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Internet Governance: A Developing Country Perspective

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Abstract

As the Internet gains an almost ubiquitous status in much of today's world, the governance of the Internet has become an important subject of study. Internet governance affects various critical issues such as open access, freedom of expression, innovation and new applications, commerce, development, and security. To date much of the discourse on Internet governance has been within the ranks of politicians, political analysts, as well as I-School and Communications School researchers. Internet governance discussions are often dictated by geopolitical issues. The perceived hegemony of the developed West regarding the governance of the Internet is increasingly facing challenges from developing countries. Some of these developing countries have even sought to exercise control over the Internet within their countries. All of these issues make Internet governance a potentially important area of study for Information Systems researchers and academics. In this paper, I briefly trace the history of Internet governance, and using that as the basis, explore more deeply the issue of Internet governance from a developing country – namely India's perspective. The paper examines various issues and their genesis, and then provides some potential approaches for dealing with global Internet governance.

Keywords: Internet governance, developing country, India, ICANN, Internet governance and U.S., Internet governance and EU

INTRODUCTION

Internet governance is a broad term that encompasses the design and maintenance of global Internet architecture. This broad definition intentionally does not include regulation of the Internet, whether by governmental or non-governmental institutions.

Regulating the Internet has always been a controversial issue. Its original designers chose to keep its operational design open and free, conceiving it as an open communications system which would enable academics to collaborate and exchange ideas and information without being tied to organizational and hierarchical constraints (Leiner et al., 2003). Thus, the Internet was designed as a highly redundant and inter-connected network of networks in which data communications would not be completely disrupted even if parts of the network were to go down. A disruption in any part of the network would result in data packets simply taking alternate routes to reach their destinations. The Internet saw rapid growth in the 1990s, thanks to the invention of protocols such as HTTP, the world-wide-web (web) platform, and the graphical web browser. These developments, combined with falling prices of computer processors and peripheral devices enabled anybody who had an Internet account to access the web, or create a web site to

disseminate information. Soon the Internet became a vehicle for unfettered expression, communication, entertainment and commerce. Proponents of free expression lauded the Internet's apparent anarchic characteristics.

However, over time, it has become clear that governments have found various means to control and regulate the Internet (Goldsmith & Wu, 2006). More importantly, numerous governmental and non-government entities have started demanding a say in the global management of the Internet. They argue that since the Internet is a global public good, its management, governance and regulation should not rest at the hands of a few administrators who often represented developed countries. They object to the view that Internet governance should only be in the hands of those countries that originally built the Internet infrastructure. These developments underscore the fact that management and governance of the Internet has become a contentious issue. They have the potential to affect the future of Internet communications, commerce, free expression, and national security. Lately some of the emerging economies have also raised their stakes in Internet governance, partly out of concern that not doing so will affect their own economic and social well-being in the future through a form of digital colonization.

Many scholars have started to address the questions of multi-lateral governance of the Internet (DeNardis, 2009; Mueller, 2013). Much of the existing discussion takes a western, developed economy perspective, with a focus on the tensions among freedom of expression, security, national integrity, innovation, and economic aspects. An emerging economy perspective is missing in the discussions. This emerging economy perspective is especially critical now. Until recently, Internet governance has generally been considered to be a prerogative of developed economies such as the United States, EU and Australia. However, the World Summit on Information Society (WSIS) meetings convened in Geneva in December 2003 and in Tunis in November 2005 were a turning point. Newly emerging economies as well as under-developed economies started seeing the potential of the Internet, and wanted to enjoy the advantages of being connected to the Internet to advance development and commerce. These new entrants were also wary of the overt influence of the developed West concerning governance aspects of the Internet. The developed economies also saw the economic benefits of bringing developing countries into the global network. The resulting years have seen a constant tussle between the digital haves and have-nots. The issue of Internet governance is still not settled, and still a subject of active negotiation among the multifarious stakeholders. Thus, the objective of this paper is to give a short historical background of Internet governance, and follow that with a more focused perspective on India's own attempts to participate in and influence Internet governance. This developing country perspective is unique, and will add, hopefully, to the literature in the field of Internet governance.

Global Internet Operations: A Historical Introduction

Until 1998, the IP address allocation and the root zone in the Domain Name System (DNS) was administered by the Internet Assigned Numbers Authority (IANA) under Jon Postel at the Information Sciences Institute at the University of Southern California. However, IANA was administered through USC/ISI's contract with the U.S. Department of Defense (DoD). Thus, in reality, the U.S. DoD maintained the power to manage the Domain Name System (DNS). This raised the possibility that access to a web site could be completely controlled by the U.S.

government. Access could theoretically be blocked for a variety of reasons – from perceived copyright infringement to transmission of content deemed illegal under U.S. laws. This level of control by one country made many other nations increasingly uncomfortable, especially as the Internet was fast becoming a global communications medium.

Since the DoD's contract with the USC was ending in late 1998, the Clinton administration, in late 1997 considered ways to jettison its control over the Internet and transfer operations to private entities. Accordingly, in February, 1998, the U.S. Department of Commerce (DoC) released a green paper outlining the creation of a new U.S. based organization to handle the tasks of the IANA (Kehoe, 1998). This was perceived by several nations (mostly from the EU and Australia) as an attempt by the U.S. government to seize and maintain control of the Internet, and was thus opposed. In a bid to calm fears, the U.S. government released a new white paper outlining the creation of a private, international organization to take IANA's place (Buckley, 1998; U.S. Department of Commerce, 1998). After several rounds of negotiations with the affected parties which included nations as well as multinational corporations, the Internet Corporation for Assigned Names and Numbers (ICANN) was created by the U.S. Department of Commerce on September 30, 1998 (Essick, 1998). IANA became a department within ICANN. However, despite assertions to the contrary, the DoC exercises ultimate authority over the DNS root zone of the Internet (Brito, 2011).

Another important component of Internet operations is the assignment and (directory) management of domain names associated with the IP address. The Internet Network Information Center (InterNIC) was responsible for this until 1998. From 1972 to 1991, the InterNIC was managed by SRI International (then known as the Stanford Research Institute). From 1992 to 1998, it was run by Network Solutions, an American company. In 1998, ICANN assumed responsibility for InterNIC.

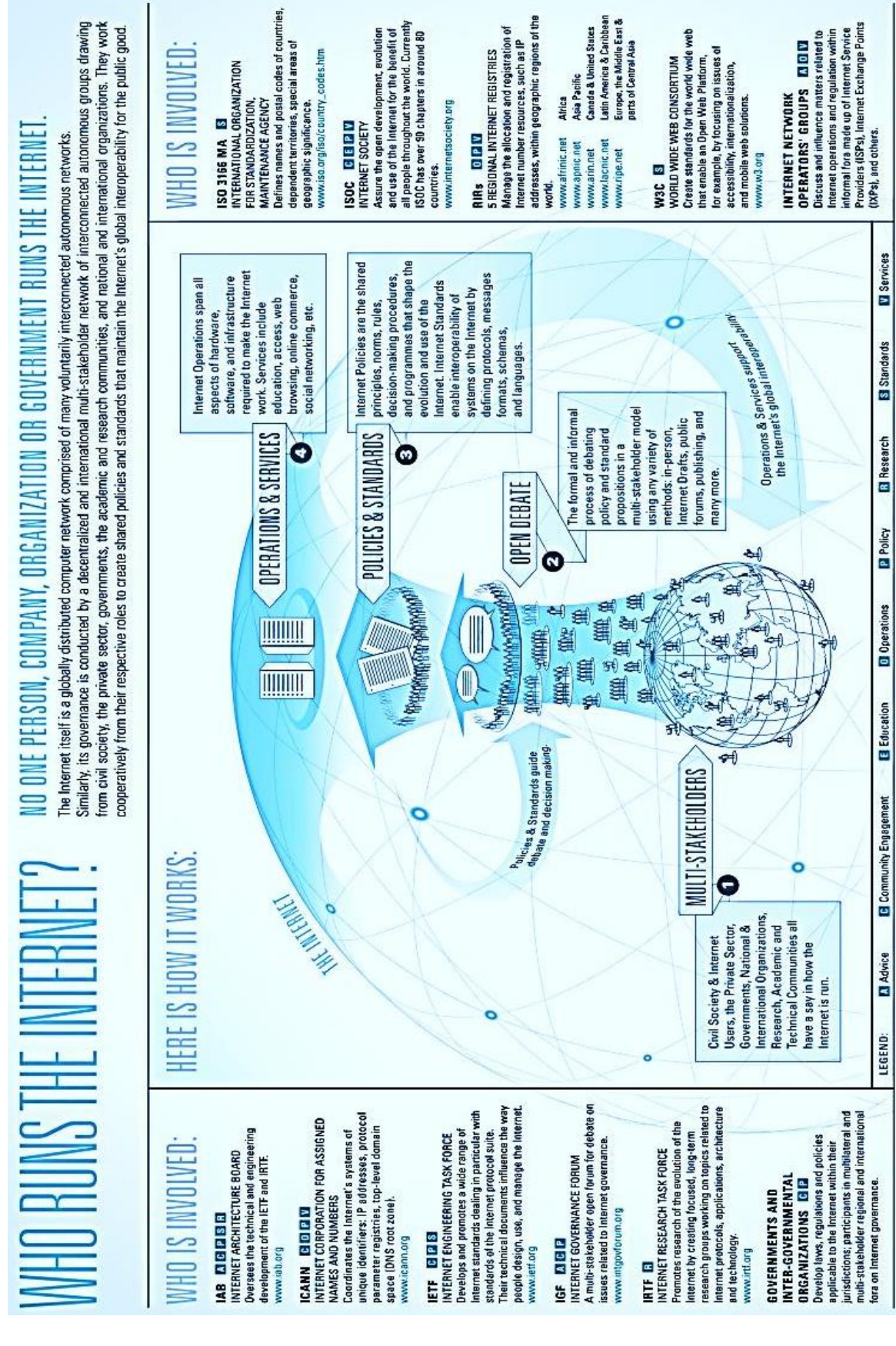
Created initially as a public-private partnership, the ICANN shoulders much of the responsibility for the secure and stable operation of the Internet. As noted in the ICANN (2013a) website, its mission is “to coordinate, at the overall level, the global Internet's systems of unique identifiers, and in particular to ensure the stable and secure operation of the Internet's unique identifier systems” (Article I, para. 1) Today the operations of the Internet are overseen by a number of volunteer entities. To provide clarification on the roles of each of these entities, ICANN (2013b) published a graphic factsheet. The factsheet, presented in Figure 1, illustrates how global Internet governance is currently operationalized by the following entities:

- **IAB** - Internet Architecture Board - Oversees the technical and engineering development of the IETF and IRTF
- **ICANN** - Internet Corporation for Assigned Names and Numbers - Coordinates the Internet's systems of unique identifiers: IP Addresses, Protocol-Parameter registries, top-level domain space (DNS root zone)
- **IETF** - Internet Engineering Task Force - Develops and promotes a wide range of Internet standards dealing in particular with standards of the Internet protocol suite. Their technical documents influence the way people design, use and manage the Internet
- **IGF** - Internet Governance Forum - A multi-stakeholder open forum of debate on issues related to Internet governance

- **IRTF** - Internet Research Task Force - Promotes research of the evolution of the Internet by creating focused, long-term research groups working on topics related to Internet protocols, applications, architecture and technology
- **Governments and Inter-Governmental Organizations** - Develop laws, regulations and policies applicable to the Internet within their jurisdictions; participants in multilateral and multi-stakeholder regional and internal forums on Internet Governance
- **ISO 3166 MA** - International Organization for Standardization, Maintenance Agency - Defines names and postal codes of countries, dependent territories, special areas of geographic significance
- **ISOC** - Internet Society - Assure the open development, evolution and use of the Internet for the benefit of all people throughout the world. Currently ISOC has over 90 chapters in around 80 countries
- **RIRs** – Five Regional Internet Registries - Manage the allocation and registration of Internet number resources, such as IP addresses, within geographic regions of the world - Africa - <http://afrinic.net>, Asia Pacific - <http://apnic.net>, Canada & United States - <http://arin.net>, Latin America & Caribbean - <http://lacnic.net>, Europe, the Middle East & parts of Central Asia - <http://rip.net>
- **W3C** - World Wide Web Consortium - Create standards for the world wide web that enable an Open Web Platform, for example, by focusing on issues of accessibility, internationalization, and mobile web solutions
- **Internet Network Operators Groups** - Discuss and influence matters related to Internet operations and regulation within informal forums made up of Internet Service Providers (ISPs), Internet Exchange Points (IXPs) and others.

As can be seen in Figure 1 on the next page, the ICANN has been assisted by a variety of global volunteer organizations to ensure the Internet's smooth operation. Over the years, the U.S. DoC has affirmed the independence of the ICANN and Internet governance by not interfering overtly with its policies. According to ICANN (2013), decisions regarding Internet governance issues are taken by the following steps:

1. Multiple stakeholders consisting of governments, civil society, Internet users, private sector, national and international organizations, researchers, academic and technical communities debate on formal and informal channels such as the Internet Governance Forum, IETF meetings, etc. and debate various policies and changes.
2. Drafts and requests for comments are circulated.
3. Policies are ironed out. Internet policies are the shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet. Internet Standards enable interoperability of systems on the Internet by defining protocols, messages formats, schemas, and languages.
4. Various operations and services are defined and agreed upon. Internet operations span all aspects of hardware, software, and infrastructure required to make the Internet work. Services include education, access, web browsing, online commerce, social networking, etc.



This graphic is a living document, designed to provide a high level view of how the Internet is run. It is not intended to be a definitive guide. Please provide feedback at www.operations.com/webgovernance.net

Figure 1: The ICANN (2013b) Factsheet.

However, these forums, policies and procedures have not assuaged some of the fears and concerns of other countries that still fear control of the Internet by the U.S. government. Over the years, there have been numerous calls for separating ICANN from its connection to the U.S. Department of Commerce. In addition, as more and more nations join the Internet, these calls have only increased. Some governments such as China and Russia fear that the U.S. constitutional imperative to protect free expression at all costs could impinge on their own sovereignty and security. Civil society has increasingly asked for equal status in policy decision making, as in many forums they do not yet have those rights. In the discussion that follows, I turn the focus of Internet governance to India, considered by many analysts to be a rapidly developing economy.

Introduction: ICT, India, and Institutional Responsibilities

Today India is considered to be at the threshold of becoming a major economic power and a leader among emerging economies. This new stature has come with certain responsibilities, foremost of which is determining how to leverage its new economic standing to enhance the development of its multifarious population, 700 million of who live in rural villages lacking basic amenities such as electricity and running water. A second responsibility, and almost as important albeit with an external focus, is that of being a self-assumed spokesperson and leader to the rest of the developing world in an increasingly inter-connected global economy. Both of these have direct technological underpinnings. In the former, the questions that India seeks to address include:

- How can it as a country leverage technology, specifically ICTs for development?
- How can ICTs enhance the processes of democratization in villages and among marginalized sections of society?
- How can ICTs be used to increase citizens' access to knowledge?
- How can ICTs be used to provide services to all segments of the population?

In addressing the latter, the questions include:

- How to leverage global networks effectively for commerce?
- How to ensure that ICTs and most notably the Internet become neutral vehicles for global development, rather than one that is tailored and manipulated by the developed North?
- What policies should govern the growth of the Internet to ensure that unfettered and equal access exists to all nations/states?
- What policy aspects should be considered to make this a reality?
- Who are the stakeholders in designing such policy?

These questions and more are actively being debated in India at present by the government, industry and civil society. An overarching thread in these debates is the role of ICTs in general, and the Internet is particular, in addressing the above questions. As a result, questions and issues pertaining to Internet governance have assumed greater significance. In October 2012, the India Internet Governance Conference was held and addressed some of these questions (Federation of Indian Chambers of Commerce and Industry [FICCI], 2012). Much of the discussions have focused on the current state of Internet governance, problems in the current structure, and changes needed to make the Internet a truly equitable and fair platform for the development of all countries—not just those that are technologically advanced. To appreciate the import of India's

role on Internet governance debate, we have start by briefly looking at the history of India's technology development.

Brief History of IT Developments in India

Indeed, India's IT prowess has been much discussed and analyzed over the last two decades. Starting with the liberalization of its economy in 1991, India accelerated its growth trajectory, turning up impressive GDP growth rates of around 9 percent per year, which has diminished only since 2008, reflecting the global economic downturn (Subramanian, 2011a). India's growth story has been particularly aided by its IT and software industry. The Indian IT-BPO sector has successfully managed to weather the uncertainties in the global business environment over the last few years, and its revenues for the financial year 2012 (not released yet) were expected to cross the landmark figure of 100 billion U.S. dollars. This sector contributes almost 7.5 percent to India's overall GDP in 2012, and has played a substantial role in India's development over the last two decades (NASSCOM, 2012).

It has been argued by Indian intelligentsia that credit for much of this development should primarily go to the industrial sector, and that the government has played only a passive role, if any. This is true to a large extent, particularly in the ICT sector. Until the economic liberalization, which started tentatively in 1984, became full blown in 1991, India's technology growth was deeply constrained by the following socialist policies built upon a deep mistrust of capitalism, planned central government, large state-run enterprises, and stringent import restrictions—all couched within the *mantra* of self-reliance. From Independence in 1947 until 1985, Indian telecommunications was controlled by the state monopoly Posts, Telegraphs and Telecommunications Department (PTT). Research was non-existent, and telephones were considered a privilege rather than a right. Over a fifty-year period from 1948 until 1998, the growth in teledensity was a shocking 2—the number of telephones per 100 persons (Jain & Sridhar, 2003). In 1999, the teledensity was approximately 9 percent (as cited in Kaushal, 2007)). In 1985, the PTT was split, and the Government of India Department of Telecommunications (DoT), a branch of the Ministry of Communications and Information Technology, was created with a view to increasing professionalism in the telecom sector.

However, it wasn't until 1994 when a new National Telecom Policy was announced which allowed a supplementary role to private telecom enterprises (DoT, 2002). New teledensity targets were set, and auctions for wireless spectrum were conducted. A revised National Telecom Policy was announced in 1999, which allowed even more private participation in the sector (DoT, 2003). The results were magical. In the years that followed, the telecom sector exploded exponentially. While landlines registered tremendous growth, the wireless connections stole the show. New private sector telecom companies left much of the landlines to the state run BSNL and MTNL, leap-frogging instead on to wireless telephony. The first cellular phone connection was established in 1995, and then the (telecom) floodgates opened. In the period from 1995 to 2001, four million new subscribers were added. From 2001-2008, the number of subscribers rose to 250 million. From 2008 to 2012, the numbers rose to 930 million subscribers (India Internet Governance Conference, 2012).

These numbers were paralleled by increases in landline subscriptions; and according to the Telecom Regulatory Authority (TRAI) the teledensity rose to 73 by 2012. The government embarked on a project enhancing telecommunications networks and providing fiber optic links up to all district headquarters. Various NGOs emerged to further enhance the telecom infrastructure and extend their reach and applications in rural areas. However, notwithstanding governmental efforts, it is important to note that ninety percent of all telecom infrastructures in India have been built and are owned by private enterprises, which also have ninety percent of all subscribers ((India Internet Governance Conference, 2012).

Arrival of the Internet and passage of the IT Act of 2000

Internet for the common citizen arrived in 1998, and its growth has been rapid, though not as stellar as that of wireless telephones. Currently there are approximately 120 million active Internet subscribers in India. However, there are also 180,000 cyber cafes that claim to provide services to approximately 60 percent of Internet users in India. This would substantially increase the total users who have some access to the Internet. In 2011, the Indian government took steps to further augment Internet access by committing \$4 billion (U.S.) to fund a project, known as the Bharat Broadband Project, to extend the fiber-optic network to 250,000 *panchayats*, meaning village governance bodies or councils (General Knowledge Today, 2013). Today, the Internet's reach in India is extensive, reaching into remote areas and used in almost all aspects of social life, from conducting e-commerce to providing basic government services, such as birth certificates. NGOs augment these services by providing Internet-based applications and services, vastly enhancing access to knowledge. Telecom companies, through their vast network, have greatly enhanced the reach of the Internet to their subscribers. Companies such as Apple, ATT, Google and Microsoft have vastly increased their presence in India. Indians have rapidly absorbed much of the new technologies and applications and incorporated them into daily use. The Internet has become an indelible part of the social, economic, information and communications fabric of India.

In 1998, the Indian government realized that it needed to take drastic steps to enhance the IT infrastructure and the Internet. Indian Prime Minister Atal Behari Vajpayee established the National Task Force on IT and Software Development. The goal of the multi-stakeholder group was to come up with ideas and strategies to make India an IT superpower and one of the largest generators and exporters of software in the world in ten years. The task force collected ideas and suggestions, which were developed into the Information Technology Action Plan (IT Plan). The IT Plan eventually led to the passage of the IT Act of 2000. The Act followed the Model Law on Electronic Commerce adopted by the UN Commission on International Trade Law (UNCITRAL), which provides legal recognition of electronic documents and digital signatures, addresses offenses, contraventions and cybercrimes.

Developing an International Perspective: India, WSIS and IGF

Recognizing the geo-political importance of the Internet, India has over the years sought to increase its presence in international forums pertaining to Internet governance. The Indian government, as well as Indian NGOs, participated in the 2003 WSIS meeting in Geneva and in the 2005 WSIS meeting in Tunis. At WSIS Tunis, the original agenda to address the digital

divide and human rights issues among nation states was quickly overshadowed by calls for a more democratic way to set Internet policies and governance issues through an UN-based Internet Governance Forum. This gained the support of all attendee-countries except the U.S., which opposed the move, preferring instead a private sector-based leadership of the Internet to a government-led, top down approach. It argued that it was just that type of leadership that had made the Internet what it was. Despite U.S.' views, paragraph 72 of the Tunis Agenda mandated the UN Secretary-General to convene a forum to conduct multi-stakeholder policy discussions (P. J. Singh, 2008). The U.S., isolated when its ally, the EU, began to support the idea of an Internet Governance Forum (Wright, 2005), finally acceded to its creation. The process was initiated through the creation of the Working Group for Internet Governance (WGIG), which eventually led to the creation of the Internet Governance Forum (IGF). The Indian government fully supported this, and Indian NGOs, such as *ITForChange*, played a big role in the initial formation of the IGF. A member of this NGO, as well as an Indian career bureaucrat initially took on the role of special advisors to the IGF Chair. The U.S. for its part counted on the IGF being a toothless organization consisting of multiple stakeholders who carried deep divisions among themselves, and thus not really pose any threat to ICANN's leadership of the technical aspects of the Internet. Certain divisions did manifest themselves during the early years of the IGF's formation and ranged from basic issues as to who would be the multi-stakeholders with representation in the IGF, would they be nominated or elected, how many member states could be represented in the forum, etc.

During the initial years of the IGF, the Indian government's position coincided with the position of the many Indian NGOs in its opposition to the power that ICANN held with regards to the Internet. In particular, the Indian government (and NGOs) was been deeply suspicious of the power that the U.S. government and U.S. industry held over ICANN. As far as India was concerned, ICANN was a U.S.-based corporation that was beholden to the U.S. Department of Commerce and U.S. laws, and thus was not an appropriate neutral entity that could be trusted with the governance of what it considered a global public good. Indians were particularly resentful of the U.S. attempts to categorize the role of ICANN as purely esoteric, technical and research-oriented in nature, focused on smooth functioning of the Internet (*vis-à-vis* stability, security and robustness of the infrastructure), and the insinuation that developing countries would be better off by just attempting to use or consume the Internet and focus on building applications to suit their development agenda. In fact, a research paper from an Indian NGO to the first IGF conference focused primarily on how Internet governance should be moved away from ICANN, which was considered to be under the control of U.S. government and business interests or rich country clubs like the Organization of Economic Cooperation and Development (OECD) (P. J. Singh, 2008). India made several statements to the effect that while it was generally satisfied with the status-quo as regards Internet operations, it preferred that the same work (that was under the purview of ICANN) be performed by an UN-based organization, which had multi-stakeholder membership, and thereby appreciated the developmental imperatives of the member states.

The position of India and several other developing countries, including Russia and China, favoring an UN-administered, top-down hierarchical structure for Internet governance was firmly opposed by the U.S. as well as EU and other OECD members. The U.S. justified its

position on the basis that such a move would lead to more governmental control, which would result in censorship of the Internet in several countries with poor human rights records.

The Indian Emperor Wore no Clothes

In fact, India itself was gradually imposing more restrictions on the Internet, such as overt blocking of sites. As early as 2003, India designated the DoT as the single authority to order blockage of certain sites and issued a notification on July 3, 2003, stating that “websites promoting hate content, slander or defamation of others, promoting gambling, promoting racism, violence and terrorism and other such material, in addition to promoting pornography, including child pornography, and violent sex can reasonably be blocked.” (Minwalla, 2003, para. 5) In September 2003, the Indian government ordered the blocking of all Yahoo groups, because Yahoo refused to block access to *Kynhum* (n.d.). That one group had advocated a particular State’s secession from India. In April 2004, a Hindu fundamentalist group’s website was blocked for inciting violence against Muslims (Subramanian, 2011b). These types of overt governmental actions gradually caused various NGOs to oppose the government’s position. On the one hand, the Indian government was trying to guard itself from the U.S. Internet industry and the U.S. government. On the other hand, the government was attempting to control free speech on the Internet to its own citizens. The NGOs realized that the Indian government was promoting multilateral agreements rather than multi-stakeholder agreements as far as Internet governance was concerned.

Nevertheless, India hosted the third IGF conference in Hyderabad in 2008, promoting the theme *Internet for Everyone*. However, that same year, India was subject to a massive attack on Mumbai in November by terrorists infiltrating from Pakistan. This attack stunned India, and a hurried Amendment to the IT Act 2000 was passed in December 2008 without much opposition (Subramanian, 2011b). The Amended Act (under sections 66-69) listed a host of actions that would be deemed computer-based crimes. NGOs such as the Centre for Internet and Society (CIS-India) and the People’s Union for Civil Liberties (PUCL) opposed these moves, saying that the Amendments were an attack on Freedom of Speech and amounted to censorship (Prakash, 2012b; Subramanian, 2011b).

Shifting Sands and the UN-CIRP Proposal

This led to shifting stances by the government, industry and civil society. The Indian government felt emboldened to take stringent actions, such as censoring information, blocking web sites and even arresting persons for making what it perceived as hate or libellous speeches. The IT industry joined the NGOs in objecting to the Indian government’s new overreach, terming it unconstitutional. However, on the subject of Internet governance, the industry and NGOs differed in their stance towards ICANN. The NGOs continued their support for an UN-based multi-stakeholder model, insisting that ICANN was complicit in many controversial policies of the U.S. government—such as attempts to take control over some domain names (through control of DNS root servers) under the guise of IP protection, and even attempting to develop the so-called Internet kill switch at the urging of some U.S. lawmakers. The industry as well as certain organizations such as the Internet Society continued their support of ICANN.

On the international front, the Indian government sought to carve out a middle position on Internet governance. The two extreme positions were at hand: the US/ICANN-focused OECD communique and the G8 declaration issued in May and June 2011, which advocated multi-stakeholder systems, albeit under non-governmental control, and the position of Russia and China, which jointly submitted a proposal at the UN that outlined a code of conduct for information security. The Russian-Chinese proposal advocated for more multi-lateral arrangements, i.e., governmental control of the Internet on the other. In September 2011, India, along with Brazil and South Africa, met at Rio de Janeiro for the IBSA Summit and came up with the idea of an UN organization that would deal with Internet governance issues. Soon after, at the 66th Session of the UNGA, India proposed the formation of a Committee on Internet-Related Policies (CIRP) for Internet governance (P. J. Singh, 2012). However, the proposal was widely seen as a proposal for governmental control of the Internet. The U.S. and other corporate stakeholders opposed it. NGOs in India felt that they had not been consulted, and thus opposed the proposal. Reacting to the opposition, the Indian government made an about-turn, saying that it was against governmental control of the Internet. The Indian government signaled at the October 2012 meeting of the Budapest Cyber Space Conference that it would step up its engagement with ICANN and continue to work with it on Internet governance (S. Singh, 2012). This decision was taken after consultations with the Ministry of External Affairs, Department of IT, industry and civil society members. The consultations were coordinated by the office of the National Security Advisor, emphasizing the importance of the subject (S. Singh, 2012).

India and the ITU

While the Internet design and operations have been conceived, implemented and maintained by the ICANN (with the ISOC and IETF as advisory participants), the important physical layer of networks is still under the purview of the International Telecommunications Union (ITU), which is the custodian of International Telecommunications Regulations (ITRs). ITRs are binding international treaties, and the last treaty was adopted in 1988 in Melbourne, Australia. ITRs can be amended through a WCIT, and the last WCIT was held in Dubai in December 2012. In May 2012, the ITU circulated *Temporary Document 64*, which suggested a proposed expansion of ITU's scope to include the Internet (ITU, 2012). As preparation, the ITU asked all member countries to send revision proposals. The Indian government sent its proposals in October 2012 (Prakash, 2012a). However, the government was accused by civil society organizations and industry stakeholders alike that they were not adequately consulted before the proposed revisions were submitted. They found several issues pertaining to security, as well as the inclusion of ICTs along with processing (which would directly subject IT and BPO companies to governmental regulations) objectionable. The CIS-India opined that multi-stakeholder issues should not end up within the ITU's purview, as the ITU was inter-governmental. Several NGOs joined together and submitted their own proposal to the ITU (Kovacs, 2012). Other countries such as Russia and China also proposed revisions, which seemed to suggest that countries be given larger control over their own domains (McCarthy, 2012). This set off alarms in many countries that feared that this would lead to increased control and censorship. Eventually the WCIT 2012 meeting ended inconclusively, with 89 countries, including India, U.S., Canada, and much of EU declining to sign the new ITR treaty (Downes, 2012).

CONCLUSION AND A PROPOSAL FOR INTERNATIONAL INTERNET GOVERNANCE

As can be seen from the above discussion, the Indian government's position Internet governance has taken many turns, and has sometimes been almost schizophrenic. However, whenever it advocated overt governmental control of the Internet, it has always met with strong resistance from civil society, and in some cases, by industry. While not efficient, it can be argued that this process of continuous negotiation is in the best traditions of democracy, and is typical of governance in India. What is new is the emergence of a variety of civil society groups that feel empowered to use the Internet to fight for Internet freedom.

However, the question of global Internet governance cannot be solved simply by using an Indian perspective. It is clear that Internet governance is a very political issue fraught with a variety of international hot-button issues. Currently, many countries in the developing world also have active committees working on Internet Governance. Apart from the efforts of South Africa and India, another noteworthy effort on Internet Governance has emerged from Brazil. The Brazilian proposal, as noted by Afonso, "seeks to derive a more decentralized organization from the only currently working structure specifically created for Internet governance—what I call here the Internet Corporation for Assigned Names and Numbers (ICANN) System, which involves ICANN and its supporting organizations, as well as the Number Resource Organization (NRO) and the Regional Internet Registries (RIRs)" (2005, para. 1). Afonso's proposal envisions the governments' roles changing from a merely advisory one to one that involves oversight. Afonso also calls for joint management of a single root system of a single root system by a new ICANN and a new Country Code Names Supporting Organization (ccNSO) (2005).

By analyzing various proposals, we can generally identify four models of Internet governance that exist at present: The ITU-based **inter-governmental model**; the IGF-based **inter-governmental + equal multi-stakeholder model**; the UN-CIRP based **inter-governmental + limited stake-holder model**; and the **fully participatory model** where the ICANN becomes a completely independent body without any supervision from any government or UN Agency. Each of these models has its supporters and detractors. At a recent conference on Internet governance held at the Yale Law School ("Rapporteur's Notes," 2013), a panel of Internet scholars (including this author) brainstormed various issues pertaining to Internet governance and arrived at a set of proposals. Those proposals are presented below:

1. Adopting a treaty preventing governments from using the DNS as a tool to achieve other policy goals such as IP protection or content restrictions.
2. Launching a global internet public relations campaign/research and development consortium that would provide technical fellowships so individuals from developing countries could participate at ICANN, the IGF, and ITU.
3. Promoting international cooperation on cyber security and cyber warfare—perhaps beginning with a treaty defining key cyber war concepts;
4. Training policymakers to better understand technical issues involved in internet governance.
5. Funding IT development projects using multilateral banks.
6. Offering prizes for solving critical cyber security challenges.
7. Creating a liability regime that puts the burden on ISPs for securing their cyber resources.

8. Establishing a golden rule or forbearance norm by which countries refrain from regulating the internet in a way that they would not want to see other countries regulate it.

Taken together, these proposals form a framework or set of principles using which detailed aspects of Internet governance can be worked out in the future. It remains to be seen, which one of these models will prevail in the sphere of international Internet governance.

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