TOR MEETUP #1

Worldwide communities

- religions

- nations / countries

- social networks

Worldwide communities
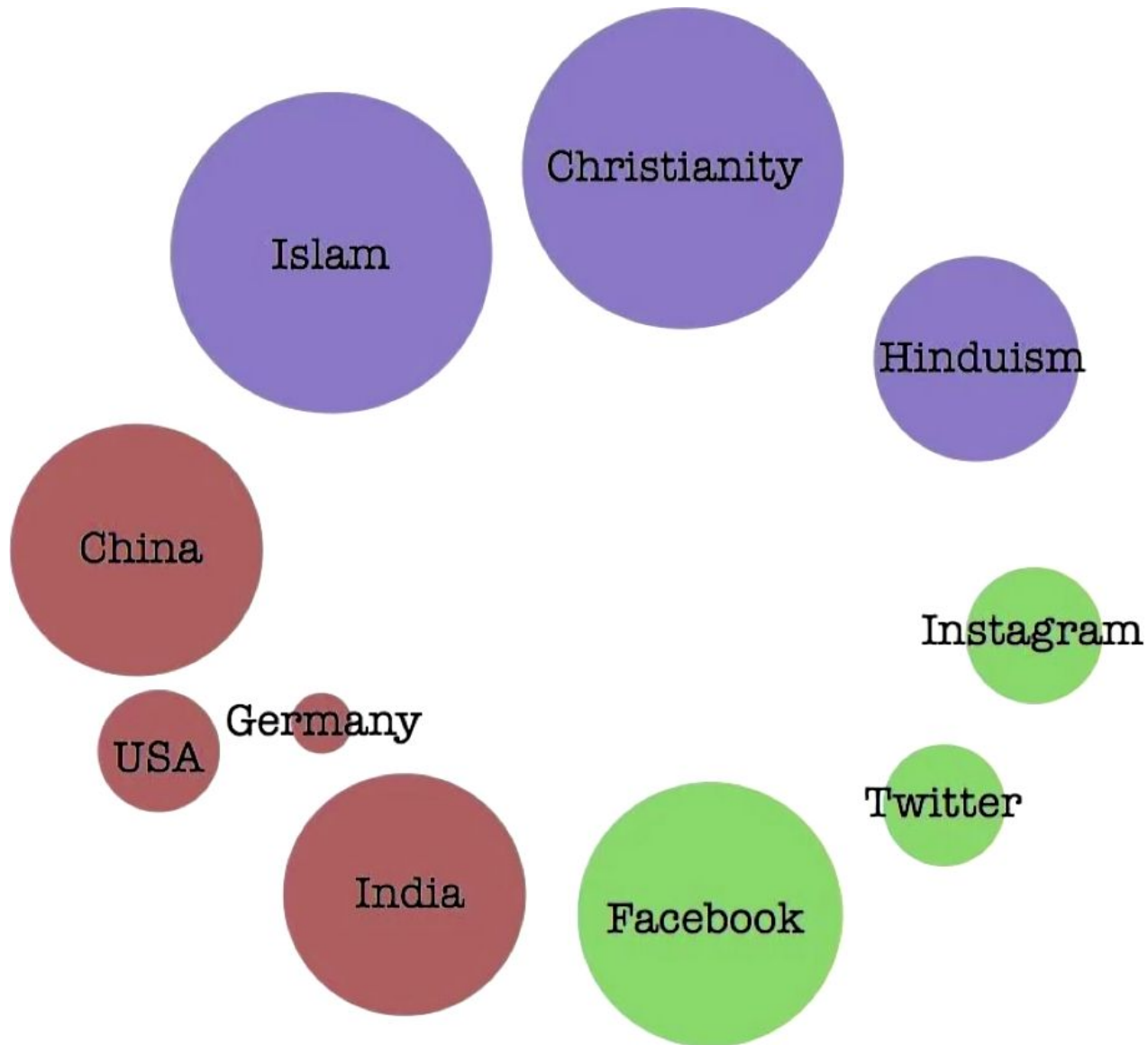
Worldwide communities + their "rules"

- religions
  - Bible
  - Quran
  - Vedas
- nations / countries
  - Universal Declaration of Human Rights
  - Constitution
- social networks
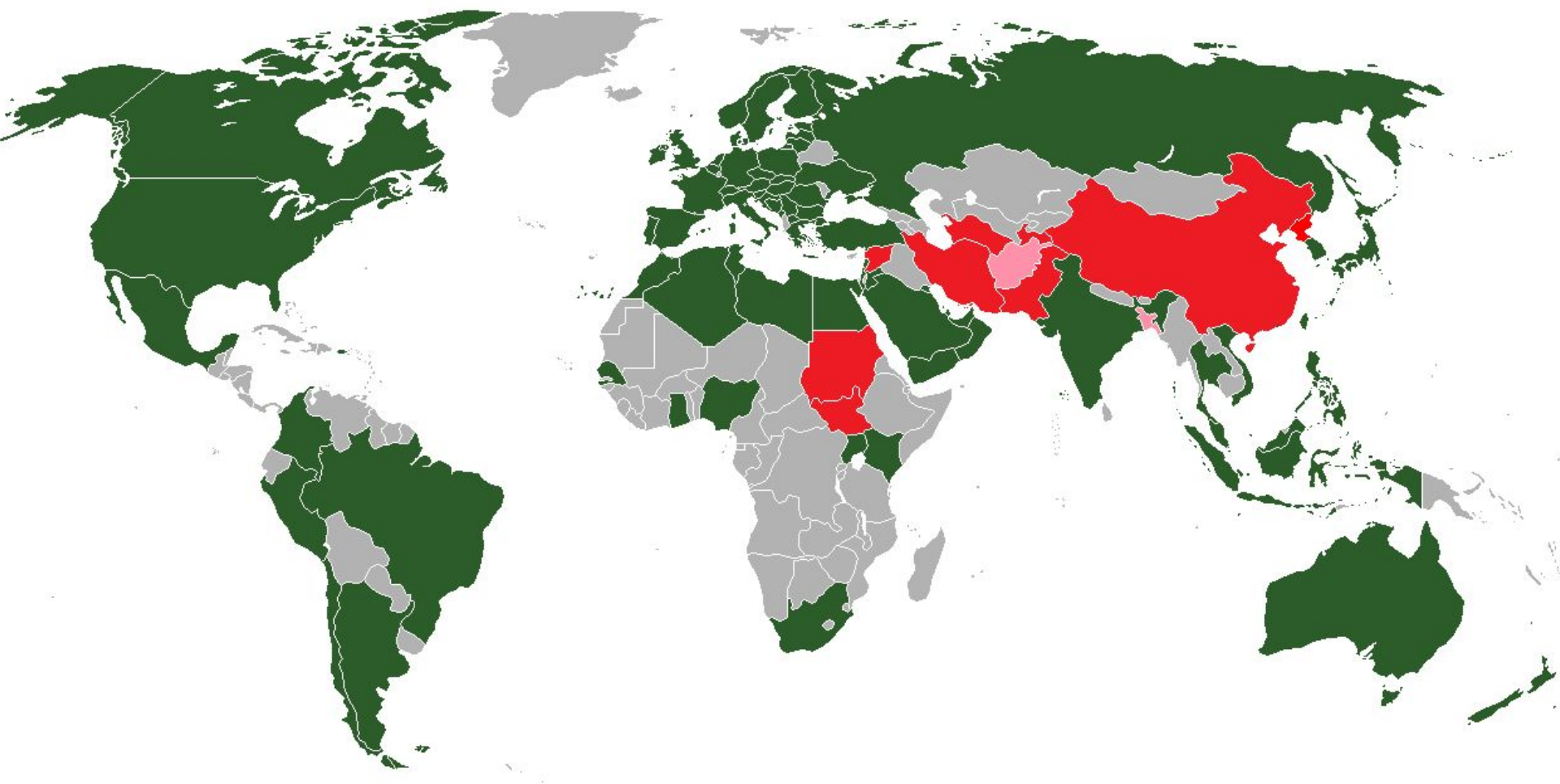 - Terms of Service

Worldwide communities + their "rules"

- Bible / Quran / Vedas / UDHR / Constitution
  - written by a lot of people
  - time-tested
  - reflect moral & ethical values
- Terms of Service
  - written by a few (chosen) people
  - relatively new
  - want to maximize company revenue/profit

Worldwide communities
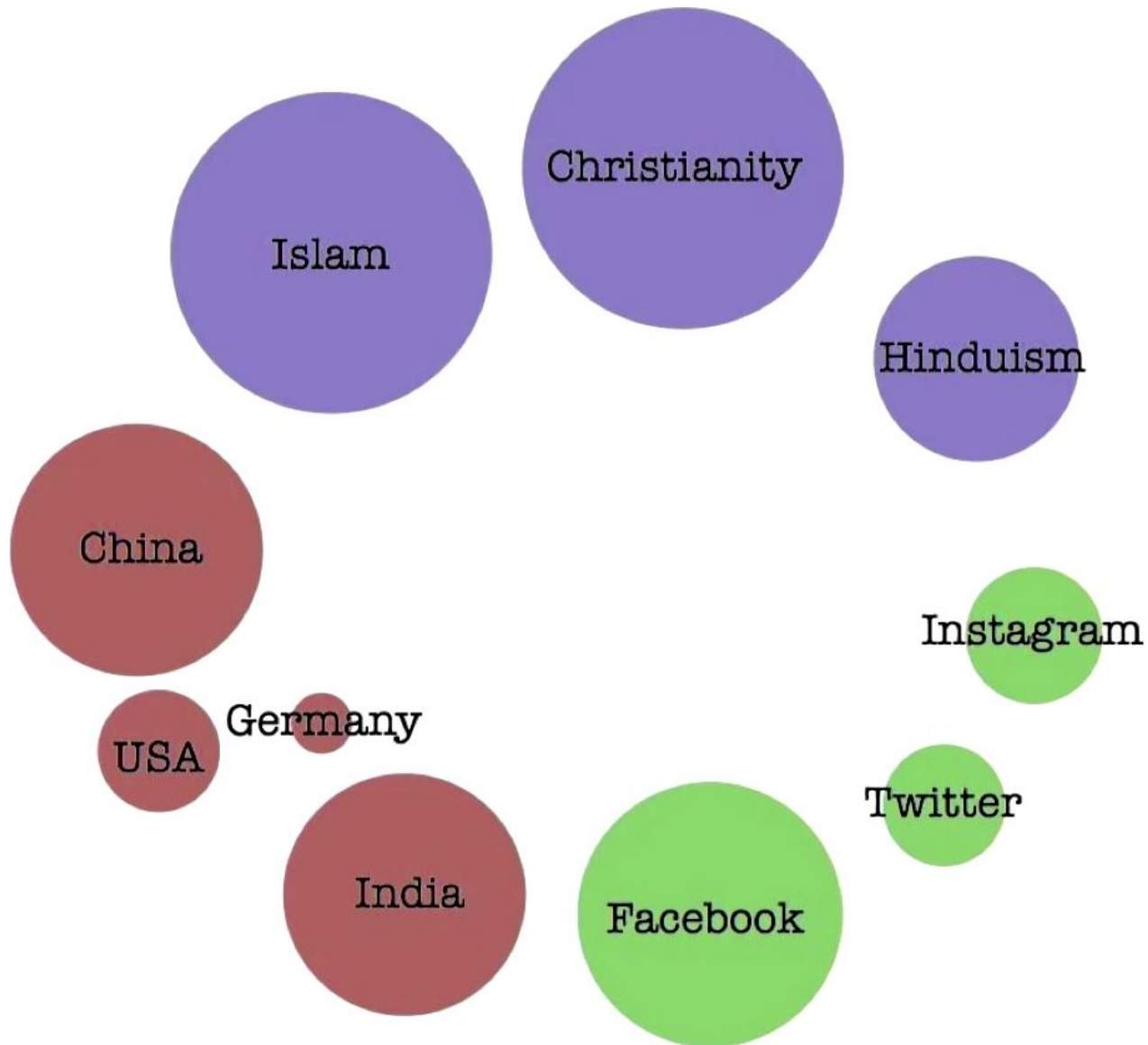
YouTube

Censorship
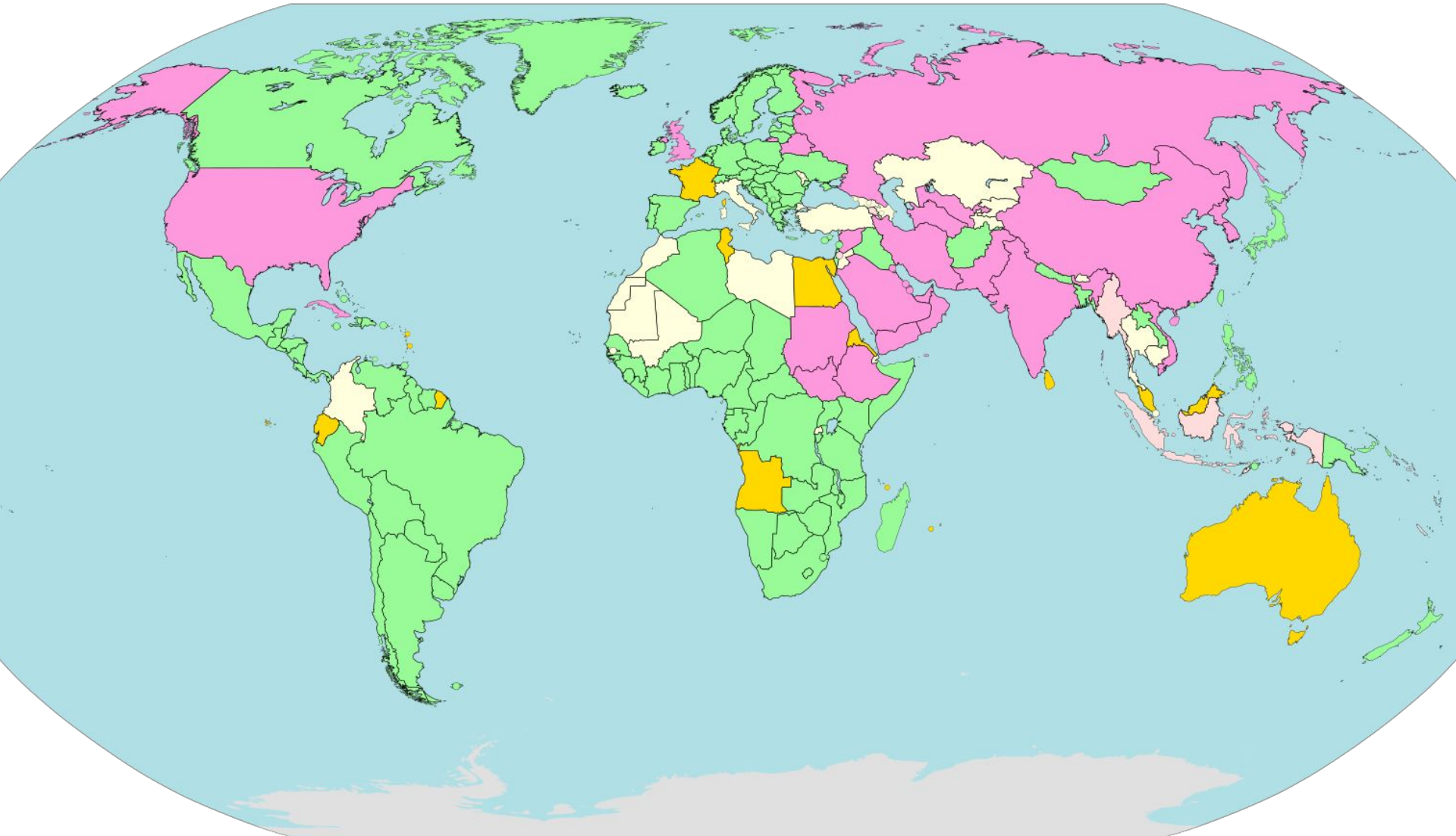
Tor

What is Tor?

- a network of volunteer-operated servers

- a software package that helps you anonymously use the Internet

- a building block for software developers to create new communication tools with built-in privacy features

What is Tor?

- has been in development for many (13) years

- very stable and mature

- regarded as one of the best privacy tools currently in existence

- can circumvent some forms of censorship

- it does not cost you anything

What is Tor?

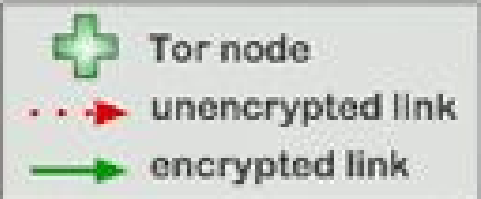- hides the source and destination of your Internet traffic
- prevents anyone from knowing both* who you are and what you are looking at

How does Tor work?

- encrypts data you send across the Internet in multiple layers (like an onion)
- it sends data through multiple relays
- each relay peels a layer off the onion
- until your packet leaves the final relay and gets to its destination

How Tor Works: 1

Legend:
- Tor node
- ••••► unencrypted link
- ──► encrypted link

Alice

Step 1: Alice's Tor client obtains a list of Tor nodes from a directory server.

Dave

Jane

Bob

How **Tor** Works: 2

Tor node
unencrypted link
encrypted link

Alice

Step 2: Alice's Tor client picks a random path to destination server. Green links are encrypted, red links are in the clear.

Dave

Jane

Bob

How Tor Works: 3

Tor node

unencrypted link
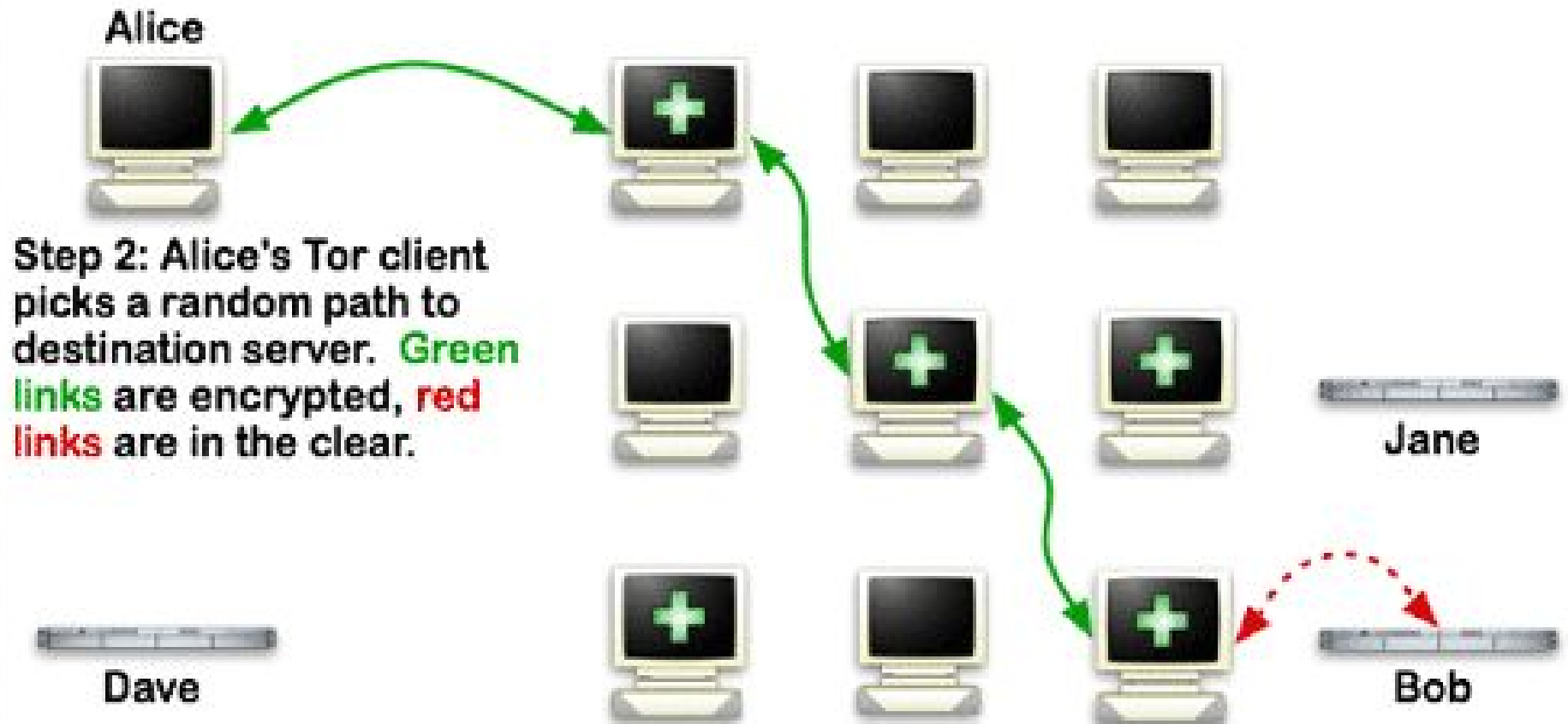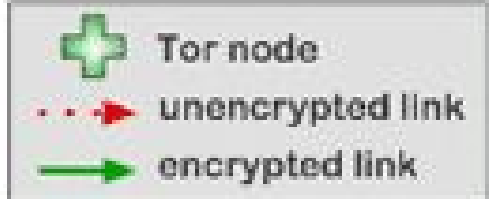
encrypted link
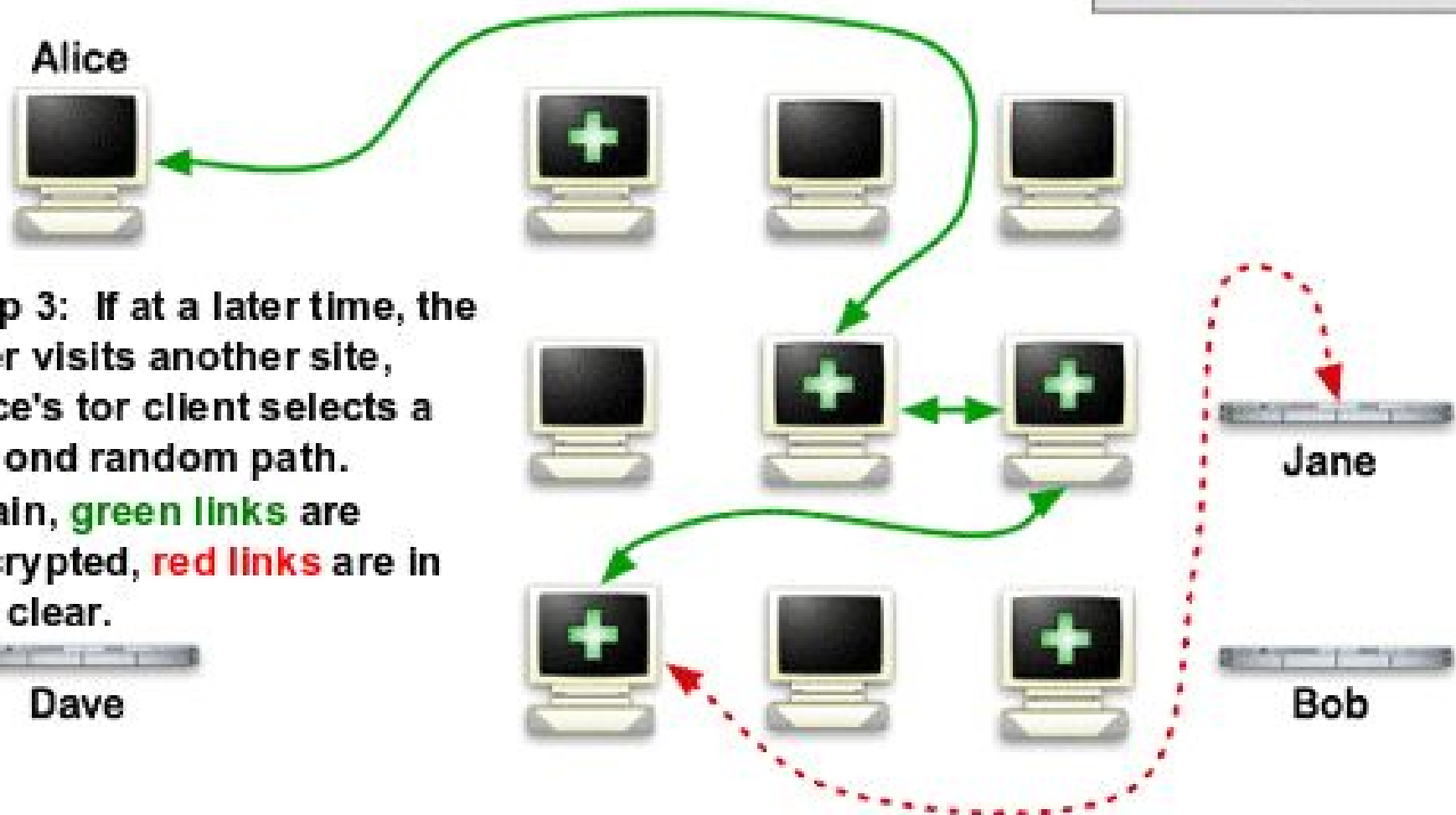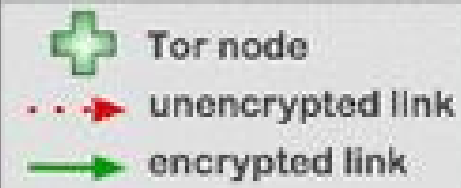
Alice

Step 3: If at a later time, the user visits another site, Alice's tor client selects a second random path. Again, green links are encrypted, red links are in the clear.

Dave
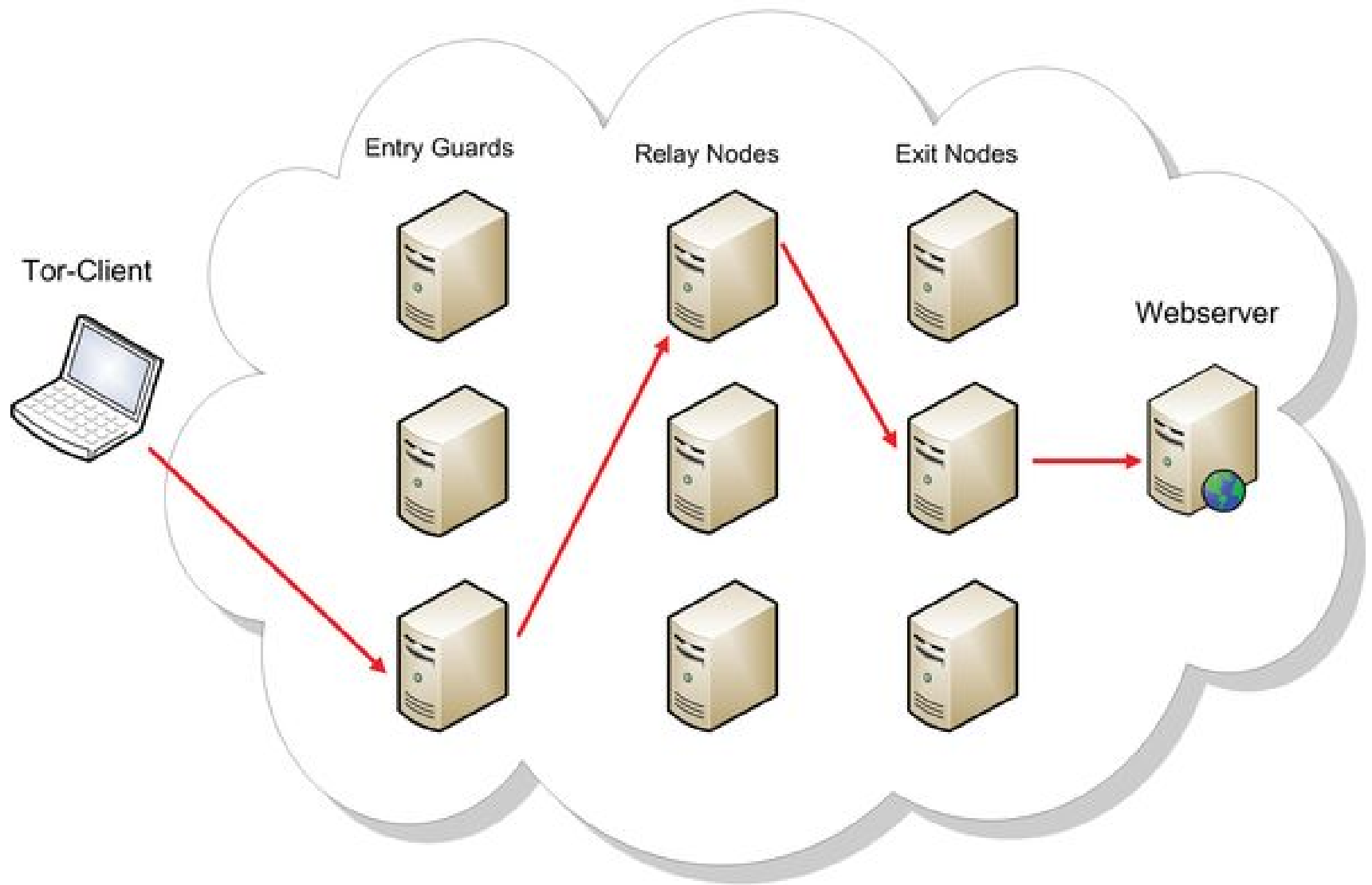
Jane

Bob

TorFlow

- ☑ Particles
- ☑ Nodes
- ☑ Labels
- ☑ Top Client Connections
- ☑ Base Map

Bandwidth Over Time

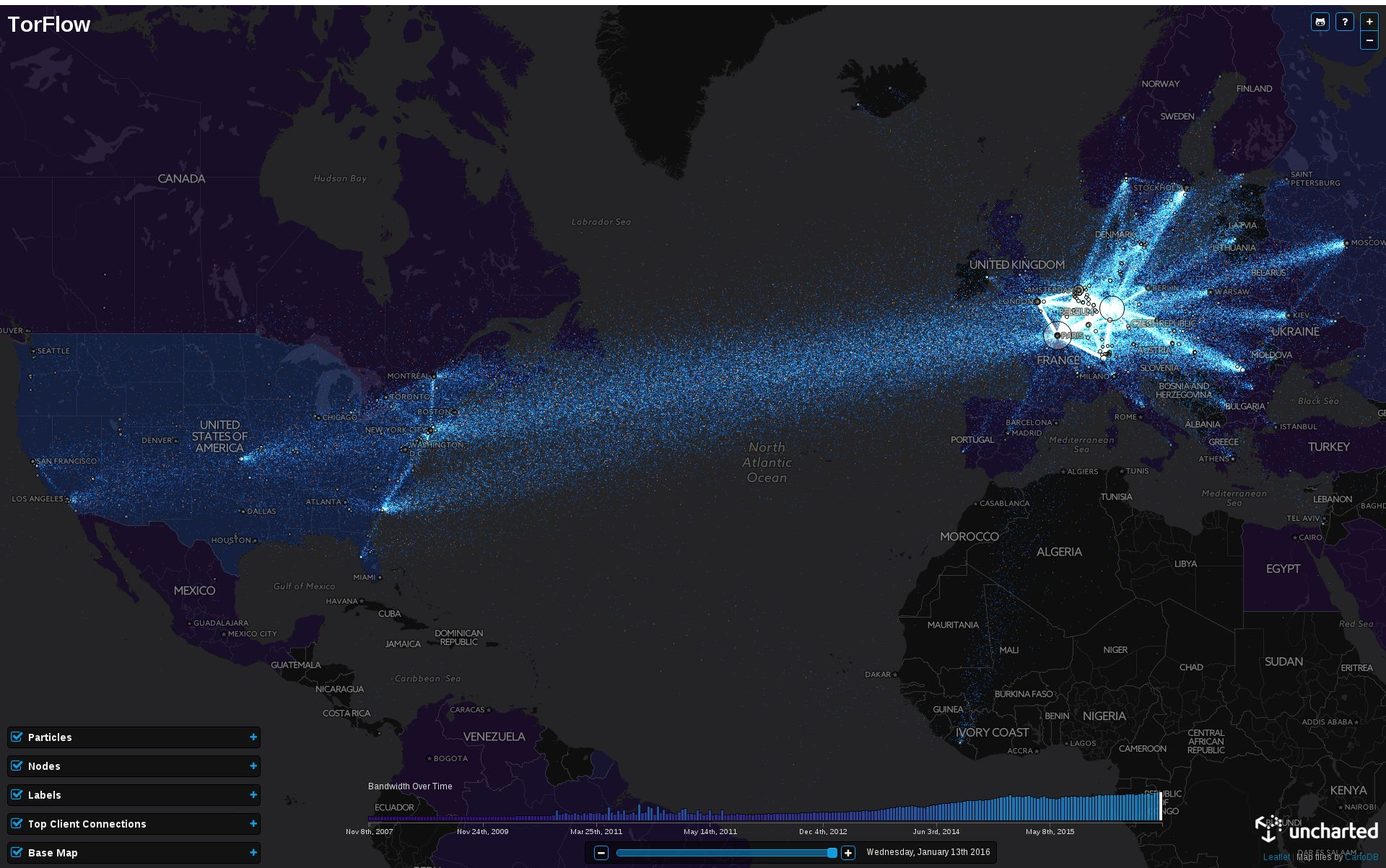Wednesday, January 13th 2016

https://torflow.uncharted.software/

#dontblocktor

yelp.com
trulia.com
mercadolibre.com.ve
kohls.com
nordstrom.com
retailmenot.com
6pm.com
zappos.com
adcash.com
ticketmaster.com
airbnb.com
asos.com
craigslist.org
expedia.com
zara.com
www.nike.com
staples.com
bestbuy.com
foxnews.com
avito.ru
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primewire.ag
yallakora.com
youm7.com
almasryalyoum.com
clixsense.com
what-character-are-you.com
subscene.com
conservativetribune.com
likes.com
leagueoflegends.com
crunchyroll.com
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target.com
wayfair.com
match.com
jumia.com.ng
e-hentai.org
adme.ru
milanuncios.com
gamespot.com
naukri.com
jcpenney.com
lowes.com
sears.com
olx.com.br
pantip.com

The anonymous Internet

Daily Tor users per 100,000 Internet users

- > 200
- 100 - 200
- 50 - 100
- 25 - 50
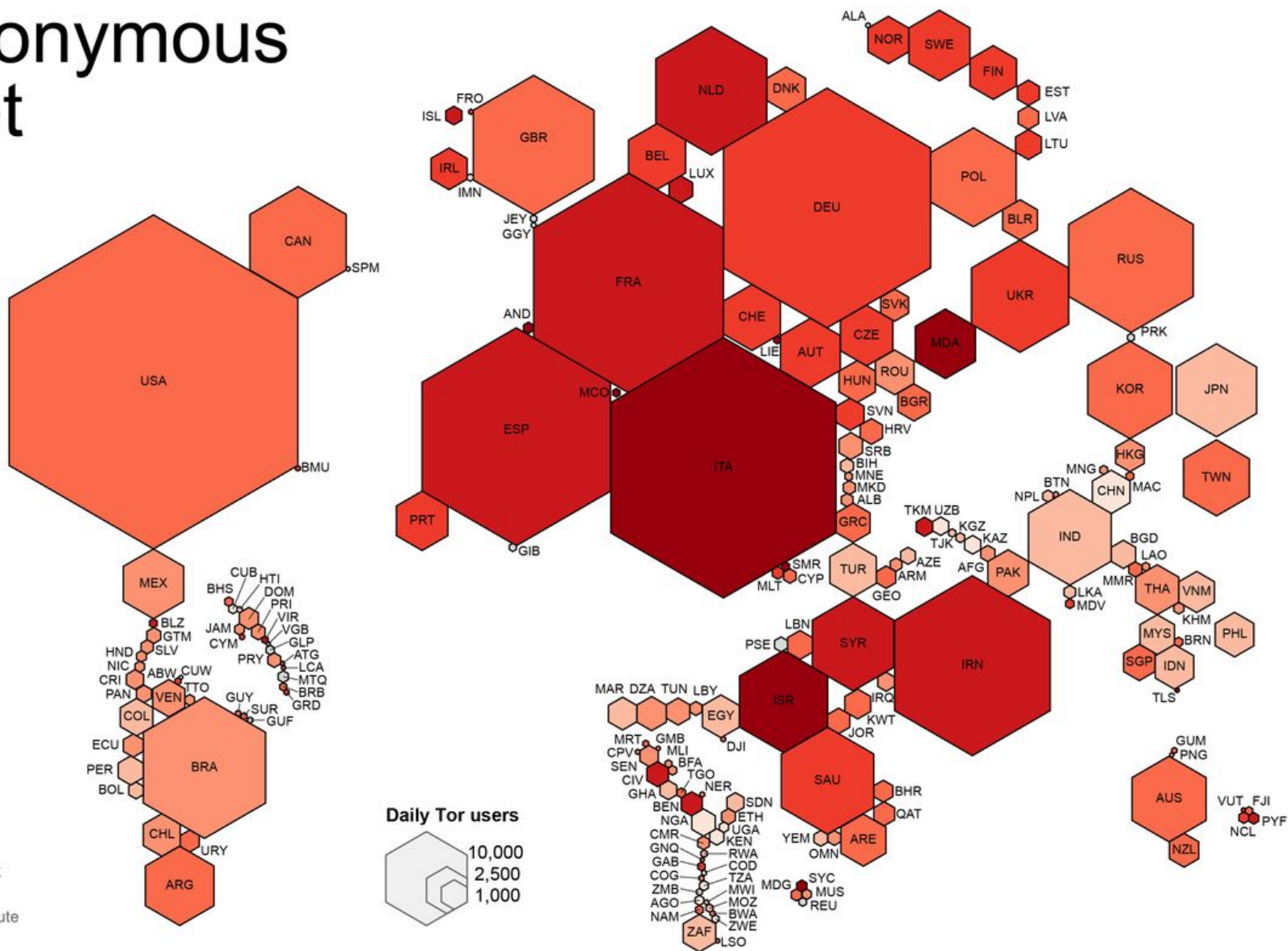- 10 - 25
- 5 - 10
- < 5
- no information
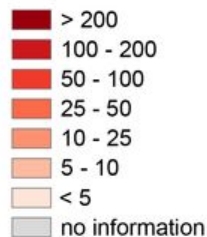
Average number of Tor users per day calculated between August 2012 and July 2013

data sources:
Tor Metrics Portal
metrics.torproject.org
World Bank
data.worldbank.org

by Mark Graham (@geoplace) and Stefano De Sabbata (@maps4thought)
Internet Geographies at the Oxford Internet Institute
2014 • geography.oii.ox.ac.uk

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oiioiioii Oxford Internet Institute
oiioiioii University of Oxford

Daily Tor users

- 10,000
- 2,500
- 1,000

Country codes shown on map:
CAN, SPM, USA, BMU, MEX, CUB, HTI, BHS, DOM, PRI, BLZ, GTM, SLV, VIR, VGB, HND, JAM, GLP, NIC, CYM, PRY, ATG, CRI, ABW, CUW, LCA, PAN, VEN, TTO, MTQ, COL, GUY, BRB, ECU, SUR, GRD, PER, GUF, BOL, BRA, CHL, URY, ARG

ALA, NOR, SWE, FIN, EST, LVA, LTU, ISL, FRO, GBR, DNK, NLD, IRL, IMN, BEL, LUX, DEU, POL, BLR, JEY, GGY, FRA, CHE, SVK, CZE, MDA, RUS, UKR, PRK, AND, LIE, AUT, HUN, ROU, KOR, JPN, MCO, SVN, BGR, ESP, ITA, HRV, SRB, BIH, MNE, MKD, ALB, GRC, HKG, MNG, BTN, CHN, MAC, TWN, PRT, GIB, SMR, CYP, MLT, TUR, AZE, ARM, GEO, TKM, UZB, KGZ, TJK, KAZ, AFG, PAK, NPL, IND, BGD, LAO, LKA, MDV, MMR, THA, VNM, LBN, PSE, SYR, IRN, KHM, MYS, BRN, PHL, ISR, IRQ, SGP, IDN, TLS, MAR, DZA, TUN, LBY, EGY, KWT, JOR, DJI, MRT, GMB, MLI, CPV, BFA, SEN, TGO, CIV, NER, SAU, BHR, GHA, SDN, QAT, BEN, ETH, NGA, UGA, YEM, ARE, CMR, KEN, OMN, GNQ, RWA, GAB, COD, COG, TZA, ZMB, MWI, AGO, MOZ, NAM, BWA, MDG, SYC, ZWE, MUS, ZAF, LSO, REU, GUM, PNG, AUS, VUT, FJI, NCL, PYF, NZL

TAILS: The Amnesic Incognito Live System

- a security-focused Debian-based Linux distro
- aimed at preserving privacy and anonymity
- all outgoing connections forced to go through Tor
- non-anonymous connections are blocked
- designed to be booted as a live DVD or live USB
- will leave no digital footprint
- https://tails.boum.org/

Meetup Topics

Tor

- technical talk
  - Roger Dingledine
- non-technical talk
  - Jacob Applebaum

Secure (Linux) distributions

- Tails

- Subgraph OS

- Whonix

- Qubes OS

Secure Communication

- PGP, OTR

- Threema, Signal

- Mute

- Ricochet

- CoyIM

- others
  - Telegram, WhatsApp, Messenger, iMessage
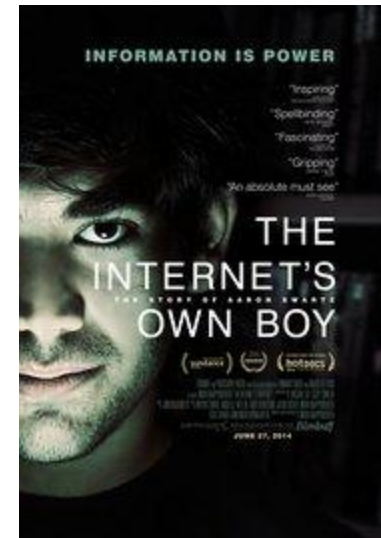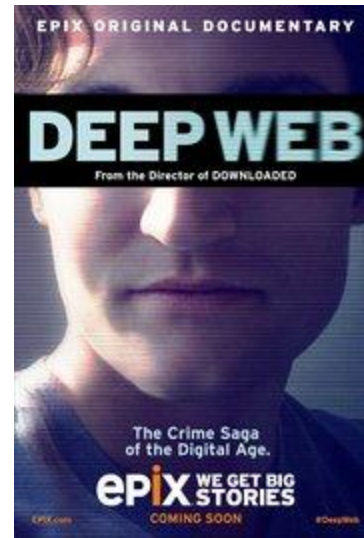
Others

- Censorship / Activism

  - Amir Taaki

- Deep web / Darknet

  - Juha Nurmi (ahmia.fi)

- SOPA / PIPA / TPP / CISPA

- Whistleblowing

  - Glenn Greenwald / Laura Poitras

- I2P

- Disk Encryption

Activities

- meetup organization

- + inviting interesting guests from abroad

- Tor relay and/or Tor exit nodes operation

- "censorship" VPN

- various workshops

Must see movies

Tor Meetup

1N3Mafk6nTxds5wnKUkQV7iHnsUjSN9UXz

https://github.com/ParalelniPolis/tor-meetup

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