

Privacy Coalition

Andrew Lewman
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09 Sep 2011



George Orwell

nineteen

eighty-four

a novel

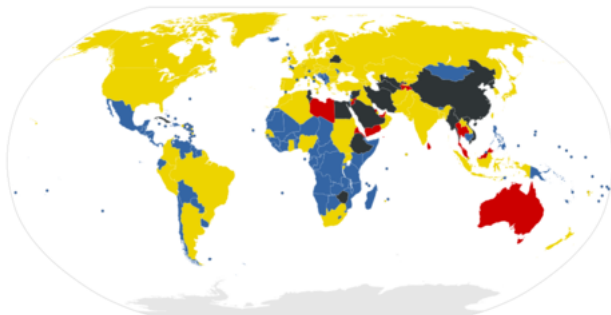
George Orwell was an optimist



Who controls the past, controls the future: who controls the present controls the past

— George Orwell, *Nineteen Eighty Four*, 1949

Internet Censorship Is Everywhere



Internet censorship map.

Blue: No censorship

Yellow: Some censorship

Red: Under surveillance

Black: Internet black holes (most heavily censored nations)

Internet Censorship Is Everywhere

Dear User,

تخدم،

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

الموقع المطلوب غير متاح.

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

ت 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

معلومات عن خدمة الإنترنت في المملكة العربية السعودية،
ممكنك زيارة الموقع التالي: www.internet.gov.sa

Internet Censorship Is Everywhere



Internet Censorship Is Everywhere



This domain name has been seized by ICE - Homeland Security Investigations, pursuant to a seizure warrant issued by a United States District Court under the authority of 18 U.S.C. §§ 981 and 2323.

Willful copyright infringement is a federal crime that carries penalties for first time offenders of up to five years in federal prison, a \$250,000 fine, forfeiture and restitution (17 U.S.C § 506, 18 U.S.C. § 2319). Intentionally and knowingly trafficking in counterfeit goods is a federal crime that carries penalties for first time offenders of up to ten years in federal prison, a \$2,000,000 fine, forfeiture and restitution (18 U.S.C. § 2320).

Censoring the 'net is all the rage



Censoring the 'net is all the rage

“ *more than 700 pornographic and copyright infringing websites have been shut down*

Censoring the 'net is all the rage

JUNE 22, 2011 5:27 PM PDT

Exclusive: Top ISPs poised to adopt graduated response to piracy

by [Greg Sandoval](#)

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Some of the country's largest Internet service providers are poised to leap into the antipiracy fight in a significant way.

After years of negotiations, a group of bandwidth providers that includes AT&T, Comcast, and Verizon are closer than ever to striking a deal with media and entertainment companies that would call for them to establish new and tougher punishments for customers who refuse to stop using their networks to pirate films, music and other intellectual property, multiple sources told CNET.

The sources cautioned that a final agreement has yet to be signed and that the partnership could still unravel but added that at this point a deal is within reach and is on track to be unveiled sometime next month.



You can't fool all of the
people all of the time,
but you can try.

It's called advertising.

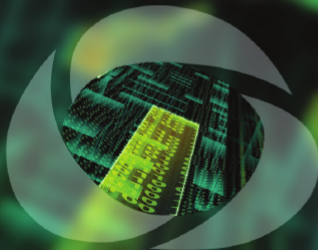
In the future
everyone will be
anonymous
for 15 minutes



I want to have
cake and eat it
And I want you
think I lost weight

Internet Surveillance is getting more advanced

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



Evolved DPI – See what's flowing through your network

Internet Surveillance is getting more advanced

```
|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)
```

Internet Surveillance is getting more advanced

'Comodo Hacker' Says He Acted Alone

The plot thickens: In an effort to back up his claims, alleged hacker dumps apparent evidence of pilfered database from breached Comodo reseller, as well as Mozilla add-on site certificate

By [Kelly Jackson Higgins](#) [InformationWeek](#)

April 09, 2011 12:00 AM

Comodo, a website certificate authority, revealed that nine SSL certificates were issued for fraudulent websites posing as domains for high-profile sites. Security researchers hope the incident will call attention to a certificate process they say is riddled with holes.

Internet Surveillance is getting more advanced

US company 'helped' Egypt block web

Egypt's crackdown on web users allegedly aided by US company's product.

Last Modified: 06 Feb 2011 03:23 GMT



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Send Feedback

When Egypt's uprising began nearly two weeks ago, there was a near-total internet blackout.

But exactly how was access cut off?

An American advocacy group called Free Press says it has uncovered a link to a California-based technology company that allegedly sold the Egyptian government equipment allowing it to track online activity.

Al Jazeera's Rob Reynolds reports.

Internet Surveillance is getting more advanced



Internet Surveillance is getting more advanced

DigiNotar Damage Disclosure

Posted September 4th, 2011 by ioerror in [ca certificates](#), [https](#), [ohdiginotaryoudidnt](#), [ssl certifications](#), [tor client safety](#), [tor network safety](#), [tor project website](#)

About an hour ago I was contacted by the Dutch Government with more details about the [DigiNotar Debacle](#). It seems that they're doing a great job keeping on top of things and doing the job that DigiNotar should've done in July. They sent a spreadsheet with a list of 531 entries on the currently known bad DigiNotar related certificates.

The list isn't pretty and I've decided that in the interest of defenders everywhere without special connections, I'm going to disclose it. The people that I have spoken with in the Dutch Government agree with this course of action.

This disclosure will absolutely not help any attacker as it does not contain the raw certificates; it is merely metadata about the certificates that were issued. It includes who we should not trust in the future going forward and it shows what is missing at the moment. This is an incomplete list because DigiNotar's audit trail is incomplete.

This is the list of CA roots that should probably never be trusted again:

- DigiNotar Cyber CA
- DigiNotar Extended Validation CA
- DigiNotar Public CA 2025
- DigiNotar Public CA - G2
- Koninklijke Notariele Beroepsorganisatie CA
- Stichting TTP Infos CA

The most egregious certs issued were for *.*.com and *.*.org while certificates for Windows Update and certificates for other hosts are of limited harm by comparison. The attackers also issued certificates in the names of other certificate authorities such as "VeriSign Root CA" and "Thawte Root CA" as we witnessed with [ComodoGate](#), although we cannot determine whether they succeeded in creating any intermediate CA certs. That's really saying something about the amount of damage a single compromised CA might inflict with poor security practices and regular internet luck.

Internet Surveillance is getting more advanced



*The most egregious certs issued were for *.*.com and *.*.org while certificates for Windows Update and certificates for other hosts are of limited harm by comparison. The attackers also issued certificates in the names of other certificate authorities such as "VeriSign Root CA" and "Thawte Root CA" as we witnessed with ComodoGate...*

— Tor Project blog,
<https://blog.torproject.org/blog/diginotar-damage-disclosure>



The Tor Project, Inc.

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



Tor hides communication patterns by relaying data through volunteer servers

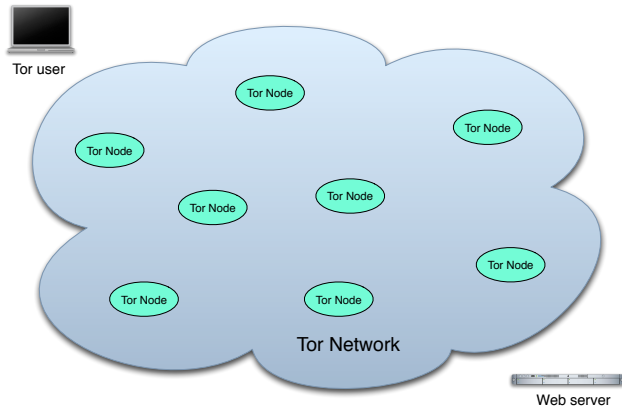
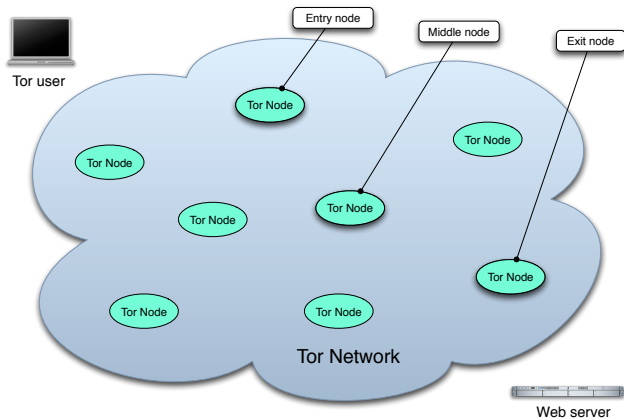


Diagram: Robert Watson

Tor hides communication patterns by relaying data through volunteer servers



Tor hides communication patterns by relaying data through volunteer servers

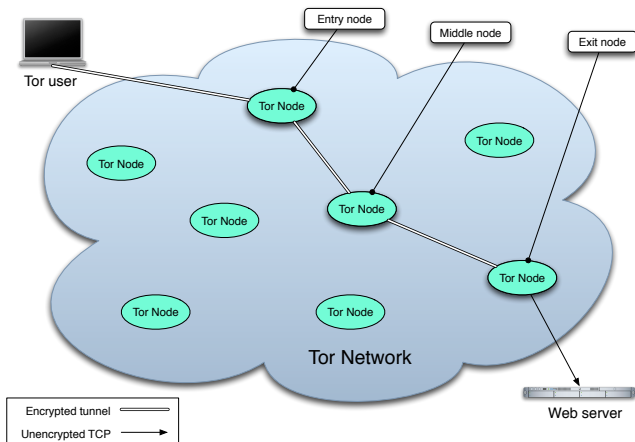
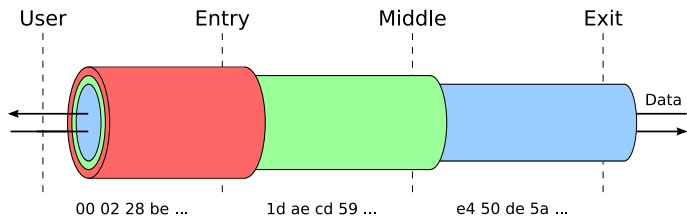


Diagram: Robert Watson

Tor hides communication patterns by relaying data through volunteer servers



Thanks!

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

Copyright & Sources

- ▶ Internet censorship is everywhere, first image: Reporters without Borders, <http://www.rsf.org>
- ▶ censoring the 'net is all the rage, <http://thenextweb.com/asia/2011/06/08/china-increases-internet-control-takes-down-hundreds-of-websites/>
- ▶ censoring the 'net is all the rage, http://news.cnet.com/8301-31001_3-20073522-261/exclusive-top-isp-poised-to-adopt-graduated-response-to-piracy/
- ▶ Internet surveillance, second image: <http://www.informationweek.com/news/security/attacks/229400850>
- ▶ Internet surveillance, third image: Al Jazeera, February 2011
- ▶ spring is in the air, Paco Pomet, <http://pacopomet.wordpress.com/>