LIS-3353

Anonymity

Encryption ≠ Anonymity

- They are related, but can be different.

  Encryption = hides the contents of the message

  Anonymity = hides the identity of the sender

Why Anonymity?

Shouldn't you always be personally responsible?

(similarly, why encryption?)

"Great invention..
..can you disable the "bank robbery getaway" function?

Re: Dangerous Techs

- Yes, new dangers are created but...

- – there are legitimate needs

- – there will be a demand →

- Someone WILL have it, ergo better to decentralize/democratize it.

Anonymity: these guys liked it...

History of Anonymity

- "Silence Dogood"

Constitutional-ish

(it doesn't say "right to anonymity," per se...
.but it doesn't say "right to privacy" either..)

..and don't forget the most important
anonymous speech of them all....

VOTING!

We say "secret" ballot, but that's technically wrong....think about it.

Reduction of personal risk

- – whistleblowers
- – crime victims
- – (literal) minorities

  – sometimes good ideas are (really) unpopular.

- – it's part of the 1st amendment.

How to do it **online**

- No magic math here, unlike encryption..

-

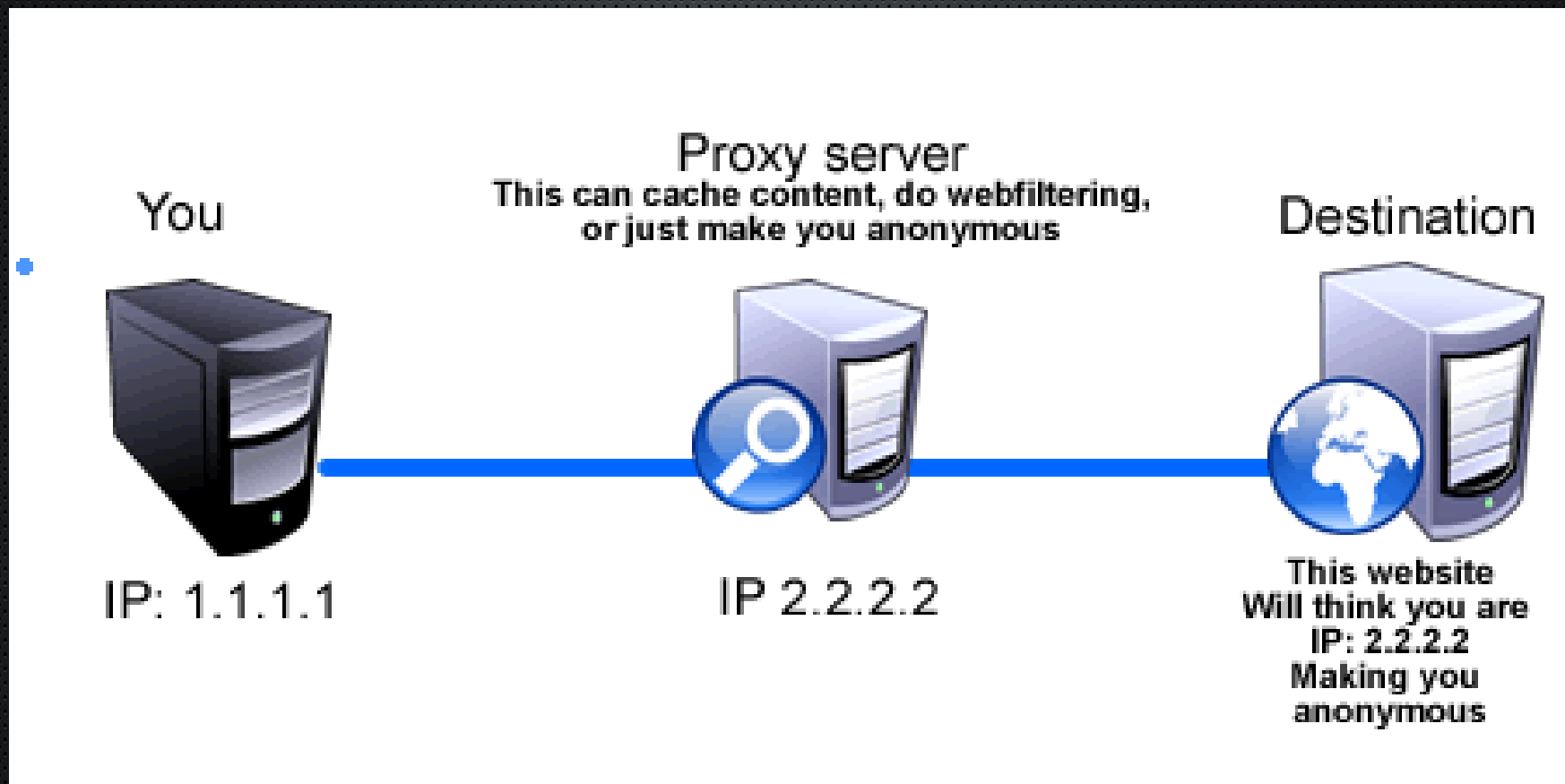- But we can use real life analogies

A Trusted 3rd Party

- This is good --- but only as good as the 3rd party.

  Stranger? Can you trust them?

- Close friend? But what about
    - - detection
    - - selling out
    - - endangering the friend?

3rd Parties online = Proxy

You
IP: 1.1.1.1

Proxy server
This can cache content, do webfiltering, or just make you anonymous
IP 2.2.2.2

Destination
This website Will think you are IP: 2.2.2.2 Making you anonymous

Is that like a VPN?

Is that like a VPN?

Sigh. Yes.

Adventures in badly named things in computing.

Is that like a VPN?

VPN. Virtual Private Network.

Network – A bunch of computers connected together.

(note – there is no technical difference whatsoever between this "network" and "cloud," but I digress...

Is that like a VPN?

VPN. Virtual Private Network.

Private Network – Think a bunch of computers connected together in the same room, only to one another. You know, privately.

Virtual Private Network – Same as above, but **virtualized** through the internet.

Is that like a VPN?

So why do we call proxies that?

It's the same underlying technology (e.g OpenVPN or tinc) aka

"Encrypted/private connections between at least two computers for the purpose of hiding what's happening in between"

(but in the case of the paid service proxy, to also provide anonymity)
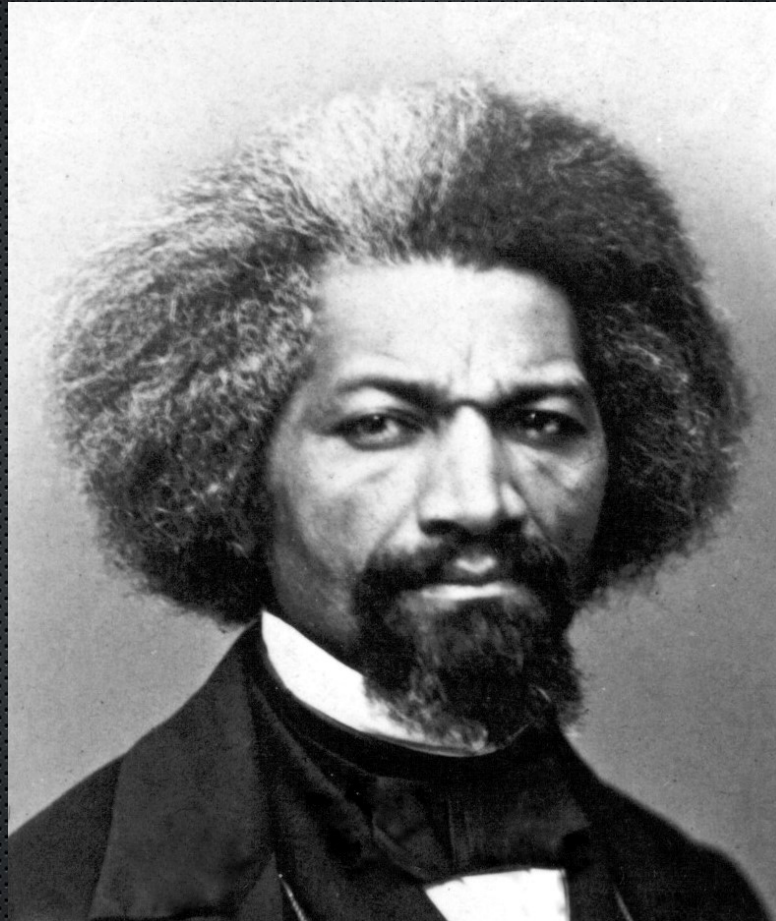
BUT. Proxies or VPNS

...there are always "endpoints," and that's your vulnerability. We need to go deeper...
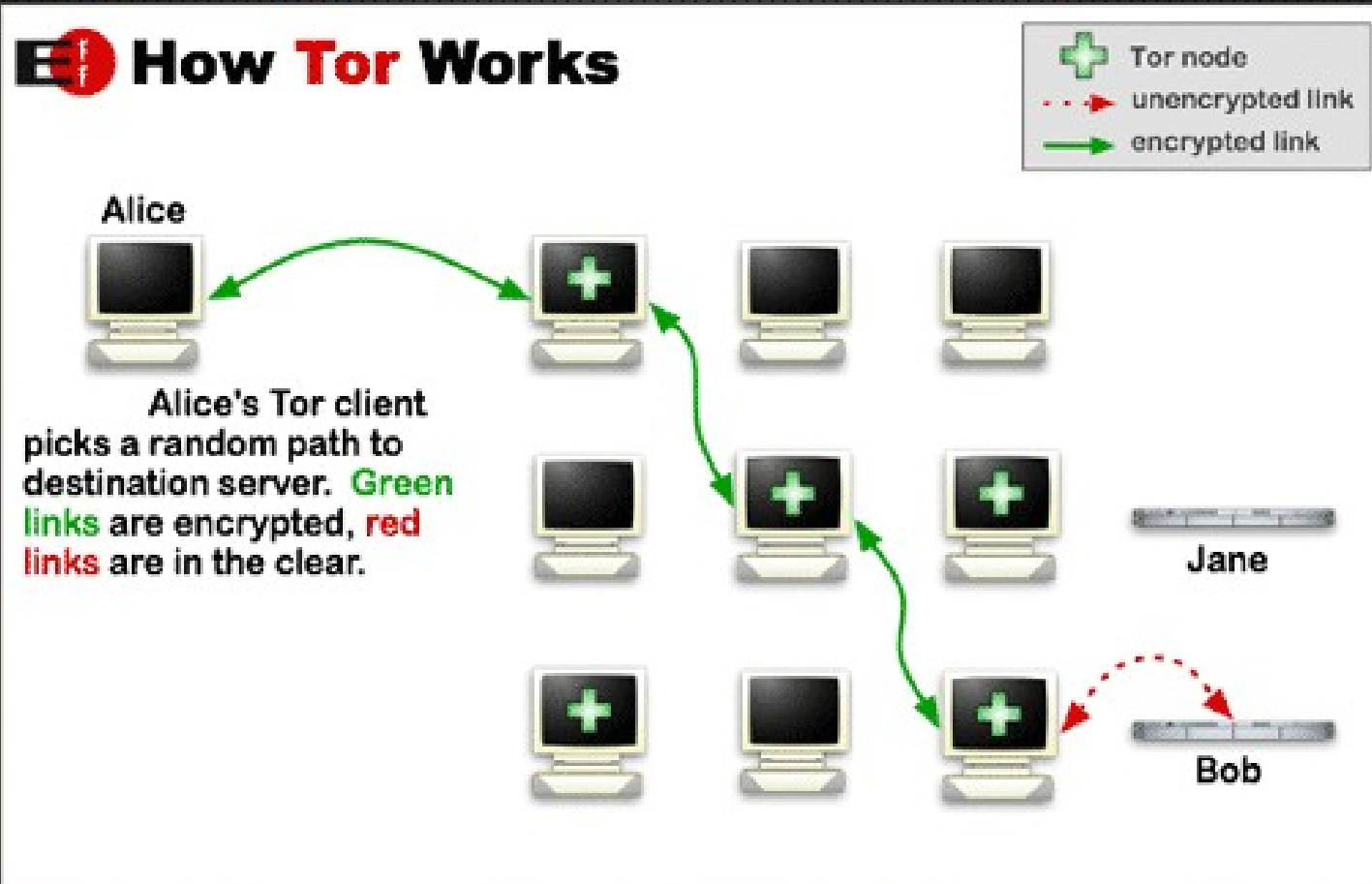
Lost in the crowd?

"I am Spartacus!"

How did he learn he was a slave?

"Don't worry 'bout the law, they can't arrest us all!"

Tor

More on Tor

- – Why allowed? Military needs it too.
  – NOT really encrypted by itself (but you can just add it)

- – MANY other possible attacks (cookies, js)
  – Exit Nodes are dangerous

- – Like encryption, yes, the bad guys will use it too.

Dark Web

- .onion sites

- The (former) Silk Road

So far, we've been thinking about "speaking"

But what about "hearing?"

"reading?"

"watching?"

Back to Frederick Douglass...

Sophie Auld, who was bored one day,

taught Frederick to read.

Back to Frederick Douglass...

Sophie Auld, who was bored one day,

taught Frederick to read, ILLEGALLY.

From there, he traded for, scammed, and stole books.

(though the books weren't necessarily kept forever...Perhaps we should say he "illegally downloaded them..."

Back to Frederick Douglass...

Luckily – books don't talk. They don't squeal on you, they don't run back to their owners and tell the owner who read them, and when, and how.

Back to Frederick Douglass...

Luckily – books don't talk. They don't squeal on you, they don't run back to their owners and tell the owner who read them, and when, and how.....

Well, they used to not do that, anyway :)

Back to Frederick Douglass…

Julie Cohen, "Copyright Management in Cyberspace"

"A fundamental assumption underlying our discourse about the activities of reading, thinking, and speech is that individuals in our society are guaranteed the freedom to form their thoughts and opinions in privacy, free from intrusive oversight by governmental or private entities."