

RESEARCH GRANT PROGRAM
DECOLONIZING THE INTERNET

**Joanna Kulesza and
Berna Akcali Gur**
Global Governance of
LEO Satellite Broadband

J. Kulesza, 2022

Equitable Access to
Secure, Affordable,
and Reliable LEO
Broadband Satellite
Services
- a development
perspective

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Dec. 2022

Cyberspace and International law

current relevant UN venues

UNODA

(UN Office for Disarmament Affairs)

The screenshot shows the 'digwatch' website (Geneva Internet Platform) with a navigation menu including Home, COVID-19, Issues, Actors, Processes, Trends, Events, Updates, and Resources. The current page is 'Home > Processes > Un Gge'. The main content is a 'Comparative Survey of the two UN-based processes on responsible behaviour in cyberspace'. It compares the 'UN Group of Governmental Experts (2019-2021)' and the 'UN Open-Ended Working Group (2019-2020)'. The GGE has 25 selected member states and a chair from Brazil. The OEWG includes all interested UN member states and a chair from Switzerland. Both groups have conducted consultations with regional organizations and stakeholders. The survey aims to address norms, confidence building measures, and international law in cyberspace.

Comparative Survey
of the two UN-based processes on responsible behaviour in cyberspace

- » [GGE vs OEWG](#)
- » [In context](#)
- » [GGE](#)
- » [OEWG](#)
- » [Open issues](#)
- » [Our projects](#)

UN Group of Governmental Experts (2019-2021)
25 selected Member States
Chair: Brazil

UN Open-Ended Working Group (2019-2020)
All interested UN Member States
Chair: Switzerland

Consultations
6 with Regional Organisations (AU, EU, OAS, OSCE, ARF, ASEAN Regional Forum), 2 with all Member States
Intersessional meetings with interested stakeholders (business, NGO, and academia)

To address

- Norms, rules and principles
- Confidence building measures (CBMs) and capacity building
- How international law applies to cyberspace
- (Further develop, or change) Norms, rules and principles listed in A/RES/73/27 (par. 1)
- Confidence building measures (CBMs) and capacity building
- How international law applies to cyberspace
- Existing and potential threats
- Establishing a center

LODZ CYBER HUB
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Group of Governmental Experts

In GA resolution 73/266, the Secretary-General was requested to establish a Group of Governmental Experts on Advancing responsible State behaviour in cyberspace in the context of international security.

The GGE will also hold its first meeting in 2019 and is to submit its final report to the General Assembly in 2021. The group will be comprised of 25 members and its Chair will hold two informal consultations with all UN Member States in between its sessions. The mandate also includes consultations on the subject to be held with regional organizations, such as the African Union, the European Union, the Organization of American States, the Organization for Security and Cooperation in Europe and the Regional Forum of the Association of Southeast Asian Nations.

The Group of Governmental Expert comprises experts from 25 States working in their personal capacity. The Group has elected Ambassador Guilherme de Aguiar Patriota of Brazil to Chair the Group.

The members of the GGE come from the following countries:

- Australia
- Brazil
- China
- Estonia
- France
- Germany
- India
- Indonesia



Open-ended Working Group

Through resolution 73/27, the General Assembly established an Open-Ended Working Group (OEWG), in which all UN Member States are invited to participate. The Group will convene for the first time in 2019 and report back to the General Assembly in 2020. The OEWG process also provides the possibility of holding intersessional consultative meetings with industry, non-governmental organizations and academia.

Ambassador Jürg Lauber of Switzerland was elected by acclamation to Chair the Open-ended Working Group.

Schedule of meetings

1. Organizational session – New York, 3-4 June 2019 (CR4)
2. First substantive session – New York, 9-13 September 2019 (CR4) – [WEBCAST](#) (Please use Internet Explorer for optimal viewing inside UNHQ network)
3. Intersessional meeting with Industry Partners and NGOs – New York, 2-4 Dec 2019 (CR1)
4. Second substantive session – New York, 10-14 February 2020 2020 – [WEBCAST](#) (Please use Internet Explorer for optimal viewing inside UNHQ network)
5. Third (and final) substantive session – New York TBC

Documents of the third round of informal meetings of the OEWG (17 – 19 November 2020)

1. [OEWG Chair's letter on the third round of informal meetings \(26 October 2020\)](#)
2. [Draft Programme of Work of the third round of informal meetings \(26 October 2020\)](#)

Related Pages

[Other Disarmament issues](#)

[Conference on MENWDMFZ](#)

[Counter-Terrorism-Strategy](#)

[Disarmament and development](#)

[Disarmament education](#)

[Disarmament and Youth](#)

[Environmental norms](#)

[Gender Perspectives](#)

[International ICT security](#)

[Multilateralism](#)



Ad hoc committee established by General Assembly resolution 74/247

Meetings of the Ad Hoc Committee

- [Organizational session, New York, 10-12 May 2021](#)
- [First session, New York, 17-28 January 2022](#)

About the Ad Hoc Committee

Through its resolution [74/247](#), the General Assembly decided to establish an **open-ended ad hoc intergovernmental committee of experts, representative of all regions, to elaborate a comprehensive international convention on countering the use of information and communications technologies for criminal purposes**, taking into full consideration existing international instruments and efforts at the national, regional and international levels on combating the use of information and communications technologies for criminal purposes, in particular the work and outcomes of the open-ended intergovernmental Expert Group to Conduct a Comprehensive Study on Cybercrime.

Pursuant to General Assembly resolution 74/247, the ad hoc committee convened a three-day organizational session in May 2021, in New York, in order to agree on an outline and modalities for its further activities, to be submitted to the General Assembly at its seventy-fifth session for its consideration and approval. The organizational session was originally scheduled to take place in August 2020 but due to the impact of the COVID-19 pandemic, the General Assembly decided through first its [decision 74/567](#) of 14 August 2020 and then [75/555](#) of 15 January 2021 to postpone the organizational session of ad hoc committee to 10-12 May 2021.

The ad hoc committee elected the Officers of the Committee and discussed an outline and modalities for its further activities at its

United Nations

A/C.3/74/L.11



General Assembly

Distr.: Limited
11 October 2019

Original: English

Seventy-fourth session

Third Committee

Agenda item 107

**Countering the use of information and communications
technologies for criminal purposes**

**Belarus, Cambodia, China, Democratic People's Republic of Korea, Myanmar,
Nicaragua, Russian Federation and Venezuela (Bolivarian Republic of):
draft resolution**

**Countering the use of information and communications
technologies for criminal purposes**

Cyberspace and the Law of the Horse

Frank H. Easterbrook†

When he was dean of this law school, Gerhard Casper was proud that the University of Chicago did not offer a course in “The Law of the Horse.” He did not mean by this that Illinois specializes in grain rather than livestock. His point, rather, was that “Law and . . .” courses should be limited to subjects that could illuminate the entire law. Instead of offering courses suited to dilettantes,¹ the University of Chicago offered courses in Law and Economics, and Law and Literature, taught by people who could be appointed to the world’s top economics and literature departments—even win the Nobel Prize in economics, as Ronald Coase has done.

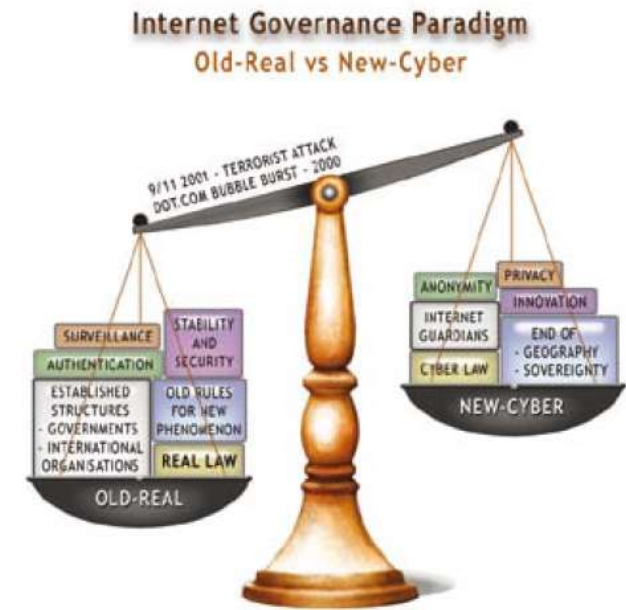
I regret to report that no one at this Symposium is going to win a Nobel Prize any time soon for advances in computer science. We are at risk of multidisciplinary dilettantism, or, as one of my mentors called it, the cross-sterilization of ideas. Put together two fields about which you know little and get the worst of both worlds. Well, let me be modest. *I* am at risk of dilettantism, and I suspect that I am not alone. Beliefs lawyers hold about computers, and predictions they make about new technology, are highly likely to be false. This should make us hesitate to prescribe legal adaptations for cyberspace. The blind are not good



cyber law vs. real law

'Old-real' vs 'new-cyber' approach

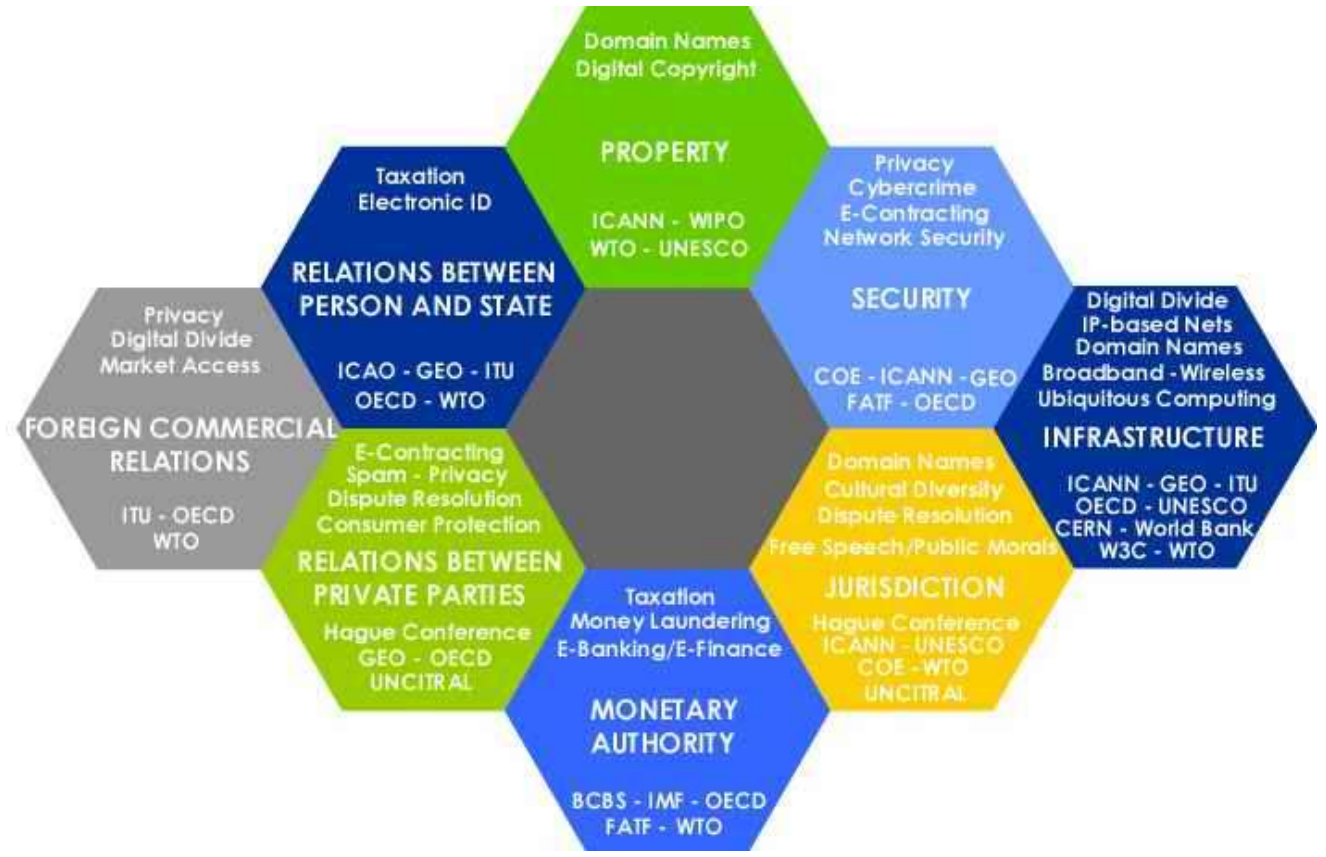
There are two approaches to almost every Internet governance issue. The 'old-real' approach – think 'new wine in old bottles' – argues that the Internet has not introduced anything new to the field of governance. It is just another new device, from the governance perspective, no different from its predecessors: the telegraph, the telephone, and the radio.



© J. Kurbalija, Introduction to Internet Governance



Real law vs cyberspace



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narrow approach

law behind „core of the Internet”
(telco infrastrucutre/DNS/TCP/IP, root-servers?)

administering key internet
resources

Internet backbone / property law

cyberspace
law



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RESEARCH

Global Commission Proposes Definition of the Public Core of the Internet

July 3, 2018

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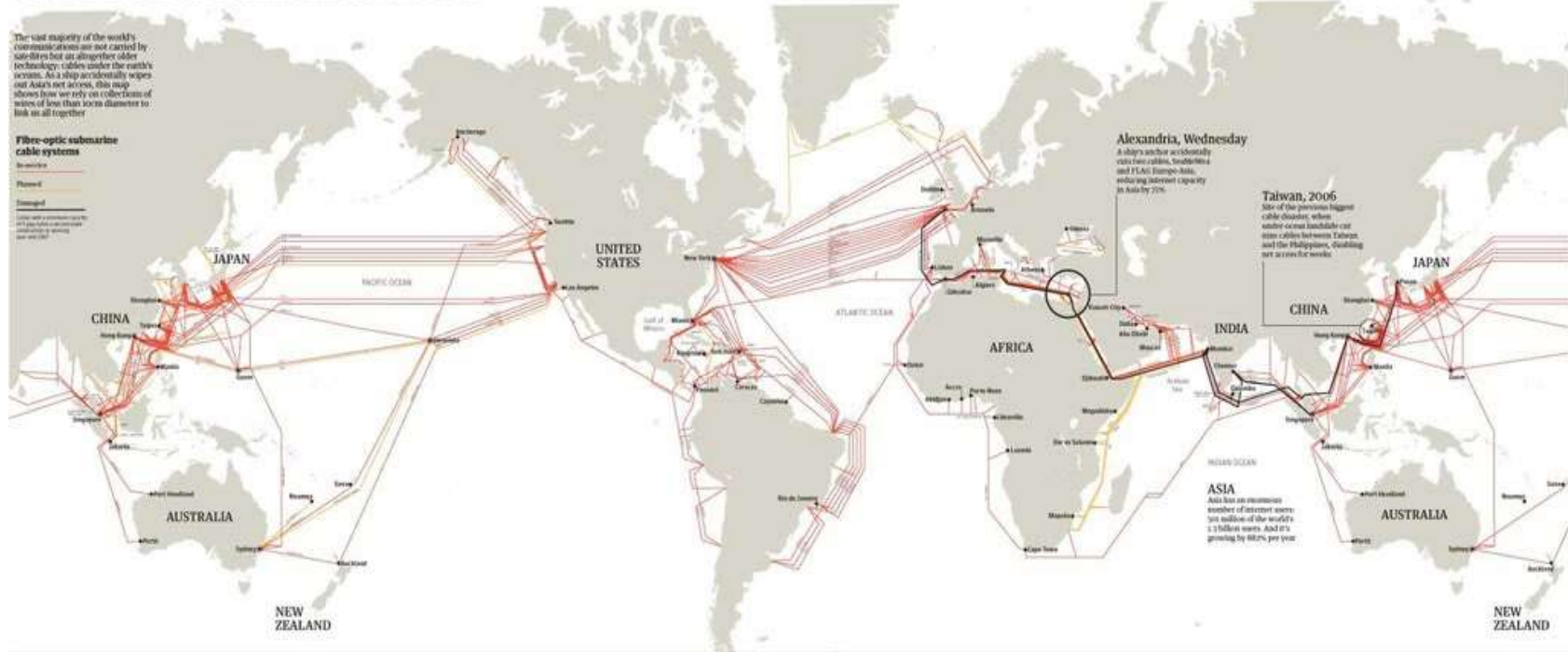


The internet's undersea world

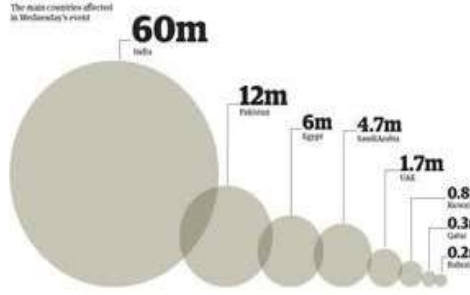
The vast majority of the world's communications are not carried by satellites but an altogether older technology: cables under the earth's oceans. As a ship accidentally ropes out Asia's net access, this map shows how we rely on collections of wires of less than 10cm diameter to link us all together

Fibre-optic submarine cable systems

Operational
Planned
Legend: Operational systems are shown in red, planned systems in orange. Data as of Dec 2017.

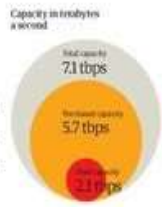


Internet users affected by the Alexandria accident

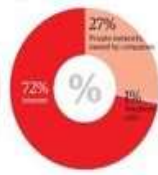


World cable capacity

Submarine cable operators light down net capacity on their systems to sell bandwidth to other carriers. Carriers buy extra capacity, mainly to build in reserve. On the trans-Atlantic route 80% of the bandwidth is paid for, but only 20% is used



What makes up "used capacity"?



The longest submarine cables

SeaMeWe-3	20,000 km
SeaMeWe-2	18,000 km
Optus-UK	16,670 km
FLAG Europe-Asia	15,800 km
South America 1	15,000 km

The world's cables in bandwidth

The first intercontinental telephony submarine cable system, TAT-1, connected North America to Europe in 1956 and had an initial capacity of 64,000 bytes per second. Since then, total trans-Atlantic cable capacity has soared to over 1 trillion bps



Cross-section of a cable

Cables of this strength are typically 10m in diameter and weigh over 10,000 kilograms a kilometer. In deeper waters, lighter and less insulated cables are used





cyberspace law

general approach

legal framework for Internet Governance

“the joint development and application by

- *Governments,*
- *the private sector and*
- *civil society,*

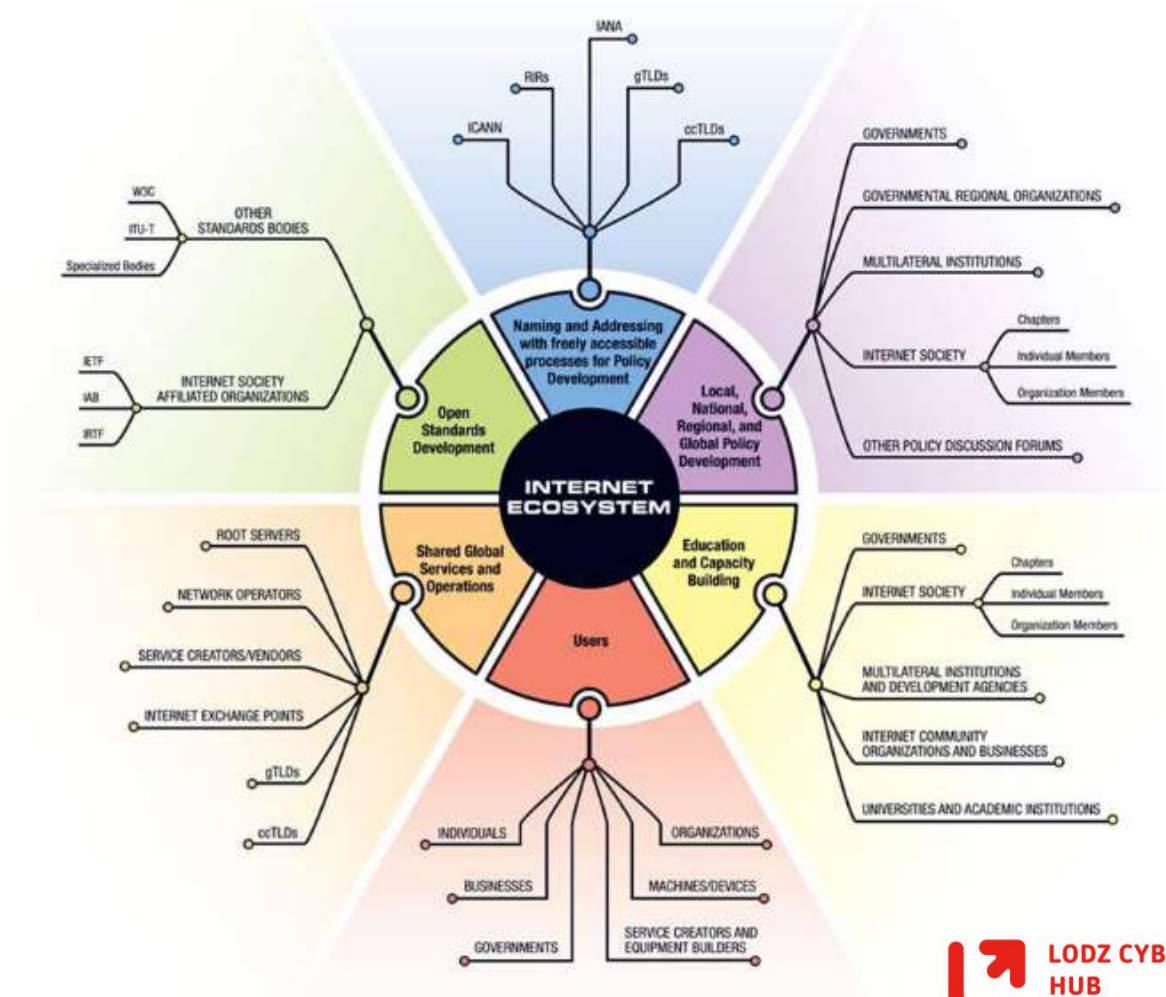
in their respective roles,

of shared principles, norms, rules, decision-making procedures, and programmes

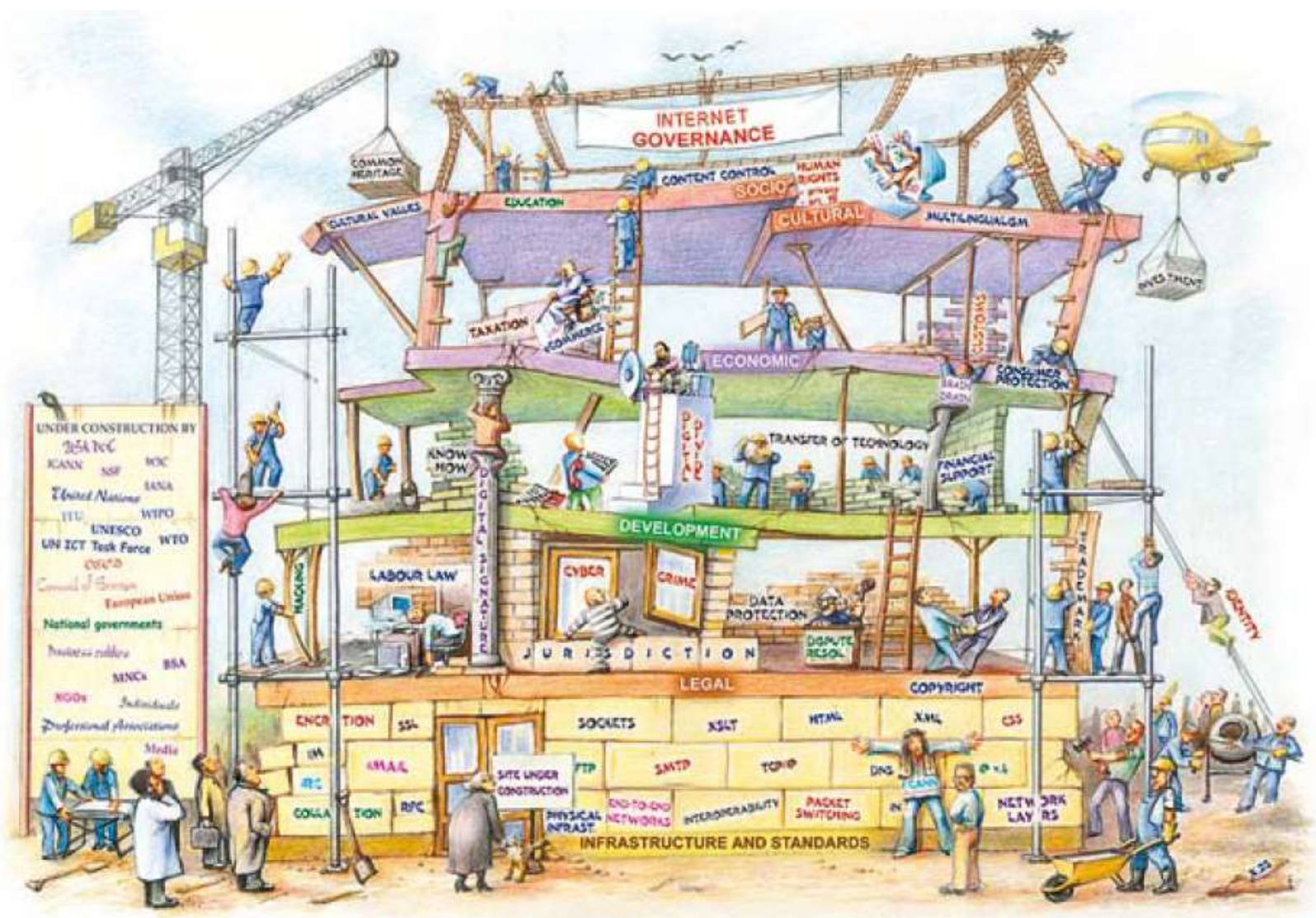
that shape the evolution and use of the Internet.”

Report of the Working Group on Internet Governance (2005), pt. 10, p. 4.

MULTISTAKEHOLDER GOVERNANCE



Source: Internet Society
<https://www.internetsociety.org/resources/doc/2016/internet-governance-why-the-multistakeholder-approach-works/>



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Promise of the Tunis Agenda

Agenda for the Information Society – Tunis 2005

C. Internet Governance

- 29. We reaffirm** the principles enunciated in the Geneva phase of the WSIS, in December 2003, that the Internet has evolved into a global facility available to the public and its governance should constitute a core issue of the Information Society agenda. The international management of the Internet should be multilateral, transparent and democratic, with the full involvement of governments, the private sector, civil society and international organizations. **It should ensure an equitable distribution of resources, facilitate access for all and ensure a stable and secure functioning of the Internet, taking into account multilingualism.**
- 30. We acknowledge** that the Internet, a central element of the infrastructure of the Information Society, has evolved from a research and academic facility into **a global facility available to the public.**
- 31. We recognize** that Internet governance, carried out according to the Geneva principles, is an essential element **for a people-centred, inclusive, development-oriented and non-discriminatory Information Society.** Furthermore, **we commit ourselves to the stability and security of the Internet as a global facility and to ensuring the requisite legitimacy of its governance, based on the full participation of all stakeholders, from both developed and developing countries, within their respective roles and responsibilities.**



Technology

2 minute read · February 27, 2022 1:17 AM GMT+1 · Last Updated 9 months ago

Musk says Starlink active in Ukraine as Russian invasion disrupts internet

By Hyunjoo Jin

☰ CNN politics The Biden Presidency Facts First 2022 Midterms

Exclusive: Musk's SpaceX says it can no longer pay for critical satellite services in Ukraine, asks Pentagon to pick up the tab



By Alex Marquardt, CNN

Updated 6:38 PM EDT, Fri October 14, 2022



☰ CNN politics The Biden Presidency Facts First 2022 Midterms



SpaceX owner and Tesla CEO Elon Musk speaks during a conversation with the E3 gaming convention in Los Angeles, California, U.S., June 13, 2019. REI

Ukraine suffered a comms outage when 1,300 SpaceX satellite units went offline over funding issues



By Alex Marquardt and Sean Lyngaas, CNN

Updated 3:44 AM EST, Mon November 7, 2022



J. Kulesza, 2022



SCIENCE | GLOBAL ISSUES

EU to launch its own communications satellite network

Clare Roth
11/18/2022

The European Union hopes to have its own communications satellite system up and running by 2027. The importance of the project became clear after Russia's invasion of Ukraine.



Negotiators from the European Parliament and EU member states agreed on Thursday to greenlight the satellite communications internet system IRIS2 (Infrastructure for Resilience, Interconnection and Security by Satellites).

The €6 billion (\$6.2 billion) project is part of an initiative to wean the EU off a bloc-wide reliance on foreign suppliers like China and Russia. EU agencies will contribute €2.4 billion to the project, which lawmakers project will enable secure communication services by 2027. The private sector is expected to

SPACENEWS

Europe reaches funding deal for sovereign broadband constellation

by Jason Rainbow — November 18, 2022



Thierry Breton, E.U. commissioner for the internal market, said in February that the planned constellation was a "Galileo moment" for Europe. Credit: European Commission

TAMPA, Fla. — The European Union reached a provisional agreement Nov. 17 to cover nearly half the 6 billion euro (\$6.2 billion) cost of deploying a secure connectivity constellation by 2027.

The European Parliament and member states agreed on a deal to contribute 2.4 billion euros from 2023-2027 for a sovereign network of satellites called IRIS², or Infrastructure for Resilience, Interconnectivity and Security by Satellite.



Connectivity Needs Global Solutions Our Network About Us Resources Work With Us

Space is
the future

Scroll to explore or skip



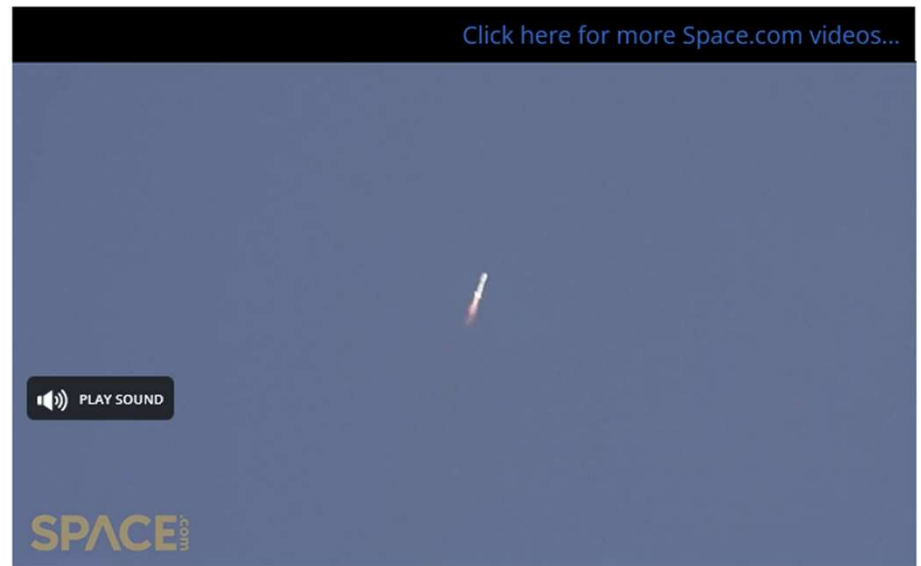
China launches 3 communications test satellites to low Earth orbit (video)

By [Andrew Jones](#) published May 23, 2022

The nation is looking to build its own version of SpaceX's Starlink broadband network.

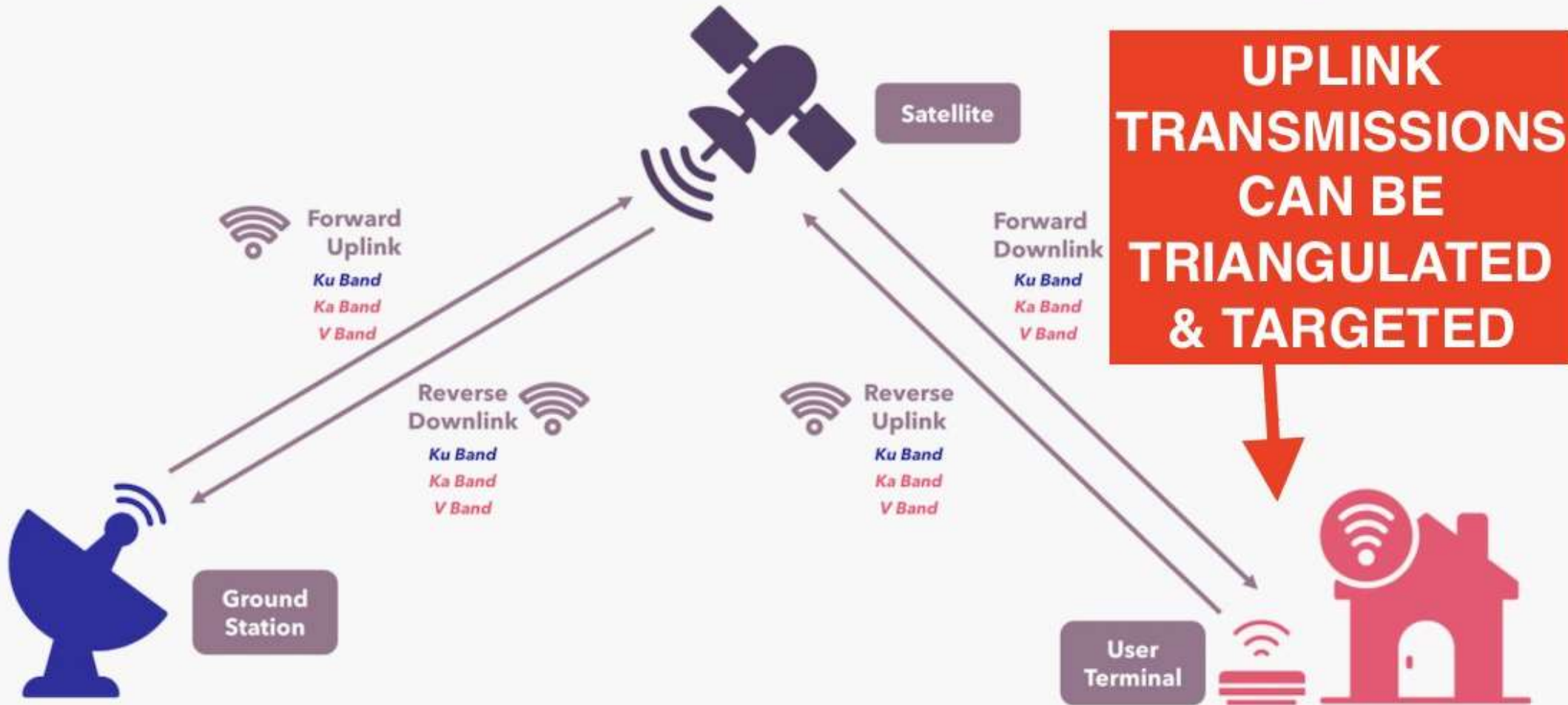


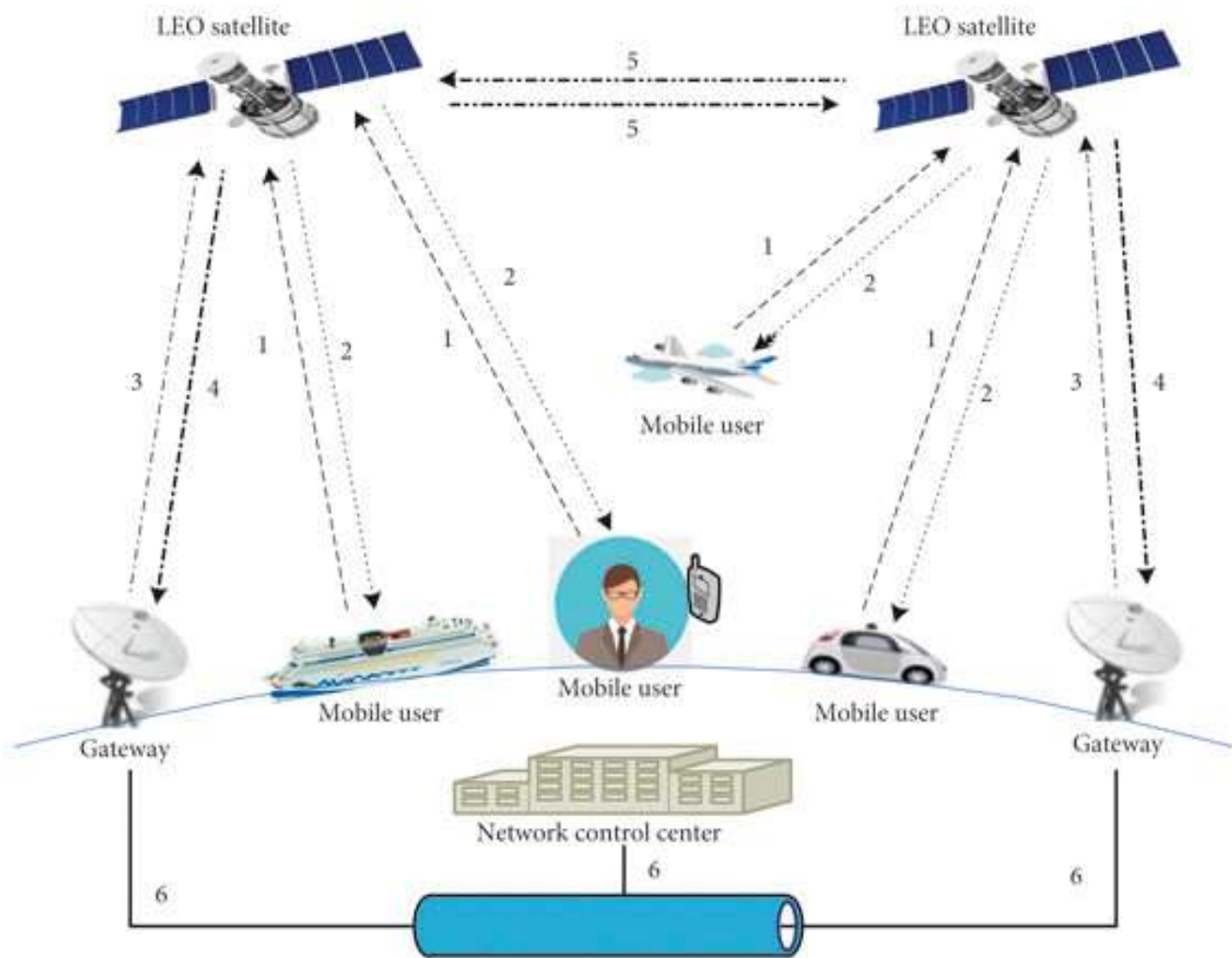
[Click here for more Space.com videos...](#)



China launched three new test communication satellites to low Earth orbit as the country looks to build its own version of SpaceX's Starlink broadband

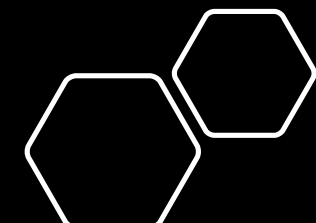
How Does Starlink Work?





- | | | | | | |
|---|--------|----------------------|---|--------|--------------------------|
| 1 | -----> | Mobile user uplink | 4 | -----> | Gateway downlink |
| 2 | -----> | Mobile user downlink | 5 | -----> | Intersatellite link |
| 3 | -----> | Gateway uplink | 6 | -----> | Terrestrial network link |

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Graphic by: Huang, Huihui & Miao, Xuyang & Wu, Zehui & Wei, Qiang. (2021). An Efficient ECC-Based Authentication Scheme against Clock Asynchronous for Spatial Information Networks. *Mathematical Problems in Engineering*. 2021. 1-14. © CC BY 4.0

Policy questions to consider

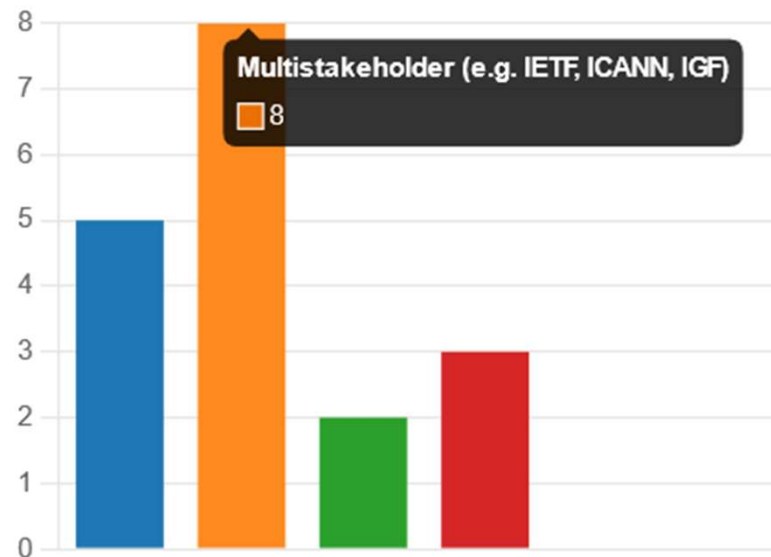
- LEO Satellite Constellations and **Sustainable Development Goals:**
 - **Meaningful Connectivity /** Regulatory Limitations and Concerns?
 - **Equitable Access** to Space and Space Resources?
 - **International Telecommunications Law** and Satellite Broadband?
 - Equitable Access Principle in **Internet Governance**
 - Multistakeholder governance
 - **Second-order Internet governance** - lessons learnt from multistakeholderism
 - **Privatized Internet governance?**
-
- cybersecurity
 - supply chain security and critical infrastructure protection (5G relevance?)
 - privacy and data protection
 - space debris and int. liability

Second-order Internet governance

- lessons learnt from multistakeholderism

3. What system is most appropriate way of engagement to resolve differences?

- International (e.g. UN, ITU)
- Multistakeholder (e.g. IETF, ICANN, IGF)
- Bilateral (through agreements between states)
- Regional (e.g. within a regional international organisation)
- Alliances among like-minded states



Thank you

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Please send your feedback to LEOsISOCstudy@gmail.com

