



Onion Routing



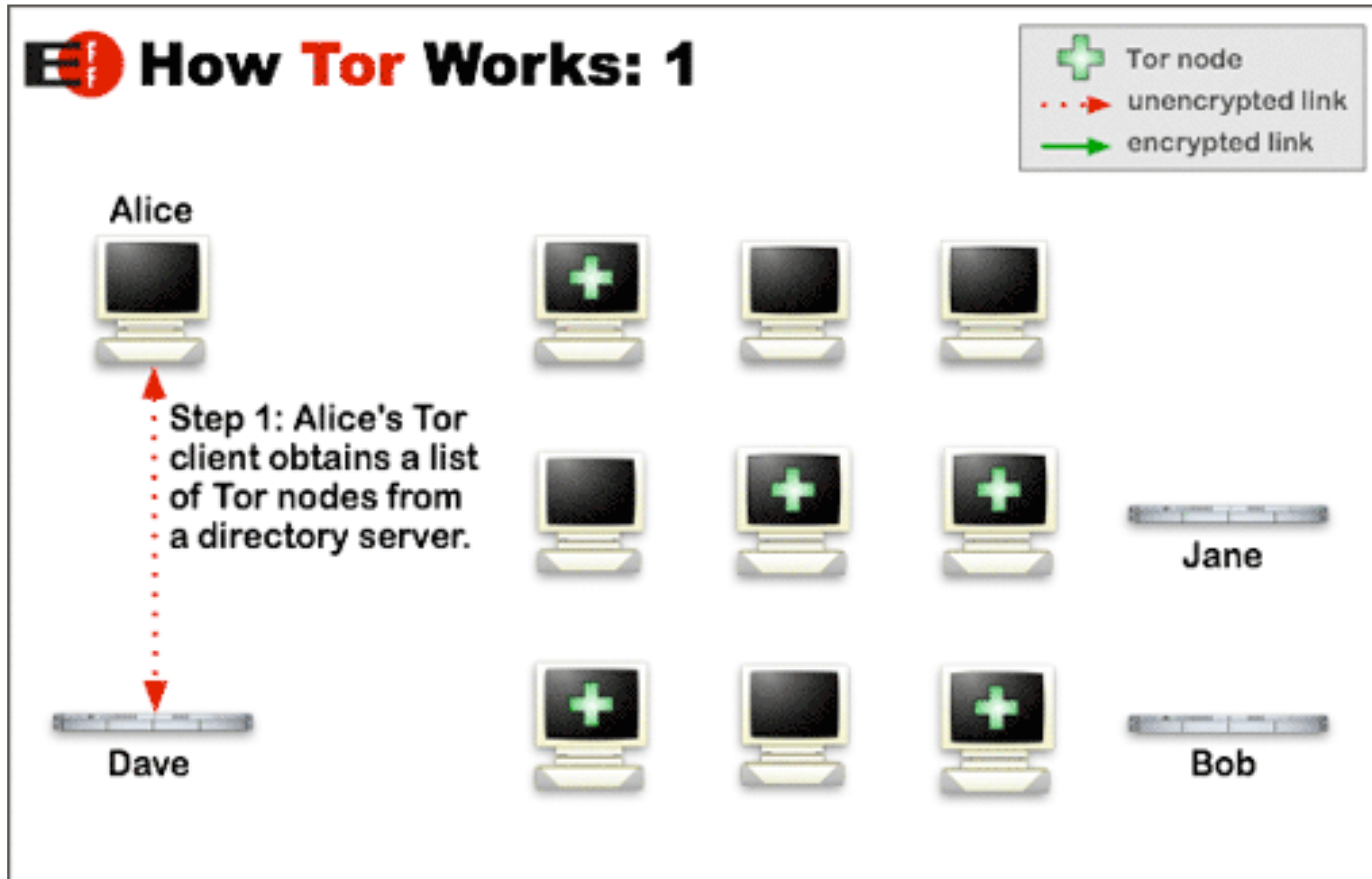
Tor

By:
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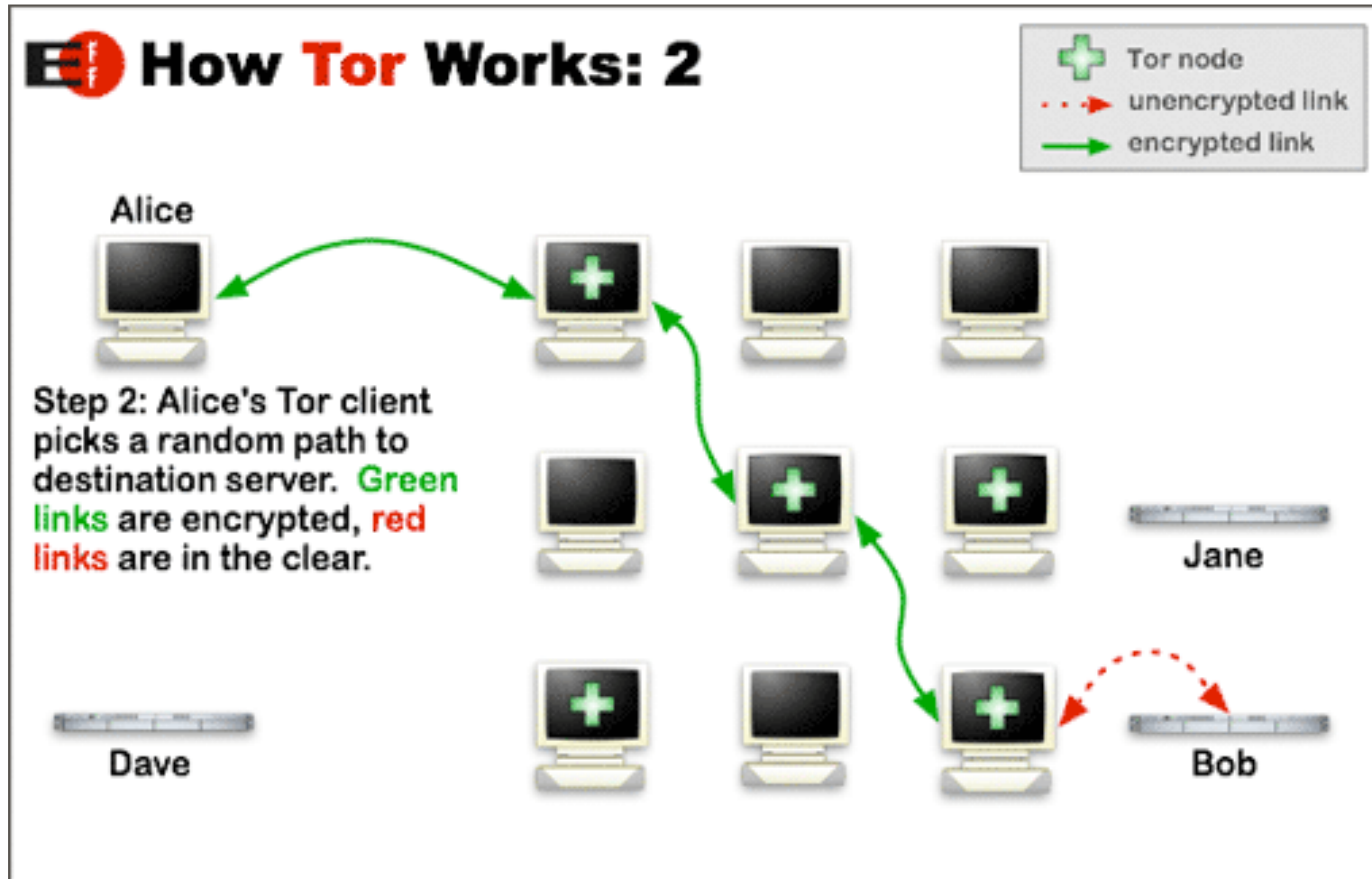
What is Tor?

- A web anonymizer.
- Started by the U.S. Navy.
- Open source and free software.

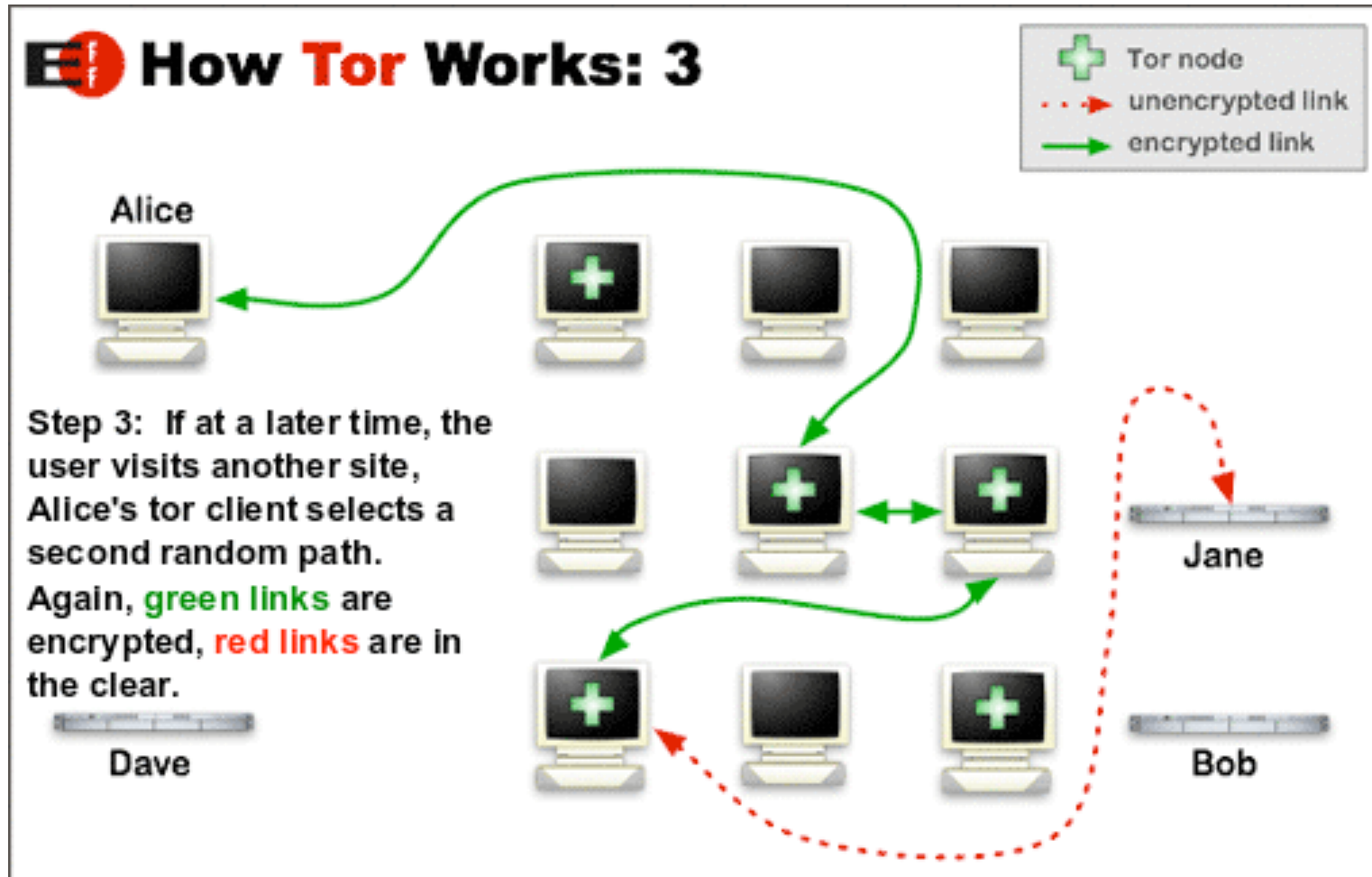
From <http://www.torproject.org>



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The Chinese Firewall



Pros of Tor.

- Anonymity for people in oppressive countries.
- Hard for advertisers to hassle Tor users.
- Some people/institutions need to be anonymous:
 - Law enforcement investigators.
 - Military personnel.
 - Journalists in the field.
 - Political and religious exiles.

Cons of Tor

- Anonymizes users indiscriminately.
- Defeats geolocation filters.
- Relays transmit blindly?
- Exponential growth/not scaling well/slow.
- Limited funding and oversight.
- Criminals can abuse.
- Relay systems can be blocked.

More Cons of Tor

- Volunteer relays.
- Back door controversy.
- Doesn't work for all Internet protocols.
- Encryption isn't end to end.
- Financial support in flux:
 - Naval research laboratory (2001-2006)
 - Electronic Frontier Foundation (2004-2005)
 - Rice University via NSF (2006-2007)

Privoxy

- Non caching web proxy.
- Software in public interest under GPL v2.
- Used on the Tor network.
- Enhanced filtering capabilities.
 - Modify web page data and HTTP headers.
 - Filter out Internet junk and annoying ads.

Conclusion

- Tor is fairly new and unproven.
- Technical issues need to be solved.
- Anonymizing random users is controversial for some relay operators.
- Funding is currently limited for Tor.
- Tor defeats services based on location.
- Privacy can never be assumed over the Internet even with Tor.

My Opinion

Tor is too new to know all of the ethical implications. In some cases, getting around censors is both appropriate and necessary. The Internet should never be viewed as a private network even though public key cryptography is powerful. A back door on Tor relays seems reasonable with warrants and appropriate policing to prevent abuse. The developers disagree.

Works Cited:

- “EFF Electronic Frontier Foundation,” Retrieved May 26, 2010 (<http://www.eff.org/>).
- “Hacking Tor, the anonymity onion routing network,” Retrieved May 26, 2010 (<http://isc.sans.org/diary.html?storyid=1794>).
- “Onion Routing,” Retrieved May 26, 2010 (<http://www.onion-router.net/>).
- “Privoxy – Home Page,” Retrieved May 26, 2010 (<http://www.privoxy.org/>).
- “Why Tor?,” Retrieved May 11, 2010 (<http://www.torproject.org/overview.html.en#overview>).