

Privacy & Tracking Protection in Firefox



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mozilla

overview

the state of online surveillance

how tracking works in practice

how widespread is it?

what can we do about it?

questions & discussion



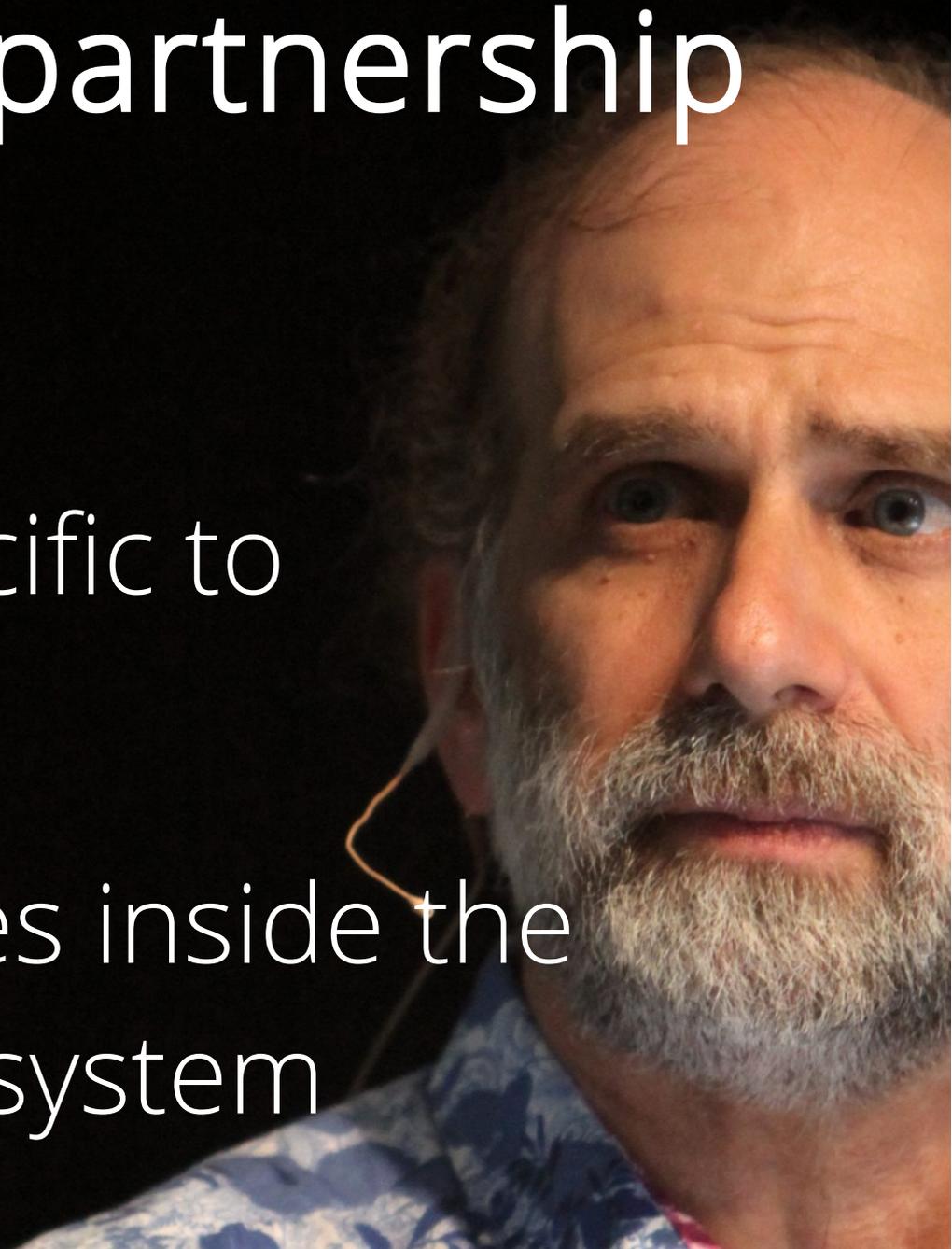
the state of online surveillance

the public-private surveillance partnership

Bruce Schneier

Relationship specific to
US context

Role of companies inside the
surveillance eco-system



the **business** of surveillance

]HackingTeam[



GAMMAGROUP



amesys^{CONSEIL}

privacyinternational.org/sii

surveillance as the **business model** of the internet

trading data for "free" services

Don't let AT&T mislead you about its \$29 "privacy fee"

by [Stacey Higginbotham](#)  Feb. 19, 2015 - 11:26 AM PDT

Comcast Wi-Fi serving self-promotional ads via JavaScript injection

The practice raises security, net neutrality issues as FCC mulls Internet reforms.

by [David Kravets](#) - Sep 8, 2014 5:00am PDT

NOVEMBER 3, 2014 | BY [JACOB HOFFMAN-ANDREWS](#)

Verizon Injecting Perma-Cookies to Track Mobile Customers, Bypassing Privacy Controls

Optus hands over customers' numbers to websites

Optus has admitted that it hands over the mobile phone numbers of customers to websites that have a commercial relationship with the company, without its customers' knowledge.



By [Josh Taylor](#) | June 24, 2015 -- 01:19 GMT (18:19 PDT) | Topic: [Telcos](#)

data brokers

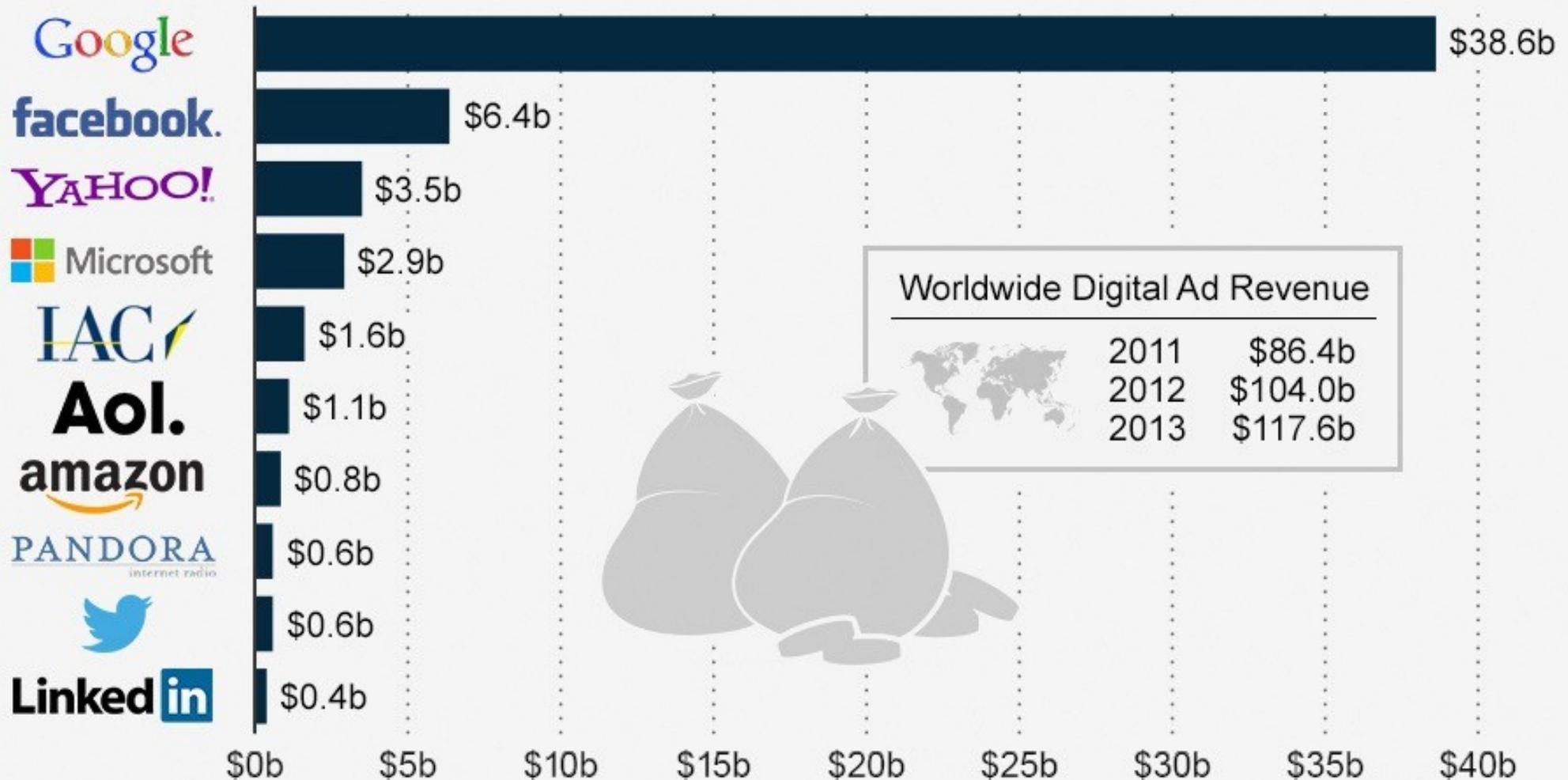
RapLeaf 

acxiom  TM

online advertising industry

Google to Rake in 33% of Online Ad Revenues This Year

Worldwide digital advertising revenue forecast for the 10 largest ad publishers in 2013



the public-private surveillance partnership

- Governments & corporations have similar goals

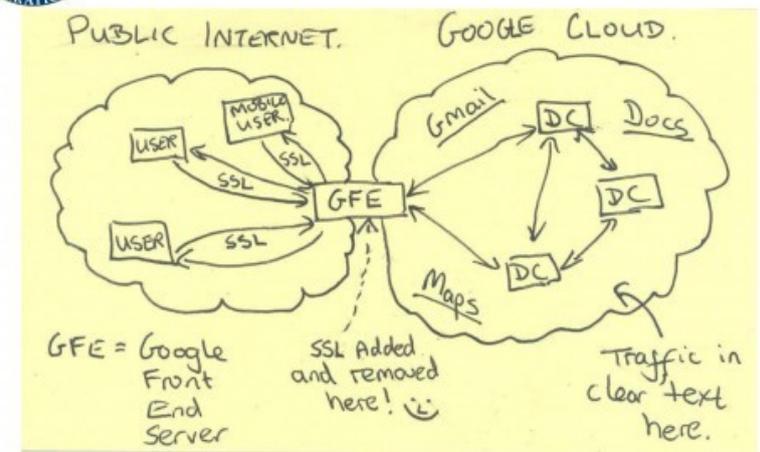
- Snowden disclosures: PRISM, MUSCULAR

- *What companies know, governments can & will know*
- Any reform must take into account this relationship

TOP SECRET//SI//NOFORN



Current Efforts - Google



TOP SECRET//SI//NOFORN

The Switch

NSA uses Google cookies to pinpoint targets for hacking

By Ashkan Soltani, Andrea Peterson, and Barton Gellman December 10, 2013

Our Approach

- Tracked target's converged communications and CNE accesses.
- Monitored passive internet traffic; created automated processes where possible (XKS ANCHORMAN, Workflows, Fingerprints).
- Provided TAO/GCHQ with WLLids/DSL accounts, Cookies, GooglePREFIDs to enable remote exploitation.
- Partnered with NGA and R4 to confirm locations and USRP equipment based on collected photographs.
- Drove CNE collection and partnered with TAO to increase USRP specific endpoint accesses.
- Provided knowledge to interagency partners for potential on the ground survey options and FBI-led intelligence guiding efforts.



A slide from an internal NSA presentation indicating that the agency uses at least one Google cookie as a way to identify targets for exploitation. (Washington Post)

The National Security Agency is secretly piggybacking on the tools that enable Internet advertisers to track consumers, using "cookies" and location data to pinpoint targets for government hacking and to bolster surveillance.

The [agency's internal presentation slides](#), provided by former NSA contractor Edward Snowden, show that when companies follow consumers on the Internet to better serve them advertising, the technique opens the door for similar tracking by the government. The slides also suggest that the agency is using these tracking techniques to help identify targets for offensive hacking operations.

Most Read

- 1 This is actually what America would look like without gerrymandering 
- 2 Baby carrots are not baby carrots 
- 3 Scientists say human greenhouse gas emissions have canceled the next ice age 
- 4 This may be the most important chart for understanding politics today 
- 5 The government wants to know who is buying luxury real estate in New York and Miami 

The Most Popular All Over

The Baltimore Sun
One officers statements ruled admissible in Freddie Gray case, as 3 others withdraw efforts to block 

International Business Times 

how does it work
in practice?







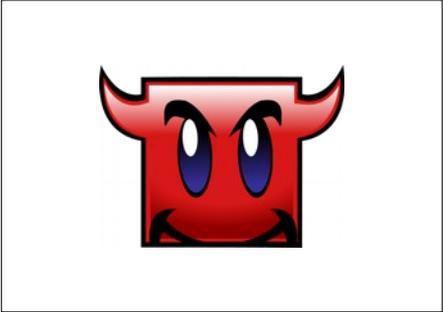


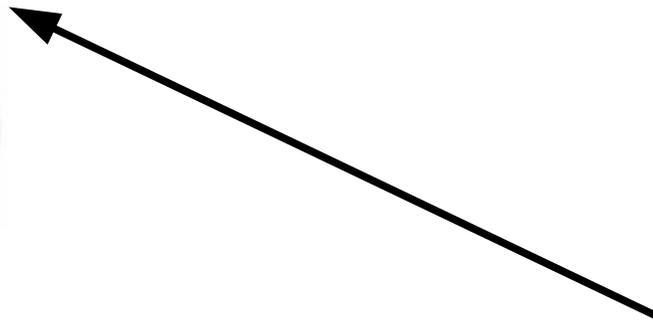
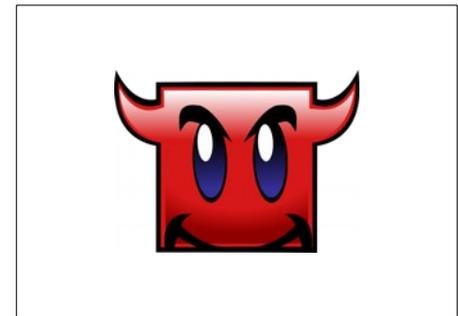


customerID=112



third-party
cookies

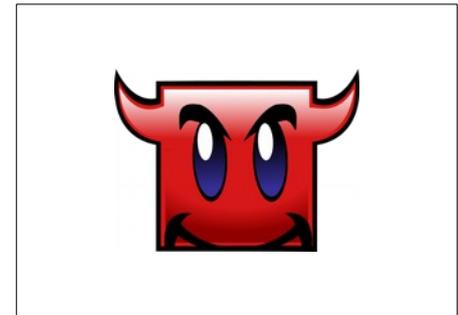
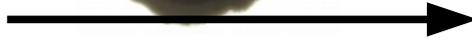




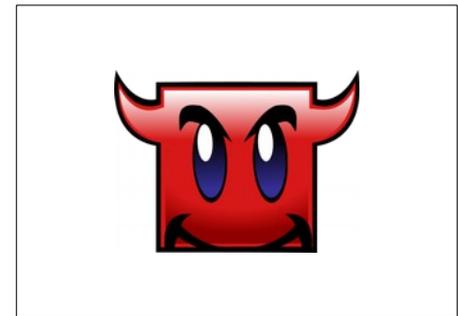


suckerID=319



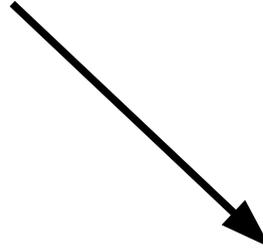
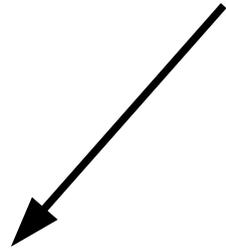






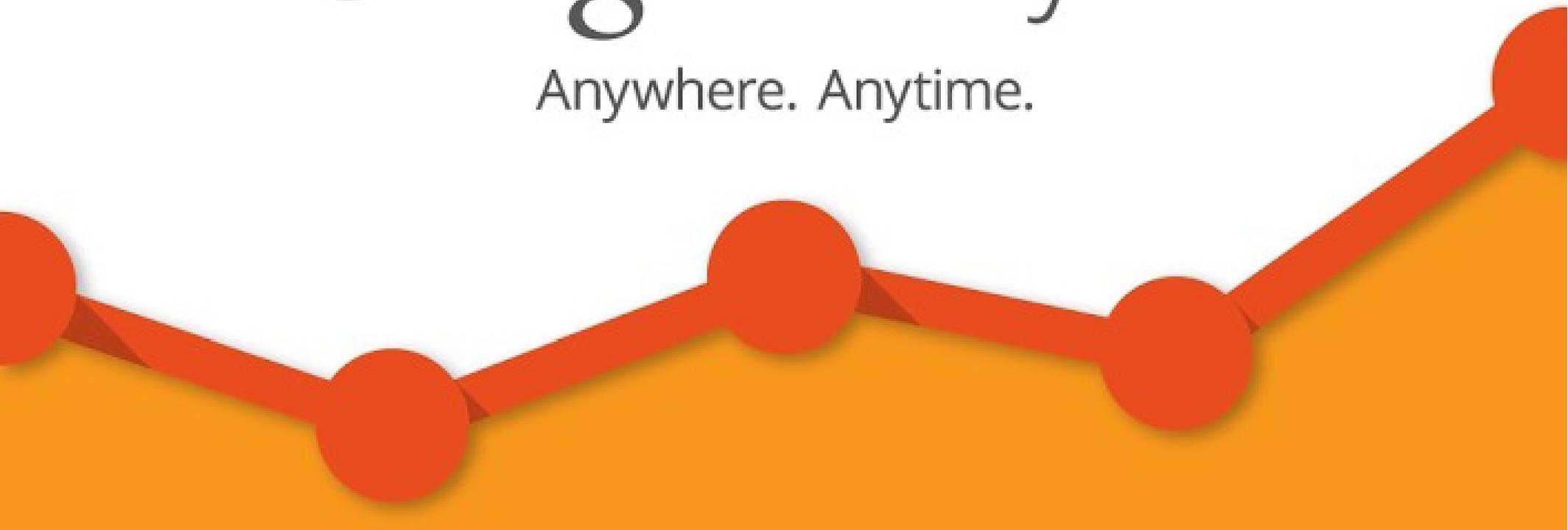


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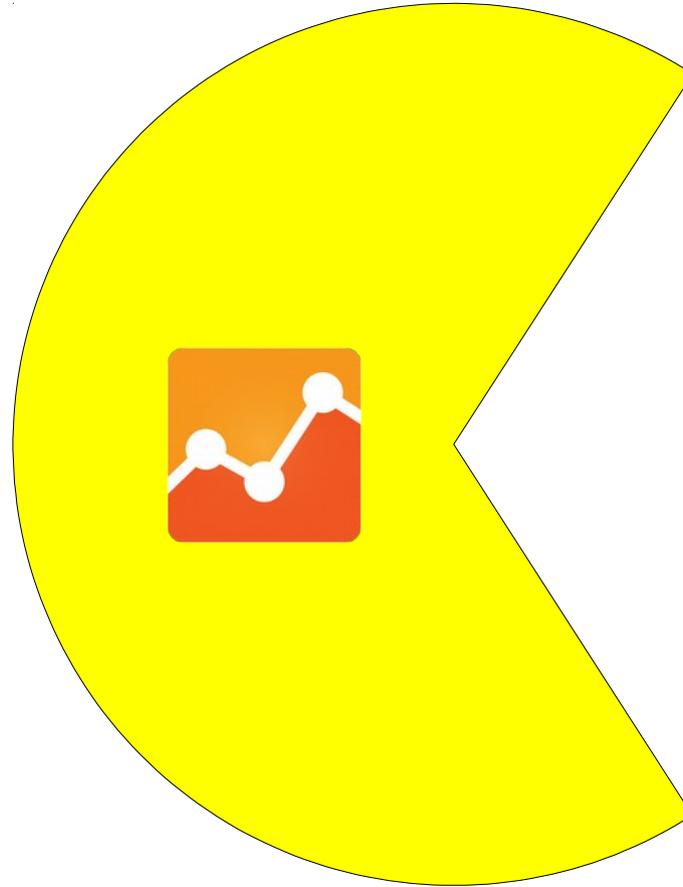


Google Analytics

Anywhere. Anytime.



top 1 million



67% use Google Analytics

General

Search

Content

Applications

Privacy

Security

Sync

Advanced

Privacy

Tracking

Request that sites not track you [Learn More](#)

Use Tracking Protection in Private Windows [Learn more](#)

[Change Block List](#)

History

Firefox will:

Always use private browsing mode

Remember my browsing and download history

Remember search and form history

Accept cookies from sites

Accept third-party cookies:

Keep until:

Clear history when Firefox closes

[Exceptions...](#)

[Show Cookies...](#)

[Settings...](#)

Location Bar

When using the location bar, suggest:

History

Bookmarks

Open tabs

[Change preferences for search engine suggestions...](#)

JS

user agent

timezone

language

screen size

browser plugins

system fonts

fingerprinting



A RESEARCH PROJECT OF THE ELECTRONIC FRONTIER FOUNDATION

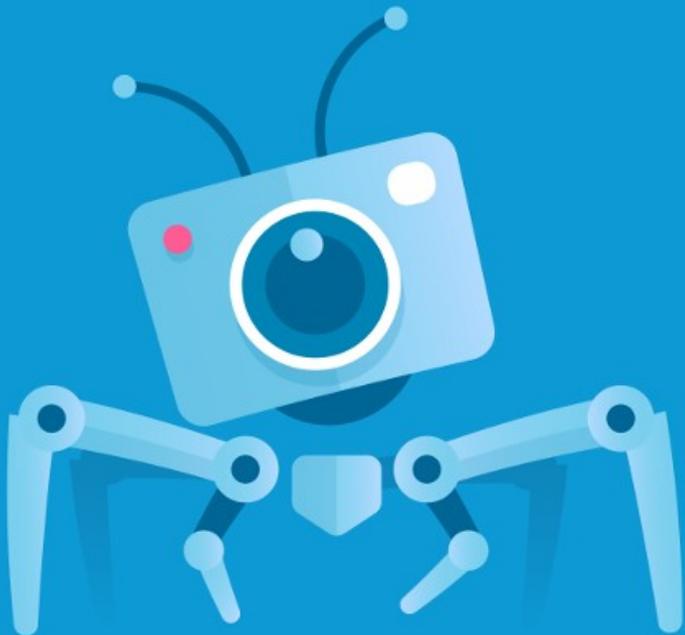
DONATE

PANOPTICCLICK

Is your browser safe against tracking?

panopticclick.eff.org

how widespread
is it?





Lightbeam
for Firefox



'The EU is disastrous for Britain': Chris Grayling's clearest signal yet he plans to back Leave campaign



Writing for the *Telegraph*, the Leader of the House of Commons says he backs David Cameron's plan to renegotiate Britain's membership

Three dead as avalanche engulfs schoolchildren and teacher on closed ski piste in French Alps



LIVE Two French teenagers and a Ukrainian skier lose their lives, while three others are seriously injured

UK's Brexit tantrum grates but the die is cast



Ambrose Evans-Pritchard: Declassified files show Washington funded EU project for decades, but the US would adapt to a post-Brexit Britain

Friends reunited: After years of speculation, the hit show's return is confirmed



Could we be any more excited?

Friends: 30 best quotes

Arsenal throw away chance to pull clear



Liverpool 3 Arsenal 3: Giroud puts visitors ahead after falling behind twice, but Joe Allen snatches point for Liverpool at death

Spurs stunned as Huth heads Leicester winner

New appeal launched in Making A Murderer case



MATT Alex



You ought to go outside and fall over while the junior doctors are working'

UK weather: lows of minus 15C forecast as severe warnings issued for snow

Comment & Analysis»

Chris Grayling
An unreformed EU is disastrous for Britain

Angela Epstein
Name and shame bogus rape victims

Allister Heath
We're far too fat, but sugar tax won't help

Letters: EU
The risks of Cameron's benefit reforms



VISUALIZATION

- Graph
- List

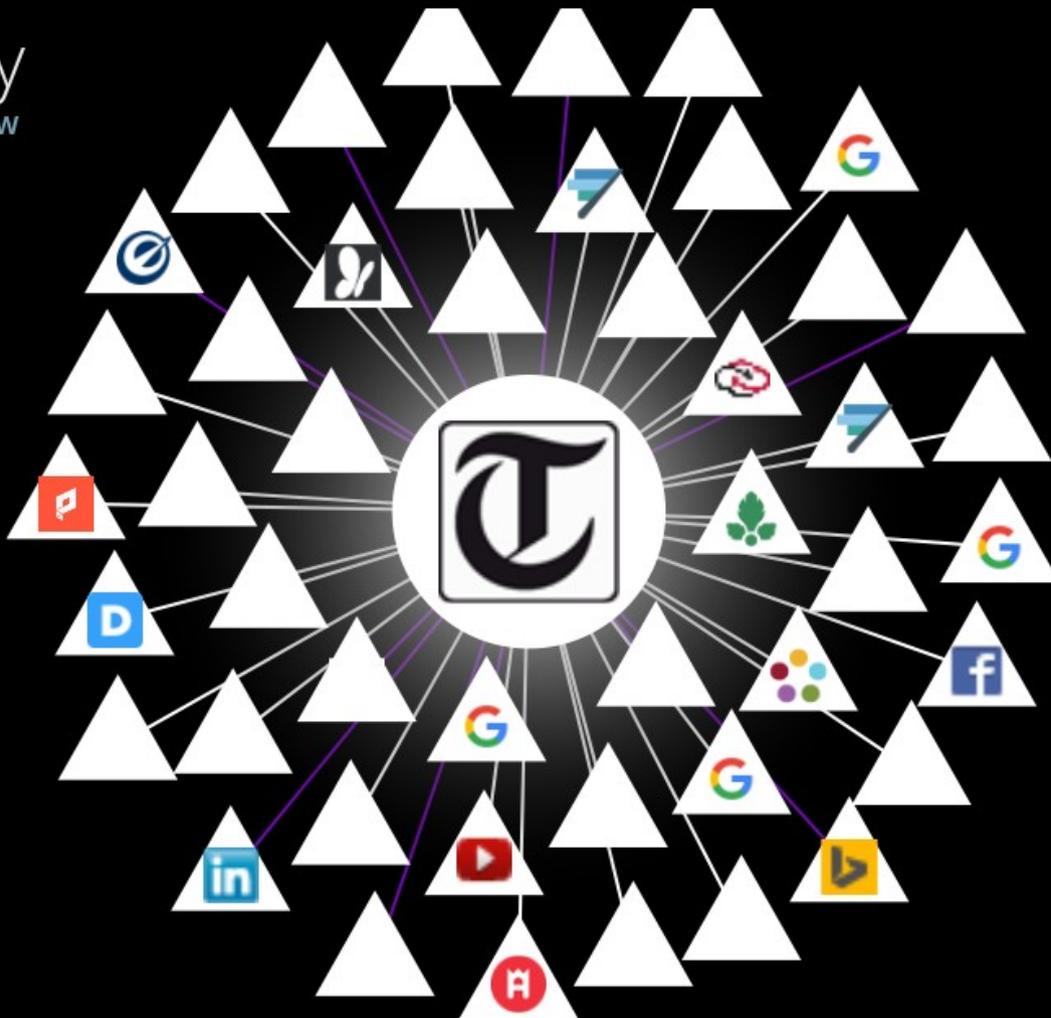
DATA

- Save Data
- Reset Data

Give Us Feedback

Uninstall Lightbeam

Daily
GRAPH VIEW



TOGGLE CONTROLS

- Visited Sites
- Third Party Sites
- Connections

- Watched Sites
- Blocked Sites

FILTER

Hide

- Cookies
- Recent Site
- Last 10 Sites
- Daily

-
-
-



SUCHE

ABONNIEREN

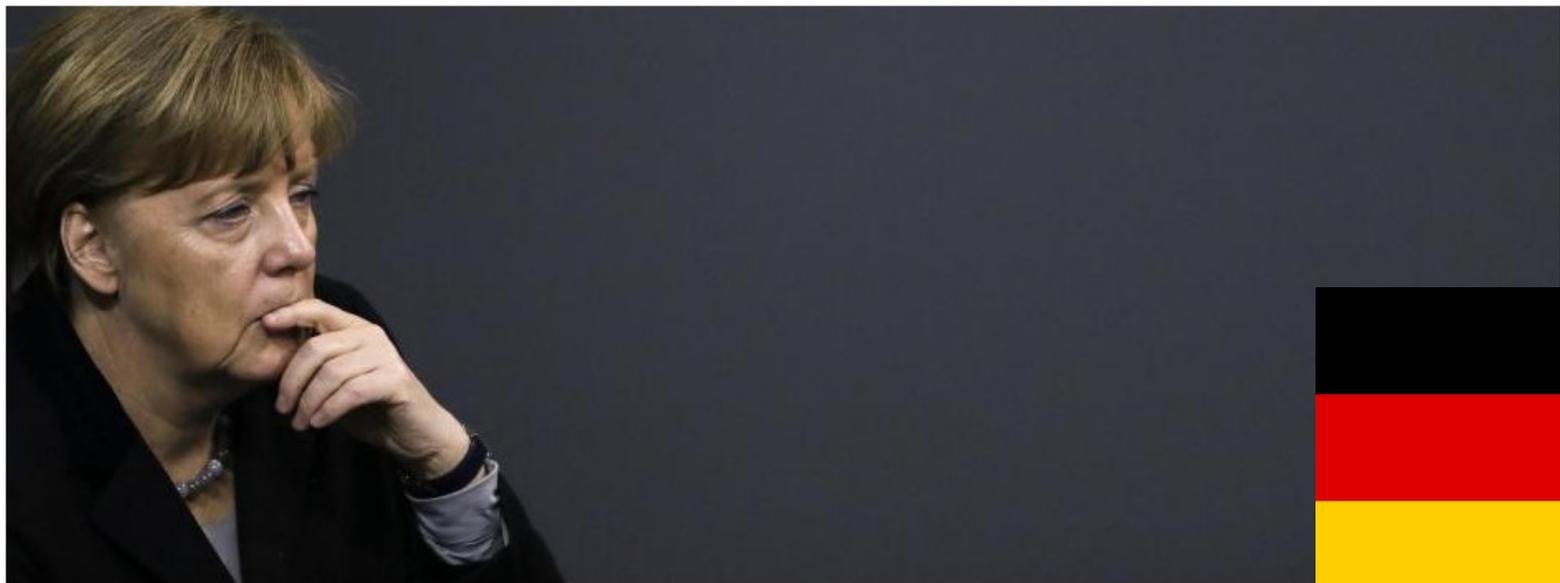
In den Nachrichten: [Anschlag in Istanbul](#) / [Übergriffe in Köln](#) / [Flüchtlingskrise](#) / [Deutscher Fernsehpreis](#)



[Desktop-Benachrichtigungen für Topmeldungen einrichten](#)

POLITIK FLÜCHTLINGSPOLITIK

"Rechtssystem ist in schwerwiegender Weise deformiert"



Weil nicht alle
so gut fahren
wie Sie.



VISUALIZATION

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- List

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GRAPH VIEW



- Global icon
- Help icon
- Info icon

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POLITICO

YOUTH AND SOCIAL MEDIA
CHANGING THE WORLD OF JOBS AND SKILLS

JANUARY 26 **RSVP**

Presented by **TATA CONSULTANCY SERVICES**

SYMPOSIUM

Is Poland a failing democracy?

POLITICO asked leading thinkers, politicians and policymakers to weigh in on the Polish question.

BY POLITICO

Fear not, Poland. You won't be kicked out of Eurovision!

Secret legal opinion inflames China trade fight

David Cameron's latest Brussels problem: the local Tories



BRUSSELS INFLUENCE
Lobbying, transparency and governance weekly

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BRUSSELS PLAYBOOK



Ryan Heath's must-read briefing on what's driving the day in Brussels.

SIGN UP FOR THE BRUSSELS PLAYBOOK

Sign Up

EVENING REPORT



VISUALIZATION

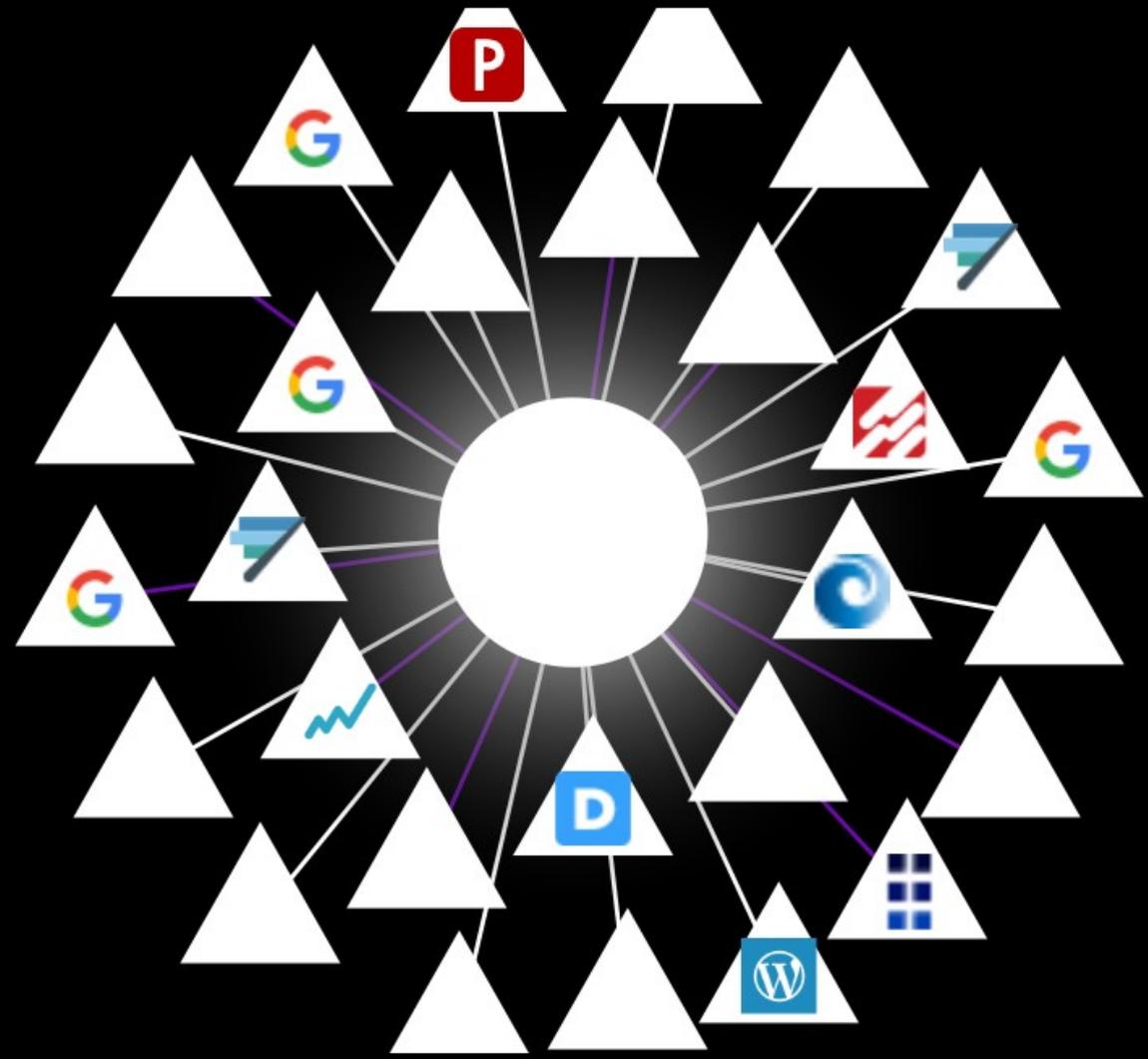
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- Info

LASIK MD VISION VIVEZ MAINTENANT. PAYEZ EN 2017. **0% / 0% / 0%** Acompte Paiement Intérêt **CONSULTATION GRATUITE**

EN CE MOMENT David Bowie Attentats de janvier 2015 Arabie saoudite Déchéance de nationalité Les décodeurs

A Marseille, « le curseur en matière de haine des juifs est très élevé »



La communauté juive marseillaise, l'une des plus importantes d'Europe, s'organise avec fatalisme face aux agressions qui touchent les juifs en France.

- Marseille : l'adolescent qui a agressé un enseignant juif mis en examen et écroué 56
- Marseille : l'appel à ne plus porter la kippa fait débat 299
- « Renoncer à la kippa serait nous priver de notre judaïsme » 77
- Cinq questions sur la kippa 12

APPEL À TÉMOIGNAGES

Vous êtes parti étudier à l'étranger après le bac. Témoignez.

Partagez votre expérience

En continu

- 01:44 Julian Assange pourra être interrogé
- 00:43 Moscovici veut l'aide du FMI à Athènes
- 23:33 Coupe de la Ligue : PSG-OL (2-1)
- 20:59 Football : suivez PSG-Lyon en direct
- 20:35 Raffarin : « l'erreur » de Hollande
- 20:10 Mayotte: pilotage jugé « insuffisant »
- 19:56 Coupe de la Ligue : Toulouse bat l'OM
- 19:36 Manuel Valls invité d'ONPC

Tout le "en continu"

ABONNEZ-VOUS 1 € SANS ENG

VISUALIZATION

- Graph
- List

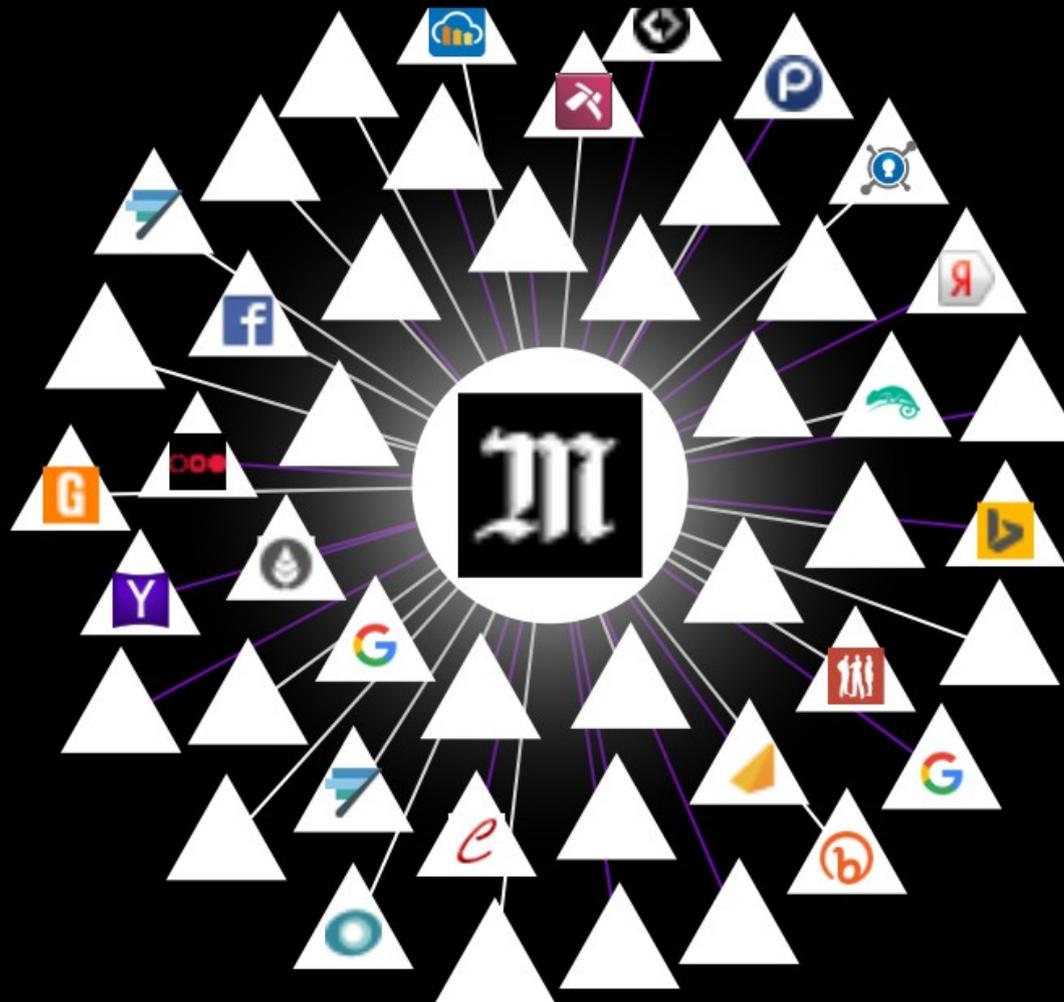
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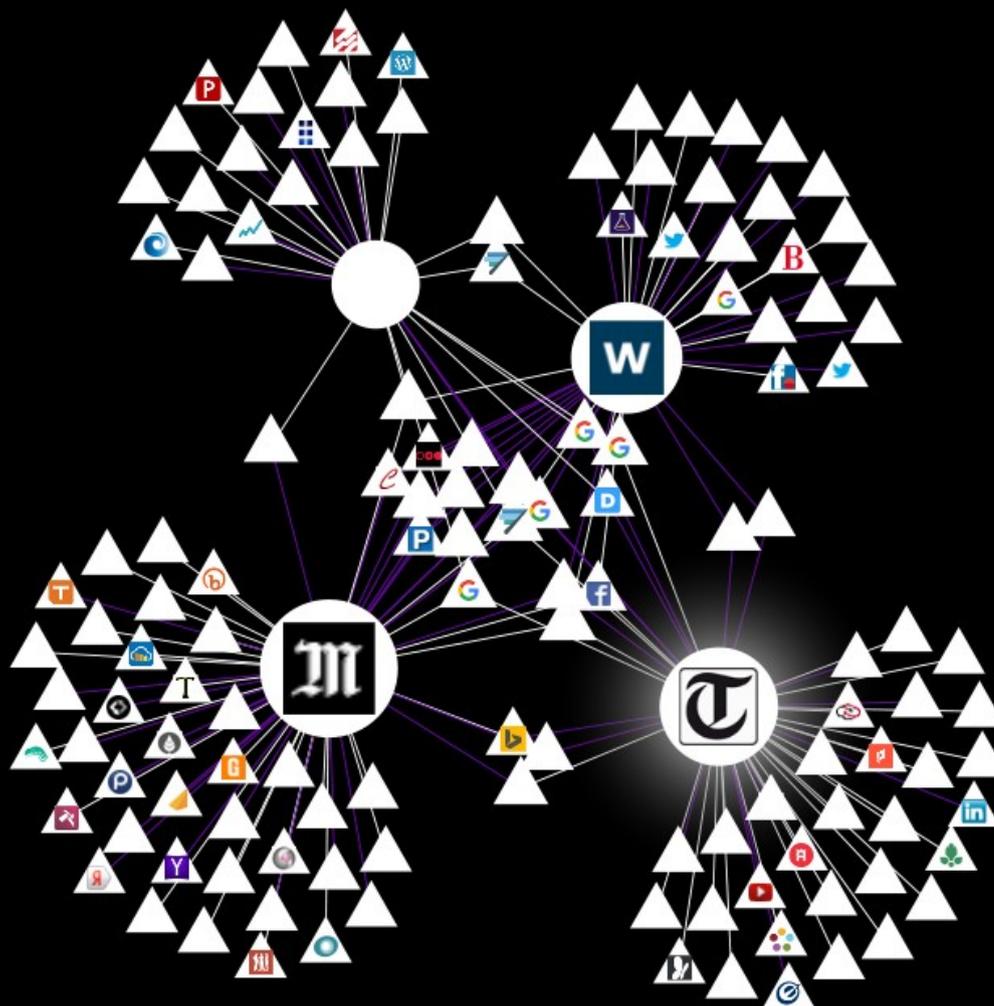
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- Connections

- Watched Sites
- Blocked Sites

Cookies

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- Last 10 Sites
- Daily

209 different third-parties

26 on more than one site



what can we
do about it?





SAY NO TO ~~STRANGERS~~
TRACKERS

political means



the EU's new privacy law

- Article 19, General Data Protection Regulation
- 2b. In the context of the use of information society services, and notwithstanding Directive 2002/58/EC, the data subject may exercise his or her right to object by automated means using technical specifications.
- Could imply Do Not Track specifications

technical means

block
network
requests



can't set any **cookies**

can't **fingerprint** you

can't see you in their **logs**



Reported Attack Page!

This web page at nsa.gov has been reported as an attack page and has been blocked based on your security preferences.

Attack pages try to install programs that steal private information, use your computer to attack others, or damage your system.

Some attack pages intentionally distribute harmful software, but many are compromised without the knowledge or permission of their owners.

Get me out of here!

Why was this page blocked?

[Ignore this warning](#)

Friday Beer Event



While coming over to Brussels to attend FOSDEM, don't miss this great opportunity to taste some of the finest [beer in Belgium](#) (and hence in the world).

When?

Friday, 29 January 2016 from 16h00 onwards, but feel free to join the party at any time of the evening. We will be there until the bar closes (well after midnight).

Beer, Beer and some more Beer

This year's beer event will again take place at the [Delirium Café](#), in a beautiful alley near the [Grand Place](#) in Brussels. In addition to the [enormous variety in beers](#), the location also has enough room to accommodate the vast crowd of geeks we tend to be.

There are 25 different draught beers available. In addition to these, there is a cellar full of regular and specialty bottled beer. The [beer menu](#) on the bar's website, while always out of date, is a good indication of

the wide selection available.

Beer Distribution Algorithm v3.3 (stable)

After about ten years of incremental improvements to our notorious Beer Distribution Algorithm, we appear to have reached a stable version with the algorithm used: v3.3. We have no changes to the algorithm to announce this year, at least up to now—if we change our mind, we will let you know you in time.

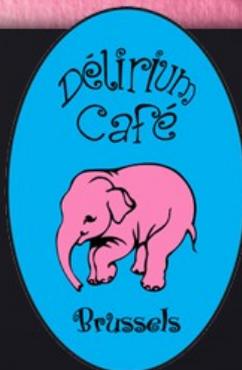
Security measures / access control

We have reserved the ground floor of the bar (*Delirium Café*) and the first floor (*Hoppy Loft*) as a private party for FOSDEM, and this between 18h00 and 2h00. You are welcome to join before 18h00, as well as stay after 2h00. The Delirium Café has been extended some more, so we will be able to move around a bit easier. FOSDEM volunteers will help us keep this area FOSDEM-only. If you meet a volunteer or a guard at the entrance to the bar or at the entrance to the alley, make it clear to him or her that you are there for the FOSDEM party.

RECHERCHE

Votre recherche...

SEARCH



SUIVEZ-NOUS

Visitez la page 

Suivre @DeliriumVillage 

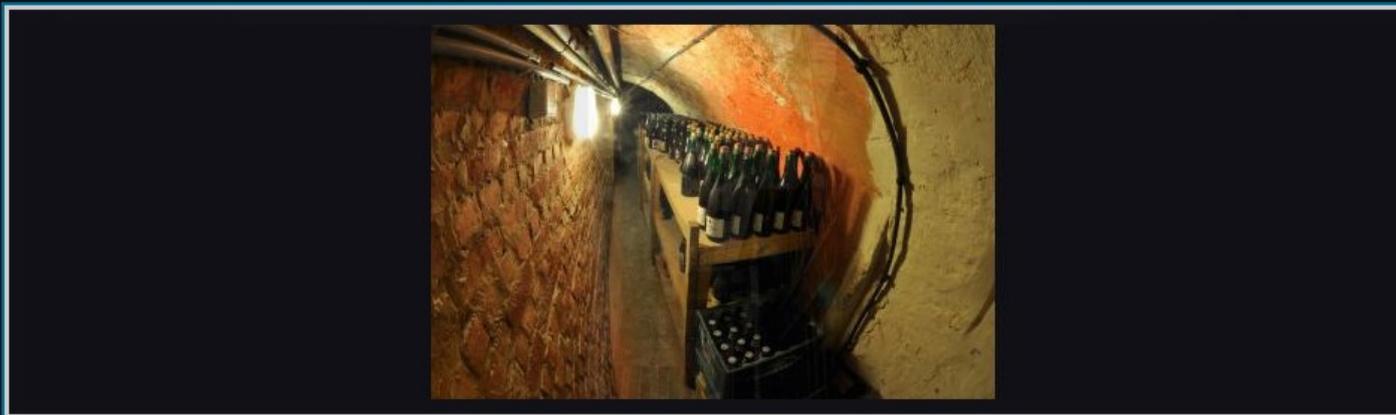
VISITEZ LE

Delirium Village

NEWSLETTER

Pour recevoir nos informations
[inscrivez-vous ici](#)

[ACCUEIL](#) [LE BAR](#) [LA CARTE](#) [AGENDA](#) [GALERIES](#) [FRANCHISES](#) [PRESSE](#) [LIENS](#) [VIDEOS](#) [CONTACT](#)



BIENVENUE AU DELIRIUM CAFÉ

Pour réserver: envoyez un mail à sophie@deliriumvillage.com ([uniquement pour les groupes](#))

[Overview](#)

[Malware dashboard](#)

Site status

[Notes](#)

[FAQ](#)

Safe Browsing Site Status

Google's Safe Browsing technology examines billions of URLs per day looking for unsafe websites. Every day, we discover thousands of new unsafe sites, many of which are legitimate websites that have been compromised. When we detect unsafe sites, we show warnings on Google Search and in web browsers. You can search to see whether a website is currently dangerous to visit.

Status of:



Current status: ❗ Dangerous

www.deliriumcafe.be is not safe to visit right now.

Site Safety Details

- ❗ Some pages on this website install malware on visitors' computers.

Testing details

We last updated our information about www.deliriumcafe.be on January 21, 2016.

This website is hosted on 1 AS:

[AS39318 \(NUCLEUS\)](#)



You're browsing privately

Not Saved

- ✓ History
- ✓ Searches
- ✓ Cookies
- ✓ Temporary Files

Saved

- ⚠ Downloads
- ⚠ Bookmarks

Please note that your employer or Internet service provider can still track the pages you visit.

[Learn More.](#)

Tracking Protection **ON**





converted and
served by Mozilla
to Firefox users

feeding.cloud.geek.nz/posts/tweaking-cookies-for-privacy-in-firefox

1st-party

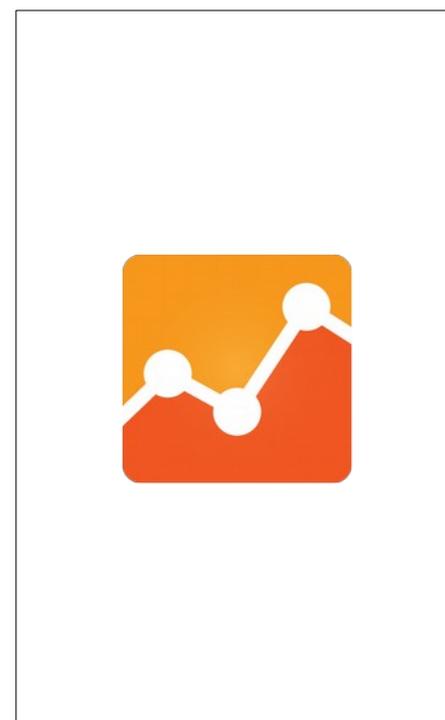
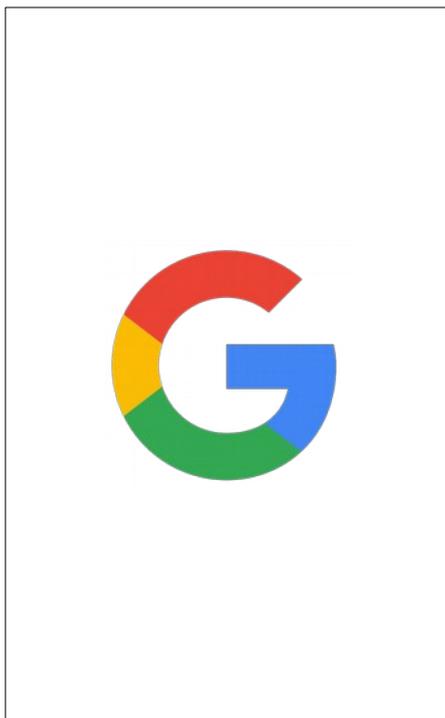
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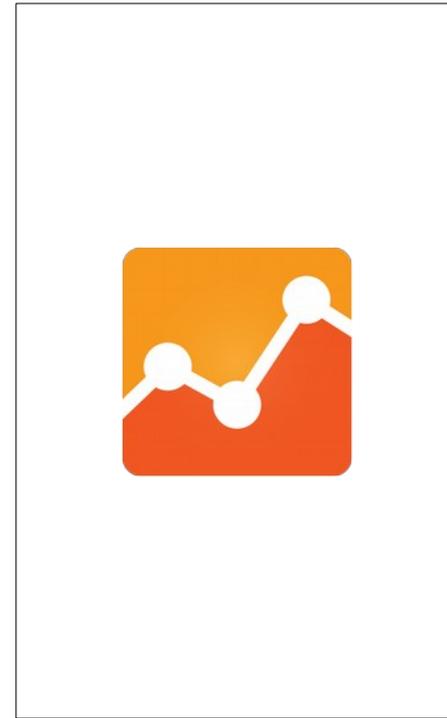
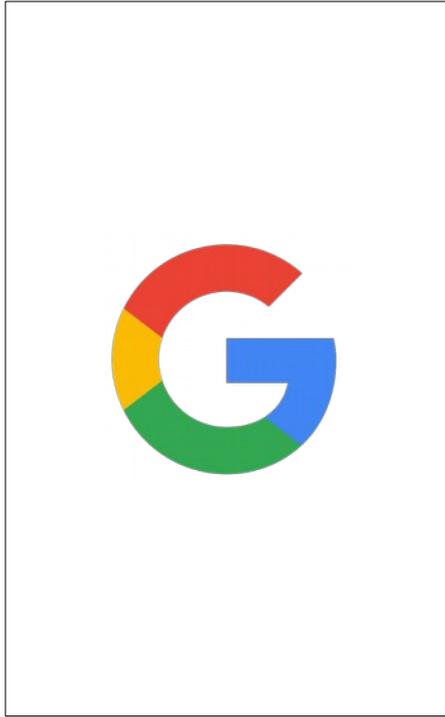
3rd-party

google.com

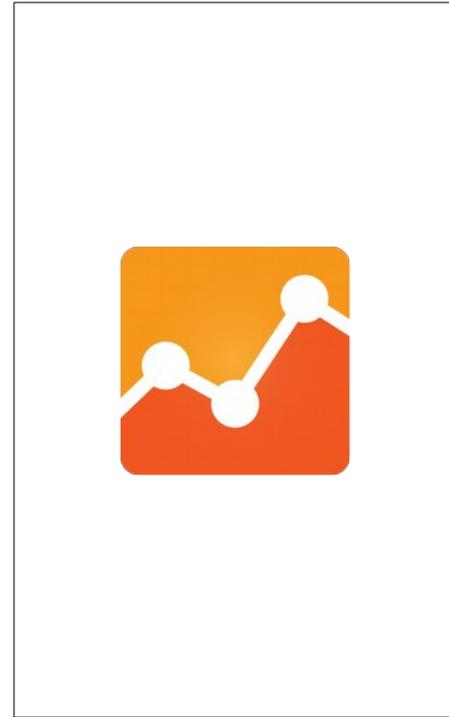
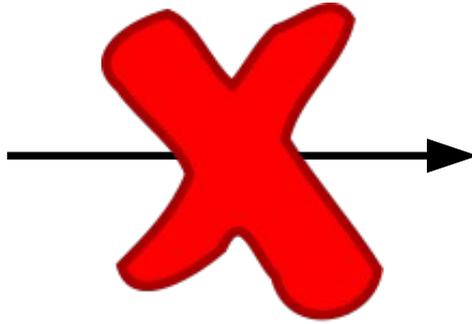
v.

google-analytics.com









avoid having a
hard dependency
on Google Analytics

developer.mozilla.org/Firefox/Privacy/Tracking_Protection

what about when you're
browsing **outside** of
private browsing?



about:config

privacy.trackingprotection.enabled



feeding.cloud.geek.nz/posts/tweaking-cookies-for-privacy-in-firefox

Tor

want to help?

report missing trackers

reach out to broken sites

Questions?

@shmaeganm



@fmarier



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François Marier <francois@mozilla.com>

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