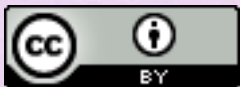


Internet, Privacy, Ethics, Policy

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Background

- Me
 - 20+ years active involvement in Internet technology advancement
 - for-profit companies
 - volunteer organizational leadership (Internet Architecture Board)
 - not-for-profit mission-based organization -- the Internet Society (Chief Internet Technology Officer)
 - active independent professional
 - <http://www.thinkingcat.com>
- My perspective
 - The Internet is Impossible
 - <http://www.internetimpossible.org>
 - The Internet can and will change to meet the world's needs, but some features will remain and/or must be preserved

Overview

- The Internet...
- Challenges driven by this technology
 - Privacy
 - Intellectual Property Rights
- Discussion of traditional policy approaches
- A Better Way
- Conclusions

THE INTERNET...

The Internet is Impossible

- The Internet is...
 - a network of networks
 - the platform for a number of globe-spanning tools and services
 - what we make of it
- The Internet is commercially based but not commercially owned
 - It's not whatever ISPs or companies "give us"
 - Why AOL, miniTel ultimately failed...
- Impossible
 - There is no master plan; there never could have been
 - This continues to make people uncomfortable

Addresses, routing

- Every thing “on the net” is connected to a network
- Networks may be local, or span continents
 - your home
 - Google
- You get from “here” to “there” because networks interconnect, and know how to send packets across networks to other parts of the world

Infrastructure versus services

- Infrastructure
 - Operated for the overall Internet
 - Uniform across the Internet
 - Funding can be a challenge
 - Domain Name System (DNS)
- Service
 - Private
 - May provide different faces to everyone
 - Google
 - Facebook

THE INTERNET AND PRIVACY CHALLENGES

Governments spying on traffic

- In June 2013, the world woke up to evidence that one government engages in widespread Internet traffic snooping
 - and, subsequently, it's become clear that government is hardly alone
 - motivation is to improve situational awareness to allow law enforcement to achieve its ends
- Spying may be limited to network elements on their soil, but cannot be limited to their citizens' traffic
- Thoughts on what should be done to address this?

Companies using peoples' data

- Google, Facebook, Yahoo! and ThinkingCat.com are accessible and used the world over.
- The US has different ideas of what is “appropriate” use of personal data than, say, France.
- Also, see previous point about spying, and think about subjecting personal data to the laws of the country storing it
- Thoughts on what should be done to address this?

THE INTERNET AND INTELLECTUAL PROPERTY RIGHTS

Other countries selling your countries goods (counterfeited)

- Pirated films on Russian servers
 - Russians don't view copyright the same way as the US does
- Vuitoni knock-offs for sale from Chinese websites
- Licensed sportscasts available live from other countries' websites
 - rojadirecta.org
- Thoughts on what should be done to address this?

DISCUSSION OF TRADITIONAL POLICY APPROACHES

Creating national boundaries on the Internet

- E.g., South American countries have called for new network connections to avoid the Miami interconnect for non-US-bound traffic
- But...
 - Vancouver is closer to Seattle than Toronto
 - YVR-SEA-ORD-YYZ might be “faster” than YVR-YYZ
 - Multiple paths are important for ensuring that there is resiliency and robustness in the network
 - Single-point-of-failure is bad
 - Egypt, kill-switch

Data localization

- Brazil called for “local data centres” for major Internet services
 - e.g., Google
 - Requiring their citizens’ data remain within the nation’s borders
- But...
 - Kind of hard to implement?
 - What is “citizens’ data”?
 - What about positive aspects of “big data”?
 - Possibly not ideal for other countries and other services (oppressive regimes)
 - Barrier to entry for new services

Tweaking Internet infrastructure

- SOPA/PIPA in the US
 - Proposed requiring ISPs to block DNS responses for sites identified as carrying IPR materials
 - Preventing US citizens' access to sites
- ICE will pull the domain name registration for sites deemed to be carrying illegal IPR
 - Preventing everyone from access
- But...
 - Blunt instrument – can take out far more than just one site
 - SOPA/PIPA would be easily circumvented
 - e.g., in Turkey, accessing Twitter
 - Breaks the technology
 - DNSSEC would not work

And we've just had a traditional technical/policy discussion

- Like a boring first generation electronic game, it's just a back and forth between technologists and policy makers:
 - “no, you cannot do that, it will break the net”
 - “it is unlawful to <fill in blank> and you will comply”

WHAT IS THE BETTER WAY?

Should policymakers become technical experts?

- Senators should not have learned how to spell DNS
 - Nor DNSSEC
- Common ground?
 - We can look at the “unchanging features of the Internet” – it’s “invariants” to frame discussion of what does, and does not, work for the Internet
 - Internet Society. 2012. “Internet Invariants: What Really Matters.” <http://www.internetsociety.org/internet-invariants-what-really-matters>.

“Global Reach, Integrity”

- Any endpoint of the Internet can address any other endpoint, and the information received at one endpoint is as intended by the sender, wherever the receiver connects to the Internet. Implicit in this is the requirement of global, managed addressing and naming services.

“General Purpose”

- The Internet is capable of supporting a wide range of demands for its use. While some networks within it may be optimized for certain traffic patterns or expected uses, the technology does not place inherent limitations on the applications or services that make use of it.

“Innovation without requiring permission”

- Any person or organization can set up a new service, that abides by the existing standards and best practices, and make it available to the rest of the Internet, without requiring special permission. The best example of this is the World Wide Web — which was created by a researcher in Switzerland, who made his software available for others to run, and the rest, as they say, is history. Or, consider Facebook — if there was a business approval board for new Internet services, would it have correctly assessed Facebook’s potential and given it a green light?

“Reusable (technology) building blocks”

- Technologies have been built and deployed on the Internet for one purpose, only to be used at a later date to support some other important function. This isn't possible with vertically integrated, closed solutions. And, operational restrictions on the generalized functionality of technologies as originally designed have an impact on their viability as building blocks for future solutions.

Revisiting the policy approaches...

- National borders
 - Undermines “global reach, integrity”
- Data localization
 - Undermines also “general purpose”, “innovation without requiring permission”
- Tweaking Internet infrastructure
 - Undermines “Reusable (technology) building blocks”

The hard work lies ahead...

- Need to tackle hard international policy challenges
 - Often, the wrong-doing is happening outside the jurisdiction that takes offence
- We can find “common ground” of issues without resorting to deep policy or technology discussion
- Take a step back and focus on the problem that needs to be addressed
 - people, behaviour
 - taking it out on the network is the easy way out, with potentially disastrous consequences

CONCLUSIONS

Conclusions

- Making policy doesn't just affect people and populations, it will make or break the Internet, globally
- If we treat the Internet just like every other network, we will succeed in making it just that.
 - and no more than that.
- A better plan is to *rethink* how to develop and apply international policy in the Internet context.



4/11/15

QUESTIONS?

Further reading

- Daigle, Leslie, “On the Nature of the Internet”, March 2015. Global Commission on Internet Governance Paper Series #7
 - <https://www.cigionline.org/publications/nature-of-internet>

<http://www.thinkingcat.com>

This I believe...

The Internet was created for connecting and sharing — initially, connecting research networks and sharing (computing) resources. Ever since it “escaped” the research lab, it has provided a basis for individuals of all age and background to connect and share in ways previously unimagined. The things we’ve seen in the last twenty years would surely have been deemed *impossible*, except that they have been achieved. As long as the Internet remains open and non-discriminating to all-comers, the people (individuals, communities and organizations) of this planet will continue to amaze each other with the creative uses to which they put the Internet.

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