

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>



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

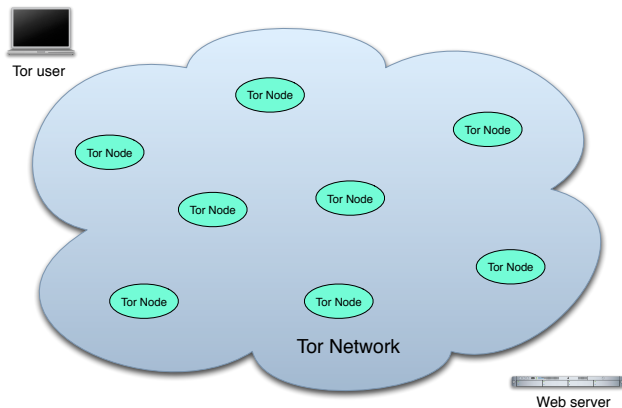


Diagram: Robert Watson

Tor hides communication patterns by relaying data through volunteer servers

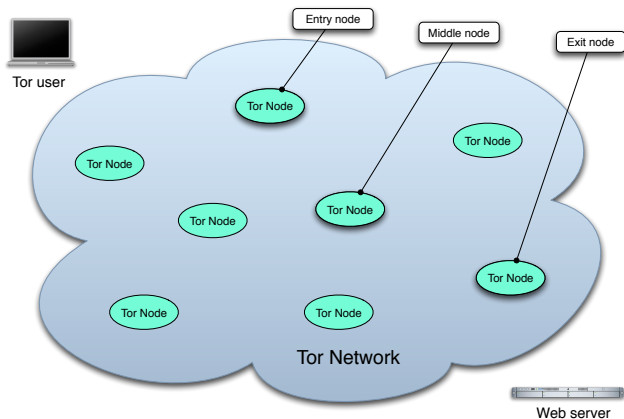


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Tor hides communication patterns by relaying data through volunteer servers

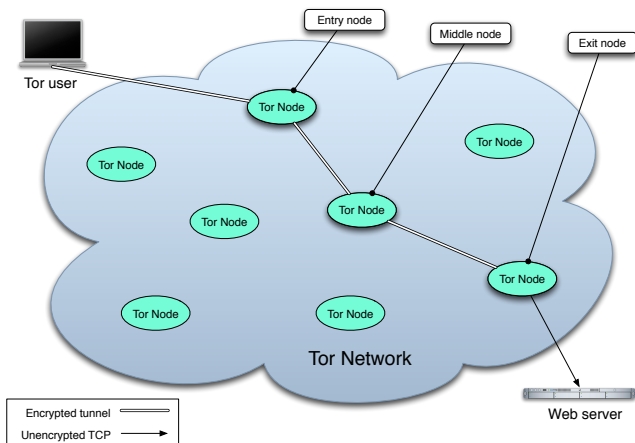


Diagram: Robert Watson

Internet Freedom

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

... applied theory...

5 Wednesday June 8, 2011, Francis Tan

China increases Internet control, takes down hundreds of websites

... applied theory...

Dear User,

عزيزي المستخدم،

**Sorry, the requested page is
unavailable.**

عفواً، الموقع المطلوب غير متاح.

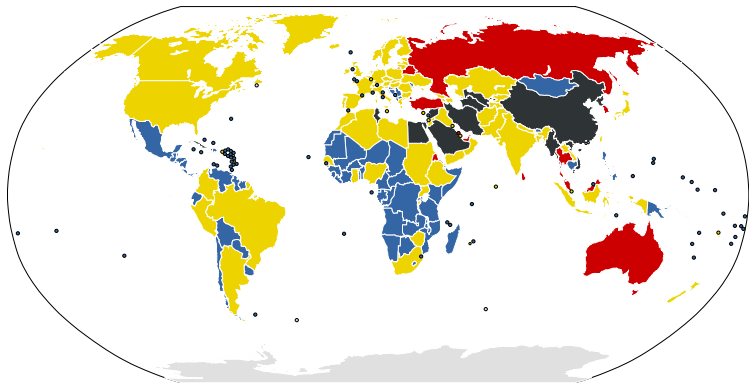
If you believe the requested page should not be
blocked please [click here](#).

إن كنت ترى أن هذه الصفحة ينبغي أن لا
تُحجب تفضل [بالضغط هنا](#).

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

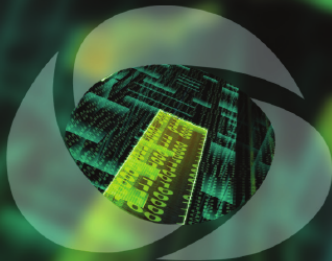
لمزيد من المعلومات عن خدمة الإنترنت في المملكة العربية السعودية،
يمكنك زيارة الموقع التالي: www.internet.gov.sa

... applied theory...



... applied theory...

If You Can See It
You Can **Monetize It**



Evolved DPI – See what's flowing through your network

... applied theory...

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...

```
|0.541 | | https > 50936 [SYN,  
| | (50936) <-----> (443)  
|0.541 | | 50936 > https [ACK]  
| | (50936) -----> (443)  
|0.542 | | Client Hello  
| | (50936) -----> (443)  
|1.030 | | https > 50936 [ACK]  
| | (50936) <-----> (443)  
|1.033 | | Server Hello,  
| | (50936) <-----> (443)  
|1.124 | | 50936 > https [ACK]  
| | (50936) -----> (443)  
|2.079 | | [TCP Previous segme  
| | (50936) <-----> (443)  
|2.079 | | [TCP Dup ACK 12#1]  
| | (50936) -----> (443)  
|5.563 | | [TCP Retransmission  
| | (50936) <-----> (443)  
|5.563 | | 50936 > https [ACK]  
| | (50936) -----> (443)  
|6.008 | | [TCP Retransmission  
| | (50936) <-----> (443)  
|6.008 | | 50936 > https [ACK]  
| | (50936) -----> (443)  
|16.025 | | Client Key Exchange  
| | (50936) -----> (443)  
|17.533 | | [TCP Retransmission  
| | (50936) -----> (443)  
|20.735 | | [TCP Retransmission  
| | (50936) -----> (443)  
|21.127 | | [TCP Previous segme  
| | (50936) <-----> (443)  
|26.447 | | 50936 > https [FIN,  
| | (50936) -----> (443)  
|26.743 | | Encrypted Alert  
| | (50936) <-----> (443)  
|26.743 | | 50936 > https [RST]  
| | (50936) -----> (443)
```

... applied theory...

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

Figure 11 Percentage of Domains each Web bug was found on, March 2009

... applied theory...

THE FUTURE OF PRIVACY FORUM
WWW.FUTUREOFPRIVACY.ORG



... 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/>.

Software - People

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>

Software - Products

We focus on six main products:

- ▶ tor browser, <https://www.torproject.org/projects/torbrowser>
- ▶ arm, <http://www.atagar.com/arm/>
- ▶ atlas/compass/metrics,
[https://\(atlas|compass|metrics\).torproject.org](https://(atlas|compass|metrics).torproject.org)
- ▶ obfsproxy, <https://www.torproject.org/projects/obfsproxy>
- ▶ tor cloud, <https://cloud.torproject.org> and
- ▶ tor itself.

Software - Tor Ecosystem

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/>
- ▶ Torrouter,
<https://trac.torproject.org/projects/tor/wiki/doc/Torrouter>
- ▶ 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.

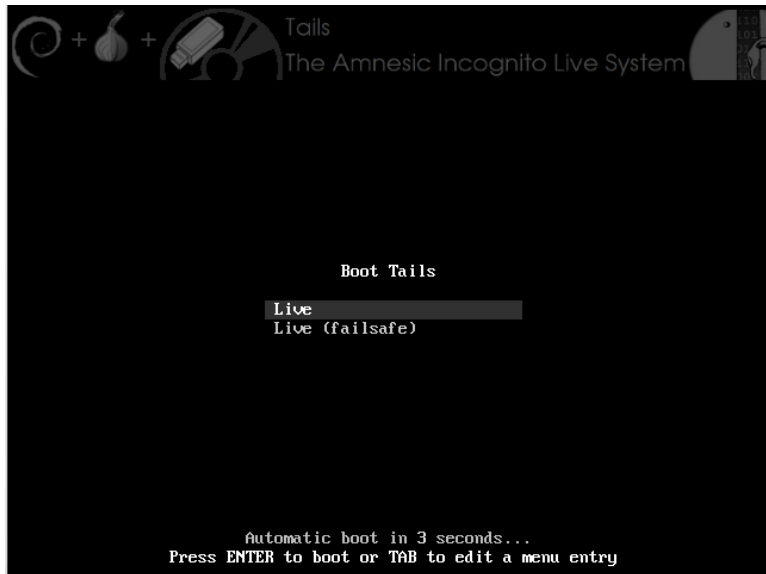
Anonymous Operating System - Tails

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.

Tails



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.

Copyrights

- ▶ applied theory, first image: Reporters without Borders, <http://www.rsf.org>
- ▶ applied theory, second image: Tor Project, Inc, <https://blog.torproject.org/blog/update-internet-censorship-iran>
- ▶ applied theory, third image: Information Week,2011-04-09, <http://www.informationweek.com/news/security/attacks/229400850>
- ▶ applied theory, fourth image: Al Jazeera, February 2011
- ▶ spring is in the air, Paco Pomet, <http://pacopomet.wordpress.com/>