

# What is Internet Governance?

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## ABSTRACT

**In 2008, Britain's Guardian newspaper published excerpts from British intelligence document leaked by former NSA contractor Edward Snowden that the U.S. government was monitoring flow of Internet data. The document alleged that NSA had been monitoring some foreign leaders including the German Chancellor, Angela Merkel's phone conversations for over a decade. This shocking news reignited a fierce international debate over internet governance with Germany threatening to confine all German Internet traffic data flow within its borders while some countries hoped to leverage on the scandal to minimize U.S. government's influence on the Washington based Internet Corporation for Assigned Names and Numbers (ICANN) which coordinates Internet Protocol addresses and domain names. However, Internet governance debate elicits broader range of other public policy issues including privacy, freedom of expression, trade and sovereignty.**

**This paper attempts to demystify the topic on Internet governance and provides analytical scheme by which to conceptualize the debate over the same.**

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## 1. Introduction

Since its inception in the early 1970s, the Internet has metamorphosed into a major global telecommunications infrastructure of our times and has become a central topic of discussion in any gathering held under the auspices of information society. What began as a research project sponsored by the U.S. Defense Advanced Research Agency in 1973 soon grew to into a global, distributed system of hundreds of thousands of independently operated and interconnected computer communication networks using a standard suite of protocols known as TCP/IP protocol suite. Having been rolled out first in 1983 in the U.S, and some parts of the U.K. and Norway, the Internet became available to the public in 1995

when a group of commercial, interconnected public Internet backbones replaced the privately owned and U.S. sponsored backbones. This eventually led to the dotcom boom of the late 1990s when many companies invested massive amounts of capital in the rush to have their online presence. The Internet continued to grow in leaps and bounds and by the year 2000 some successful Internet businesses like the Amazon, eBay and Google had started to thrive on the account of this Internet madness.

As the Internet use became more and more ubiquitous and the world economy became reliant on its operation, many governments began to recognize the tactical and strategic importance of this new infrastructure and how it could contribute to the well being of their citizens. It therefore became evidently in the governments' interest to be more involved in the management of the Internet and in 2002, ICANN was reformed to establish the Government Advisory Committee. While some governments supported this option, other governments, mainly from developing countries preferred that the Internet should be managed by international organizations. This was the backdrop for the 2003 World Summit on Information Society held in Geneva in which Internet governance became the key issue addressed at the summit. The summit culminated in the establishment of the Working Group on Internet Governance (WGIG) whose mandate was to tackle the problem of Internet governance on a global level.

## What is Internet Governance?

In 2005, the Working Group on Internet Governance (WGIG) issued a report in which they gave the following definition of Internet governance:

*"Internet governance is the 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".*

The report goes on to clarify that Internet governance “also includes other significant public policy issues, such as critical Internet resources, the security and safety of the Internet, and developmental aspects and issues”.

From this extended definition, it is clear that Internet governance is not just about government but embraces a variety of other actors including private sector as well as civil society. At the same time, it refers to more than just Internet domain name and address management or technical decision-making.

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## **2. Layers Principle in Internet governance**

In his work on regulation of communications, law professor Yochai Benkler proposed the layers principle and categorized communications networks into three distinct layers: a “*physical infrastructure layer*”, through which information travels; a “*logical layer*” that controls the infrastructure; and a “*content layer*”, which contains the information that runs through the network. This layers principle is also drawn from the architectural engineering and design of the Internet in which TCP/IP protocol suite is structured into seven stacks. It is crucial that the design of any legal rules should respect this fundamental principle architecture of the Internet and therefore holistic approach to Internet governance should take place on multiple layers or levels.

The infrastructure layer is considered the foundation layer of the Internet and consists of the copper wire, optical cables, satellite link and radio waves that transmit data around the world and are physically connected to our homes and offices. Logical and content layers are built upon this foundational layer and therefore its governance is critical to maintaining the seamlessness and viability of the entire network. Issues that would require governance at this layer include interconnection, universal access and deployment of next generation technologies to ensure that they work in harmony with the pre-existing legacy systems.

The logical layer sits upon the infrastructure layer and consists of software programs and protocols that gives life to the installed infrastructure and also provides an interface to the user. Issues that need governance at this layer include standards, domain name system (DNS) and IP allocation and numbering. Standards are important in order to make the Internet operate seamlessly over diverse operating systems, browsers, networks as well as different devices. Examples of such standards include TCP/IP protocol suite which is the heartbeat of the Internet as well as the Hypertext Mark-up Language (HTML) and the HyperText Transfer

Protocol (HTTP). Domain Name System maps IP addresses to domain names thereby allowing users to use memorable alphanumeric names to identify network services such as the World Wide Web and email servers. The DNS has been an issue of heated as well as interesting debate in Internet governance due the central role played by the Washington controlled Internet Corporation for Assigned Names and Numbers (ICANN) which coordinates the activity.

The content layer is considered to be the place where an average user experiences the Internet. It contains the programs, services and applications users’ access on their everyday life. Governance at this layer is of utmost importance to the user and includes issues such as Internet pollution, cybercrime and intellectual property rights. Internet pollution is a term generally used to refer to a variety of harmful and illegal forms of content that clog or pollute the Internet. These include spam or unsolicited emails, viruses, pornography as well as other spyware and phishing attacks (an email that solicits sensitive information such as bank account). Internet pollution epidemic has risen to unprecedented proportions over the last decade with spam messages accounting for 59.56 percent of email traffic worldwide as in September 2017. Internet pollution causes huge economic damage and reduces the amount of trust users have on the network. Cybercrime is also very closely related to Internet pollution as many forms of online pollution such as spam emails and phishing are considered examples of criminal activities. Cybercrime also takes other forms such as financial fraud, hacking, denial of service attacks as well as injection of viruses, worms and Trojan Horses. Cyber terrorism has also emerged as a major concern in recent years.

Intellectual Property Rights (IPR) has become a major concern in Internet governance in recent times. This is because the Internet, in large part has aided copyright violations using simple processes such as copy paste or complex processes through P2P networks like Kazaa and Napster which allow individuals to connect and illegally share digital music and video files in a massive scale. Music industry has emerged as perhaps the most hit and also the most important Intellectual Property Rights issue today.

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## **3. Why is Internet governance Difficult?**

The difficulty in Internet governance stems from the fact that there is no single authority that is responsible for all aspects of the network. The Internet technical architecture renders it difficult for any single authority to exert control. Unlike other form of networks such office LAN or telephone networks, the Internet is not dependent upon any central server. Instead, the *Internet is a*

network of autonomous networks, and control rests with the various distributed facilities that, together, make up the collaborative resource referred to as the Internet. This means that the Internet is always empowered at the edges, that is, at the individual facilities and is sometimes referred to as end-to-end (e2e) network. This e2e nature of the Internet is due to its technical architecture that relies on TCP/IP protocol suit which usually breaks down messages into individual packets of data and routes them over the network using the most efficient and least costly path to the destination. The network is always neutral with regards to the content of data packets. As long as the packet satisfies TCP/IP protocol rules, it will be routed without discrimination. This means that intelligence of the Internet rests at the edges where the power to innovate, create applications and services or content type lies with individual users.

Since there is no gatekeeper or central authority on the Internet to inspect the contents of each packet (this can only be done at the facilities at the edges such as firewalls or intrusion detection systems), viruses, spam, pornography and other innocuous messages are treated equally and since there exists multiple paths within the network to route packets from source to destination, it is difficult for any party to block information because packets will simply find another route. The open standard and e2e model of the Internet architecture is what makes it a success and able to drive innovation and is actually what makes it difficult to govern. As much as there is need for some form of governance to limit harmful content, there is a widespread agreement that the governance mechanism should not compromise the core architecture of the Internet.

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#### 4. Internet governance Models

Since the Internet cuts across the divide all stakeholders including governments, private sector, academia as well as civil society should be involved in its governance. Better answers to global questions can only be got when a range of experts and interests take part in a meaningful discussion. This therefore calls for a multi-stakeholders approach to Internet governance as the only framework that will allow the Internet to thrive. The multi-stakeholder governance framework is informed by three components which are of relevance: a) opened-ended unleashed innovation (infrastructure), b) decentralized governance institutions (governance) and, c) open and inclusive processes (human). It should also be observed that multi-stakeholder model is not a single solution but a set of tools and practices that are shared by participating members to develop consensus policies. Today much of the Internet

infrastructure is operated by a range of different stakeholders and therefore it only makes sense that this participatory approach of governance is adopted so as to maintain the open nature of the Internet and its underlying technologies.

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