Cooperation among BRICS on ICT Development and Internet Governance for Network Stability and Sustainable Development

By GUO Feng (Mr.)

Consultant/Researcher of Internet Governance

China Academy of ICT

I. Overview of BRICS in ICT Development and Internet Governance

From the beginning of 21st century, Internet as the symbol of ICT development has become the global applicable infrastructure, which takes human society to the age of cyberspace and has been fostering innovation and prosperity.

Today over 3 million people[1] are connected to the Internet. In a few more years, it is expected that there will be approximately 5 billion. Even more impressive is in mobile internet, cloud computing, Big Data, Internet of Things (IoT) in the past few years. In 2014, the global cloud computing market volume reached up to 150 billion USD[2]. The momentum of development is speeding up. According to Cisco Visual Networking Index (VNI)[3], by 2018, there will be nearly four billion global Internet users (more than 51 percent of the world's population), up from 2.5 billion in 2013.By 2018, there will be 21 billion networked devices and connections globally, up from 12 billion in 2013.Globally, the average fixed broadband connection speed will increase

---

[1] Internet World Stats- http://www.internetworldstats.com/stats.htm 3,035,749,340 Internet users estimated for June 30, 2014

[2] Estimated from Gartner statistics

[3] Cisco Visual Networking Index (VNI)- www.cisco.com/web/solutions/sp/vni/vni_forecast_highlights/index.html

2.6-fold, from 16 Mbps in 2013 to 42 Mbps by 2018.Globally, IP video will represent 79 percent of all traffic by 2018, up from 66 percent in 2013.

In the past several years, BRICS had witnessed fast development in ICT sector. Statistics from ITU shows that the Internet penetration of most of BRICS comes to 45% or even higher in 2013. Mobile penetration in Brazil, Russia and South Africa go beyond 135% from year 2013, which indicate that every 100 inhabitants in these three countries possess 135 to 152 cellphones or mobile devices. The total mobile subscribers in China and India are more than 2 billion which almost count for 30% of the world population.

CHART 1.1 Percentage of Individuals using the Internet of BRICS, 2008-2013
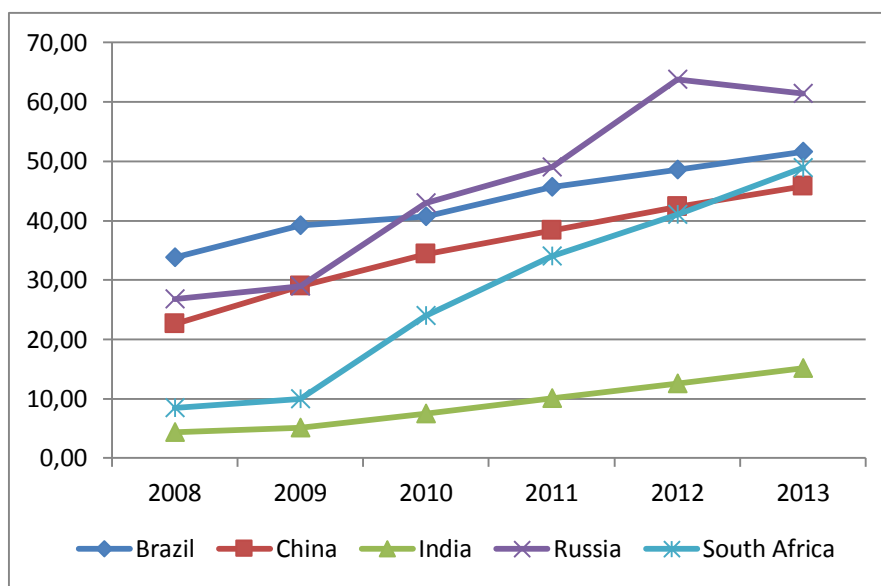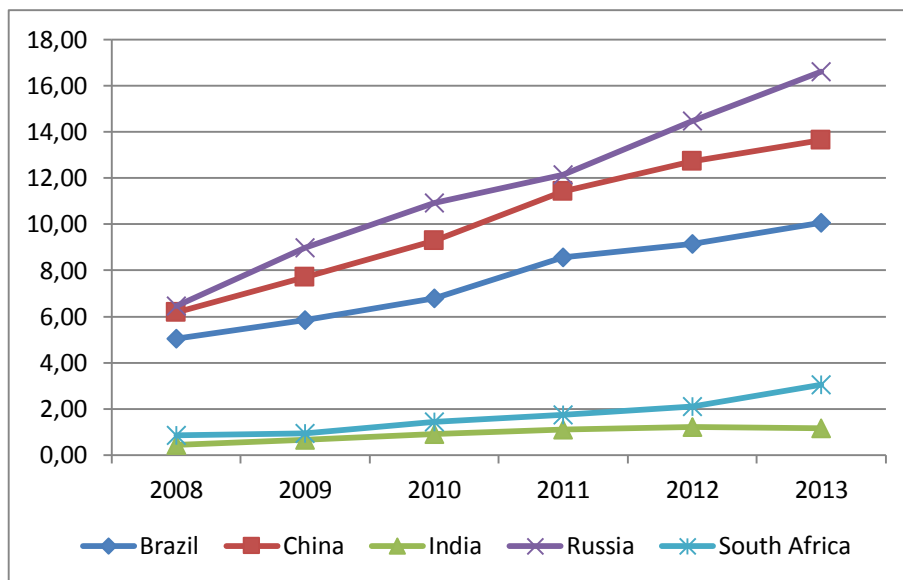
CHART 1.2 Mobile-cellular telephone subscriptions per 100 inhabitants of BRICS, 2008-2013
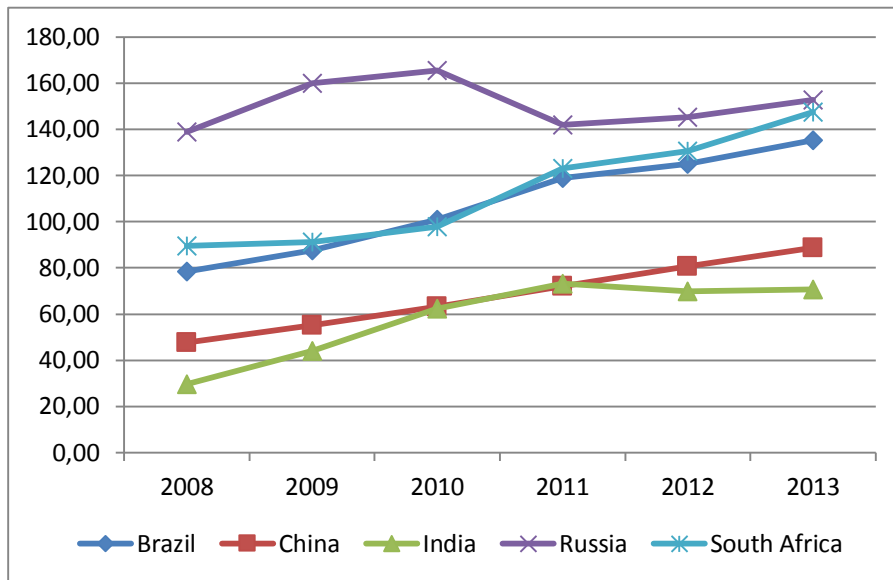
CHART 1.3 Fixed (wired)-broadband subscriptions per 100 inhabitants of BRICS, 2008-2013

Along with the rapid growth of Internet and ICT, BRICS emerging as ineligible forces in digital economy had been playing more important and active role in the arena of Internet Governance. BRICS were at World Summit on Information Society (WSIS) [4]in 2003 and 2005 and exert influences on the

---

[4] The World Summit on the Information Society (WSIS) is held in two phases. The first phase of WSIS took place in Geneva hosted by the Government of Switzerland from 10 to 12 December 2003. The second phase of WSIS took place in Tunis from 16 to 18 November 2005. The objective of the first phase was to develop and foster a clear statement of political will and take concrete steps to establish the foundations for an Information Society for all, reflecting all the different interests at stake. At the Geneva Phase of WSIS nearly 50 Heads of state/government and Vice-Presidents, 82 Ministers, and 26 Vice-Ministers and Heads of delegation as well as high-level representatives from international organizations, private sector,

outcome of the important topics discussed such as ICT for Development, stability and security of Internet, critical Internet resources, which were reflected in Geneva Declaration of Principles, Geneva Plan of Action, Tunis Commitment and Tunis Agenda for the Information Society. In 2007 and 2008, Brazil and India had hosted Internet Governance Forum respectively.

In 2013, The Internet Corporation for Assigned Names and Numbers (ICANN) chose Beijing and Durban to hold the 46th and 47th ICANN global meeting. Last year, Brazil organized Global Multistakeholder Meeting on the Future of Internet Governance known as NETmundial in April which attracts stakeholders from around the world. NETmundial Initiative (NMI) as the follow-up of NETmundial will be carried out as an important workstream in Internet Governance. The next November the 10th IGF[5] will be held at João Pessoa, Brazil. Representatives from Russia, China and South Africa had participated Accountability and Transparency Review[6] as the review team Members. Last but not least, all stakeholders from BRICS have been actively following and participating in the processes of IANA stewardship transition.

II. Key Issues Faced by BRICS on Global ICT and Internet Governance

---

and civil society provided political support to the WSIS Declaration of Principles and Plan of Action that were adopted on 12 December 2003. More than 11,000 participants from 175 countries attended the Summit and related events.

[5] IGF 2015 will be convened in João Pessoa, Brazil – 10 November 2015

[6] The Affirmation of Commitments (AoC) requires ICANN to conduct recurring reviews of ICANN's deliberations and operations "to ensure that the outcomes of its decision-making will reflect the public interest and be accountable to all stakeholders." Formed in March 2010, he Accountability and Transparency Review Team 1 (ATRT 1) conducted the review in 2010 and submitted its final recommendations on 31 December 2010. As mandated by the AoC, a second Accountability and Transparency Review Team (ATRT2) was convened in 2013, and hereby presents its report of Recommendations for ICANN on 31 December 2013.

Internet Governance is a hot topic today and has become the subjective for many global meetings and international forums in particular since the explosion of Edward Snowden leaking Prism project to the world. Internet Governance contains a wide range of issues because that Internet penetrates every aspect of human life. However, from the perspective of BRICS, several issues can be identified which are highly relevant for BRICS to make efforts to way in the Internet Governance at present.

i. IANA Stewardship Transition

The Internet Assigned Numbers Authority (IANA) is a traditional name used "to refer to the technical team making and publishing assignments of Internet protocol technical parameters." This technical team performs a set of tasks that involve the administration or coordination of many of the identifiers that allow the global Internet to operate. These tasks are currently performed by ICANN under a set of agreements[7]. As described in the current IANA Functions contract between ICANN and NTIA, the IANA Functions are:1) Domain Name System (DNS) Root Zone Management; 2) Internet Numbers Registry Management; 3) Protocol Parameter Registry Management, including management of the "Address and Routing Parameter Area" (.ARPA) TLD; and 4) Management of the "INTernational treaty organizations" (.INT) top-level domain.

---

[7] Including 1) a contract with the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce; 2) a Memorandum of Understanding (MoU) with the Internet Engineering Task Force (IETF); 3) an MoU with the Regional Internet Registries; 4) agreements with some root server operators; 5) contracts, MoUs, and other agreements with country code Top-Level Domain (ccTLD) administrators; and 6) a number of contracts with generic Top-Level Domain (gTLD) administrators.

On March 14, 2014, The U.S. Commerce Department's National Telecommunications and Information Administration (NTIA) announced its intent to transition key Internet domain name functions to the global multistakeholder community. NTIA was asking ICANN to convene global stakeholders to develop a proposal to transition the current role played by NTIA in the coordination of the Internet's domain name system (DNS)[8]. NTIA clearly stated in its announcement that it will not accept a proposal that replaces the NTIA role with a government-led or an inter-governmental organization solution.

To carrying out the task, ICANN had developed two parallel processes: 1. IANA Stewardship Transition[9], which focused on delivering a proposal to transition the stewardship of the IANA functions to the multistakeholder community. 2. Enhancing ICANN Accountability[10] which focused on ensuring that ICANN remains accountable in the absence of its historical contractual relationship with the U.S. Government. However, taking from the current development, the transition will not meet the previously-set target date[11]--30 September 2015.

CHART 2.1 Overview of the IANA Stewardship Transition and Enhancing ICANN Accountability Processes

---

[8] NTIA communicated to ICANN that the transition proposal must have broad community support and address the following four principles: 1) Support and enhance the multistakeholder model; 2)Maintain the security, stability, and resiliency of the Internet DNS; 3)Meet the needs and expectation of the global customers and partners of the IANA services; and, 4)Maintain the openness of the Internet.

[9] CWG stewardship - Cross Community Working Group on IANA Stewardship Transition

[10] CCWG-Accountability - Cross Community Working Group on Enhancing ICANN Accountability

[11] The current IANA functions contract expires September 30, 2015.
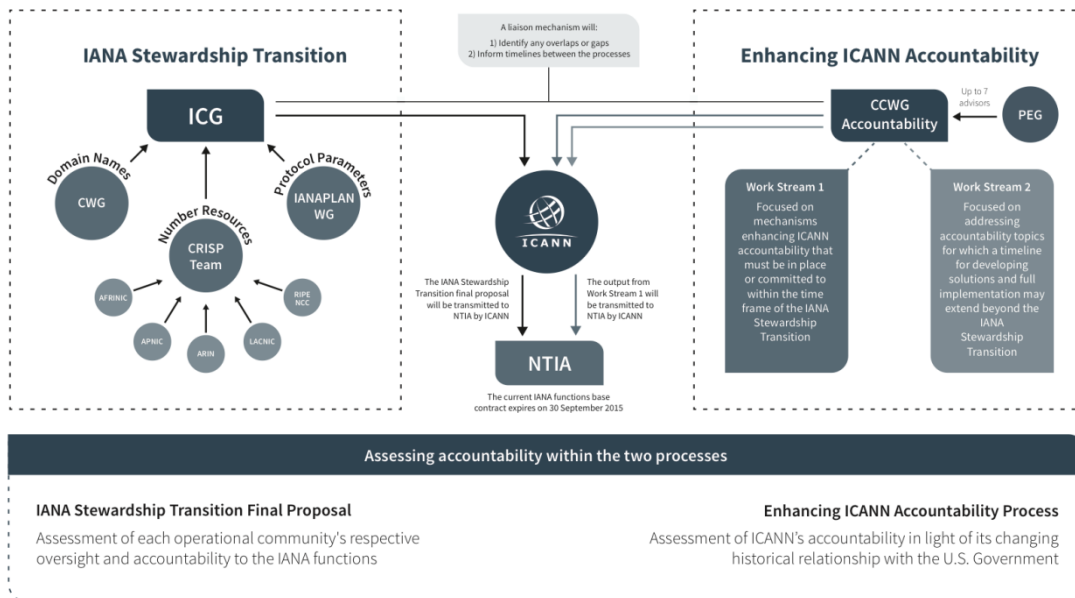
There are good reasons for people to speculate the linkage between Snowden Incident and the US government's announcement for IANA stewardship transition. The fact is that the US government's action did alleviate a lot of pressure against US government because of the exposed massive surveillance, even though US officials had never confirmed the linkage between the two matters. The core issue for IANA stewardship transition is the accountability framework designed which will replace NTIA as transparent governance structure. The nonsense in the processes questioned by some of governments including: 1) the oversight function for IANA was performed by one government, then why can not a group of governments or a government-led take the oversight function for IANA thereafter.[12] People even question more because of Federal Communication Commission's rolling out net neutrality rules. 2) The jurisdiction of IANA function (or ICANN) is a forbidden area for discussion. If one country holds IANA functions to its own jurisdiction, there

---

[12] Comment from Spanish government shared at GAC mailing list.

will be no ground to build the real accountability for all stakeholders around the world.

On May 4, Cross Community Working Group on Enhancing ICANN Accountability (CCWG-Accountability) issued a new version of accountability proposal[13] to solicit public comments for 30 days. The proposed enhancements to ICANN's accountability framework it has identified is regarded as essential to happen or be committed to before the IANA Stewardship Transition takes place. It is expected the concrete move for IANA transition will not take place until the end of this year.

ii. Governments' Role in Internet Governance (+WSIS review)

As the Internet was emerging from the technical community, technicians always had the inclination that they regarded Internet as Utopia and rejected nation states to get involved especially in early days. In the words of Dave Clark, an Internet founder:"We reject: kings, presidents, and voting. We believe in: rough consensus and running code." In their eyes, territorial government is often characterized (or caricatured) as "top-down." For them, difficult decisions were not imposed by fiat but rather emerged organically in a"bottom-up" fashion through discussion, argument, and consensus. In the early and "golden" age, The Internet Engineering Task Force (IETF) used this informal governance framework to promulgate standards that deepened, formalized, and ultimately popularized the basic internetwork design from the 1970s. Popular Internet

---

[13] https://www.icann.org/public-comments/ccwg-accountability-draft-proposal-2015-05-04-en

features like the modern e-mail system and the World Wide Web are the products of this era, along with countless other protocols whose operations are invisible to the average user.[14]

When Internet evolved to be the global critical infrastructure, nation states had to engage more in the related affairs. In 1997, Ira Magaziner, the "Internet Cesar" from the Clinton Administration stepped in firmly to lead the process to create ICANN, putting DNS system under the oversight of US Government. The trend that a wide range of nation states getting involved in Internet Governance started from WSIS. The most heated discussion was around "unilateral control of critical Internet resources by one country"[15], reflecting nation states seriously considering how to position their roles in the arena of Internet Governance. In addition, a number of articles in Tunis agenda explain the necessities for nation states to engage with public policy issues[16].   Article 69 of Tunis Agenda explicitly noted that "we further recognize the need for enhanced cooperation in the future, to enable governments, on an equal footing,

---

[14] JACK GOLDSMITH, TIM WU, Who Who Controls the Internet? Illusions of Borderless World, OXFORD UNIVERSITY PRESS, 2006

[15] The Working Group on Internet Governance (WGIG) was a United Nations multistakeholder Working group initiated after the 2003 World Summit on the Information Society (WSIS) first phase Summit in Geneva failed to agree on the future of Internet governance. The first phase of World Summit on the Information Society (WSIS) agreed to continue the dialogue on Internet Governance in the Declaration of Principles and Action Plan adopted on 12 December 2003, to prepare for a decision at the second phase of the WSIS in Tunis during November 2005. In this regard, the first phase of the Summit requested the United Nations Secretary-General to establish a Working Group on Internet Governance (WGIG). The main activity of the WGIG was "to investigate and make proposals for action, as appropriate, on the governance of Internet by 2005." The WGIG was asked to present the result of its work in a report "for consideration and appropriate action for the second phase of the WSIS in Tunis 2005."

[16] TUNIS AGENDA Ariticle 58. We recognize that Internet governance includes more than Internet naming and addressing. It also includes other significant public policy issues such as, inter alia, critical Internet resources, the security and safety of the Internet, and developmental aspects and issues pertaining to the use of the Internet. Ariticle 68. We recognize that all governments should have an equal role and responsibility for international Internet governance and for ensuring the stability, security and continuity of the Internet. We also recognize the need for development of public policy by governments in consultation with all stakeholders. Ariticle 69. We further recognize the need for enhanced cooperation in the future, to enable governments, on an equal footing, to carry out their roles and responsibilities, in international public policy issues pertaining to the Internet, but not in the day-to-day technical and operational matters, that do not impact on international public policy issues.

to carry out their roles and responsibilities, in international public policy issues pertaining to the Internet, but not in the day-to-day technical and operational matters, that do not impact on international public policy issues."

There are a number of occasions where the topic of the role of governments in Internet Governance attracted much attention.

The World Conference on International Telecommunications (WCIT-12) was held on 13-14 December. Some 89 Member States signed the updated treaty on 14 December, supporting expansion of ITU mandate to Internet and network security. Speaking at the closing ceremony, ITU Secretary-General, Dr Hamadoun I. Touré, commented: "A clear majority of Member States has already signed the new treaty – and these countries represent not just most of the world's people, but the great majority of the world's unconnected people. We understand that some Member States need to go to their capitals and constituencies before they can accede to the new ITRs."

CHART 2.2 Signatories of the Final Acts in WCIT 2012

WCIT 2012
World Conference on International Telecommunications — 3-14 December 2012 - Dubai, UAE

Signatories of the Final Acts: 89

AFGHANISTAN (signed)	ALBANIE	ALGÉRIE (signed)	ALLEMAGNE	ANDORRE	ANGOLA (signed)	ARABIE SAOUDITE (signed)	ARGENTINE (signed)	ARMÉNIE	AUSTRALIE
AUTRICHE	AZERBAÏDJAN (signed)	BAHREÏN (signed)	BANGLADESH (signed)	BARBADE (signed)	BÉLARUS	BELGIQUE	BELIZE (signed)	BÉNIN (signed)	BHOUTAN (signed)
BOTSWANA (signed)	BRÉSIL (signed)	BRUNÉI DARUSSALAM (signed)	BULGARIE	BURKINA FASO (signed)	BURUNDI (signed)	CAMBODGE (signed)	CANADA	CAP-VERT (signed)	RÉPUBLIQUE CENTRAFRICAINE (signed)
CHILI	CHINE (signed)	CHYPRE	COLOMBIE	COMORES (signed)	RÉPUBLIQUE DU CONGO (signed)	RÉPUBLIQUE DE CORÉE (signed)	COSTA RICA	CÔTE D'IVOIRE (signed)	CROATIE
CUBA (signed)	DANEMARK	DJIBOUTI (signed)	RÉPUBLIQUE DOMINICAINE (signed)	EGYPTE (signed)	EL SALVADOR (signed)	EMIRATS ARABES UNIS (signed)	ESPAGNE	ESTONIE	ETATS-UNIS
FÉDÉRATION DE RUSSIE (signed)	FINLANDE	FRANCE	GABON (signed)	GAMBIE	GÉORGIE	GHANA (signed)	GRÈCE	GUATEMALA (signed)	GUYANA (signed)
HAÏTI (signed)	HONGRIE	INDE	INDONÉSIE (signed)	RÉPUBLIQUE ISLAMIQUE D'IRAN (signed)	IRAQ (signed)	IRLANDE	ISRAËL	ITALIE	JAMAÏQUE (signed)
JAPON	JORDANIE (signed)	KAZAKHSTAN (signed)	KENYA	KOWEÏT (signed)	LESOTHO (signed)	LETTONIE	LIBAN (signed)	LIBÉRIA (signed)	LIBYE (signed)
LIECHTENSTEIN	LITUANIE	LUXEMBOURG	MALAISIE (signed)	MALAWI	MALI (signed)	MALTE	MAROC (signed)	ILES MARSHALL	MAURICE (signed)
MEXIQUE (signed)	MOLDOVA	MONGOLIE	MONTÉNÉGRO	MOZAMBIQUE (signed)	NAMIBIE (signed)	NEPAL	NIGER (signed)	NIGÉRIA (signed)	NORVÈGE
NOUVELLE-ZELANDE	OMAN (signed)	OUGANDA (signed)	OUZBÉKISTAN (signed)	PANAMA (signed)	PAPOUASIE-NOUVELLE-GUINÉE (signed)	PARAGUAY (signed)	PAYS-BAS	PÉROU	PHILIPPINES
POLOGNE	PORTUGAL	QATAR (signed)	KIRGHIZISTAN (signed)	SLOVAQUIE	RÉPUBLIQUE TCHÈQUE	ROYAUME-UNI	RWANDA (signed)	SAINTE-LUCIE (signed)	SÉNÉGAL (signed)
SERBIE	SIERRA LEONE (signed)	SINGAPOUR (signed)	SLOVÉNIE	SOMALIE (signed)	SOUDAN (signed)	SOUDAN DU SUD (signed)	SRI LANKA (signed)	RÉPUBLIQUE SUDAFRICAINE (signed)	SUÈDE
SUISSE	SWAZILAND (signed)	TANZANIE (signed)	THAÏLANDE (signed)	TOGO (signed)	TRINITÉ-ET-TOBAGO (signed)	TUNISIE (signed)	TURQUIE (signed)	UKRAINE (signed)	URUGUAY (signed)
VENEZUELA (signed)	VIET NAM (signed)	YÉMEN (signed)	ZIMBABWE (signed)						

Source: ITU

Working Group on Enhanced Cooperation (WGEC)[17] was established by General Assembly Resolution[18] within the Commission on Science and Technology for Development (CSTD) to examine the mandate of the World Summit on the Information Society regarding enhanced cooperation as contained in the Tunis Agenda, through seeking, compiling and reviewing inputs from all Member States and all other stakeholders, and to make recommendations on how to fully implement this mandate. Studies were conducted by WGEC to better facilitate governments to get involved with Internet-related public policy issues.

---

[17] http://unctad.org/en/Pages/CSTD/WGEC.aspx
[18] Para 20, GA Resolution A/RES/67/195

The World Telecommunication Policy Forum (WTPF)[19] in 2013 came to a close with robust debate among all stakeholders about the role of government in Internet governance. With International Internet-related Public Policy Matters as its theme, during the meeting, ITU member states and sector members, civil society organizations, and other key international stakeholders addressed topics such as capacity building, IP addressing, and Internet governance. Chinese delegation was reaffirming the role of governments in Internet Governance echoed by developing world and many European counties.

With Affirmation of Commitments (AoC) sighed between the U.S. Dept. of Commerce's and ICANN, periodic community review of four key objectives are required under the AoC: 1) ensuring accountability, transparency ("ATRT"), 2) preserving security, stability and resiliency of the DNS, 3) promoting competition, consumer trust and consumer choice, and 4) WHOIS policy. ATRT1 and ATRT2 were established to conduct review in 2010 and 2013. One of the missions for ATRT1 and ATRT2 was "assessing the role and effectiveness of the GAC and its interaction with the Board and making recommendations for improvement to ensure effective consideration by ICANN of GAC input on the public policy aspects of the technical coordination of the DNS". The general observation from many countries is that the government's role (or GAC's role[20]) was dwarfed in ICANN structure. GAC is only an advisory body without any decision making ability regarding domain names issue. Some of the

---

[19] The World Telecommunication Policy Forum (WTPF) was established by the 1994 ITU Plenipotentiary Conference as a new type of meeting to provide a less formal venue for discussion.
[20] Governmental Advisory Committee of ICANN

representatives from governments in ATRT1 and ATRT2 were dedicated themselves to promote and strengthen the role of governments along with the review processes.

The World Summit on the Information Society (WSIS) will celebrate its 10 year anniversary in 2015. UNGA High-level Meeting on Overall WSIS+10 Review will be held in New York, United States on 15 December 2015. The respective roles of government and other stakeholders in the review modality of WSIS+10 Review caused a lot of debates at the annual session of CSTD.

iii. Digital Divide

A digital divide is an economic and social inequality according to categories of persons in a given population in their access to, use of, or knowledge of ICT. The divide within countries (such as the digital divide in the United States) may refer to inequalities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories. The divide between differing countries or regions of the world is referred to as the global digital divide, examining this technological gap between developing and developed countries on an international scale.[21]

While the information society is growing worldwide, digital divides remain – and are even widening – in some segments[22]. In particular, there is a significant and persistent urban-rural digital divide, whereby urban citizens

---

[21] http://en.wikipedia.org/wiki/Digital_divide
[22] Measuring the Information Society Report 2014 by ITU

enjoy ubiquitous mobile network coverage, affordable high-speed Internet services and the higher levels of skills required to make effective use of online content and services, while the opposite is often the case in rural and remote areas of many developing countries.

Despite the encouraging progress, there are important digital divides that need to be addressed: 4.3 billion people are still not online, and 90 per cent of them live in the developing world. Fixed broadband penetration stands at 6 per cent in developing countries, compared with 27.5 per cent in developed countries, and growth rates are slowing. Mobile broadband is growing fast, but the difference between developed and developing regions remains large, with 84 per cent penetration in the former as against 21 per cent in the latter. Increasing ICT uptake in the world's least connected countries (LCCs), which are home to some 2.5 billion people, should therefore be the policy focus for the years to come. In these countries, the share of population living in rural areas is often high, reinforcing the urban-rural digital divide.

Closer examination and disaggregation of the data reveal, however, that digital divides still exist and that some people are still excluded from access to communication networks. There are populations living in rural areas that are not covered by a mobile-cellular signal (Table 2.1). Even though rural population coverage is very high, at 87 per cent globally, at end 2012 around 450 million people worldwide still lived out of reach of a mobile signal.

CHART 2.3 Mobile-cellular subscriptions by level of development, 2005-2014 (left) and by region, 2014* (right)
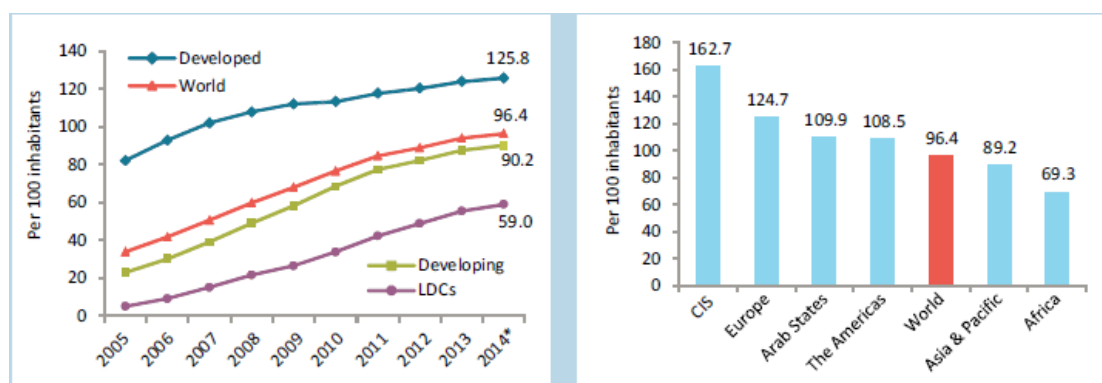
TABLE 2.1 Rural population covered by a mobile-cellular signal, 2012

|	Overall mobile-cellular population coverage (%)	Rural population covered (%)	Rural population covered (millions)	Rural population not covered (millions)
Africa	88	79	498	129
Americas	99	96	171	9
Asia	92	87	2 017	309
Europe	99	98	196	3
Oceania	96	81	0.9	0.2
World	93	87	2'883	450

The divide between developed and developing countries remains huge: mobile broadband penetration will reach 84 per cent in the former compared with 21 per cent in the latter. The high penetration in developed countries is partly due to very high uptake in populous countries such as the United States and Japan, where penetration rates reached 93 per cent and 120 per cent, respectively, at end 2013.

CHART 2.4 Fixed (wired)-broadband subscriptions by level of development, 2005-2014 (left) and by region, 2014* (right)
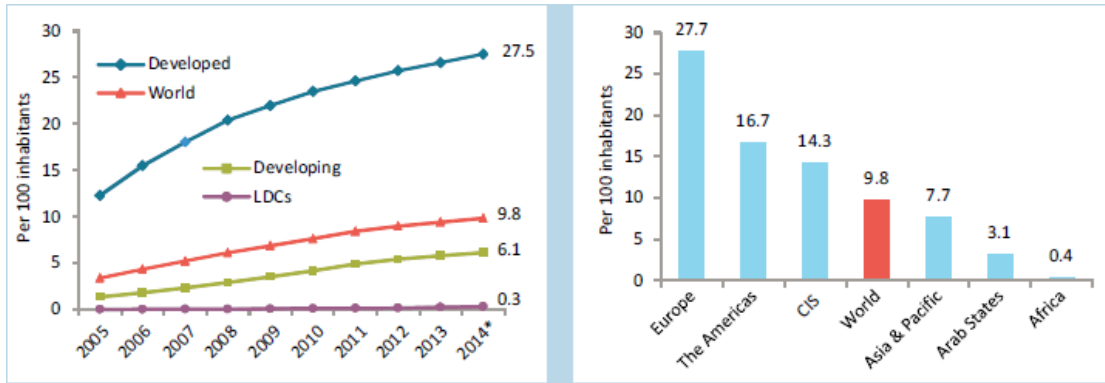
CHART 2.5 Active mobile-broadband subscriptions by level of development, 2007-2014 (left) and by region, 2014* (right)
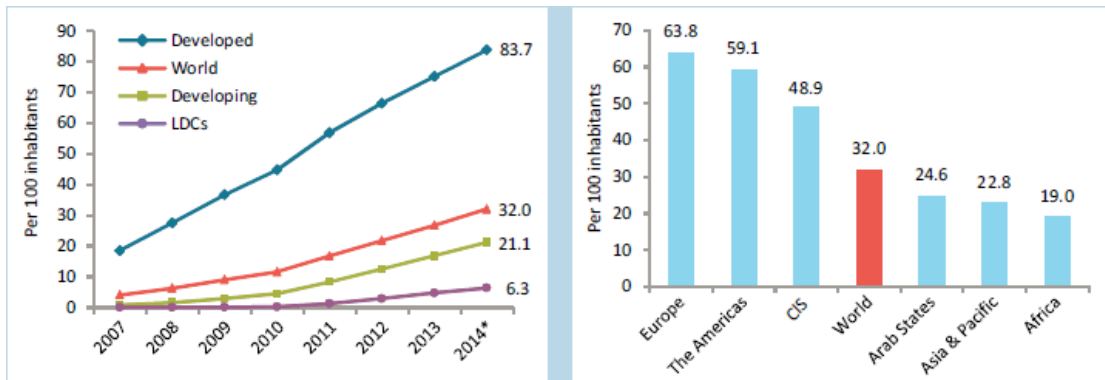
Nevertheless, Internet usage is growing steadily, at 6.6 per cent in 2014 – 3.3 per cent in developed countries and 8.7 per cent in developing countries. Indeed, in developing countries, the number of Internet users will have doubled in five years (2009-2014), and two-thirds of today's Internet users live in the developing world. Growth rates are highest in LDCs (13 per cent in 2014), but they are starting from lowvalues: by end 2014, only an estimated 8 per cent of the population in LDCs will be online.

CHART 2.6 Individuals using the Internet, by level of development, 2005-2014 (left) and by region, 2014* (right)
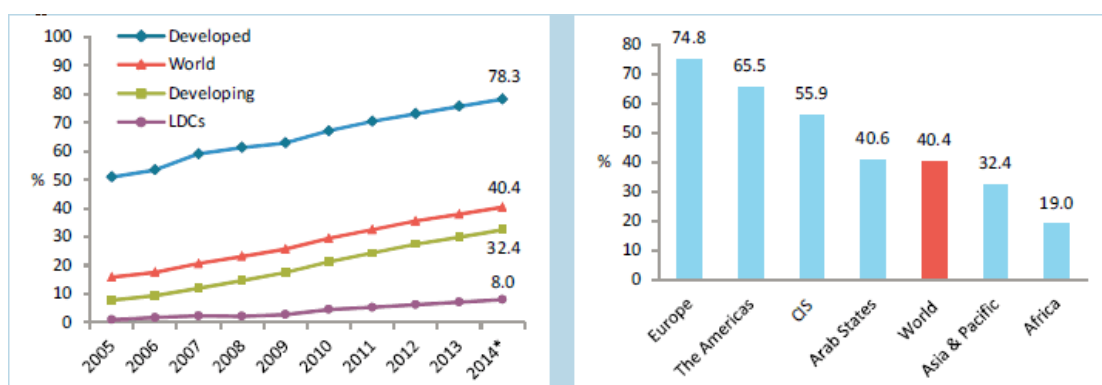
A more nuanced analysis carried out to identify digital divides. Table 2.2 shows that, for example, domain-name registrations are still dominated by content providers in developed countries, which account for over 80 per cent in 2013. Domain-name registrations from Africa account for less than 1 per cent. The data include both global top-level domain (gTLD) and country code top-level domain (ccTLD) registrations, and there are comparability issues related to registries across countries.

TABLE 2.2 Total Internet domain registrations by world region, 2003, 2008 and 2013

	2003		2008		2013	
	Millions	%	Millions	%	Millions	%
World	59.7	100.0	173.4	100.0	245.2	100.0
Developed	49.6	82.9	135.9	78.4	197.4	80.5
Developing	7.1	11.8	34.7	20.0	45.0	18.4
Other/Unknown	3.1	5.2	2.8	1.6	2.7	1.1
Africa	0.3	0.5	1.0	0.6	2.3	0.9
Americas	23.9	40.1	71.8	41.4	98.9	40.4
Asia	5.3	8.9	29.8	17.2	36.9	15.0
Europe	25.8	43.3	63.7	36.8	98.0	40.0
Oceania	1.2	2.1	4.2	2.4	6.4	2.6

iv. Network surveillance[23]

In the wake of recent disclosures about cyber espionage, the discussion surrounding online surveillance continues to capture global headlines. New technological developments over the past decade allow governments and other organizations to collect, store and analyze information relatively cheaply and efficiently. With the integration of the Internet into our daily lives, this technology can assemble a picture of an individual's entire personal and professional life with a few computer commands.

Intelligence gathering is an established government function, but like many things, online surveillance has created a grey area in the rules of the game. The United States has claimed that it uses online surveillance methods to protect its citizens against terrorism, improving state security. US Secretary of State John Kerry [24] stated that no "innocent people" were being abused and that surveillance by several countries had prevented many terrorist plots (The Guardian 2013). Whether or not these statements are true, the online factor has complicated our traditional notions and methods of surveillance and understanding of what constitutes acceptable levels of surveillance in the international realm.

In response, Brazil and Germany have spearheaded efforts at the United Nations to protect the privacy of electronic communications. In the fall of 2013, they drafted a "Resolution on The Right to Privacy in the Digital Age,"

---

[23] Much of this part were drawn from CIGI report - Finding Common Ground: Challenges and Opportunities in Internet Governance and Internet-related Policy

[24] The Guardian. 2013. "US Surveillance Has Gone too Far, John Kerry Admits." The Guardian, November 1. www.theguardian.com/world/2013/oct/31/john-kerry-somesurveillance-gone-too-far.

emphasizing that "unlawful or arbitrary surveillance and/or interception of communications, as well as unlawful or arbitrary collection of personal data" are "highly intrusive acts" that "violate the rights to privacy and freedom of expression and may contradict the tenets of a democratic society" (UNGA 2013a). And in 2014 Brazil hosted the NETmundial meeting to elaborate principles of Internet governance and propose a roadmap for the future development of the ecosystem (NETMundial 2014).

Revelations about US surveillance strategies have also been felt by the private sector, as some leaked documents revealed that the agency had intercepted data transmitted on the cables that link the worldwide data centers belonging to Google and Yahoo (see Gellman and Soltani 2013)[25]. In an open letter to the United States, Google and Yahoo, along with several other technology giants, raised their concerns regarding US national law and data transparency (see Reform Government Surveillance 2013). Overall, the revelations have been toxic for the legitimacy of Internet governance and diplomatic processes, as they have shed light on a number of serious privacy and transparency issues.

The technical Internet community's reaction against Snowden Incident was the Montevideo Statement[26] on the Future of Internet Cooperation. ICANN, IETF, ISOC, W3C, RIRs med in Uruguay, 7 October 2013 and produced the

---

[25] Gellman, B. and A. Soltani. 2013. "NSA Infiltrates Links to Yahoo, Google Data Centers Worldwide, Snowden Documents Say." The Washington Post, October 30.
www.washingtonpost.com/world/national-security/nsa-infiltrates-links-toyahoo-google-data-centers-worldwidesnowden-documents-say/2013/10/30/e51d661e-4166-11e3-8b74-d89d714ca4dd_story.html
[26] http://www.internetsociety.org/news/montevideo-statement-future-internet-cooperation

Statement "reinforced the importance of globally coherent Internet operations, and warned against Internet fragmentation at a national level. They expressed strong concern over the undermining of the trust and confidence of Internet users globally due to recent revelations of pervasive monitoring and surveillance."

III. Suggestions for BRICS Cooperation on ICT development and Internet Governance

As the typical emerging powers around the globe, there is much room for BRICS to strengthen collaboration on ICT development and Internet Governance. The pragmatic need for this is that the prosperity, stability and security and Internet is and will be tremendously impact social and economic development for BRICS and the rest of the world. We must not neglect the fact that cyberspace is the space for Information society and is different with traditional territories which demand efforts made together to tackle the challenges.

i. Building consensus within BRICS in regard to ICT development and Internet Governance

BRICS need to enhance the dialogue and build consensus on a series issues pertaining to ICT development and Internet Governance. This kind of work is important that the European Commission and OECD had made efforts to set up their own checkpoints for Internet Governance. The OECD Recommendation

on Internet Policy Making Principles[27] was adopted amid concerns that the openness of the Internet—which has stimulated innovation, delivered economic and societal benefits, and given voice to democratic aspirations—was at risk. On 12 February, 2014, the European Commission adopted a Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: "Internet Policy and Governance - Europe's role in shaping the future of Internet governance"(COM(2014) 72/4). The European Commission released "Internet Policy and Governance in plain language"[28] in May 2014. Those "info-fiches" provide factual information and background explanation on 11 key aspects covered by the Communication on "Internet Policy and Governance".

It is recommended that BRICS take efforts to build consensus and establish a set of principles on ICT development and Internet Governance which will help reach common understanding within BRIC on important issues and amplify the voice of BRICS internationally.

ii. Enhancing coordination among BRICS on specific international matters related to ICT development and Internet Governance

BRICS ought to enhance coordination on specific international matters related to ICT development and Internet Governance. ICT development and Internet Governance can ben put as the regular topic for BRICS meetings at all levels. For example seminars can be organized on IANA Stewardship Transition

---

[27] The OECD Recommendation on Internet Policy Making Principles was released on 13 December 2011. http://www.oecd.org/internet/ieconomy/49258588.pdf

[28] https://ec.europa.eu/digital-agenda/en/news/internet-policy-and-governance-plain-language

and ICANN Accountability for BRICS government officials, private sector stakeholders and academicians to exchange views and orchestra measures and actions to influence those important working processes. In addition, exchange of views and positions conducts regularly before some of large and important international conference such as WSIS+10 Review, ITU Plenipotentiary Conference, and Internet Governance Forum etc. it is also recommended that BRICS encourage its representatives and stakeholders to promote exchange of information and coordination at different international occasions e.g. ICANN and the Governmental Advisor Committee, ITU, as well as ICT standards organizations. Current, Stakeholders play a more significant role on the platform of Internet governance in information age. What's more important is encourage stakeholders within BRICS to carry out concrete cooperation on matters related to ICT development and Internet Governance.

iii. Accelerating ICT Development for BRICS with a set of measures and tools

Besides the rapid growth in ICT and Internet, the digital divide still exists because of vast land and unbalanced development in BRICS countries. It is a crucial task for BRICS to face and take action against the digital divide. Sharing of experience and best practice of domestic management of Internet and ICT innovation is essential for BRICS learning from each other. The good governance is the basis for Sci-tech improvement. For example it is welcomed Brazil to showcase its governance model with Brazilian Internet Steering

Committee (CGI.br)[29]. BRICS can also be the platform for Internet and IT enterprises in each BRICS country to come together to share experience on universal services as well as frontier technology and services. The development of mobile internet can be the effective way chosen to serve under developed areas while fixed infrastructure is not able to be ready overnight.

With the establishment of New Development Bank (BRICS), it is highly recommended that the financial tools will be used as efficient as possible to bridge the digital divide. It is suggested that BRICS experts work together to come up with and identify a couple of real cost-effective ICT project where investment from New Development Bank will beneficiary to people in rural area.

iv. Maintaining and safeguarding the stability and security of cyberspace

Network security is the tough challenge faced by all governments and stakeholders around the world in the information age. The robust national security, good protection of privacy and secured financial transaction rely on a stable and secure Internet and ICT facilities. President Xi Jinping stressed that the development of Internet technology should neither infringe the information sovereignty of other nation states nor put other countries' security at stake to seek the absolute security for one country itself. We cannot afford double standards on Internet. Every nation state has its right to defend its own network and information security. It is hoped that this concept is shared by BRICS

---

[29] Brazilian Internet Steering Committee (CGI.br) is considered as one of the best practices for domestic Internet Governance. http://cgi.br/about/

representatives.

It is recommended that BRICS to develop coordinated measure and actions to answer network security threat. The cooperation of CERTs of BRICS could be enhanced to a new level on tackling cyber-attacks, spam, and phishing etc. It is proposed that cooperation studies on security technology be conducted among BRICS to follow up the fast evolution of Internet. Best practice and experience on security defense is able to be shared.

IV.Conclusion

In Conclusion, along with the rapid growth of Internet and ICT, BRICS emerging as ineligible forces in digital economy had been playing more important and active role in the arena of Internet Governance. BRICS are facing some of the same key issues and challenges in the area of ICT development and Internet Governance. The prosperity, stability and security and Internet are and will be tremendously impact social and economic development for BRICS. BRICS need enhance cooperation to answer the challenges for the network stability, secure cyberspace and sustainable development

10 May 2015