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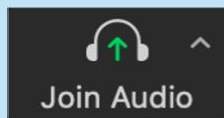
COMMUNITY
FORUM



Virtual Participants

1

Connect your **Zoom Audio** to listen to the meeting.



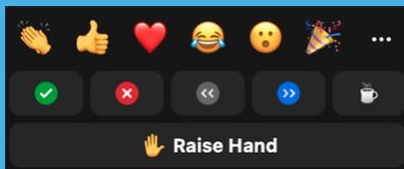
2

Turn on your **Zoom Video** to be seen by other participants.



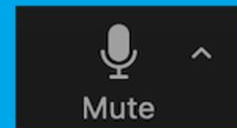
3

Raise your hand in **Zoom Reactions** to join the speaking queue.



4

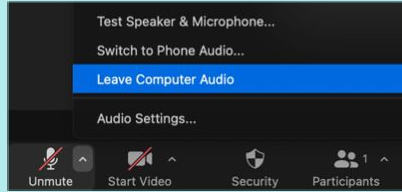
Unmute your **Zoom Audio** when called upon to speak.



On-Site/In-Room Participants

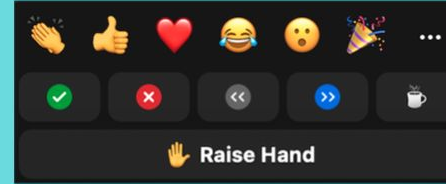
1

Do **not** connect your **Zoom Audio**. To disconnect your audio, click on the **Up Arrow** and select **Leave Computer Audio**.



2

Raise your hand in **Zoom Reactions** to join the speaking queue.



3

Use the physical microphone at your seat or in the aisle when called upon to speak.





ccNSO Members Meeting - Day 1
Internet Fragmentation Session

ICANN | ccNSO

Country Code Names Supporting Organization



Internet Fragmentation | Tuesday, 5 March 2024

10:30-12:00 local

Internet fragmentation is defined in many different ways. Also, it affects ccTLDs from different regions. What are the regulatory realities and what are the approaches being taken by ccTLDs?

Session chair: Annaliese Williams (.au)

- Elena Plexida (ICANN org, Vice President for Government and IGO Engagement)
- Bruna Martins dos Santos (PNIF)
- Molehe Wesi (.za)
- Demi Getschko (.br)
- Barrack Otieno (AFTLD)



IGF Policy Network on Internet Fragmentation

Bruna Santos, PNIF MAG co-facilitator



The Policy Network on Internet Fragmentation

The **Policy Network on Internet Fragmentation (PNIF)** is an IGF intersessional activity to further the discussion on and to raise awareness of the technical, policy, legal and regulatory measures and actions that pose a risk to the open, interconnected and interoperable Internet.

The **objectives of the PNIF** - over an envisaged 2 year timeframe - are to (a) Offer a systematic and comprehensive framework to define Internet fragmentation, its intended and unintended causes, and its potential effects; (b) Collect and analyze case studies to fine-tune and complement this framework; (c) Establish shared principles, recommendations or codes of conduct that prevent fragmentation and preserve the open, interconnected and interoperable nature of the Internet.

PNIF 2022 and PNIF Framework for Discussing Internet Fragmentation

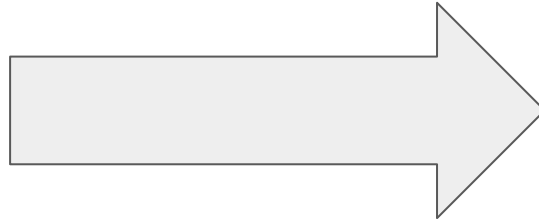
Webinar 1 'What does internet fragmentation meant to you?'

Webinar 2 'What can be done and who should be doing what?'

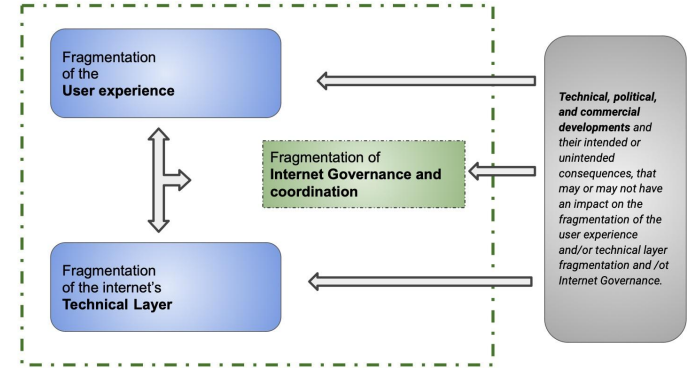
Working call drafting a PNIF framework

PNIF workshop @IGF 2022

PNIF survey



PNIF framework for discussing fragmentation

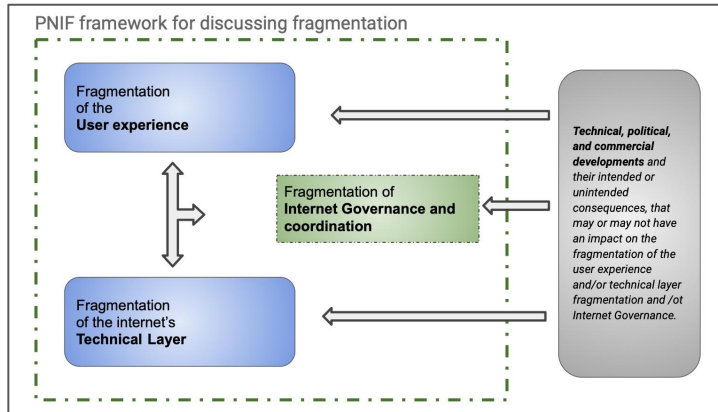


The overall goal of the framework is to serve as a general guiding and orienting tool for continuing the dialogue about fragmentation and bringing in more people and stakeholders, allow a more holistic and inclusive debate, and at the same time create a space for focused discussion and work towards concrete solutions, policy approaches and guidelines.

Policy Network Internet Fragmentation 2023

PNIF 2022

PNIF 2023



Unpacking

Prioritising

Avoiding and/or Adressing

Webinars

Working groups

Discussion paper

Discussion @ IGF 2023

July - September

**Internet Governance and
Coordination**

16 May

**Internet Governance and
Coordination**

**Internet
User experience**

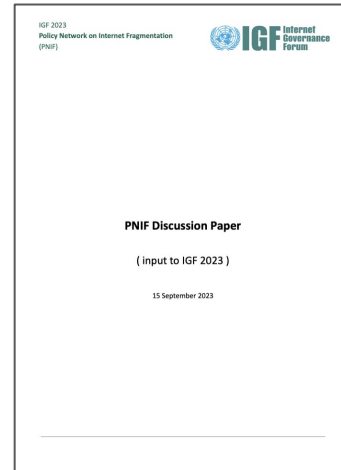
27 May

**Internet
User experience**

**Internet
Technical layer**

27 June

**Internet
Technical layer**



Internet Governance and Coordination

concept

Fragmentation of Internet governance primarily relates to the interactions between global Internet governance and standards bodies. **When these bodies do not coordinate inclusively, it can and does result in fragmentation.** This fragmentation can manifest in siloed or duplicative discussions and exclusion of specific groups from participation, **resulting in decisions being taken without consensus from the global multistakeholder community.**

Fragmentation at the governance level can also create **knock-on effects** for fragmentation at the technical and user experience layers.

What can we do to avoid fragmentation at the governance and coordination level?

- Avoiding duplicative mandates
- Avoiding closed forums with closed/exclusive participation
- Taking action with the right measures and at the right level

What practical steps can we take to address these points?

- Do not introduce further bodies into the Internet governance landscape....
-but, improve coordination between existing Internet governance bodies.
- To avoid siloed public policy discussions regarding Internet governance, all Internet governance bodies must be fully inclusive to stakeholders and enable meaningful multistakeholder participation.
- Existing global Internet governance bodies must engage more closely with national governments.

Internet User Experience

concept

Fragmentation of the user experience can be understood as **the phenomenon by which different end-users of the Internet, when trying to perform the same action online, are presented with different content, options or interfaces.** This happens normally as the consequence of using different client-side instruments (devices, applications), different server-side platforms (search engines, social media), different languages and ways of expression, and also, as the consequence of being located in different parts of the world; moreover, this is often the result of per-user customizations applied by the services that are being used.

Many of these differences are actually beneficial, facilitating the user's success by providing a more familiar and tailored experience. However, **when such fragmentation is forced upon the end-user by other parties, or when it hampers the communication among end-users and their ability to access content and services, it can deny the advantages and the freedoms that the Internet is supposed to offer.** This is the kind of fragmentation that is detrimental to an open internet as a whole, and which must be addressed.

What can we do to address fragmentation of the Internet user experience ?

- 1. Equality**
- 2. Enhancement**
- 3. Impact Assessment**
- 4. Harmonisation**
- 5. Free Choice**

Internet Technical Infrastructure

concept

Fragmentation is not a clearly defined term and trying to arrive at a definition that can be operationalized is a topic that needs further exploration. The Internet is made up of a technical infrastructure that collectively interoperates at a global scale so that data (information) is reachable and can be transported over the Internet. **Fragmentation of the Internet's technical infrastructure thus relates to a range of challenges to this interoperability** at the technical transport layer that makes the Internet work, and upon which applications and services are reliant.

What can we do to avoid fragmentation of the Internet's technical infrastructure?

1. Recognise that there are critical properties of the internet/public core that require multistakeholder protection
2. Measurement to monitor the extent and nature of different types of technical fragmentation as the Internet evolves.
3. Critically assess and avoid technical proposals (in standards and technology development) which reduce interoperability or otherwise would take the Internet away from the properties and design principles which have led to its success.
4. Protect the multistakeholder approach.

PNIF webpage

www.intgovforum.org/en/content/policy-network-on-internet-fragmentation

.zadna
Domain Name Authority



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Internet fragmentation .za Perspective

Your online presence is our business

Presentation Overview

01 ZADNA on a Page

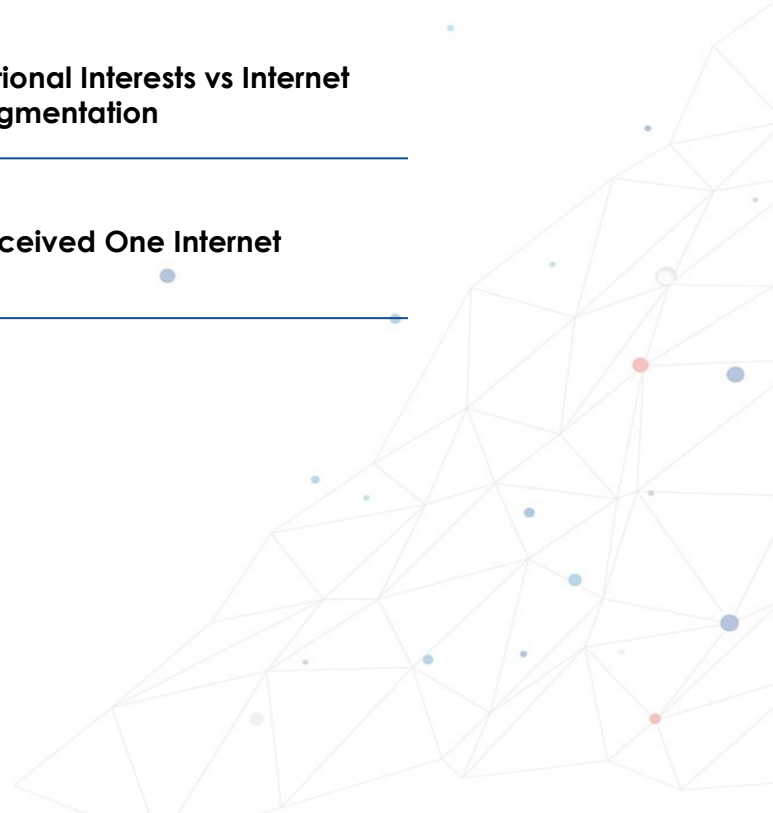
02 Legislated Mandate

03 Core functions

04 Internet Fragmentation

05 National Interests vs Internet Fragmentation

06 Perceived One Internet





Your online presence...
Our business

Statutory regulator and manager of .ZA Namespace.

Enhances public awareness

Custodian of Internet Governance in SA.

Accountable to DCDT and its Members.

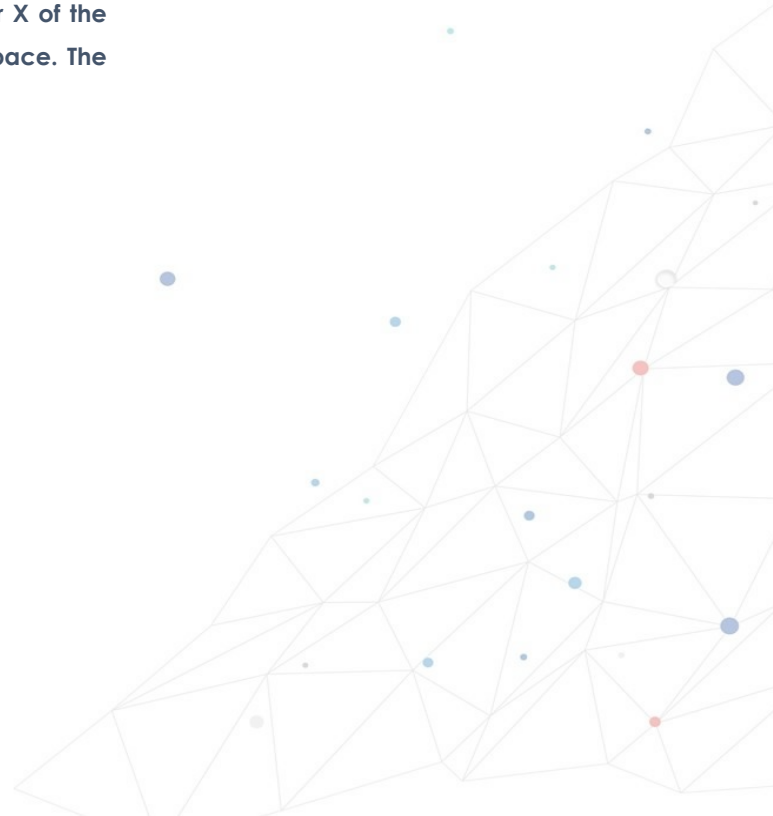
Legislated Mandate

ZADNA is a statutory, not-for-profit entity established in terms of Chapter X of the ECT Act 25 of 2002 to administer, manage and regulate the .ZA namespace. The mandate can be summed up as follows:

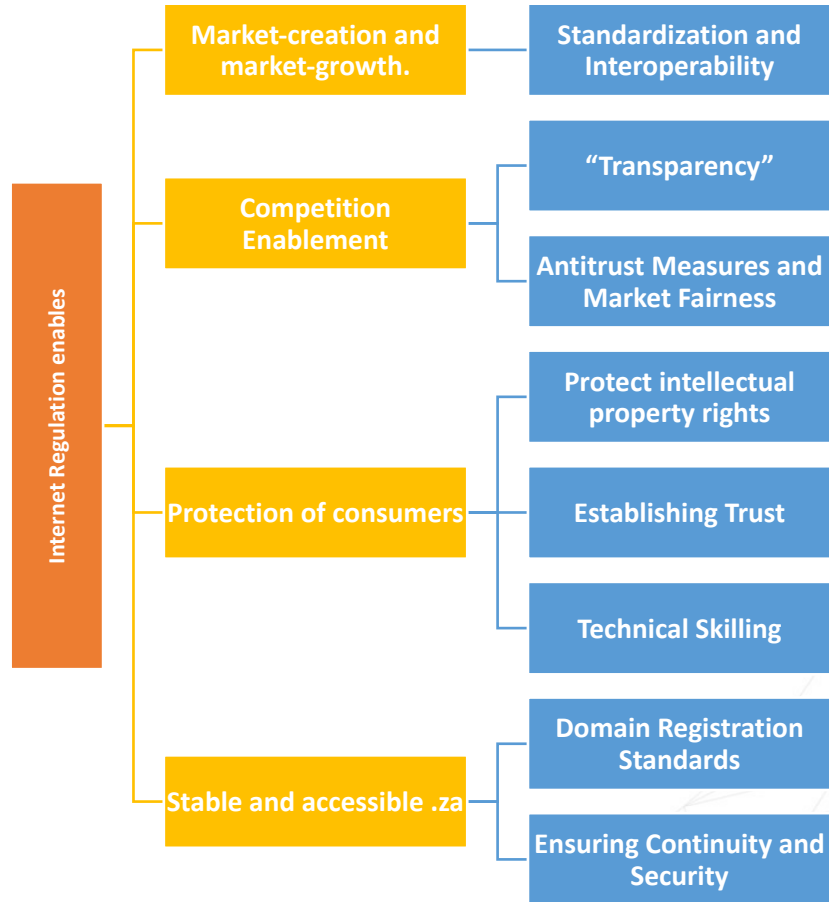
- a) Management and administration of the .ZA namespace;
- b) .ZA policy, licensing and regulation;
- c) Monitoring and compliance;
- d) Domain name awareness and education;
- e) Research and development; and
- f) Making relevant policy recommendations to the Minister.
- g) Alternate Dispute Resolution Regulations

Additional non-ECT Act Responsibilities

- i. dotCities
- ii. Internet Governance

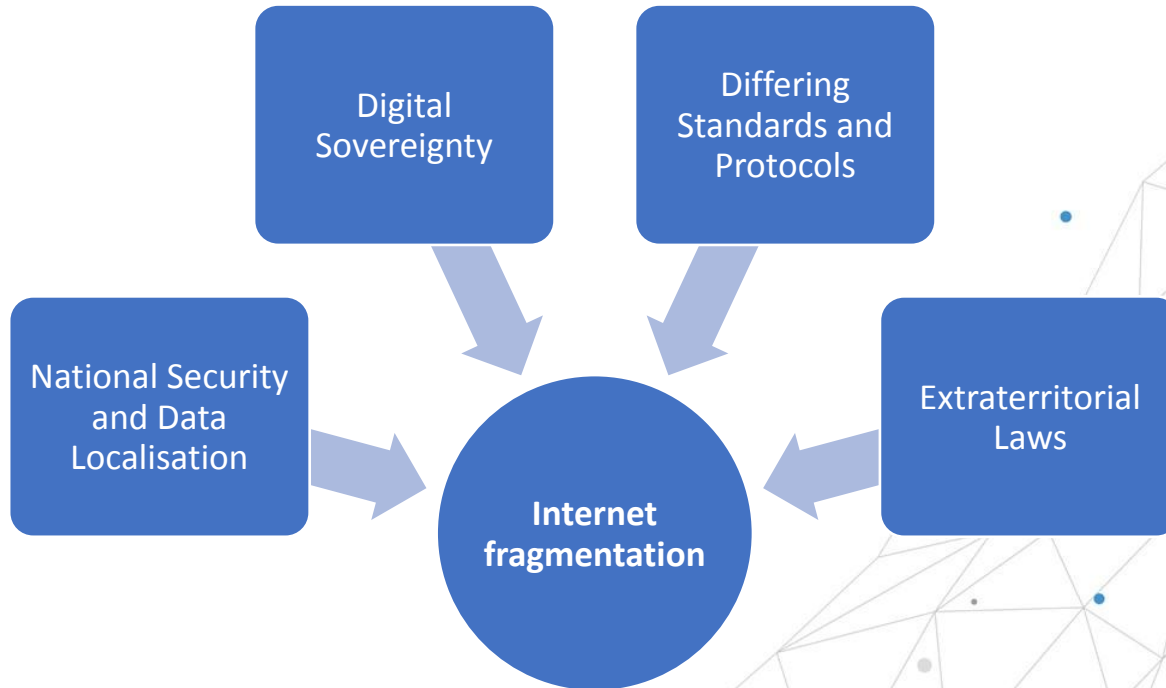


Core function of .ZADNA



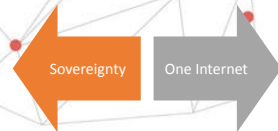
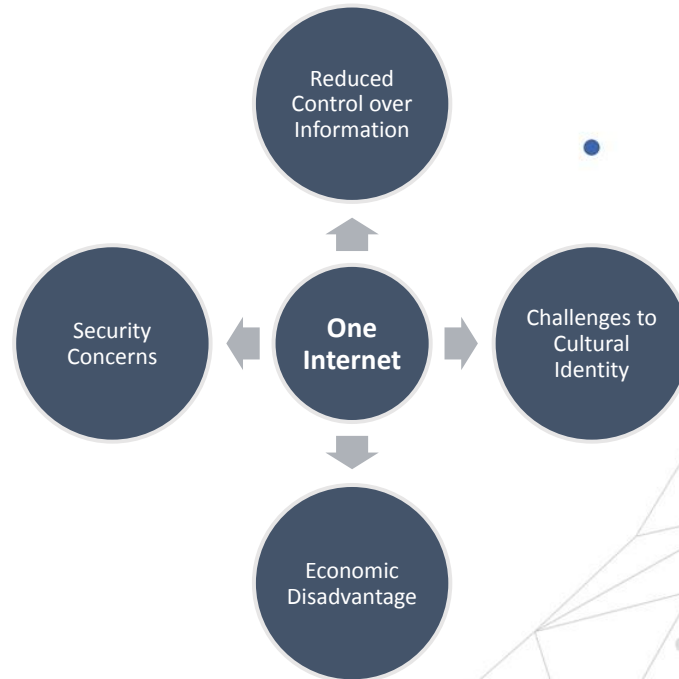
Internet Fragmentation

Unintended consequences of excessive and incoherent legislation



National Interests vs Internet Fragmentation

Potential harms of One Internet to a Country's sovereignty



National Interests vs Internet Fragmentation



South Africa's approach

• South African Constitution

- Freedom of expression;
- Equality and non-discrimination; and
- Privacy

• ECT Act implements and upholds the rights enshrined in the Constitution

- The Act prevents censorship and promotes the free flow of information online;
- The Act outlines regulations for data collection, storage, and use to protect user privacy (now covered by POPIA); and
- The Act ensures equal access to electronic communications and transactions for all South Africans

07 Perceived One Internet

- I content under the prevailing geopolitical climate the concept of an unfragmented internet will remain utopic.
 - Emergence of an alternative to the DNS as we know it (Web 3.0);
 - Economic and policy mistrust;
 - Digital sovereignty; and
 - Security (“cognitive warfare”).
- BUT, even with this, the internet shall and must remain interconnected



Image: Getty
Images/iStockphoto



Thank you – info@zadna.org.za

ICANN 79

IGLC Internet Fragmentation Session

Puerto Rico - 22 January 2024

Demi Getschko .br

demi@nic.br

Brazilian context on Internet

Principles for the governance and use of the Internet

approved in a consensus of CGI.br board members in 2009

1) Freedom, privacy and human rights (###)

The use of the Internet must be driven by the principles of freedom of expression, individual privacy and the respect for human rights, recognizing them as essential to the preservation of a fair and democratic society.

2) Democratic and collaborative governance

Internet governance must be exercised in a transparent, multilateral and democratic manner, with the participation of the various sectors of society, thereby preserving and encouraging its character as a collective creation.

3) Universality

Internet access must be universal so that it becomes a tool for human and social development, thereby contributing to the formation of an inclusive and nondiscriminatory society, for the benefit of all.

4) Diversity

Cultural diversity must be respected and preserved and its expression must be stimulated, without the imposition of beliefs, customs or values.

5) Innovation (###)

Internet governance must promote the continuous development and widespread dissemination of new technologies and models for access and use.

6) Network Neutrality (###)

Filtering or traffic privileges must meet ethical and technical criteria only, excluding any political, commercial, religious and cultural factors or any other form of discrimination or preferential treatment.

7) Non-liability of network intermediaries (###)

All action taken against illicit activity on the network must be aimed at those directly responsible for such activities, and not at the means of access and transport, always upholding the fundamental principles of freedom, privacy and the respect for human rights.

8) Functionality, security and stability

The stability, security and overall functionality of the network must be actively preserved through the adoption of technical measures that are consistent with international standards and encourage the adoption of best practices.

9) Standardization and interoperability

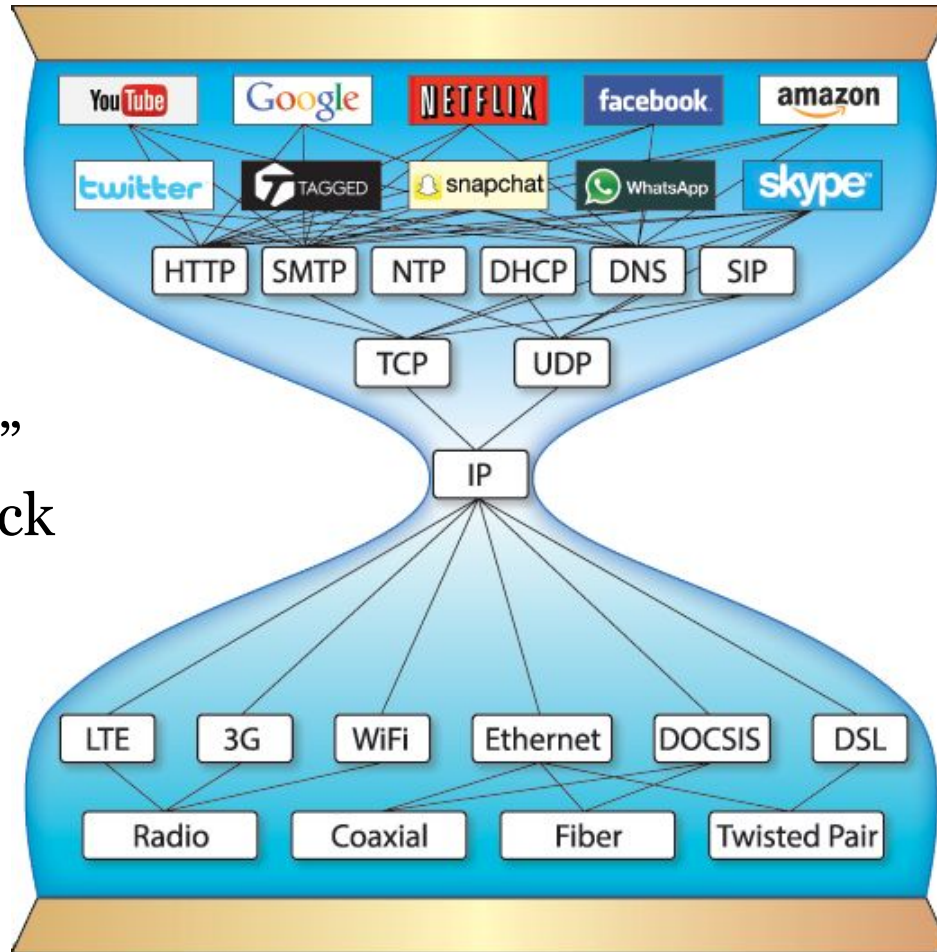
The Internet must be based on open standards that facilitate interoperability and enable all to participate in its development.

10) Legal and regulatory environments

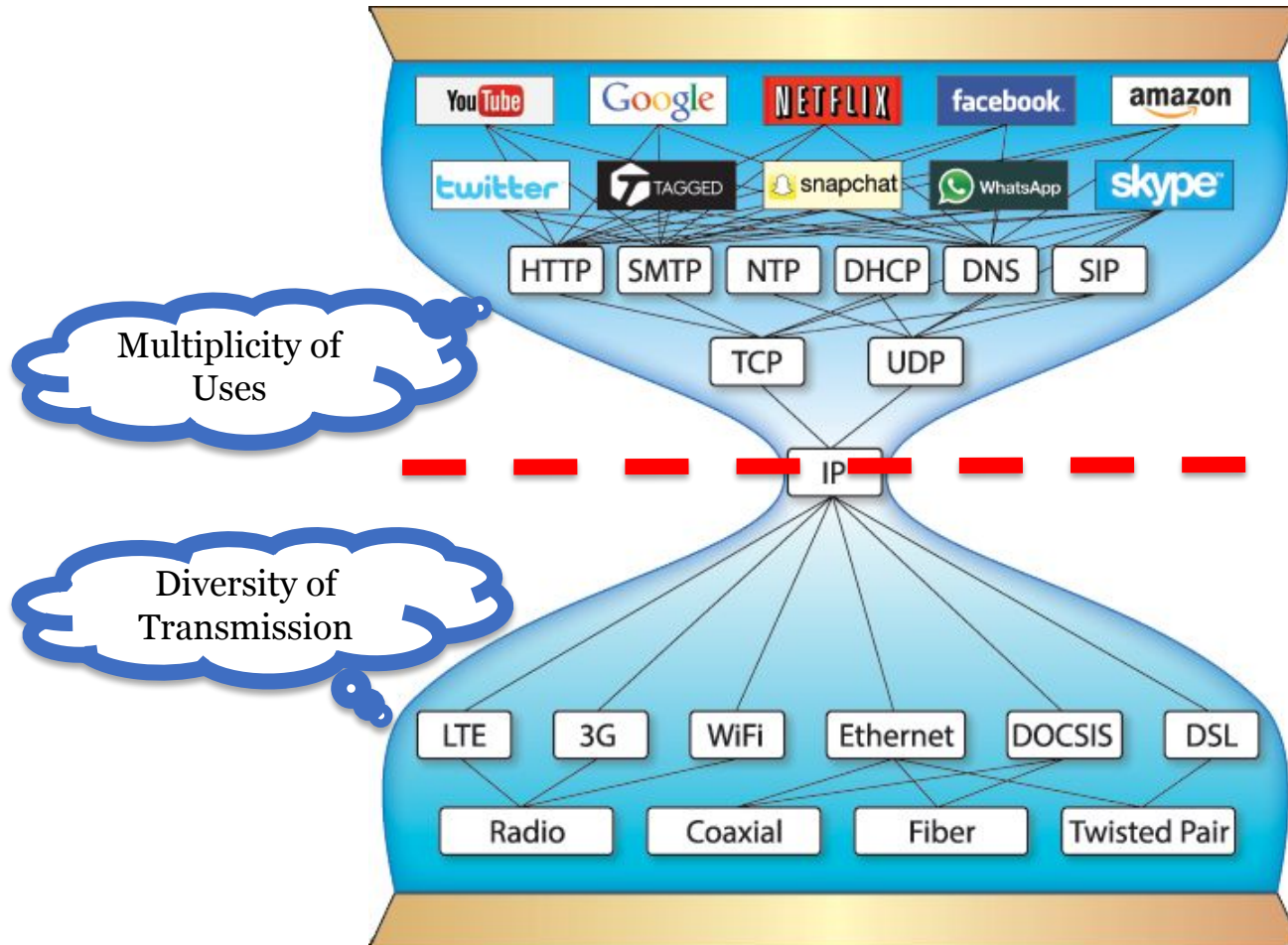
The legal and regulatory environments must preserve the dynamics of the Internet as a space for collaboration.

*That set of principles has been guiding CGI.br actions, and also being a reference to activities related to Internet Governance in Brazil. Especially in the Brazilian context, CGI.br principles **inspired and based "Marco Civil da Internet" (Federal Law 12.965/2014)**, the most important Internet-related legal device in the country.*

The
“hourglass”
protocol stack



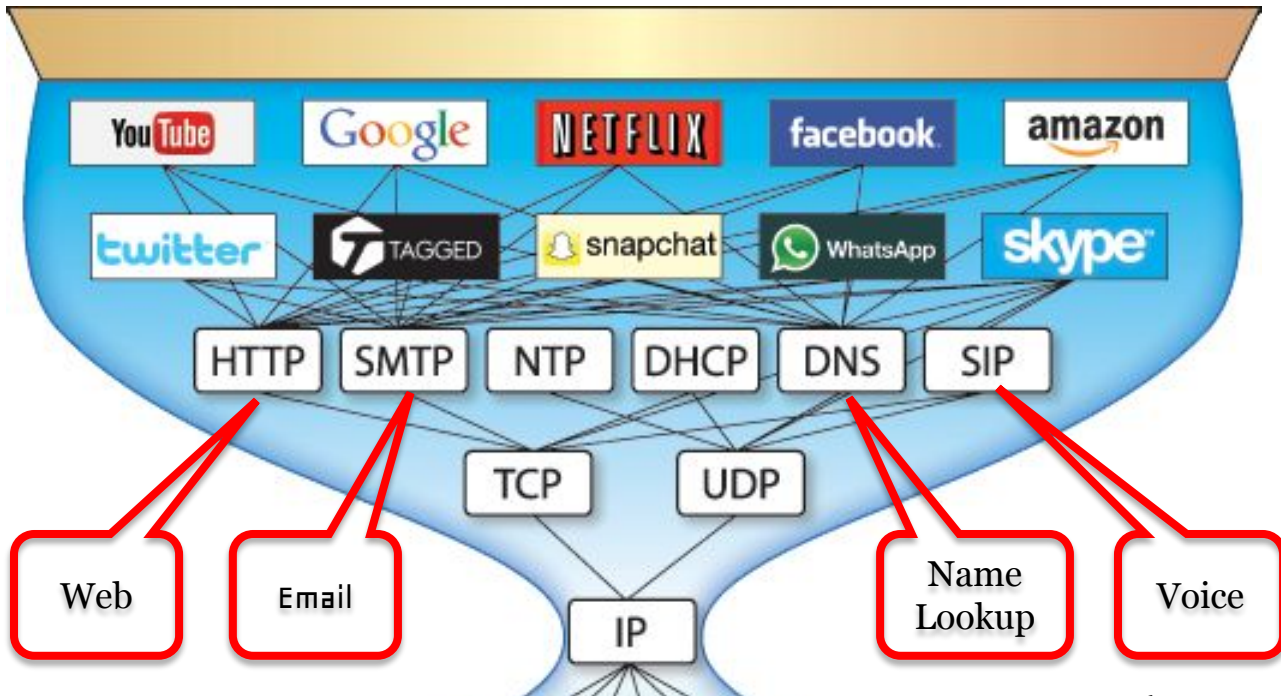
*(Steve Crocker's
presentation)*



Multiplicity of Uses

Diversity of Transmission

(Steve Crocker's presentation)



(Steve Crocker's presentation)

+ ARPANET RESULTS:

+ Networks are feasible!

+ Everyone wanted to join; countries wanted their own networks

+ Heterogeneous network (not vendor specific)

+ Layered protocol architecture

+ Ok to add functionality on top, underneath, in between

+ **Open** protocol stack (permission-less innovation)

+ **Open** standards process: NWG => IETF

+ **Open** (free) documentation – the RFCs

*(Steve Crocker's
presentation)*

Fragmentation in the DNS:

“Challenges with Alternative Name Systems”

<https://www.icann.org/en/system/files/files/octo-034-27apr22-en.pdf>”

Fragmentation in IP

“Huawei’s ‘New IP’ Proposal“

<https://www.internetsociety.org/resources/doc/2022/huaweis-new-ip-proposal-faq/>

Dealing with Terminology issues:

- 1- Technically, what is the Internet?**
- 2- Where does the Internet end and applications on it begin?**
- 3- When talking about fragmentation on the Internet, what is the real meaning of this?**

We need a prior taxonomy and a defined semantics to avoid making mistakes that are difficult to correct later.

<https://www.bell-labs.com/institute/blog/who-invented-internet-and-who-will-invent-future-industrial-internet/>

- The Internet has become a very complex system with many different layers and components.
- It can be challenging to define where the Internet ends and where the applications on it begin.

Some argue that the Internet encompasses **everything connected**, like websites, apps, and devices - Others see it as the **underlying infrastructure** facilitating these connections.

As for a necessary **taxonomy**, categorizing internet applications is crucial: treating them as a **single entity** seems impractical. Their very diverse characteristics demand tailored approaches, potentially including regulation at some levels, to address their specific behaviors.

- The purpose of the application (private or open?)
- The type of data that is collected and used by the application.
- The way in which the application is used
- The potential risks and harms associated with the application

Major Forces Revisited

Moore's Law

10x improv. every five years

10 years: 100x

Computer Science

Algorithms / Graphics / Speech recog.

Artificial Intelligence

- + Technology Improves
- ✓ Human Nature Doesn't
- ✓ Good Luck Helps

***(Steve Crocker's
presentation)***

“Varied types - essays”, 1903

G.K.Chesterton

===

“We are learning to do a great many clever things...The next great task will be to learn not to do them”.

===

Internet Fragmentation a regional perspective

Barrack Otieno

General Manager

Secretariat@aftld.org

<http://www.aftld.org>

ICANN 79 Meeting

Africa Top Level Domains Organization



Overview

- Developing a common understanding of Internet Fragmentation
- Factors that contribute to Internet Fragmentation
- A Regional Perspective
- Conclusion



Internet Fragmentation....

*Any Policy or decision that undermines the open , global , interoperable nature of the internet – the very attributes that have empowered people everywhere to benefit from it – contributes to fragmenting the Internet – **Internet Society***



Factors that Contribute to Internet Fragmentation....ISOC.org issue paper

- Emerging Technologies (Securitization of the Internet)
- Walled Gardens (Intranets)
- Increasing desire for Digital Sovereignty by State Actors
- Internet Shutdowns
- Limiting Global Access (Geopolitics)
- National Internet Gateways
- Regulating Business Relationships
- Regulation of DNS Infrastructure



A regional perspective

- According to data from access now , in 2022 alone governments in seven African countries shut down the Internet nine times.
- African political leaders have increasingly shown willingness to shut down the internet during major political events. In 2024 17 African countries with a combined population of around 310 million people, of which 58 % or over 180 million are eligible to vote will have political events
- Growing pushback from non state actors has barely deterred governments from employing Internet Shutdowns
- In 2022 it is estimated that Africa lost USD 261 million to shutdowns. The shutdowns lasted for a total of 9532 hours and affected 132.2 million people
- According to techpoint.africa sub Saharan Africa lost 1.74 billion in 2023 due to government induced internet shutdowns. Sub Saharan African came in second after europe with losses spread over 30,785 hours and affecting 84.5 million internet users
- 42 % of ccTLDs in Africa are under oversight from governmental agencies. This is an existential threat that could contribute to fragmentation



Conclusion and proposals for consideration

- Internet Shutdowns and by extension...fragmentation are inherently disproportionate and unjustified and cannot be justified under international human rights law...**UN**
- **ccTLDs** can and should contribute in pushing back against Internet Fragmentation. This can be achieved through various means...
 - **Championing the Multistakeholder Model of Internet Governance.** In the past Regional Organizations jointly organized sessions at the Global IGF.
 - **Embracing Multistakeholderism in their governance to minimize State Capture.** Regional Organizations have developed issue papers that could guide state and non state actors
 - **ccTLDs and Regional Organizations can and should contribute to Policy Development Processes at National Level.** They can be at the fore front of Capacity Building and Capacity development of State and non state actors through Schools of Internet Governance at National and Regional level. AFTLD has in the past contributed to the African School of Internet Governance
 - **ccTLDs and Regional organizations should conduct Research and Publish issue papers and policy briefs that highlight the factors that contribute to Internet Fragmentation and the economic impact of the same within their jurisdictions**
 - **ccTLDs and Regional Organizations should convene thought leadership sessions that encourage discussions on factors that contribute to Internet fragmentation within their Jurisdictions**



Thank You!

**Africa Top Level Domains
Organization**

Secretariat@aftld.org

<http://www.aftld.org>

Home of Africa National TLDS



Thank you!

Coming next:

- Policy Gap Session | 13:15-14:30 & 15:00-15:00
- ccPDP4 IDN ccTLD String Selection: Update Session | 16:30-17:30