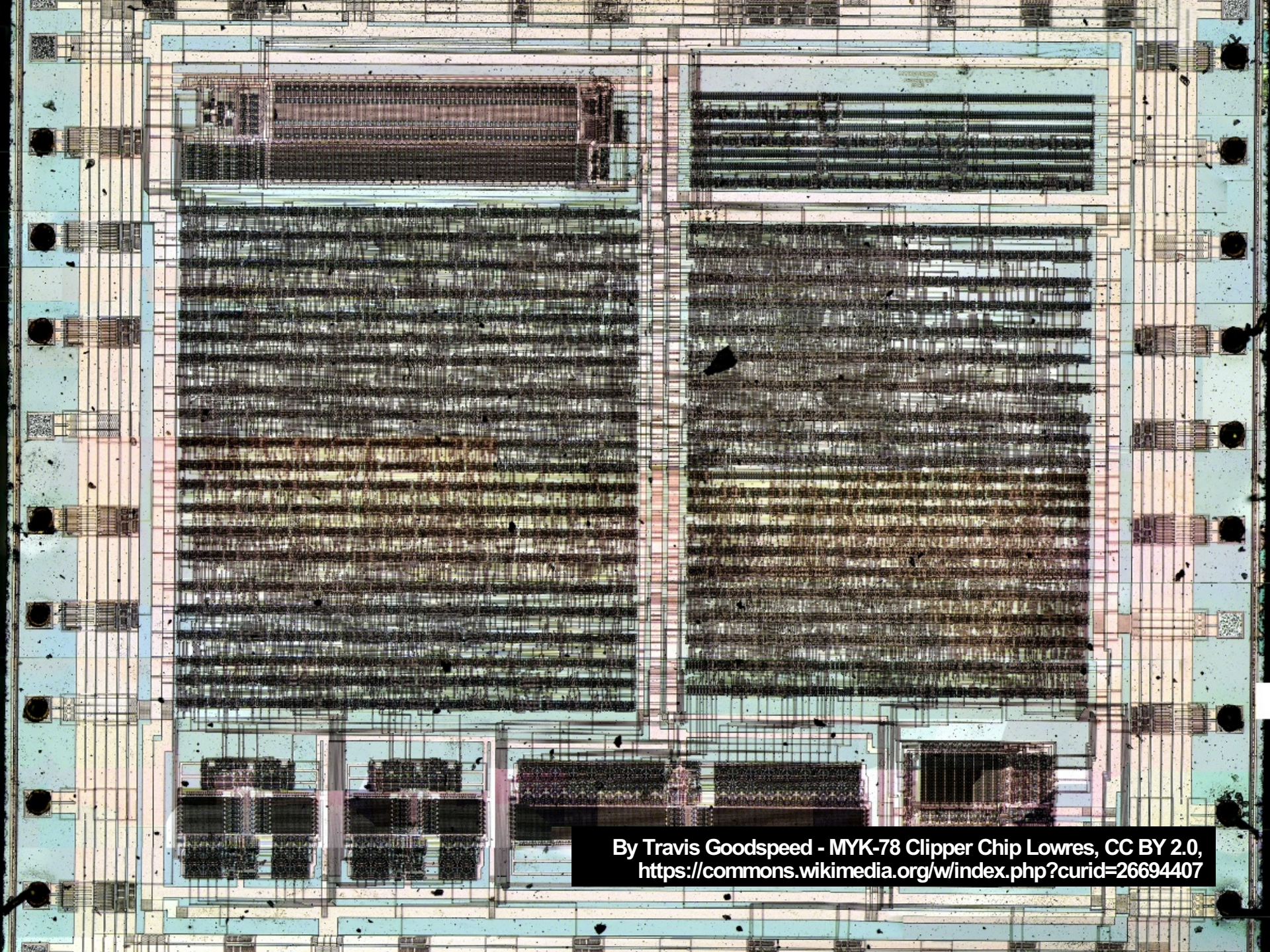


An Internet of Governments: How Policymakers Became Interested in “Cyber”



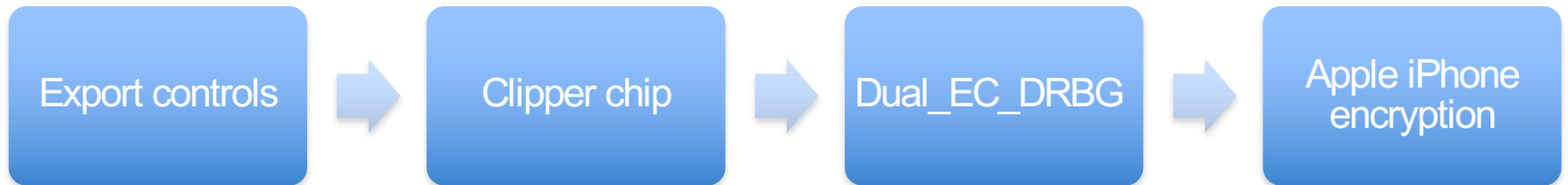
*Maarten Van Horenbeeck, FIRST
Klee Aiken, APNIC*



By Travis Goodspeed - MYK-78 Clipper Chip Lowres, CC BY 2.0,
<https://commons.wikimedia.org/w/index.php?curid=26694407>

Crypto wars

- Should the government be able to read private communications?
- Do corporations have a duty to collect information?



FIRST Members around the world

Search FIRST Teams

There are 409 Teams in 84 different countries.

FIRST: The Forum of Incident Response and Security Teams



Our vision

- **Global Coordination:** In an emergency you can always find the teams you need to support you in our global community.
- **Global Language:** Incident responders around the world speak the same language and understand each other's intents and methods.
- **Automation:** Let machines do the boring stuff, so humans can focus on the hard stuff
- **Policy and Governance:** Make sure others understand what we do, and enable us rather than limit us.



Capacity building



Providing external expertise



Training and education

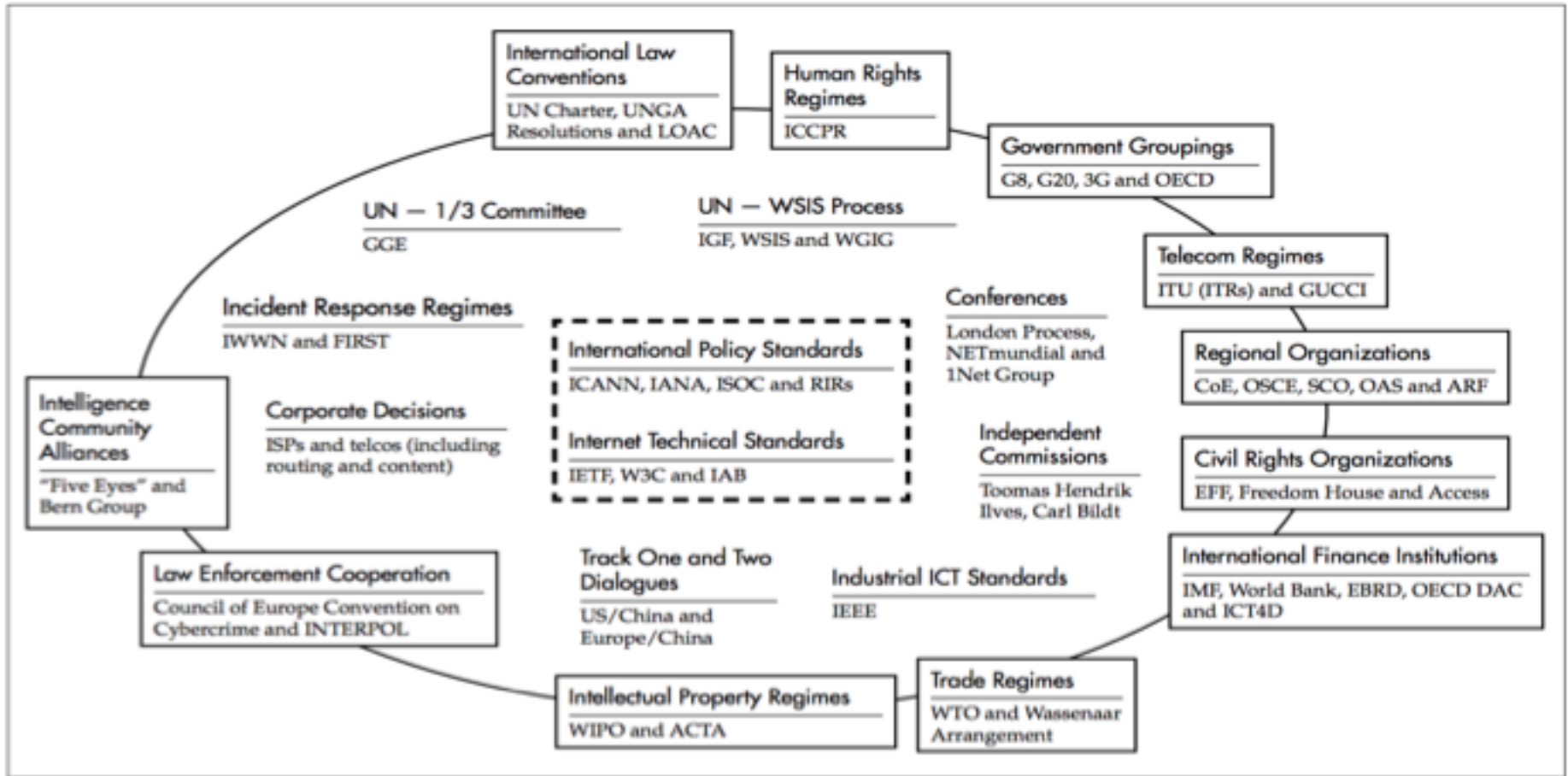




FIRST activity across the world: Training classes TC's and Symposia Annual conference 2017



Figure 1: The Regime Complex for Managing Global Cyber Activities



Source: Joseph S. Nye, Jr. – The Regime Complex for Managing Global Cyber Activities



Westfaelischer friede in Munster (Gerhard Terboch 1648) from Wikipedia (https://en.wikipedia.org/wiki/Peace_of_Westphalia)



States

- Borders
- Law
- Ability to engage with other states
- Max Weber's "Monopoly on violence"
- States typically provide at least some services to their population



۱۵ کیلومتر

مجتمع فولاد نطنز

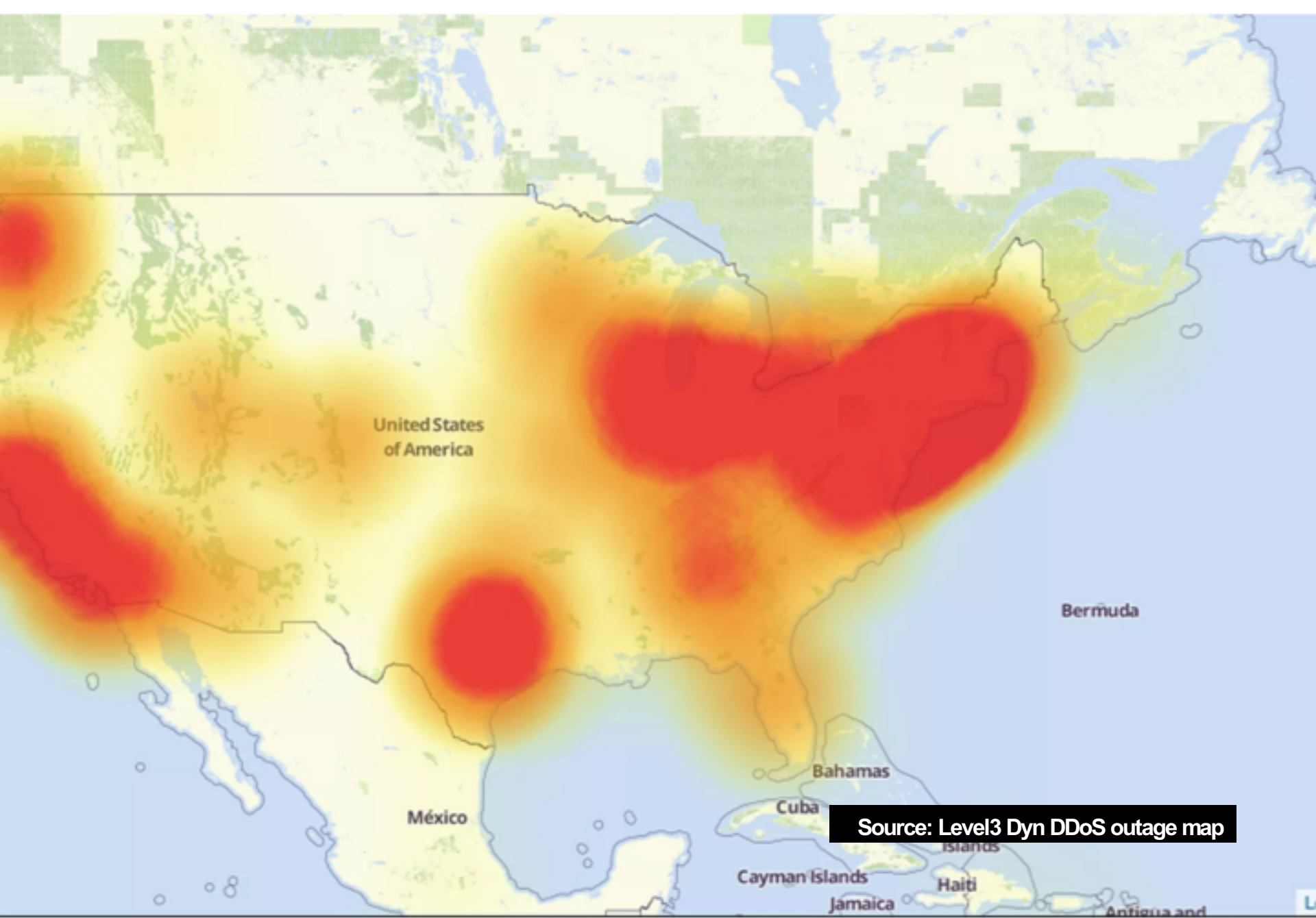
۲۵ کیلومتر

نطنز

Natanz Steel Group 15 km

Natanz 25 km





Source: Level3 Dyn DDoS outage map

A Level3 map of the US detailing internet outages and disruptions.

States, revisited

- Borders ?
- Law
- Ability to engage with other states
- Max Weber's "Monopoly on violence"
- States typically provide at least some services to their population



States, revisited

- Borders ?
- Law ?
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States, revisited

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States, revisited

- Borders ?
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States, revisited

- Borders ?
- Law ?
- Ability to engage with other states ?
- Max Weber's "Monopoly on violence" ?
- States typically provide at least some services to their population ?



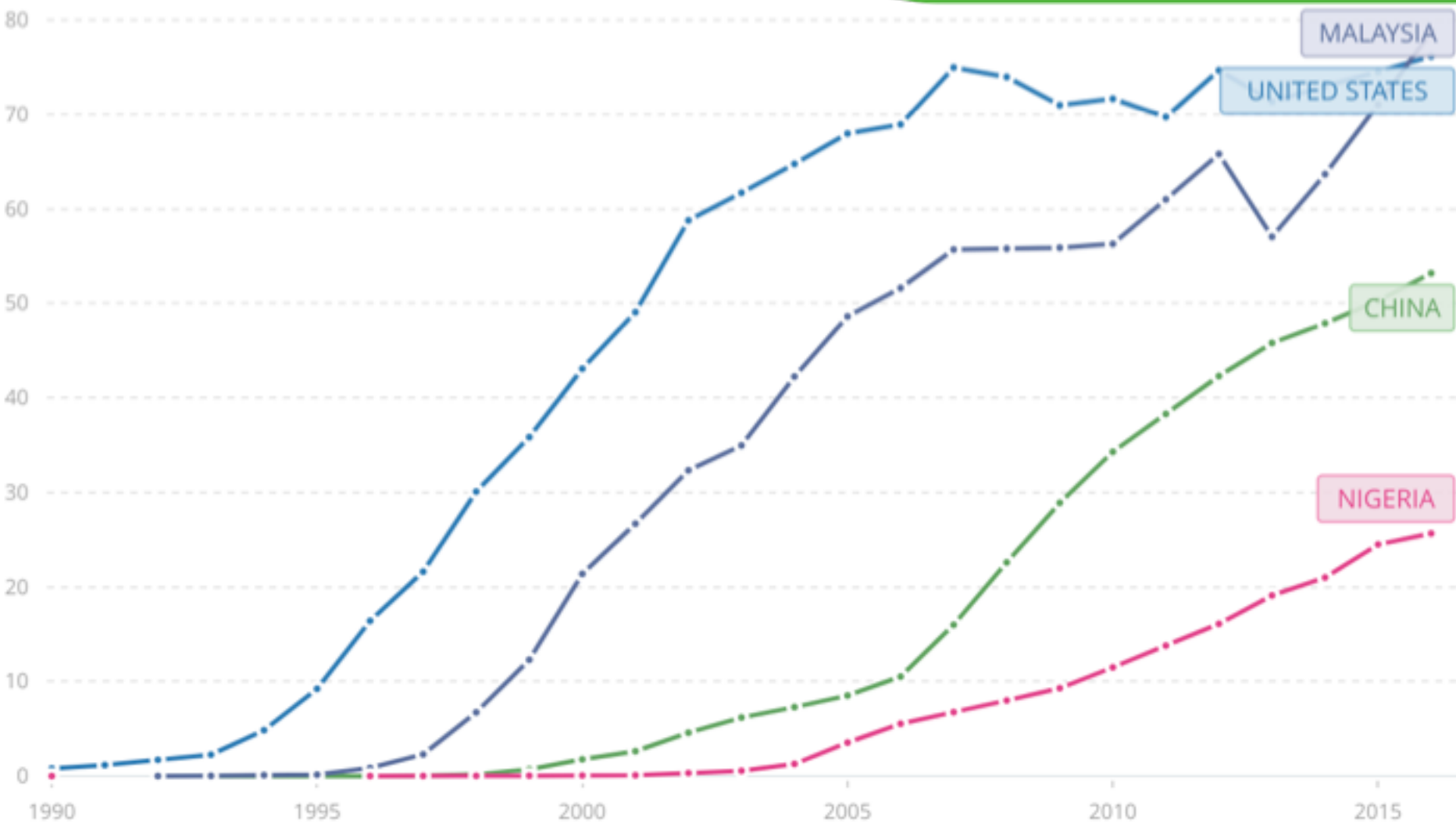
In comes the internet

This is our world now... the world of the electron and the switch, the beauty of the baud. We make use of the service already existing without paying for what could be dirt-cheap if it wasn't run by profiteering gluttons, and you call us criminals. We explore... and you call us criminals. We seek after knowledge, and you call us criminals. We exist without skin color, without nationality, without religious bias... and you call us criminals.

You build atomic bombs, you wage wars, you murder, cheat, and lie to us and try to make us believe it's for our own good, yet we're the criminals.

Source: Phrack – The Mentor, “Hacker’s Manifesto”





Source: Google Data – World Bank – Internet adoption rates





Josh Aas
@0xjosh

Follow

.@Mozilla telemetry shows more than 50% of page loads were HTTPS yesterday. First time that has ever happened.



9:46 AM - 14 Oct 2016

1,059 Retweets 997 Likes



29 1.1K 997



A history of issues

- Different **perspectives**
 - National security
 - Social concerns
 - Economic impact
- No universal **legal framework**
- Lack of clear **attribution**
- Lack of clear **intent**
- **Lack of trust** between governments



Budapest Convention

- Council of Europe
- International **treaty** to harmonize national laws
- Adopted in November of 2001, with 52 states ratified so far
- Supports international law enforcement cooperation



<https://www.coe.int/en/web/cybercrime/-/andorra-ratified-the-budapest-co>



“Talinn Manual”

- Born out of 2007 Estonia cyber attacks
- Analysis of how existing law applies to cyberspace
- Cyber events incur rights and obligations on behalf of countries

- First edition covered important operations that involved states defending themselves, or stepping beyond regular international relations
- Second edition adds legal analysis of more common incidents

GCCS

- “*London Process*” or **Global Conference on Cyberspace**
- **London:** Set of principles for “governing behavior in cyberspace”
- **Budapest:** emerging issues, internet rights and security
- **Seoul:** increased representation from countries, “open and secure cyberspace”
- **The Hague:** greater representation from non-state actors
- **New Delhi**
- Outcomes include “Chair’s statement” and year specific goals



Wassenaar

- Export control for **dual use goods**
 - Includes **intrusion and surveillance** technologies
 - Consensus
 - Voluntary compliance
4. A. 5. Systems, equipment, and components therefor, specially designed or modified for the generation, operation or delivery of, or communication with, "intrusion software".

Wassenaar

Intrusion Software

Software specially designed or modified to avoid detection by ‘monitoring tools’, or to defeat ‘protective countermeasures’ of a computer or network capable device, and performing any of the following:

- a. The extraction of data or information, from a computer or network capable device, or the modification of data of a system or user; or
- b. The modification of the standard execution path of a program or process in order to allow the execution of externally provided instructions; or



Regional processes



- **ASEAN:** ASEAN Way, develop more predictable relationships
- **SCO:** proposed international code of conduct under the UN
 - Focus on multilateral approach vs. multi-stakeholder
 - Highlights "sovereignty"
- Implications on technology provenance

United Nations

- **Call for input** from 2010 through 2016
 - Countries can share their own projects and progress
 - Flag issues they have that require international collaboration

- Government Group of Experts (**UNGGE**)
- **International Telecommunications Union**
 - Build “confidence and security”
 - Global Cybersecurity Agenda

- **Internet Governance Forum**
- **ITU**



What is being done?

- **Laws and treaties**
 - Signers accept roles and responsibilities, ability to hold someone liable
- **Confidence Building Measures**
 - Opportunities for states to interact, often on a voluntary basis
 - Enables growth of interaction and cooperation
- **Capacity Building**
- **Norms of behavior**
 - Developed in “norms melting pots”
 - Confirmed and enforced through behaviors between groups of actors
 - You distinguish norms through other’s reaction when they are violated

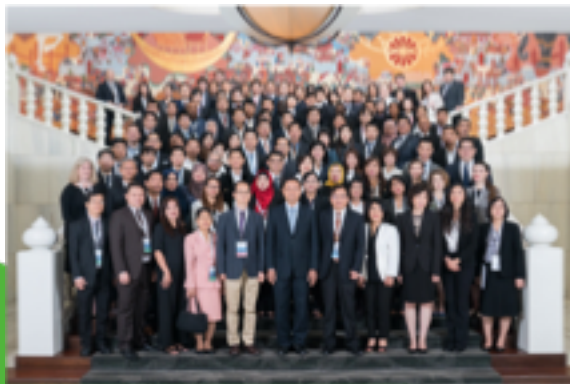
So what are norms anyways?

‘collective expectations about proper behavior for a given identity’

– Jepperson, Wendt, Katzenstein (1996)



TLP:RED
TLP:AMBER
TLP:GREEN
TLP:WHITE



Who defines normal?



UNODA
UNITED NATIONS OFFICE FOR
DISARMAMENT AFFAIRS

UNGGE

'States should not conduct or knowingly support activity to harm the information systems of the authorized emergency response teams of another State'

Global Commission on the Stability of CyberSpace (GCSC)

'States and non-state actors should not conduct or knowingly allow activity that intentionally and substantially damages the general availability or integrity of the public core of the Internet, and therefore the stability of cyberspace.'



GCSC

Unilateral, Bilateral, & Multilateral

- Indictments
- Sanctions
- Cyber Strategy
- US – China Cyber Agreement (2015)
- US – South Korea Joint Statement (2015)
- UK – China Cyber Agreement (2015)
- G20 Leaders Communique (2015)
- SCO Draft International Code of Conduct (2011)



Getting Engaged

'A global, open, stable, and secure Internet that serves the entire Asia-Pacific community'
– APNIC Vision



Norms & the Tech Community



Follow

Microsoft signs the [#TechAccord](#), joining more than 30 global tech companies that are driving cybersecurity forward for everyone.

msft.social/DYN4EI

7:26 AM - 17 Apr 2018

159 Retweets 322 Likes



9 159 322



Following

No sign anything is being done to exempt WHOIS records from the EU GDPR privacy regulations that take effect next month. There needs to be a much larger outcry from the security industry about this, b/c it's about to get MUCH harder to track bad guys. The silence is deafening.

11:15 PM - 4 Apr 2018

297 Retweets 492 Likes



29 297 492



Follow

Wow! Policy work does make a difference. GA Gov vetoes SB315. Definitely did not see that coming!



Victory! Georgia Governor Vetoes Short-Sighted Computer Crime Bill
Recognizing the concerns of Georgia's cybersecurity sector, Gov. Nathan Deal has vetoed a bill that would have threatened independent research ...
eff.org

4:12 PM - 8 May 2018

77 Retweets 156 Likes



4 77 156



What is FIRST doing?

Policymaker education

- Release of our "Incident Response for Policymakers" course

Contributions as technical experts

- Participation in the IGF, GFCE, ICT4Peace community and GCCS
- Outreach and awareness building
- Work on topic-specific issues, such as GDPR and Whois
- Assembling a group of policy-aware technical experts within the FIRST community. **Join us!**
- Contributing expertise to IGF Best Practices Forum on Cybersecurity. **Join us!**



Questions?

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<https://www.first.org>

