Anonymity, Usability, and Humans. Pick Two.

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TorProject.org

What are we talking about?

- Crash course on anonymous communications
- Quick overview of Tor
- Usability, Security, and Humans

The Tor Project, Inc.

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

Anonymous communication

- People have to hide in a crowd of other people ("anonymity loves company")
- The goal of the system is to make all users look as similar as possible, to give a bigger crowd
- Hide who is communicating with whom
- Layered encryption and random delays hide correlation between input traffic and output traffic

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- increasingly diverse toolset:
  Tor, Torbutton, Tor Browser Bundle, TAILS Anonymous Operating System, Tor Weather, Tor auto-responder, Secure Updater, Orbot, Torora, Tor Check, Arm, Nymble, Tor Control, Tor Wall, TorVM

Other Systems

- VPN - Virtual Private Network, 1 to 1 connection, can redirect all traffic, generally encrypted
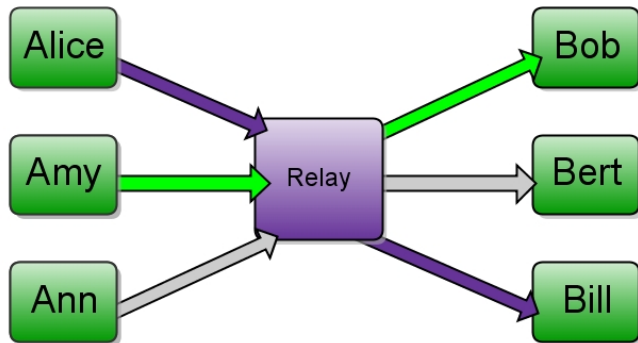
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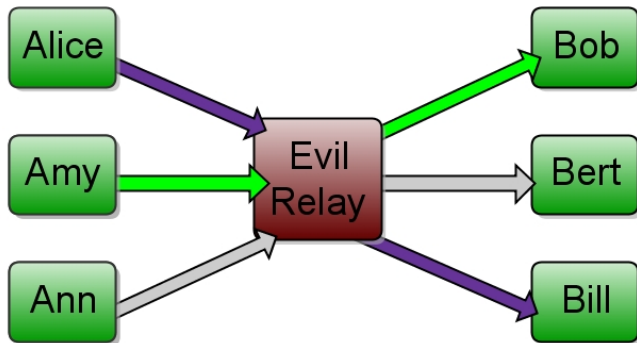
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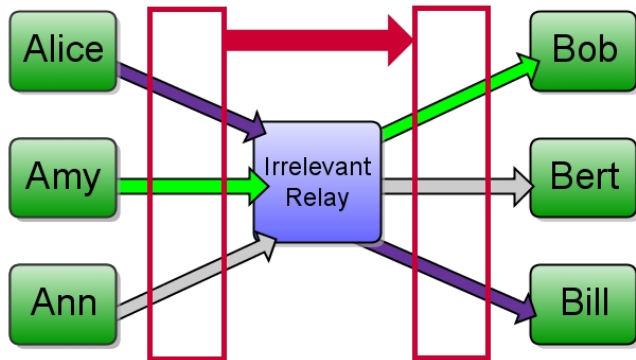- GNUnet - closed network, anonymity, distributed file storage and sharing
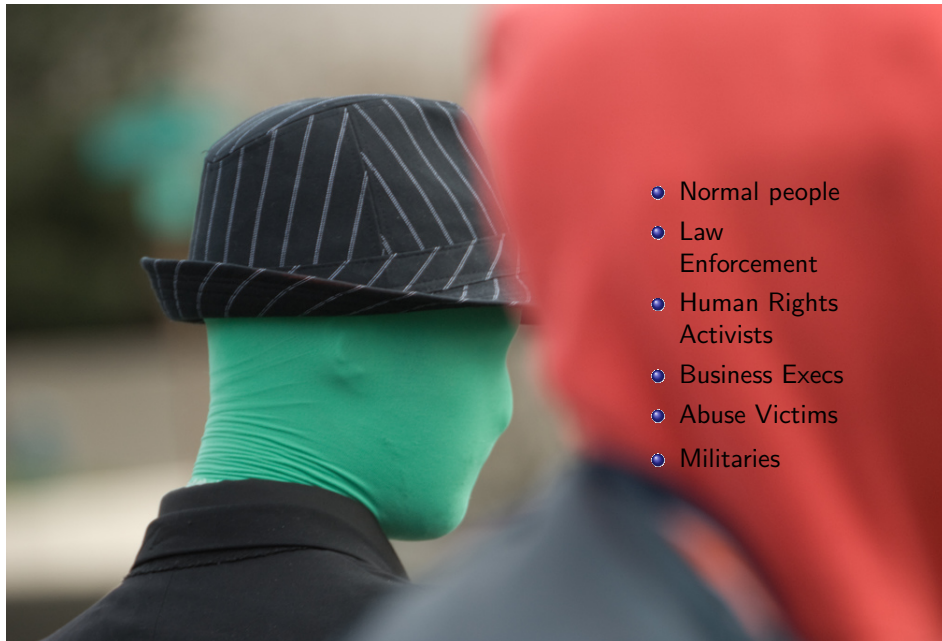
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Who uses Tor?

- Normal people
- Law Enforcement
- Human Rights Activists
- Business Execs
- Abuse Victims
- Militaries

Who uses Tor?

- *Normal users*
  linking sensitive information to their current identities, online
  advertising networks, search engines, censorship circumvention

Who uses Tor?

- *Law enforcement*
  accidental disclosure to targets, family and friend concerns, separating work from home life

Who uses Tor?

- *Rights Activists*
  Personal safety, family safety, narrowly-defined publicity, censorship circumvention

Who uses Tor?

- *Business Execs*
  separating work from home life, competitor research, censorship
  circumvention

Who uses Tor?

- *Abuse Victims and Survivors*
  complete separation of past abuse and current life, finding help and
  safety, need to help others anonymously

Who uses Tor?

- *Militaries*
  intelligence gathering, separating work from home life, other activities

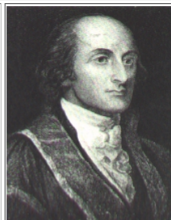# estimated 400k to 800k daily users

Online and Offline change happens

...spring is in the air...

Tor hidden services

The browser window shows:

Title bar: The Federalist - Contents - Namoroka

Menu: File Edit View History Bookmarks Tools Help

Address bar: http://duskgytldkxiuqc6.onion/fedpapers/federa00.htm

Tab: The Federalist - Contents
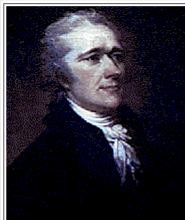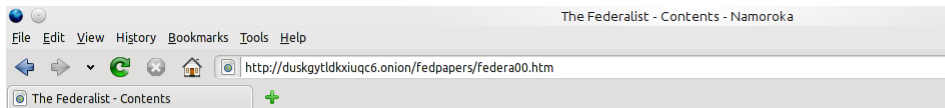
| Alexander Hamilton | James Madison | John Jay |

The Federalist

The text of this version is primarily taken from the first collected 1788 "McLean edition", but spelling and punctuation
errors -- mainly printer's lapses -- have been corrected. The main heads have also been taken from that edition and
something like "The Same Subject Continued" we have repeated the previous heading and appended "(continued)",
have been guided by the excellent edition by Jacob E. Cooke, Wesleyan University Press, 1961. The footnotes are the
edition used a variety of special typographical symbols for superscripts, we use numerals. The footnotes are the
original typography used for emphasis, such as all caps or italics, has been used here. We have tried to identify the
newspapers were the *Independent Journal* [**J**], the *New-York Packet* [**P**], and the *Daily Advertiser* [**A**], all based in Ne
actually first appeared May 28, 1788, in a bound volume published by J. and A. McLean, *Federalist II*. We have follo
each paper to its primary author, James Madison [**M**], John Jay [**J**], or Alexander Hamilton [**H**], which is shown follo

Tor hidden services

http://duskgytldkxiuqc6.onion/fedpapers/federa00.htm
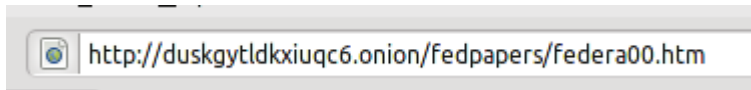
Anonymity, Usability, and Humans

- Allow the user to fully configure Tor rather than manually searching for and opening text files.
- Let users learn about the current state of their Tor connection, and configure or find out whether any of their applications are using it.
- Make alerts and error conditions visible to the user.
- Run on Windows, Linux, and OS X, Android, iOS, on normal computers and phones.

First iteration: command line


```
(0) (phobos@necrid:4) (0.00 0.04 0.00 1/165 17617) (~) (03:42:16)
--> /etc/init.d/tor start
```

Second iteration: GUI controller contest

TorK

April3rd
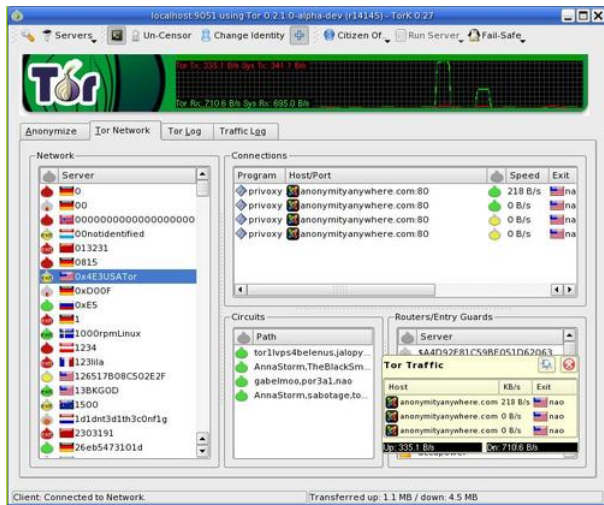
This is the default view when user opens the Tor Control Panel for the first time. The text in the caption is used to explain how to get started with Tor. Once the user chooses to hide the caption text, this setting is remembered when Tor Control Panel is accessed again.
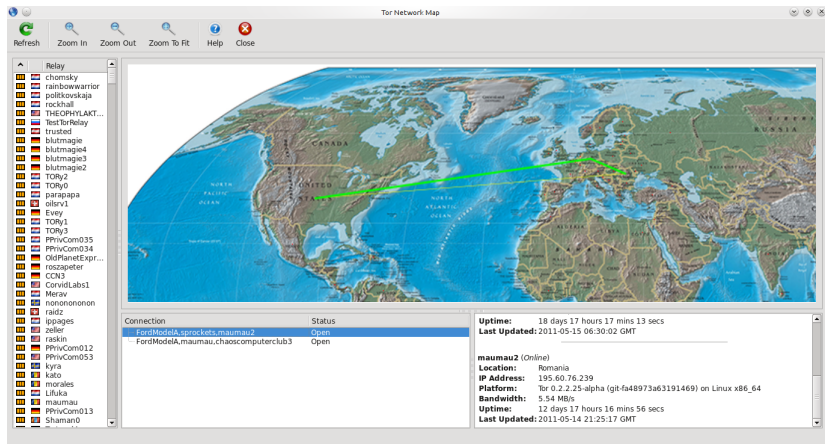
Caption-help includes diagrams and links to further help topics.

Vidalia

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- Software leaks data all over the place. Stopping these leaks leads to unexpected user experiences.
- Six years since we last dabbled in Usability.

Next steps

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

Time for a demo

Demonstration of Tor Browser Bundle

Copyright

- who uses tor?
  http://www.flickr.com/photos/mattw/2336507468/siz, Matt Westervelt, CC-BY-SA.
- 500k, http:
  //www.flickr.com/photos/lukaskracic/334850378/sizes/l/,
  Luka Skracic, used with permission.
- spring is in the air, Paco Pomet, http://pacopomet.wordpress.com/