



## **‘Policy Options for Connecting the Next Billion’**

**Draft v1.1 produced for discussion as of 7 September**

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- a. Costs of access per capita**

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- a. Government, Regulatory Authorities and IGO Frameworks (Laws and Regulations)**
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#### **3. Summary of Contributions received as of 7 September**

## 1. Introduction

### **Online List of Contributions:**

<http://www.intgovforum.org/cms/policy-options-for-connection-the-next-billion/list-of-contributions>

### **Broader Context**

Technological advancement in connectivity has expanded broadband access and mobile penetration in recent years. More than three billion people<sup>1</sup> will be connected to the Internet by the end of 2015; however, more than 4 billion remain unconnected. In spite of the progress achieved, more effort is necessary in order to connect the next billion and to address the digital divide.

This bottom-up and community led process, which strives to help identify both obstacles and solutions and strategies to improve connectivity is timely due to the ongoing process of reviewing the outcomes of the World Summit on the Information Society (WSIS+10)<sup>2</sup> and the discussion of the United Nations post-2015 Sustainable Development Goals (SDGs)<sup>3</sup>. Collaboration between governmental and non-governmental actors is key to meet this challenge and the multistakeholder nature of the IGF makes it an ideal space for this ongoing discussion.

<http://www.ohchr.org/EN/Issues/FreedomOpinion/Pages/Annual.aspx>

Internet has been identified as a key enabler of development by helping foster positive results in education, healthcare, agriculture, employment, commerce and many other areas. The Sustainable Development Goals (SDGs) are aimed at guiding policy in achieving dignity, wellbeing, and equality for all the world's people - especially the poor and underserved<sup>4</sup>. A report from the Human Rights Council of the United Nations General Assembly also declares access to the Internet a basic human right which enables individuals to "exercise their right to freedom of opinion and expression<sup>5</sup>."

Internet connectivity/access allows people to take part in the digital economy, stimulates economic impact, and enables the transition to knowledge-based economies. It lowers barriers to market, driving new ideas and innovation, and stimulating demand for data and devices. By enabling individuals to exchange information and ideas instantaneously and inexpensively across national borders, the Internet allows access to information and knowledge that was previously unattainable and helps users make informed decisions. Access to information contributes to the discovery of the truth and progress of society as a whole.<sup>6</sup>

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<sup>1</sup> <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2015.pdf>

<sup>2</sup> <http://unpan3.un.org/ws10/>

<sup>3</sup> <https://sustainabledevelopment.un.org/focussdgs.html>

<sup>4</sup> [The Internet and Sustainable Development](#)

<sup>5</sup> [http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27\\_en.pdf](http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf)

<sup>6</sup> Concept note of IGF 2015 Main Session on Internet Economy and Sustainable Development

## Overview

A [report](#) produced by the UN General Assembly Economic and Social Council (ECOSOC) Working Group on Improvements to the IGF called for the development of more tangible outputs to ‘enhance the impact of the IGF on global Internet governance and policy’. The report also encourages better communication and interactions between national and regional IGF initiatives and the IGF, and to promote and enhance linkages with national and regional IGF initiatives. To enrich the potential for IGF outputs and to promote and enhance linkages between National and Regional IGF initiatives and the IGF, the IGF Multistakeholder Advisory Group (MAG) has developed an intersessional programme for 2015 to complement other ongoing IGF activities, such as [national and regional IGF initiatives](#), [dynamic coalitions](#), and [best practice forums](#) (BPFs).

The outputs from this intersessional programme will become robust resources, to serve as inputs into other pertinent forums, and to evolve and grow over time. The theme “**Policy Options for Connecting the Next Billion**” was chosen for the 2015 intersessional work after an extensive public consultation with the global IGF community.

To compile “Policy options for Connecting the Next Billion”, rounds of online public consultation are currently being conducted. Following the example of the IGF [best practice forums](#), an open and bottom-up process aimed at gathering as many diverse views and opinions from the community forms the foundation of this exercise.

Draft compilation outputs are being produced and further discussed, both online and during the IGF 2015 (10-13 November, João Pessoa, Brazil). The output will also be shared with relevant fora (e.g. WSIS+10, UNCTAD, UNESCO, etc.), and the goal is for it to provide a resource for anyone looking for ways to increase connectivity – one of the main goals of the WSIS.

The IGF provides a unique platform for this collaborative work which aims to collect the views of the broader Internet governance community on the topic of access. The IGF strives in all of its work to provide a neutral and open platform which ensures that all interested parties in the multi-stakeholder IG community can contribute in a bottom-up fashion. Increasing Internet access is a shared goal which drives at the core of Internet governance, and many policy issues contribute to the enabling environment for improved access. Section 72 of the Tunis Agenda<sup>7</sup>, where the IGF derives its mandate, also asks the IGF to embark on this type of bottom-up, community driven work.

## Defining the Issue:

The IGF community has contributed a broad range of inputs to the call for contributions for this initiative. In addition to individual stakeholders who filled out an online form/questionnaire<sup>8</sup>, a number of related background papers were submitted that are closely related to the broad topic

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<sup>7</sup> <http://www.itu.int/wsIs/docs2/tunis/off/6rev1.html>

<sup>8</sup> The following questions made up the online survey for this call for inputs: How would you define the issue “Connecting the Next Billion”? Have you observed any regional or national specificities regarding connectivity (e.g. Internet industry development)? Do you know of existing policy measures, and private sector or civil society initiatives addressing connectivity? If yes, was the policy a government policy, industry policy (either collective best practice or corporate policy), technical policy, or did it pertain to civil society collaboration? Describe them. In your opinion, what worked well in the development of the policy, and what impediments were encountered? What was the experience with implementation? Did you experience any unintended consequences of policy developments/interventions, good and bad? Can you think of unresolved issues where further multistakeholder cooperation is needed? Did you gain any insight as a result of the experience? List proposed steps for further multistakeholder dialogue/actions.

of access and connectivity, particularly for the next billion global citizens who currently do not have Internet access for a variety of reasons. A number of contributions were also received from National and Regional IGF initiatives<sup>9</sup> who decided to discuss the topic of “Connecting the Next Billion” within their respective IG forums at the National and Regional levels.

One thing that is clear based upon the submissions received from the community is that the broad issue of “Connecting the Next Billion” can and does mean very different things to different stakeholders. While some inputs received concentrated on suggesting concrete ‘policy options’, others focused on describing the main obstacles, from their own unique perspectives, to achieving connectivity for the next billion users, as identifying and addressing the problems they have in achieving increased and/or improved Internet access and connectivity is to them the most crucial issue at hand.

For example, to many in the developing world, “Access is understood not only as a measurement of physical access to the Internet, but also – from a rights-oriented perspective – as the capability to retrieve, produce and distribute information (text, visual, audio and video) over the Internet. The extent to which such capability can be attained and exercised is determined by the interaction between national and international regulatory frameworks, which establish the rights and obligations of those involved in such communications, including nation states, carriers and other stakeholders.”<sup>10</sup>

A snapshot of how the issue of “Connecting the Next Billion” was defined by different stakeholders (quoted directly below via the online questionnaire<sup>11</sup>) reflects the diversity of opinions and views of the global multistakeholder IGF community:

***How would you define the issue “Connecting the Next Billion”? Some of the respondents<sup>12</sup> to the call for inputs defined the issue as:***

*“I would define the issue as comprising the very difficult work of providing reliable, affordable and relevant connectivity to unconnected and under-connected global citizens. “*

*“It is the possibility of allowing people in rural and remote areas of the country/countries to take advantage of the Internet for better, faster and efficient private and public services.”*

*“Bringing the next 1 Billion of the world's citizen's into the Internet Age to enable them to get access to knowledge and improve their economic circumstances through safe e-commerce.”*

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<sup>9</sup>

<http://www.intgovforum.org/cms/home-36966/77-igf-regional-events/igf-regional-and-national/2160-list-of-national-and-regional-igf-initiatives-2015>

<sup>10</sup>

[http://www.researchictafrica.net/publications/Evidence\\_for\\_ICT\\_Policy\\_Action/Discussion\\_paper\\_-\\_Mapping\\_Multistakeholderism\\_in\\_Internet\\_Governance\\_-\\_Implications\\_for\\_Africa.pdf](http://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Discussion_paper_-_Mapping_Multistakeholderism_in_Internet_Governance_-_Implications_for_Africa.pdf)

<sup>11</sup> <http://www.intgovforum.org/cms/policy-options-for-connection-the-next-billion/list-of-contributions>

<sup>12</sup> <http://www.intgovforum.org/cms/policy-options-for-connection-the-next-billion/list-of-contributions>

*“Connecting the Next Billion means the steps/efforts that need to be undertaken to ensure that everyone, especially those from developing countries. This means putting in place the right infrastructure, adopting the right regulations.”*

*“Connecting the Next Billion to me is a clarion call to motivate stakeholders to provide Internet access to more people of the World with a focus on the next billion. That call for action requires procedure, best practice. And hence it encompasses protocols, standards, services, security, policies, laws on the Internet. It would be necessary that the next billion connected use the Internet better.”*

*“It is defined as a network connection networks of knowledge, challenge to build a new model of Educational System: productive and human society to achieve a smart, road to equal opportunities.”*

## **2. Policy Issues and Options related to Connecting the Next Billion**

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### 3. Summary of Contributions Received as of 7 September 2015

| Name                                         | Summary of Submissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mr. Said Zazal,<br>Government of Afghanistan | Mr. Zazal, an IT adviser with the Government of Afghanistan, emphasizes access and use of the Internet as a public service by populations in rural areas. He references his own country, Afghanistan, to discuss lagging 3G connectivity and Internet services which remain unaffordable and out of reach to many.<br><b>Keywords:</b> 3G services, Internet services, Afghanistan, policy measures<br><a href="#">Contribution by Mr. Said Zazal, IT Advisor at the Government of Afghanistan.</a><br>2015. |

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| <p>Ms. Silvia Rosa Way Naupay, <a href="http://www.saberperu.org">www.saberperu.org</a></p> | <p>Ms. Silvia Way Naupay has shared her <a href="#">expert opinion</a> on the current conditions in Peru and Latin America in general, as well as ideas for policy options for higher connectivity. Defining connectivity along with the terms knowledge, education, productive, human society and equal opportunities, she shares her concerns for not having developed policies in Latin America for this issue. The lack of political will and monopoly within the operator market are primary factors for it, as she claims. She also points to the lack of IT experts and multistakeholder dialogues as obstacles..</p> <p><b>Key words:</b> policy options, connectivity, government, private companies, dialogue</p> <p><a href="#">Contribution by Ms. Silvia Rosa Way Naupay</a>. SaberPeru Organization. 2015.</p>                                                                                         |
| <p>Mr. Dhanaraj Thakur, Alliance for Affordable Internet (A4AI)</p>                         | <p>On behalf of the Alliance for Affordable Internet, Mr. Thakur submitted a <a href="#">report</a> with substantive analysis of Internet access affordability. The publication analyzes some current policies and regulations in order to understand why some countries have succeeded in making Internet access more affordable, accessible and universal, and what others can do to catch up quickly. The report assesses the policy and regulatory environments in 51 countries, and analyses the effectiveness of government programs in addressing the divides and barriers that prevent affordable access to the Internet.</p> <p><b>Key words:</b></p> <p><a href="#">Affordability Report</a>, Alliance for Affordable Internet. 2014</p>                                                                                                                                                                   |
| <p>Mr. Dhanaraj Thakur, Web Foundation</p>                                                  | <p>On behalf of the Web Foundation, Mr. Thakur submitted a <a href="#">paper</a> on broadband development initiatives. The paper seeks to clarify some of the key questions surrounding the appropriate role that Universal Service and Access Funds play, and how the capacity-building and collaborative support these funds need can be achieved.</p> <p><b>Key words:</b></p> <p><a href="#">Universal access and service funds in the broadband era: the collective investment imperative</a>. May, 2015</p>                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Ms. Despoina Sareidaki, The Broadband Commission for Digital Development</p>             | <p>The Broadband Commission for Digital Development contributed two submissions. The <a href="#">first</a> aims at raising awareness of the importance of broadband networks. Special focus is placed on integrating ICT skills into education and integrating everyone into the digital world, along with a set of recommendations for future practices.</p> <p><b>Key words:</b> broadband, internet, access, ICT, education, digital world</p> <p><a href="#">The State of Broadband 2014: Broadband for all</a>. September, 2014</p> <p>The second <a href="#">submission</a> is a Resolution document issued by the Plenipotentiary Conference of the International Telecommunication Union (ITU). The document itself normatively supports the importance of telecommunications and obliges to give further active support to the developments in increasing global connectivity.</p> <p><b>Key words:</b></p> |



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|                                                                                     | <p><a href="#"><i>Resolution 200 (Busan. 2014) Connect 2020 Agenda for global telecommunication/information and communication technology development.</i></a><br/>ITU.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Mr. Marcelo Saldanha,<br/><a href="#"><i>Movimento de Espectro Livre</i></a></p> | <p>The submission from Mr. Saldanha asserts that to improve connectivity, the pressure and influence of the International market is necessary. The paper asserts that countries need to increase access for all citizens using smart technologies. Otherwise, creating smart cities and e-government initiatives for instance, without any infrastructure that will be focused on public interest, will be pointless. The author discusses the social and infrastructural dimension of connectivity.</p> <p><b>Key words:</b> connectivity, Brazil, government, infrastructure, broadband</p> <p><a href="#"><i>Contribution of Mr. Saldanha. Movimento de Espectro Livre.</i></a> 2015</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Mr. Patrick Ryan</p>                                                             | <p>I</p> <p>Along with five other researchers, Mr. Rayan submitted an <a href="#"><i>academic-research paper</i></a> problematizing the issue of ISP monopolies in particular countries where consumers do not have any practical alternatives for high-speed broadband connections. The authors use a case study of Indonesia to illustrate this and give an overview of their observations on the marketplace on the topic. It also gives a brief overview on representative cases from Latin America, Europe and USA in order to draw attention to the process of the liberation of global telecom markets that has been a 'long slog'. The paper concludes with five specific recommendations for ways in which business, regulators, and consumers can work to improve local competition on a global scale.</p> <p><b>Key words:</b> broadband; multiple-dwelling unit; competition; consumer protection</p> <p><a href="#"><i>The Problem of Exclusive Arrangements in Multiple Dwelling Units: Unlocking Broadband Growth in Indonesia and the Global South.</i></a> Patrick S. Ryan, Breanna Zwart, Richard Whitt, Marc Goldberg and Vinton G. Cerf. 2015.</p> <p>II</p> <p>The <a href="#"><i>article</i></a> problematizes broadband deployment framework, describing how "the next five billion" may be connected to the Internet in the future. This framework identifies the most promising Internet technologies and the areas where they should be deployed. Wireless platforms are considered to be used in rural markets and other areas that will benefit greatly from a high degree of shared infrastructure, particularly with an electrical powering solution. Over time, fiber-based networks will gradually fill across the network, migrating from the core to the edge. The policy options for facilitating the prompt and efficient deployment of broadband infrastructure are also presented.</p> <p><b>Key words:</b> broadband, internet technologies, wireless,market, policies</p> <p><a href="#"><i>Technologies And Policies To Connect The Next Five Billion.</i></a> David Reed, Jennifer Haroon &amp; Patrick S. Ryan. 2014. Pages: 48</p> |

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| <p>Mr. Shreedeeep Rayamjhi</p>                                                       | <p>Mr. Shreedeeep submitted his <a href="#">opinion</a> on some connectivity issues with regards to the monopoly of giant telecoms which ‘manipulate the price and scale of Internet access’. He uses specific countries in the Asia Pacific region to illustrate this. The opinion is in line with the argument that in developing countries the problem with policy implementations is very much connected with lack of monitoring and awareness.</p> <p><b>Key words:</b> awareness, monopoly, access, developing countries, policy options<br/> <a href="#">Contribution by Mr. Shreedeeep Rayamjhi</a>. 2015.</p>                                                                                                                                                                                                                                                                                                                                           |
| <p>Ms. Lilliana Nalwoga</p>                                                          | <p>Ms. Nalwoga submitted her <a href="#">opinion</a> referring to the efforts that need to be taken in order to ensure that everyone has access, especially citizens from developing countries. She refers to rapid growth in Africa in terms of Internet users, but also asserts that more dialogue and awareness on these issues is very much needed.</p> <p><b>Keywords:</b> developing countries, Africa, access, growth, policy options, dialogue<br/> <a href="#">Contribution by Ms. Lilliana Nalwoga. ICT4D</a>. 2015.</p>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Mr. Mpho Moyo, Universal Access Fund and ICT Infrastructure Investment Africa</p> | <p>On behalf of Universal Access Fund and ICT Infrastructure Investment Africa, a group of researchers submitted a <a href="#">research paper</a> that focuses on the problem of unequal investments in ICT infrastructure between urban and rural areas. Even though most people live in rural areas, in many parts of Sub-Saharan African countries, the investments on behalf of Universal Access Funds are mainly directed into urban and semi urban areas, as they are more economically profitable. Investment into rural areas, which have traditionally been perceived as uneconomic, has been limited by the high cost of rolling out networks and services.</p> <p><b>Keywords:</b> Access, infrastructure, regulation<br/> <a href="#">Is the Universal Access Fund in Africa creating an enabling environment for ICT infrastructure investment in rural and perceived uneconomic areas?</a> Enrico Calandro and Mpho Moyo- ICT Africa. Pages 31</p> |
| <p>Ms. Dominique Lazanski, GSMA</p>                                                  | <p>On behalf of GSMA, Mr. Lazanski submitted a <a href="#">report</a> on the rapid growth of the mobile industry. Along with the proposition for future investments in mobile connectivity, the report triggers different issues such as social issues connected with mobile connectivity. Namely, it submits that plans for providing affordable mobile phones and, by that opportunities for the poor, is already becoming one of the most dramatic game changing technologies the world has ever seen. It puts in the center mobile phone connectivity between gender equality, Internet of things, digital commerce, protection of personal data online, networking and development of new services for better connectivity.</p> <p><b>Key words:</b> mobile phones, next-generations network, connectivity<br/> <a href="#">The Mobile Economy 2015 Report</a>. Pages 76.</p>                                                                               |
| <p>Mr. Michael Kende, ISOC</p>                                                       | <p>On behalf of ISOC, Mr. Kende submitted <a href="#">two reports</a>. Reports from 2014 and 2015 contain data on some of the newest trends in the online world, as well as an analysis of the benefits that users can have in terms of various services</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|                                  | <p>combined with smart devices. It presents both opportunities and challenges that Internet presents for current and future entrepreneurship. Finally, the report discusses some challenges for the mobile Internet, a main source for access.</p> <p><b>Key words:</b> Internet, trends, benefits, open and stable internet</p> <p><a href="#">Internet society global Internet report 2015 mobile evolution and development of the internet</a>. ISOC. 2015. Pages: 142</p> <p><a href="#">Internet society global Internet report 2014 mobile evolution and development of the internet</a>. ISOC. 2014. Pages: 146</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Mr. Tim Kelly,<br>The World Bank | <p>Mr. Kelly, on behalf of the World Bank, has submitted a <a href="#">research report</a> that presents some of the most recent global statistics on Internet penetration rates and global connectivity. The report examines the impact of Internet in the context of past industrial revolutions and future possible developments. The report examines the challenges that emerging digital technologies are posing to society, especially challenges related to Internet of Things and 3D printing. These aspects are also examined with regards to the fear of rapid automation leading to massive unemployment and social instability. Special approach is taken when analyzing the impact of Internet on economic development arguing that it is a two-fold process. The patrons of the Internet in developing countries—facing numerous government and market failures—are likely to expect more from the Internet: to create markets where none exist, to turn around failed public services, to reduce market frictions, to solve agency problems, etc.</p> <p><b>Key words:</b> rapid diffusion of digital technologies, Internet penetration, world economy, development</p> <p><a href="#">Internet for development: World Development Report 2016</a>. World Bank. December, 2016. Pages 16</p> |
| Ms. Sonia Jorge, AFAI            | <p>Ms. Sonia Jorge contributed a <a href="#">submission</a> on behalf of AFAI of a set of policy and regulatory best practices on how to increase the affordability of the Internet for all. The report suggests that nurturing healthy market competition is necessary along with a Regulator established as an effective and independent expert agency. The best practices report suggests ways for infrastructure sharing alternatives and successful management.</p> <p><b>Key words:</b> policy, recommendation, market competition, regulator, management, infrastructure</p> <p><a href="#">Policy &amp; Regulatory Best Practices</a>. Pages 4</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Mr. Lee Hibbard,<br>EURODIG      | <p>The European Dialogue on Internet Governance (EURODIG) submitted a report which strongly advocates for global connectivity and considers Internet as a global resource which should be managed in the public interest. The report contains recent statistics from Europe and best practices on regional and national levels in the fields of digital access, connectivity and inclusion.</p> <p><b>Key words:</b> public interest, Internet access, connectivity</p> <p><a href="#">REPORT: EuroDIG 2015 - Workshop 9: European Policy Options for Digital Access and Inclusion</a>. CoE, June 2015. Pages: 9</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

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| <p>Ms. Judith Hellerstein</p>          | <p>Ms. Hellerstein, on behalf of Hellerstein &amp; Association submitted a <a href="#">paper</a> that includes policy options for developing countries to increase their connectivity. The list includes recommendations on how the market should be structured, the importance of having an independent and effective regulator and tips for building an infrastructure network.</p> <p><b>Key words:</b> market, regulator, management, infrastructure, funding, digital literacy,</p> <p><a href="#">Connecting the Next Billion Submission of Judith Hellerstein- CEO of Hellerstein &amp; Associates: Policy Options for Developing Countries</a>, 2015. Pages 5</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Mr. Mark Graham</p>                 | <p>Mr. Graham submitted his <a href="#">paper</a> where he problematizes the geographies of Internet coverage space. Stating that the Internet was used by over 2.5 billion people around the world in 2013, he argues that even in an age of almost ubiquitous potential connectivity, online voice, representation, and participation remain highly uneven. The author explores why, in an age of almost ubiquitous potential connectivity, so many people are still left out of global networks, debates, and conversations.</p> <p><b>Key words:</b> Internet geographies, connectivity, access, information inequality, infrastructure</p> <p><a href="#">Inequitable Distributions in Internet Geographies The Global South Is Gaining Access. but Lags in Local Content</a>. Mark Graham. 2014. Pages: 6</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Ms. Cristiana Gonzales , LACNIC</p> | <p>On behalf of LACNIC, Ms. Gonzales submitted a <a href="#">proposal</a> with valuable ideas on some practical ways to increase connectivity with regards to current infrastructure. The paper emphasizes increasing access through mobile networks. At the same time it insists on so called 'sharing policies' between private sector and government, where for example, telecommunications operators should be responsible for increasing investment, including improving access in remote and rural areas, while the governments could reduce investment costs avoiding regulation that could pose barriers for the return on investment. It concludes that there is still no consensus or enough discussion on the issue of whether Internet access policies should prioritize fixed or mobile broadband as well as on what is the appropriate role of the private sector in investing and providing connectivity and the appropriate regulation to keep Internet as a public good with respect to human rights when high investments are necessary.</p> <p><b>Key words:</b> access, telecom operators, government's, broadband</p> <p><a href="#">IGF-2015: Call for Contributions - Policy Options for Connecting the Next Billion: LAC-IGF first contribution</a>. August, 2015. Pages: 1</p> |
| <p>Ms. Alison Gillwald, World Bank</p> | <p>A World Bank <a href="#">report</a> interprets how the poorest of the world's citizens use mobile phones to enhance their lifestyles and livelihoods, using, as a case study, the example of South Africa. The paper presents the causal relationship between low usage of mobile media tools and Internet literacy which is based on the argument that even when people have access to the Internet, they lack understanding of it. The goal of the study is to investigate the demand for mobile applications, services and products, with a view to increasing economic</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|                                                                                                                  | <p>opportunities and improving well-being for users of some of the poorest countries in the world.</p> <p><b>Key words:</b> mobile phones, Internet Literacy, connectivity, economy</p> <p><a href="#">Mobile Usage at the Base of the Pyramid in South Africa</a>. December 2012.</p> <p>Pages: 71</p>                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>Ms. Susana Dornel,<br/>Agency for e-Government and Information Society Office of the President of Uruguay</p> | <p>Ms. Dornel has shared the positive <a href="#">experience</a> from Uruguay that, since 2007, has increased its connectivity so much that they are now leaders in the region. She has submitted several recommendations for other countries that could follow the example of Uruguay.</p> <p><b>Key words:</b> Uruguay. Internet access, connectivity, education</p> <p><a href="#">Contribution of Ms. Susana Dornel</a>, AGESIC. 2015</p>                                                                                                                                                                                                                                                         |
| <p>Mr. Akin-Awokoya Emmanuel</p>                                                                                 | <p>On behalf of the Internet Society, Klanthem, High Tech Center for Nigerian Women and Youths, an <a href="#">expert opinion</a> was submitted stating that the goal is to connect as many people as we can reaching to the next billion. By using the case of Nigeria, he explains that positive movements are possible. In this case study he argues that increased government support is necessary, along with the support of civil society.</p> <p><b>Key words:</b> internet, access, Nigeria, government, civil society, dialogue</p> <p><a href="#">Contribution of Mr. Akin-Awokoya Emmanuel</a>, Internet Society, Klanthem- High Tech Center for Nigerian Women and Youths. 2015.</p>      |
| <p>Mr. Sergio Luis Cossa ,<br/>Mozambique IGF</p>                                                                | <p>Mr. Cossa, on behalf of all Mozambique IGF stakeholders, has submitted a <a href="#">proposal</a> for the IGF which suggests possible policy options for how to connect the next billion. The recommendation paper suggests that one key for increasing accessibility and connectivity is infrastructure sharing mechanisms. It illustrates this suggestion through the case study of Burundi and their success.</p> <p><b>Key words:</b> Affordable Access, Infrastructure sharing mechanisms, broadband, connectivity</p> <p><a href="#">Policy options for connecting the next billion</a>. Sérgio Luís Cossa, MSc Information System Statistics and Information Management. 2015. Pages: 2</p> |
| <p>Mr. Jorge Cancio, Swiss IGF</p>                                                                               | <p>Mr. Jorge contributed by submitting a <a href="#">report</a> from the recent Swiss IGF. For the purpose of connectivity, the stakeholders at this event agreed that it is a crucial question where a lot of work remains to be undertaken on its actual implementation, both by private and public actors. Awareness-raising, education and training of specialists are the some of the key steps for increasing the accessibility.</p> <p>Key words: private and public actors, <i>data authority and digital self-determination of end users, accessibility, content, services</i></p> <p><b>Key words: confidence, trust, security, access</b></p>                                              |

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|                                                        | <p><a href="#"><i>Swiss contribution on meaningful multistakeholder participation mechanisms</i></a> . 2015. Mr. Jorge Cancio. Federal Office of Communications OFCOM. Pages: 2</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Mr. Enrico Calandro , ICT Africa</p>                | <p>Mr. Calandro, on behalf of researchers at ICT Africa submitted a <a href="#">research paper</a> on the connectivity and Internet usage status in 11 African countries based on household and individual ICT survey data. The paper gives a special focus to the problem of expensive prepaid mobile Internet service that are only available to elites, while the rest of the society has to rely on public access points. It is stated that competition in mobile markets is an efficient way of fulfilling the gap that exists in the homogeneous market and will result in an increase in the choice of services and a reduction in prices.</p> <p><b>Keywords:</b> Africa, Information technology, Communication technologies, Internet, Mobile technology, Mobile networks, Broadband, ICT access and use, Internet adoption, Mobile internet, Network effects, Social networking<br/> <a href="#">Internet going mobile: Internet access and use in 11 African countries.</a> Christoph Stork, Enrico Calandro and Alison Gillwald. 2013. Pages: 18</p> |
| <p>Ms. Louise Bennett , Chartered Institute for IT</p> | <p>Mr. Bennett, on behalf of the Chartered Institute for IT, has expressed an <a href="#">opinion</a> related to the activities the UK Government has taken in order to illustrate how the Internet can bring services to citizens. He identifies the lack of widely used robust, non-proprietary standards as a cause of problems related to bad connectivity.</p> <p><b>Keywords:</b> UK, government, connectivity, internet<br/> <a href="#">Contribution by Mr. Louise Bennett.</a> BCS-The Chartered Institute for IT. 2015.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>Mr. Abdourazakhe Abani, IGF Nigeria</p>             | <p>Mr. Abani's <a href="#">submission</a> is related to the argument that the lack of political will influences the slow process of implementation of the potential policies for higher connectivity.</p> <p><b>Key words:</b> access, mobile phones, government, telecoms<br/> <a href="#">Contribution of Mr. Abdourazakhe Abani.</a> IGF Nigeria. 2015.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Mr. Garland T. McCoy</p>                            | <p>Mr. McCoy has contributed to the project by submitting his <a href="#">expert opinion</a> offering policy options on how to overreach all the obstacles to connectivity issues. He insists on expanding private and public sector engagement with a need to significantly augment the current public and private sector ICT stakeholder community. The report suggests recruiting support and participation from government and industry leaders in trade, transportation, finance, tourism, healthcare, education, construction, etc. as each has significant interest in expanding and deepening individual and corporate engagement with the Internet.</p> <p><b>Key words:</b> connectivity, public/private partnerships , multi-stakeholder model, Internet stakeholder community<br/> <a href="#">Policy Options for Connecting The Next Billion. IGF Intersessional Submission.</a> Garland T. McCoy Technology Education Institute. 2015. Pages: 3</p>                                                                                                |



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| <p>Ms. Alison Gilward,<br/>Research ICT Africa</p> | <p>Research ICT Africa's <a href="#">contribution</a> refers to Internet governance as a term that needs to be discussed and problematized in the light of the distinction between developed and undeveloped countries, since few developing countries participate in these debates, and fewer still in agenda-setting for Internet governance. The report problematizes an absence of an enabling institutional environment for sector reform and development, resulting in poor market structuring with limited competition and ineffectual regulation, limited network investment, and high wholesale and retail prices. As a result, in Africa the sector is often characterised by backbone provisioning by weak former fixed line incumbents; the dominance of regional mobile operators that have driven the take-up of voice and data services on the continent but that have also been able to exploit their dominance and the often weak regulatory environments that undermine some of the competitive benefits associated with the liberalisation of markets. The report also defines some strategic objectives of projects and programmes in the ICT sector.</p> <p><b>Key words:</b> Africa, internet governance, stakeholders, action, impact</p> <p><a href="#"><i>Mapping Multistakeholderism in Internet Governance: Implications for Africa.</i></a><br/>Research ICT Africa. 2015. Pages: 50</p>                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p>Mr. Paul Mitchell,<br/>Microsoft</p>            | <p>Microsoft's <a href="#">contribution</a> is related on creating innovative ICT solutions and initiatives that are inclusive, and help to realize the full potential of peoples around the world, while enabling sustainable social and economic development through partnerships with local business, governments, civil society, and others. The ICT is used as term that will create a bridge the digital divide. This includes two key components:</p> <p>1) affordable and universal access to broadband services and the Internet; and<br/>2) local capacity building to enable adoption, production, and consumption of localized content and services. The report includes case studies on how innovative solutions can bring real socio-economic results. These need to be developed and deployed more effectively through multistakeholder cooperation, and benefit all parties, including national governments and local communities.</p> <p>Examples of these outcomes include: government ministries developed new means to deliver services and achieve national policy goals, including a greater ability to respond to challenges like rural healthcare delivery and natural disasters; government regulators gathered more data to inform policymaking to increase broadband access and ICT capacity; local communities realized enhanced connectivity, gained more disaster-resilient communication infrastructure, increased the quality of schools, increased access to health services, and improved access to information and services for disabled persons; and local students and ICT professional improved their skills and capacity to develop solutions and services that benefit their local communities, created new small businesses, and enhanced their competitiveness in the global economy.</p> |

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|                       | <p><b>Key words:</b> access, connectivity, ICT, Philippines, Botswana, capacity building, projects</p> <p><a href="#"><i>The Challenge of “Connecting the Next Billion”</i></a>, Microsoft.2015. Pages 8</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ms. Jane Coffin, ISOC | <p>I</p> <p>IXPs refer to interconnection facilities in which different players in the Internet ecosystem (ISPs, content providers, hosting companies, etc.) exchange IP traffic. This <a href="#">report</a> takes stock of the development of IXPs in Latin America and the Caribbean, documenting best practices in four selected cases: Argentina, Brazil, Colombia and Ecuador. It argues for accelerating the development of IXPs as a necessary step towards improving the quality and coverage of access services in the region.</p> <p><b>Key words:</b> IXPs, Latin America, Caribbean, access, services</p> <p><a href="#"><i>Connectivity in Latin America and the Caribbean The Role of Internet Exchange Points</i></a>. November 2013. Pages: 22</p> <p>II</p> <p>This <a href="#">submission</a> discusses the ongoing difficulty of achieving Internet penetration and connectivity in rural areas. The projects highlighted make use of low-cost wifi, Wi-Fi-based equipment and unlicensed spectrum (free spectrum) to connect and empower rural and under-served communities.</p> <p>The following rural communities in India were cited as case studies: Chanderi, Baran, Tilonia, Tura, Giridih, Mandla and in Naogang.</p> <p><b>Key words:</b> wifi, program, communities, impact</p> <p><a href="#"><i>Wireless: A case book for communities</i></a>. ISOC. 2013. Pages: 44</p> <p>III</p> <p>The following report highlights improvements in Africa’s Internet connectivity. Progress has been bolstered by enormous financial investments in telecom infrastructure, especially in intercontinental connectivity and terrestrial fibre networks: investments in submarine cable amount to around USD3.8 billion and over USD8 billion have been poured into terrestrial networks. In addition, Internet exchange points (IXPs), used for local exchange of traffic, have become increasingly important in many African countries. Factors which obstruct the further development of the Internet ecosystem in Africa, the implications of those obstructions, and their possible resolutions, are also explored. The report references a persuasive study on the impact of IXPs in Kenya and Nigeria. The study found that IXPs can and do improve the quality of Internet services and save African operators millions of dollars per year in connectivity fees – but that a key factor in the success of IXPs is the availability of good domestic connectivity.</p> |



International connectivity, national backbone and 'middle-mile' elements of the value chain, as well as any obstacles to competitive Internet access services, are specific aspects of the report.

**Key words:** Africa, internet, access, connectivity, costs, IXPs

[Report for the Internet Society: Lifting barriers to Internet development in Africa: suggestions for improving connectivity](#). Robert Schumann, Michael Kende for ISOC. May 2013. Pages: 71

IV

This [paper](#) details the impact of IXPs have in two emerging markets in sub-Saharan Africa: Kenya and Nigeria. The benefits for Internet Service Providers (ISPs) alone include savings on international capacity costs, along with an improved quality of service resulting in additional revenues, with a total value worth millions of dollars per year.

The benefits of localizing Internet interconnection are increasing, due to consumers' growing demand for services with higher bandwidth (such as video) and lower tolerance for latency (such as Voice over IP). In developed countries, IXPs have played a key role in advancing the Internet ecosystem over the past 15 years. Today, IXPs are steadily being adopted in Africa, despite a more challenging economic and telecommunications environment. The Kenya Internet Exchange Point (KIXP) currently localizes more than 1Gbit/s of peak traffic, dramatically reducing latency (from 200-600ms to 2-10ms on average), while allowing ISPs to save almost \$1.5 million per year on international connectivity. Meanwhile, the Internet Exchange Point of Nigeria (IXPN) localizes 300Mbit/s of peak traffic with corresponding reductions in latency, allowing national operators to save over \$1 million per year on international connectivity.

**Key words:** IXPs, Kenya, Nigeria, benefits, projections, UK, Netherlands, South Africa,

[Assessment of the impact of Internet Exchange Points – empirical study of Kenya and Nigeria](#). Michael Kende, Charles Hurpy for ISOC. 2012. Pages: 59

V

This [report](#) underlines the vast diversity of economic conditions among ASEAN member states and how this reflects a digital divide in the region. To remedy the divide and increase Internet penetration rates, it argues the focus should squarely be on increasing supply and lowering the cost of access. The multiplier effects from increased internet usage to the economic and social development of ASEAN member economies are so profound as to warrant a specific and sustained focus.

**Key words:** digital divide, costs, access, economy, social development, society

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|  | <p><a href="#"><i>Unleashing the potential of the internet for the ASEAN economics</i></a>. ISOC. 2015.<br/>Pages: 14</p> |
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