

**NANYANG
TECHNOLOGICAL
UNIVERSITY**
SINGAPORE

Technology Neutrality, Technology Sovereignty and the Architect of Technology of 21st Century

**(High Level) Policy Dialogue Technology and Innovation Policy in the
Age of Global Value Chain**

International Institute for Trade and Development

10-12 June, 2019 , Berkeley Hotel, Bangkok

Presentation by

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Agenda

- Tension between openness and closeness

How much power does the USA
have over the world?

Financial

US fined
SCB 2012:
it had
committed
no offence
under UK
law. The
funds
travelled
over SWIFT
network.

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Standard Chartered hit by \$300m in Iran fines

🕒 10 December 2012

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Standard Chartered will pay more than \$300m (£187m) to settle charges it violated US sanctions on Iran, Burma, Libya and Sudan.

The UK-based bank has been fined \$100m by the Federal Reserve while it will also pay the Department of Justice \$227m, the regulators said.

The violations took place between 2001-2007 and the bank said it had changed its procedures since then.

It has already paid \$340m to New York's Department of Financial Services.



The bank had previously disputed the value of the transactions that broke US sanctions

Civilian Use of Military Application

Global Positioning Satellite (GPS)



GPS is a military application open to civilian use
1978

The Russians have developed their own system
called GLONASS—also military application,
open to civilian use. 1995

EU—Galileo 2016

China has BeiDou—supposed to be operational
2020, operational brought forward to 2018

Japan, India, UK (after Brexit)

7 GPS Systems

Country	System Name	Satellites Deployed	Full Operational Date	2018 Launches	Cost?
USA	GPS	31 - 33	1978	—	\$12B
Russia	GLONASS	24 - 26	1995	2	\$4B - \$11B
EU	Galileo	26	2019-20	4	10B Euro
China	Beidou	35 - 40+	2020	18	\$8.98B - \$10.6B
Japan	QZSS	4	2018	—	170B Yen
India	IRNSS	7	---	1	\$313M
UK	Unconfirmed	---	---	—	Up to 5B GBP

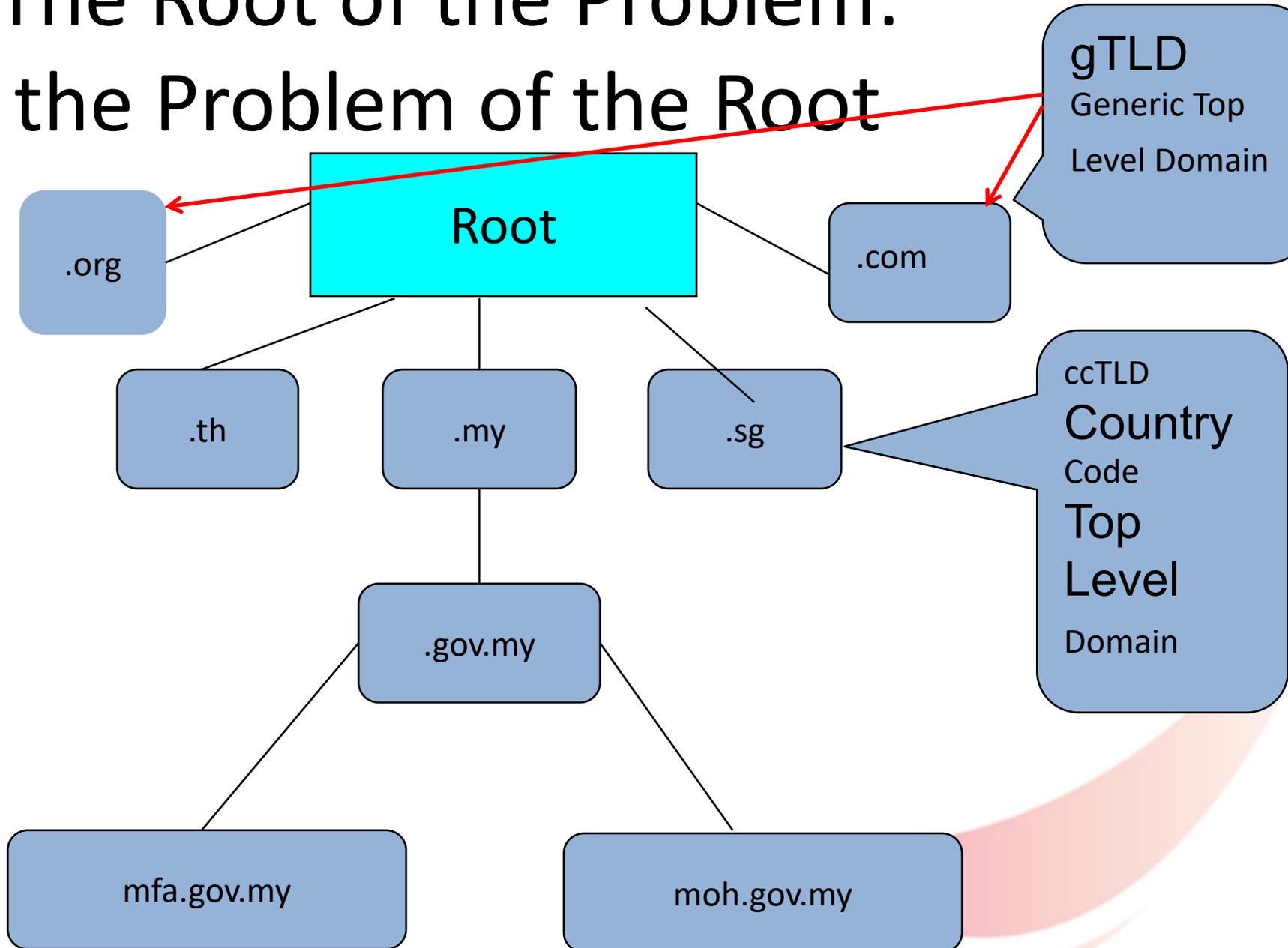
Joint Strike Fighter

- US\$40 billion project
- \$4 billion from partners
- Source code is in the hands of the USA so that UK (\$2.5 billion) could not upgrade plane
- Planes could not shoot down allies of USA
- Agreement reached to have countries have “operational sovereignty” over planes

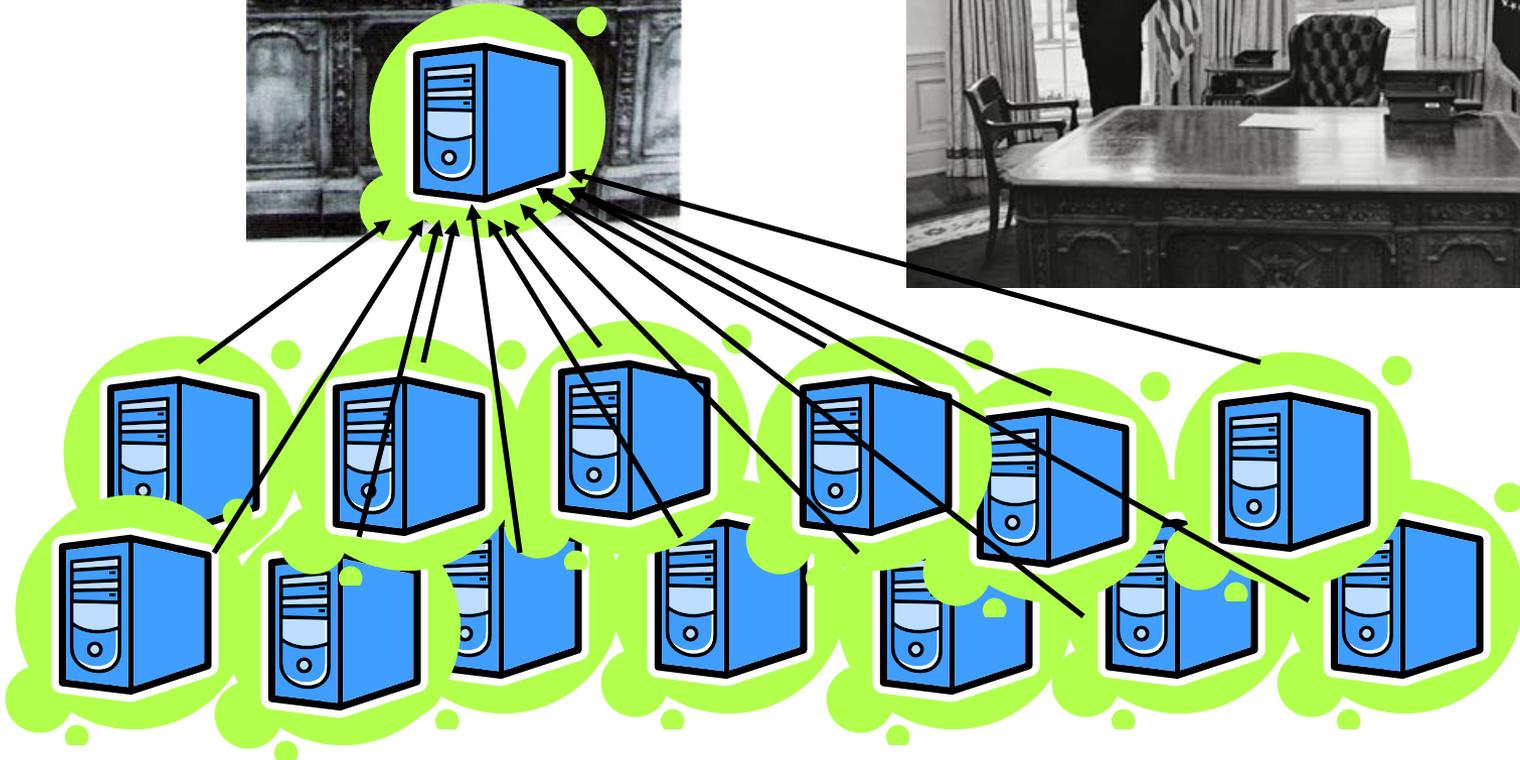


What About the Internet?
Developed, “owned” and operated
by the USA.

The Root of the Problem: the Problem of the Root



Where is the root server?



Total of 13
root servers
globally

Internet

Meet the seven people who hold the keys to worldwide internet security

It sounds like the stuff of science fiction: seven keys, held by individuals from all over the world, that together control security at the core of the web. The reality is rather closer to The Office than The Matrix

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<https://www.theguardian.com/technology/2014/feb/28/seven-people-keys-worldwide-internet-security-web>

People apply to be one of 7 technical experts; all 7 are globally located in every continent.

Q1: What if the USA behaves as if it owned the Internet?

Q2: What happens to a country's Internet if the country is at war with the USA?

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Peace education

Create peace while you create your future.
Maharishi Univ. BA-MA-PhD
MUM.edu

Interfaith Dialog Center

Brings faiths together through diverse interfaith activities
www.idonj.org

Peace Movement

Citizens for Peace Campaign and Links
peacecoup.us

[The Register](#) » [Internet and Law](#) »

Iraq domain owner convicted



Bayan Elashi and his four brothers face 10 years in US jail

By [Kieren McCarthy](#) → [More by this author](#)

Published Friday 9th July 2004 17:05 GMT

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The current owner of Iraq's .iq domain has been found guilty along with his four brothers, of illegally shipping computer parts from the US to Libya and Syria. Bayan, Basman, Ghassan, Hazim and Ihsan Elashi have yet to be sentenced but face 10 years apiece.

On top of this, all five of them will face a further trial in September for allegedly dealing in the property a "specially designated terrorist" - namely Mousa Abu Marzook, the ex-head of Hamas' political bureau and their cousin's husband, for which they could face a further 10-year sentence. With that also comes various counts of money laundering that have a 10 to 20-year sentence.

World Summit on the Information Society I and II

Recommendation of UN Secretary-General appointed Working Group on Internet Governance

- All countries will have sovereignty over their ccTLD
- ICANN later privatized one part of the root zone management system

Movement towards Openness from 2004 to 2016

- Internet governance issues looked resolved
- 9/11 (which pushed some privacy advocates to turn around 180 degrees and say “to hell with privacy, do all we can to get the terrorists”) perceived threats receded
- EU pushing for more open data
- Obama Administration had an open government initiative

EU : Open Access for Academic Journals

- Academic publishing process is flawed:
 - Academics work for free producing journals
 - Commercial publishers package the work and sell the journals at a high price to university libraries
- Part of push in academic environment to have open data

Part of Openness Extends to AI

- Much of trained AI algorithms are done in universities
- Universities used to be liberal in sharing trained models
- But now universities are beginning to charge for them

Artificial Intelligence

AI tends to be a black box—no one can tell how the algorithm is developed

- Openness therefore means:
 - Ability to audit results to avoid unfair discrimination eg Uber and surge-pricing for when phone battery is low
 - Sharing some trained models (also to avoid carbon footprint of training datasets) when trained on public data

The Huawei Case: America and American Companies Will Be the Biggest Losers in the Medium to Long Term

- How would you respond?
- To what extent would you trust US technology?
- To what extent would you hedge your bets, build your own technology?

Conclusion

- When it comes to military applications, openness will be questioned
- But in ordinary life, openness offers much benefits
 - Reduces cost (no need to duplicate GPS system)
 - Offers backup/failsafe