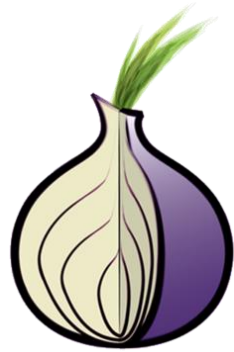


# Tor and the Dark Web: Challenges and Opportunities



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Section  
June 2017

An iceberg floating in a blue ocean under a blue sky. The small tip of the iceberg is above the water line, while the much larger, jagged body of the iceberg is submerged. The water is a deep blue, and the sky is a lighter blue with some wispy clouds. The iceberg is white and has a rough, crystalline texture.

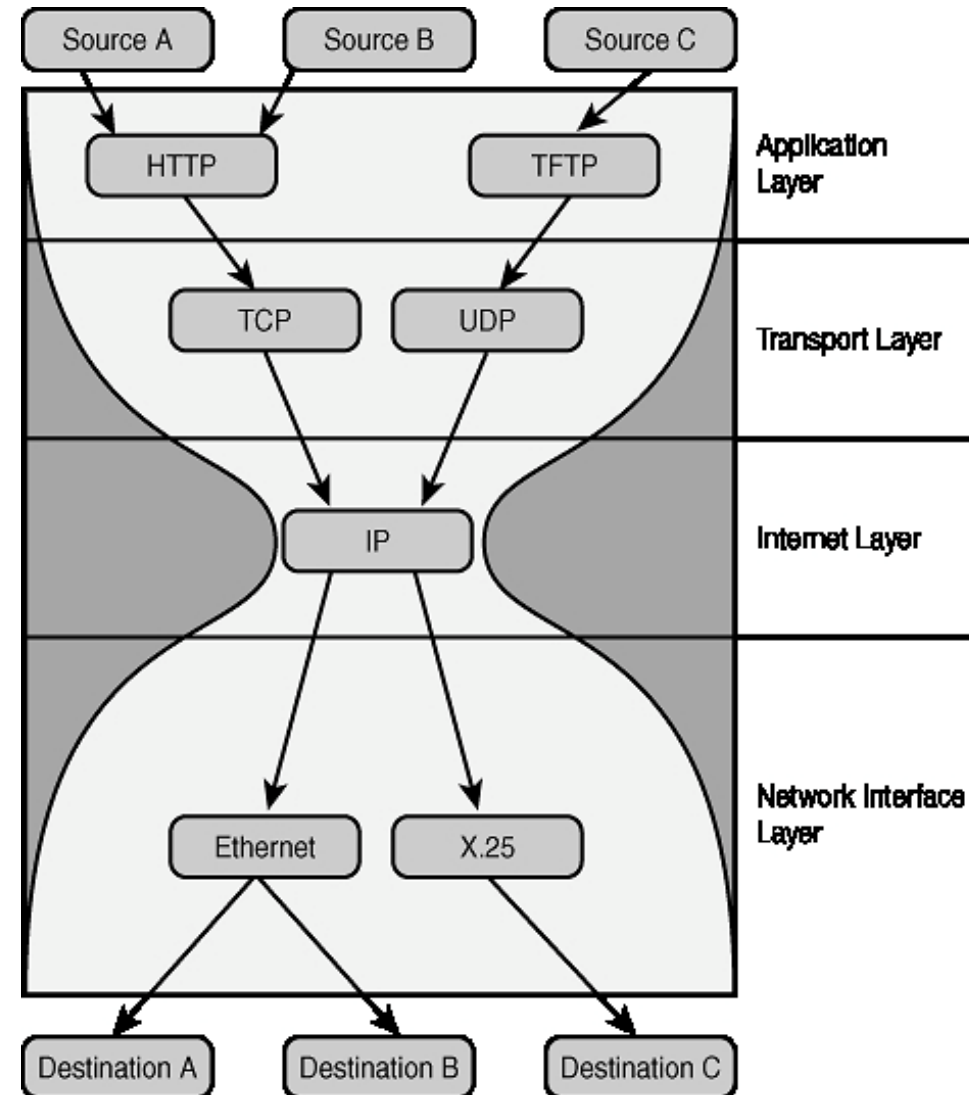
Surface Web  
(~indexed)

Deep Web

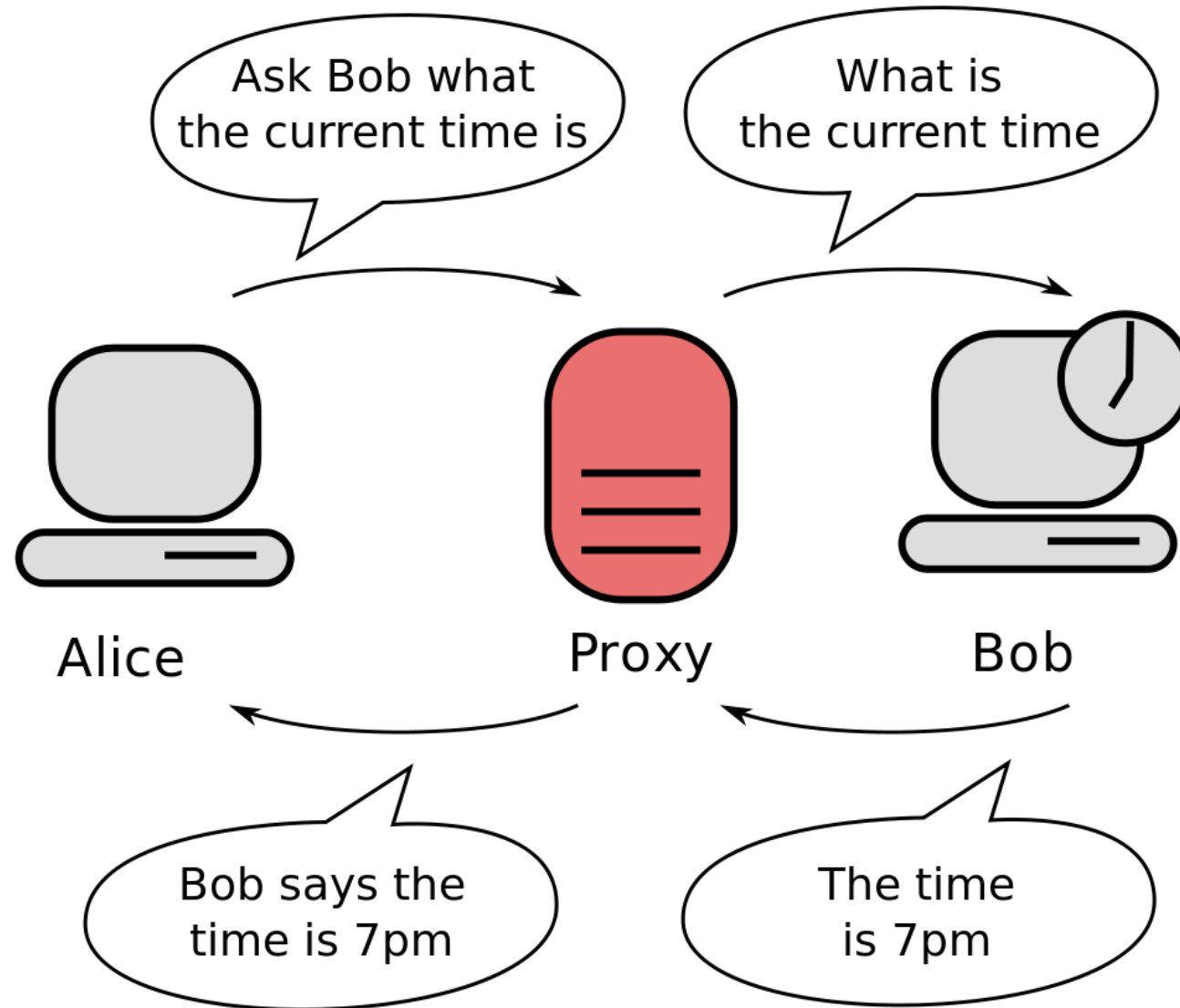
Dark Web

} > 99%

# 4-layer model

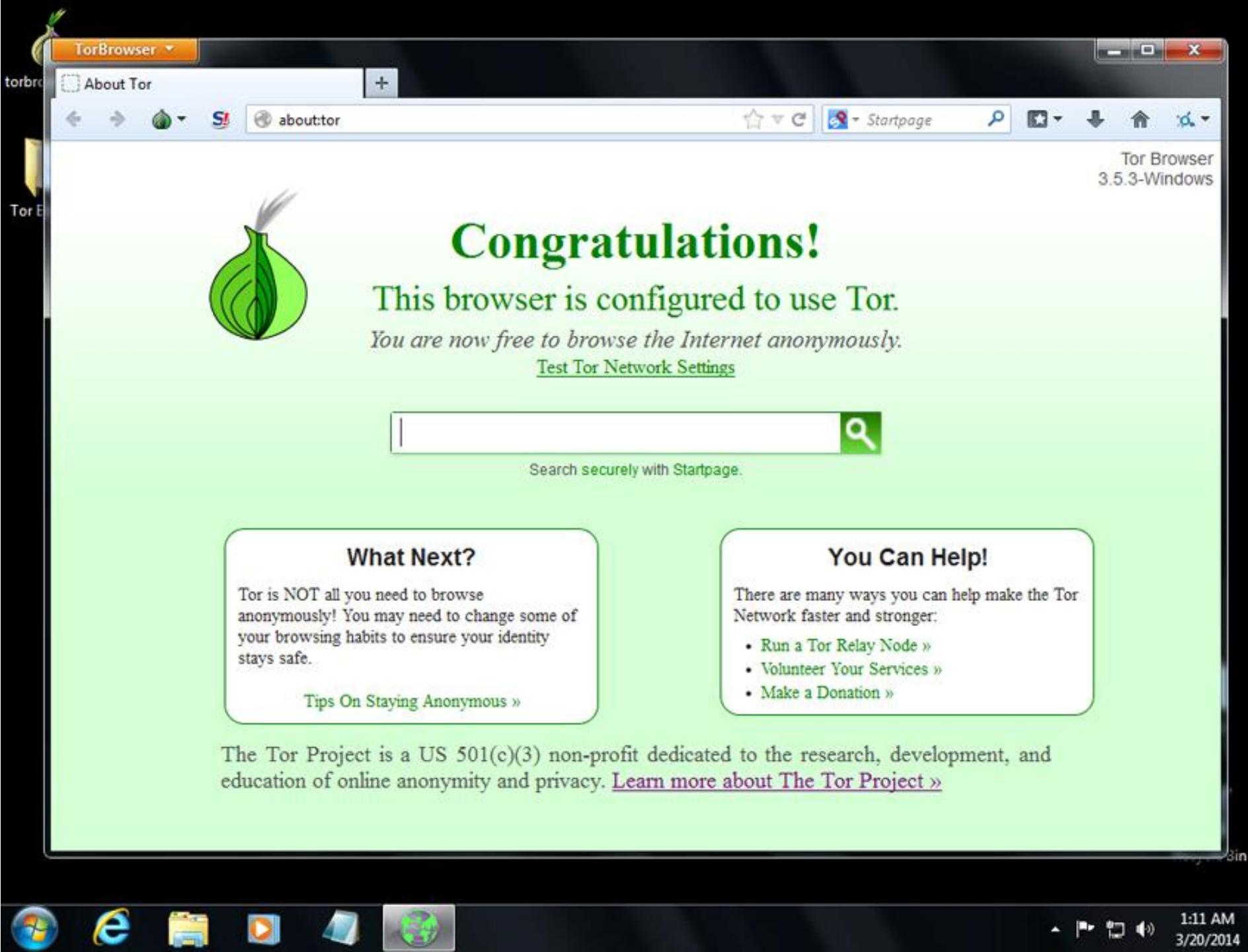


# Proxy servers



# Tor: The Onion Browser

- Most popular “dark web” platform
- Free downloadable browser
- Funded by multiple sources (i.e., here to stay)



TorBrowser

About Tor

about:tor

Startpage

Tor Browser  
3.5.3-Windows



# Congratulations!

This browser is configured to use Tor.

*You are now free to browse the Internet anonymously.*

[Test Tor Network Settings](#)

Search securely with Startpage.

## What Next?

Tor is NOT all you need to browse anonymously! You may need to change some of your browsing habits to ensure your identity stays safe.

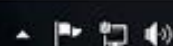
[Tips On Staying Anonymous »](#)

## You Can Help!

There are many ways you can help make the Tor Network faster and stronger:

- [Run a Tor Relay Node »](#)
- [Volunteer Your Services »](#)
- [Make a Donation »](#)

The Tor Project is a US 501(c)(3) non-profit dedicated to the research, development, and education of online anonymity and privacy. [Learn more about The Tor Project »](#)

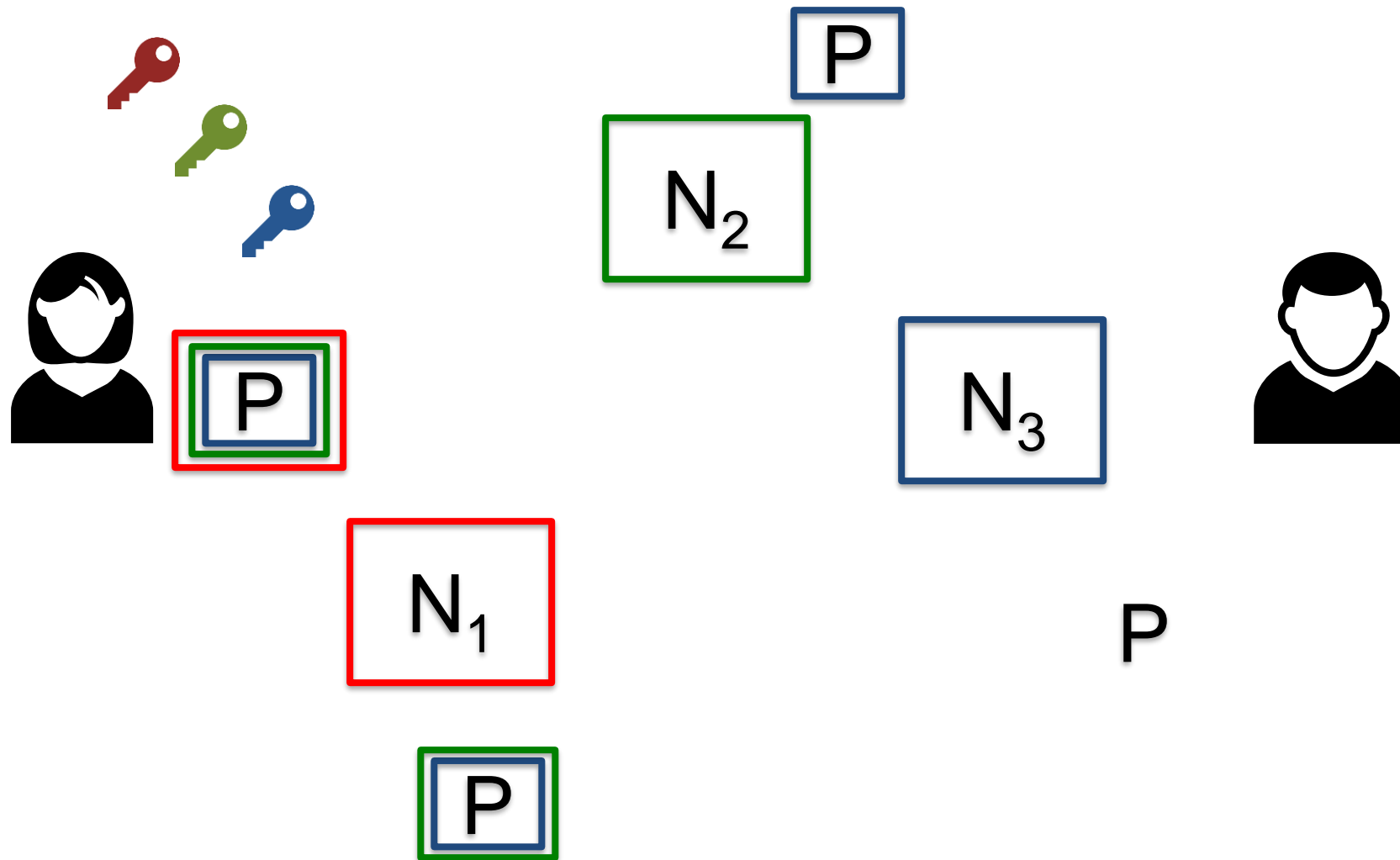


1:11 AM  
3/20/2014



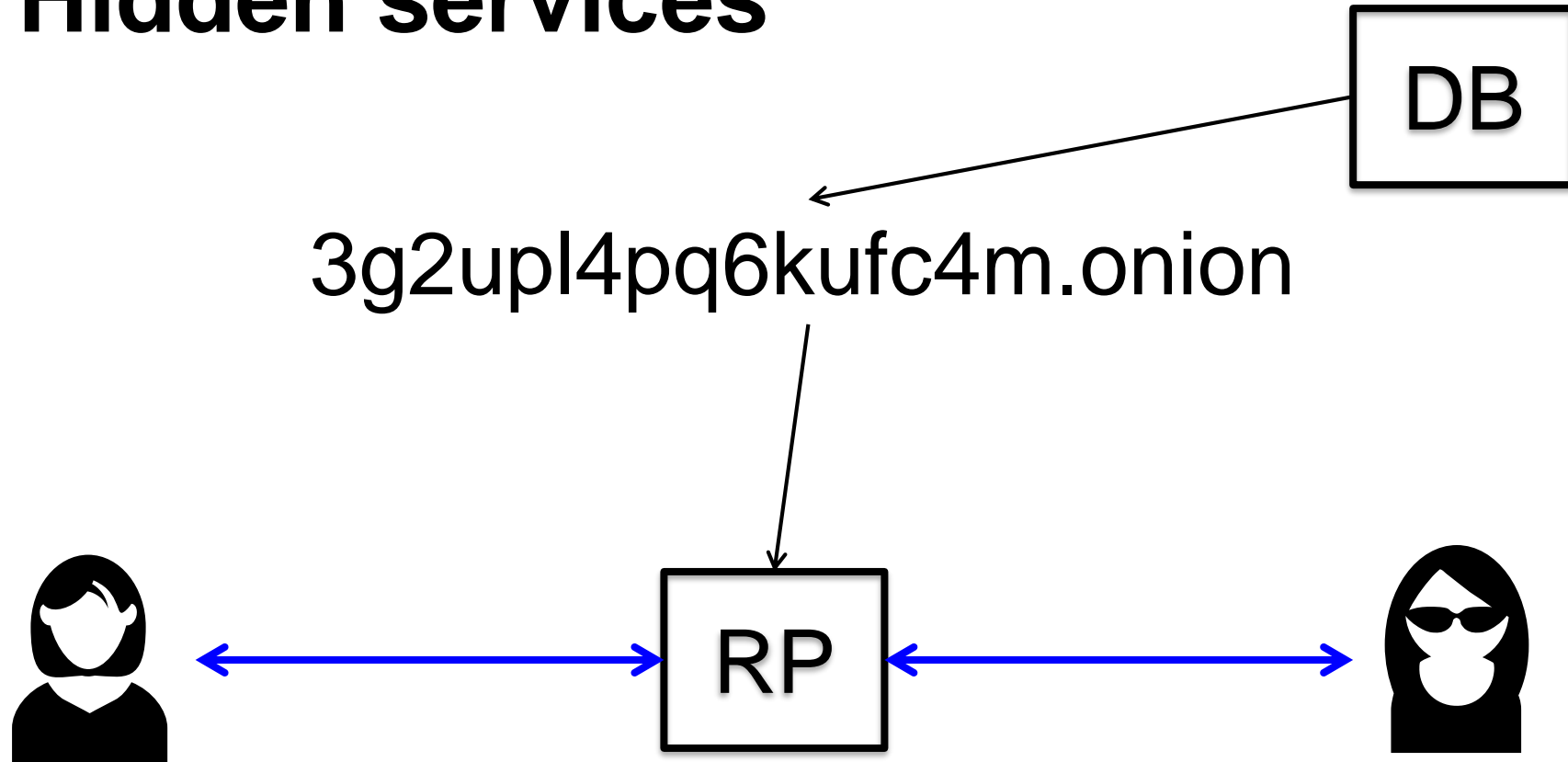


# Onion routing





# Hidden services







































# Uses for Tor

- Evading surveillance
- Avoiding censorship and political repression
- Four Horsemen of the Infocalypse
  1. Terrorists
  2. Pedophiles
  3. Drug (and gun) dealers
  4. Money launderers
- 80% of hidden services traffic for child pornography

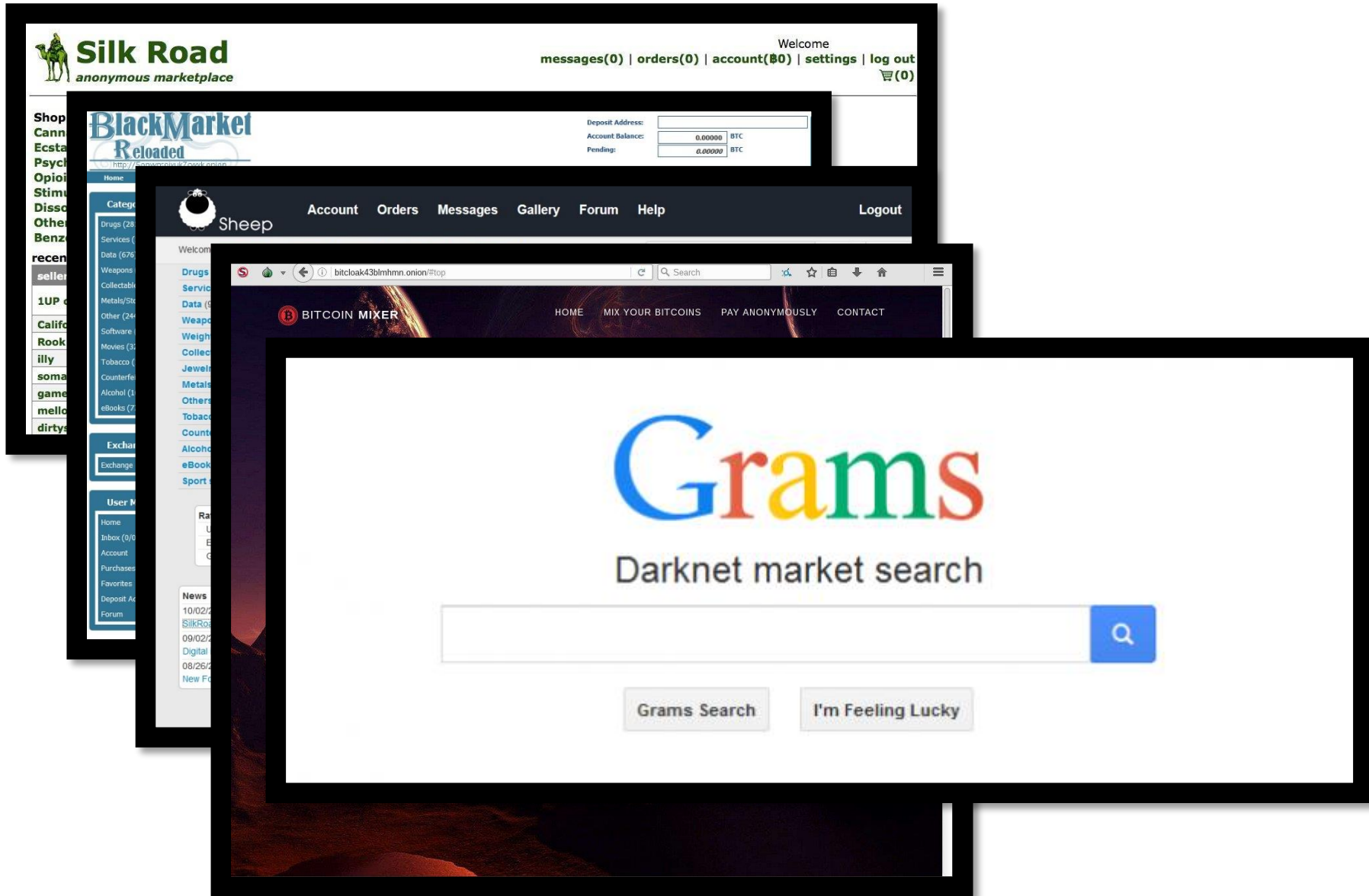
# Investigative Challenges

- End user does not know location of hidden service
- Hidden service does not know location of end user
- Surveillance of user does not lead to website and vice-versa
- Result: criminal activity undertaken in the open

# Child Exploitation

VIDEOS	TOPICS	POSTS	LAST POST
 <b>Non-Nude</b> non-nude - all ages	1177	11196	by CappyKat  Fri Dec 09, 2016 11:52 am
 <b>Naturist</b> non-sexual nudity, to include studio films (all ages)	997	9208	by lentz  Fri Dec 09, 2016 1:34 am
 <b>Softcore</b> solo action (age 5-12)	2639	22251	by Alphabet  Fri Dec 09, 2016 4:48 pm
 <b>Hardcore</b> two or more participants (age 5-12)	4719	72225	by jimmyjbl  Fri Dec 09, 2016 4:31 pm
 <b>Webcam</b> cams - all ages	3890	45267	by Pacman  Fri Dec 09, 2016 5:01 pm
 <b>Toddlers</b> 0-4 years	764	6951	by thar  Fri Dec 09, 2016 12:21 pm
 <b>Jailbait</b> teen boys (age 13+)	1687	18861	by dreamer123  Fri Dec 09, 2016 3:45 pm
 <b>Fetish</b> cross-dressing, diaper, scat, zoo, etc	628	4551	by cumbackboy  Fri Dec 09, 2016 3:14 pm
 <b>Soft Hurtcore</b> fighting, wrestling, bondage, spanking, etc	530	5076	by ThisIsMySecret  Thu Dec 08, 2016 3:40 pm
 <b>Art, Photoshopped, Shotacon, 3D</b> non real stuff.	112	789	by LittleBoyButt  Fri Dec 09, 2016 3:45 pm
 <b>Video Requests</b>	8886	25585	by leviathan321  Fri Dec 09, 2016 12:10 pm
PHOTOS	TOPICS	POSTS	LAST POST
 <b>Non-Nude</b> non-nude - all ages	1236	9279	by Samuel  Fri Dec 09, 2016 3:30 pm
 <b>Models</b> all ages	926	15322	by Gordy24  Fri Dec 09, 2016 4:02 pm
 <b>Naturist</b> non-sexual nudity (all ages)	582	3871	by Gordy24  Fri Dec 09, 2016 3:25 pm
 <b>Softcore</b> solo action (age 5-12)	3094	30512	by thunderpanths  Fri Dec 09, 2016 4:36 pm
 <b>Hardcore</b> two or more participants (age 5-12)	1717	15756	by Gordy24  Fri Dec 09, 2016 3:58 pm
 <b>Toddlers</b> 0-4 years	654	4785	by Taylor1  Thu Dec 08, 2016 8:51 pm
 <b>Jailbait</b> teen boys (age 13+)	1094	8414	by Alphabet  Fri Dec 09, 2016 4:53 pm
 <b>Fetish</b> cross-dressing, diaper, scat, zoo, etc	224	3009	by today4ik  Fri Dec 09, 2016 2:44 am
 <b>Soft Hurtcore</b> fighting, wrestling, bondage, spanking, etc	170	1902	by bondage boy  Fri Dec 09, 2016 1:47 am
 <b>Art, Photoshopped, Shotacon, 3D</b> non real stuff.	544	3220	by felix421  Fri Dec 09, 2016 1:27 pm

# DarkMarkets



# Opportunities

- Real world investigations
- Follow the money
- The Internet never forgets
- International cooperation



# Operation Onymous



U.S. Immigration and  
Customs Enforcement



## THIS HIDDEN SITE HAS BEEN SEIZED

as part of a joint law enforcement operation by the Federal Bureau of Investigation,  
U.S. Immigration and Customs Enforcement's Homeland Security Investigations,  
and European law enforcement agencies acting through Europol and Eurojust

in accordance with a protective order obtained by the  
United States Attorney's Office for the Southern District of New York  
and issued pursuant to 18 U.S.C. § 983(j) by the  
United States District Court for the Southern District of New York





Questions?