>
<td>TCP Retransmission</td>
<td></td>
</tr>
<tr>
<td>5.563</td>
<td>50936 [ACK]</td>
<td></td>
</tr>
<tr>
<td>6.008</td>
<td>TCP Retransmission</td>
<td></td>
</tr>
<tr>
<td>6.008</td>
<td>50936 [ACK]</td>
<td></td>
</tr>
<tr>
<td>16.025</td>
<td>Client Key Exchange</td>
<td></td>
</tr>
<tr>
<td>17.533</td>
<td>TCP Retransmission</td>
<td></td>
</tr>
<tr>
<td>20.735</td>
<td>TCP Retransmission</td>
<td></td>
</tr>
<tr>
<td>21.127</td>
<td>TCP Previous segment</td>
<td></td>
</tr>
<tr>
<td>26.447</td>
<td>50936 [FIN]</td>
<td></td>
</tr>
<tr>
<td>26.743</td>
<td>Encrypted Alert</td>
<td></td>
</tr>
<tr>
<td>26.743</td>
<td>50936 [RST]</td>
<td></td>
</tr>
</tbody>
</table>
... applied theory...

<table>
<thead>
<tr>
<th>Tracker</th>
<th>Number of unique domains found on</th>
<th>Percent of all unique domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google Analytics</td>
<td>329,330</td>
<td>84%</td>
</tr>
<tr>
<td>Google Adsense</td>
<td>162,584</td>
<td>41%</td>
</tr>
<tr>
<td>DoubleClick</td>
<td>122,483</td>
<td>31%</td>
</tr>
<tr>
<td>Statcounter</td>
<td>26,806</td>
<td>7%</td>
</tr>
<tr>
<td>AddThis</td>
<td>24,126</td>
<td>6%</td>
</tr>
<tr>
<td>Quantcast</td>
<td>24,113</td>
<td>6%</td>
</tr>
<tr>
<td>Google Custom Search Engine</td>
<td>20,601</td>
<td>5%</td>
</tr>
<tr>
<td>OpenAds</td>
<td>17,608</td>
<td>4%</td>
</tr>
<tr>
<td>Omniture</td>
<td>13,126</td>
<td>3%</td>
</tr>
<tr>
<td>Wordpress Stats</td>
<td>11,475</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Figure 11 Percentage of Domains each Web bug was found on, March 2009*
... applied theory...
spring is in the air...
Software

We write a lot of free software.

About half is GPLv2 and the other half 3-Clause BSD.
Software

We write in C, C++, python, ruby, shell, javascript, java, perl, and whatever else I forgot.

All our code is available at Tor’s gitweb, https://gitweb.torproject.org

or our old svn server, https://svn.torproject.org/.
33 core people. 6 female and 27 male.

12 countries. Virtual team, virtual office.

we talk via email, IRC, and XMPP.

5,000+ volunteers, 85 countries.

See what we’ve done in the past few years in our 2012 Annual Report

https://www.torproject.org/about/findoc/2012-TorProject-Annual-Report.pdf
We focus on six main products:

- arm, http://www.atagar.com/arm/
- atlas/compass/metrics, https://(atlas|compass|metrics).torproject.org
- obfsproxy, https://www.torproject.org/projects/obfsproxy
- tor cloud, https://cloud.torproject.org and
- tor itself.
Growing ecosystem of products:

- tails, https://tails.boum.org
- orbot, https://guardianproject.info
- torchat, https://github.com/prof7bit/TorChat
- TorTV, http://www.dyne.org/software/tortv/
- Onion Browser, https://mike.tig.as/onionbrowser/
Anonymous Operating System - Tails

Tails is a live DVD or live USB that aims at preserving your privacy and anonymity.

It’s based on Debian Stable.
Anonymous Operating System - Tails

It’s used in 94 countries with an average client boot seen every 24 seconds around the clock.

We sponsor Tails.

We’re doing a bug bounty program. This will fix a lot of bugs/feature requests in upstream.
Company

The Tor Project, Inc runs on free software.
We believe in transparency and sharing. Our code, designs, and content are all freely licensed (3-Clause BSD, GPL, or CC-BY-3.0)
We publish our tickets, discussions, and contract details with the world on our wiki, https://wiki.torproject.org.
Thanks!

Visit https://www.torproject.org for more information, links, and ideas.


applied theory, fourth image: Al Jazeera, February 2011

spring is in the air, Paco Pomet, http://pacopomet.wordpress.com/