The Internet Fragmentation... or Decay?







The End of a Unified Internet

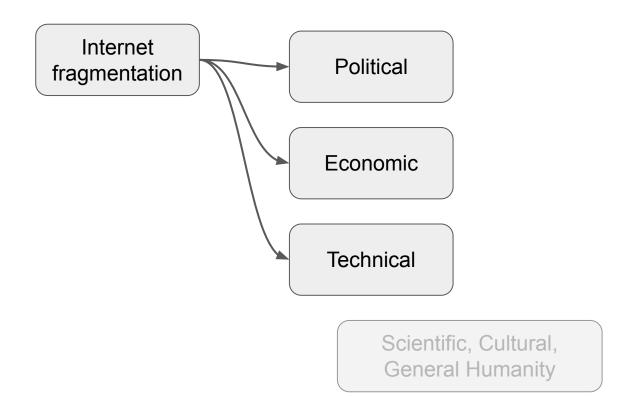
Internet fragmentation is the division or splintering of the unified, open, global Internet into smaller, isolated networks subject to different rules, regulations, and technical standards—which may not be able to interconnect or interoperate seamlessly...



https://www.internetsociety.org/resources/internet-fragmentation/about-the-explainer/

Two levels of fragmentation

Taxonomy of fragmentation



Political fragmentation

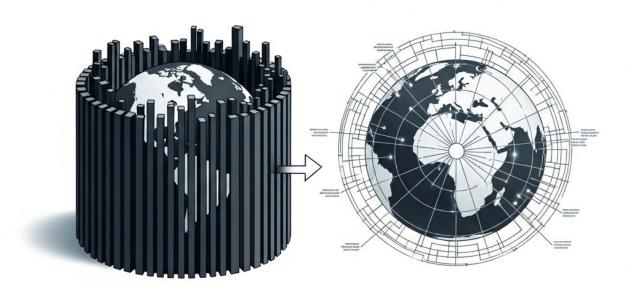


Methods of political control

- Censorship and content filtering
- Internet shutdowns
- Data localization laws
- Building sovereign infrastructure



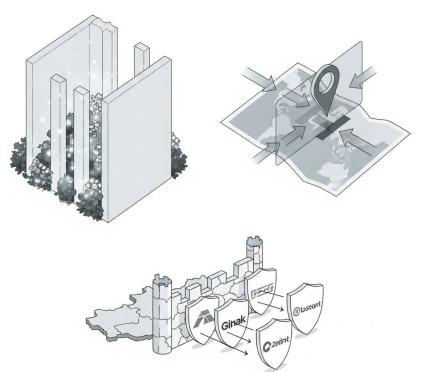
Authoritarian vs. Democratic Models



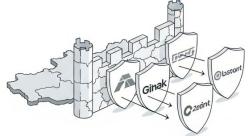
Digital Authoritarianism and Regulatory Autonomy

Economic fragmentation

Walled Gardens

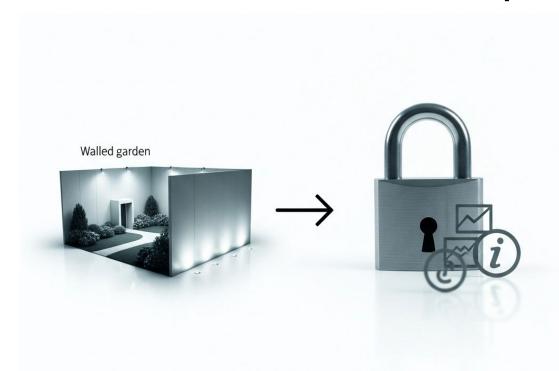


Geo-blocking



Digital Protectionism

"Walled Gardens" and Censorship



Easier to pressure one company than control a decentralized network of thousands.

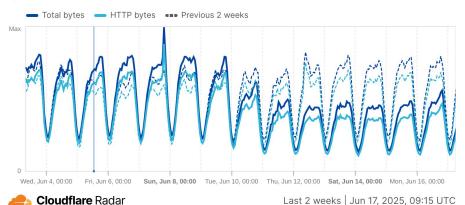
Technical fragmentation

- **DNS Manipulation** Targeting the domain name system via poisoning or filtering to mislead or block users.
- DNS Poisoning Injecting false data into resolvers to redirect users to malicious or state-controlled sites.
- **DNS Filtering/Blocking** Configuring resolvers to deny access to specific domains, creating an inconsistent naming system.
- **IP Address Blocking** Dropping all traffic to or from certain IPs or entire ranges via router rules.
- Protocol/Standards Incompatibility Issues like slow IPv6 adoption or proprietary protocols that hinder interoperability.
- **Deep Packet Inspection (DPI)** Real-time content inspection enabling advanced filtering beyond IP or URL blocking; used in China's Great Firewall and Russia's TSPU system.

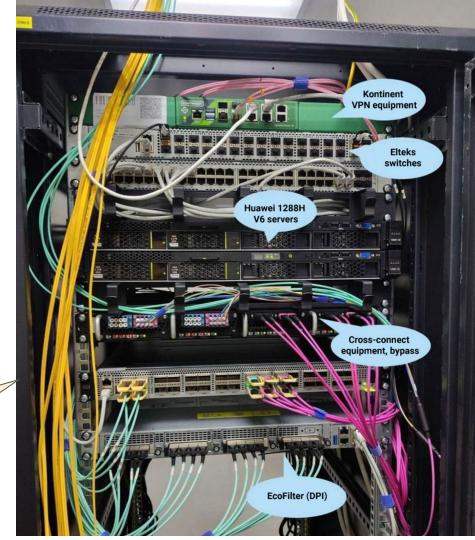
Control technologies

Traffic trends in Russian Federation

Bytes transferred over the selected time period

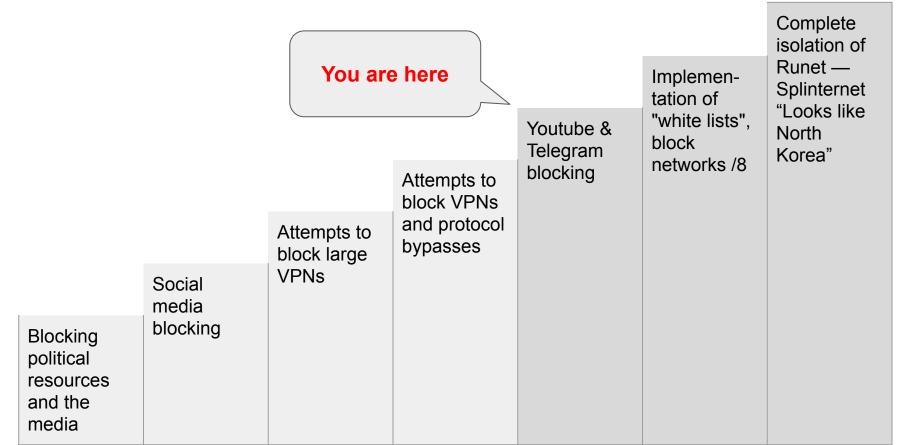


TSPU | DPI in Sovereign Runet

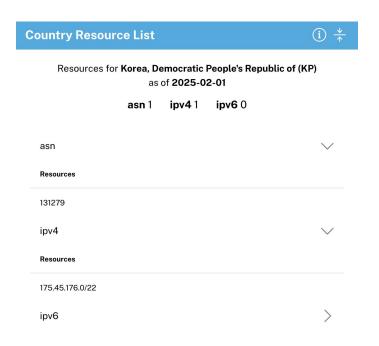


https://theins.press/en/politics/265749

Ladder of blocks (Way to Sovereign Runet)



North Korea: Splinternet





China: The Great Firewall

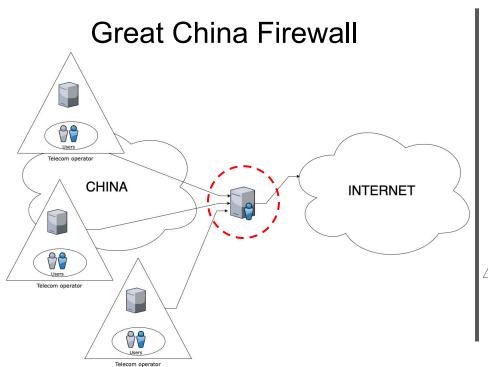


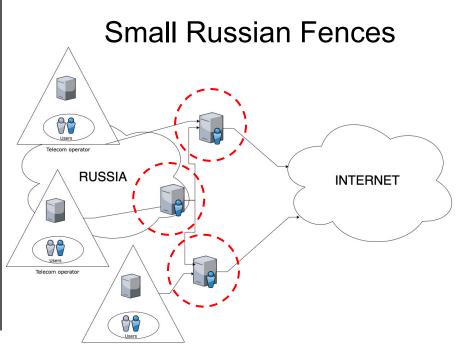
https://www.thousandeyes.com/blog/deconstructing-great-firewall-china https://www.thousandeyes.com/blog/what-happened-when-marketos-domain-name-expired

Russia: Sovereign Runet



Internet comparison in Russia and China





EU and India: regulatory fragmentation

EU: GDPR as a Tool of Fragmentation

India: DPDPA and Economic Nationalism



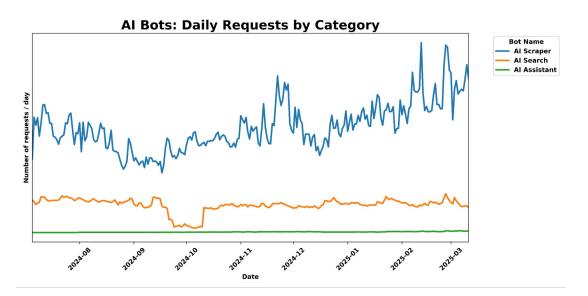
The Breakdown of the Internet: Digital Rot

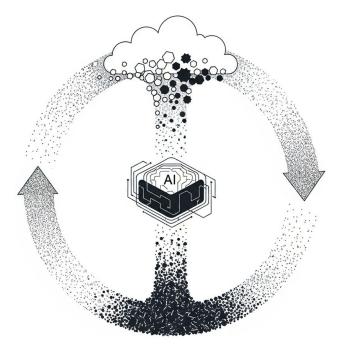
- Loss of access to content
- Link rot
- Page disappearance
- Digital amnesia



Poisoning the Internet

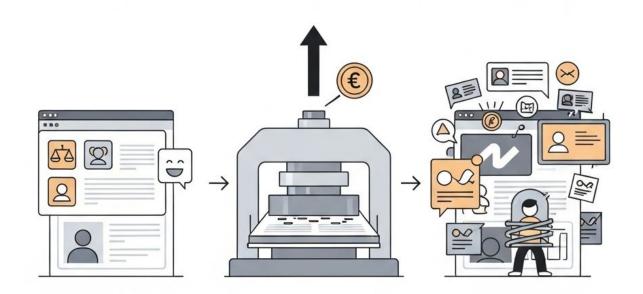
The "Dead Internet Theory" conspiracy





https://blog.cloudflare.com/ai-labyrinth/

Enshittification



https://de.wikipedia.org/wiki/Enshittification

Global Impact of Fragmentation

Fragmentation scenario	Description of the scenario	Estimated global GDP losses	Estimated Impact on Global Inflation	The main affected group
Low fragmentation	Restrictions only in sensitive sectors	0.6 trillion US dollars.12	Insignificant.	Global impact is limited.
Moderate fragmentation	Economic restrictions on all exchanges between the three blocs	Varies.	Varies.	All-encompassing influence.
High fragmentation	The Eastern and Western blocs cease all economic exchanges	Varies.	Significant.	Global economy.
Very high fragmentation	Complete economic separation of East and West; neutral countries forced to choose sides	US\$5.7 trillion (about 5% of global GDP)	Increase by more than 5%	Emerging Markets and Economies (EMDEs) face GDP losses of >10%

What Comes Next?

- 1. **Status Quo** A continued and accelerating trend toward fragmentation and digital disintegration.
- 2. **Emergence of International Law** Progress toward binding global norms and rules, possibly under the UN or similar bodies.
- 3. **Sovereign Autonomous Domains** Full realization of a "Splinternet" with multiple incompatible national networks.
- 4. **Coalition of Openness** Formation of like-minded blocs (as proposed by CFR) that maintain open, interoperable internet access among themselves, resulting in a multipolar digital world.



Mikhail Klimarev

klimarev@gmail.com

https://t.me/wanderer_from

Signal: Klimarev.73