

# Southern African Internet Governance Forum

## Issue Papers<sup>1</sup> No. 2 of 5

### Emerging Issues: The Mobile Internet

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#### Table of contents

1. Emerging issues related to the mobile internet.....	3
2. The development potential of the mobile internet.....	4
2.1 Challenges.....	4
2.1 Access and infrastructure.....	5
2.2 Diversity and local specificity.....	5
2.3 The role of network operators and regulation.....	6
3. Human rights and the mobile internet.....	7

#### 1. Emerging issues related to the mobile internet

This is the second of a series of issue papers produced for the SAIGF. This is the second paper dealing with the “emerging issues” theme. Cloud computing was the topic of the plenary (main session) on Emerging issues at the 5th Annual Internet Governance Forum in 2010, but still continues to be important and was the topic of Paper 1a. The theme of this paper is emerging issues related to the mobile internet.

The emerging issue to be discussed in the plenary/main session of the 6<sup>th</sup> Annual Meeting of the IGF Nairobi in September 2011, will be the mobile internet. The mobile internet will refer to internet as accessed by mobile phones as opposed to internet as rendered on desktop computers. There are differences in experience and functionality between the two, as well as differences with how websites and web-application are accessed with mobile phones.

The main question to be discussed at the plenary will be “is governance different for the mobile internet and the wired internet?”<sup>2</sup> As internet governance exists at national, regional and global levels, this question can be further unpacked. Do approaches to Internet governance, national

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<sup>1</sup>APC and SANGONeT would like to thank the Open Society Initiative of Southern Africa (OSISA) for making this issue paper series possible. The papers provide a background introduction and were produced especially for the SA IGF. They do not necessarily reflect the position of the organisers.

<sup>2</sup> Internet Governance Forum, Draft Programme for the 2011 Meeting, 09 August 2011, [intgovforum.org/cms/2011/programmepapers/ProgrammePaper2011.Aug%209.doc](http://intgovforum.org/cms/2011/programmepapers/ProgrammePaper2011.Aug%209.doc)

policy and regulation, and regional initiatives approach the the mobile Internet, and Internet accessed by computer in the same way? Should they be approached differently?

Sub questions to be discussed in the plenary session in Nairobi on emerging issues are:

- “What are the key development issues given strong mobile penetration in developing countries and the use of new equipment and applications (such as cloud computing) that did not exist before?
- How do internet policy and regulation choices in the mobile Internet context impact the spheres of human rights, openness and neutrality?
- What are the policy and governance choices and opportunities in the mobile Internet space that foster innovation and development?”<sup>3</sup>

## 2. The development potential of the mobile internet

More people in Africa have mobile phones than computers or fixed-line internet connections. As more mobile phones become connected to the internet many development opportunities arise. For many, mobile internet access has become the norm, rather than the exception with regards to internet use. The International Telecommunication Union reported that during the third-quarter of 2009, the number of people in Africa accessing the internet through a mobile phone connection became higher than the amount of people accessing the internet through a fixed line connection.<sup>4</sup> In 2010 it was predicted by a Morgan Stanley analyst that within five years, there would be more mobile internet users than desktop users in the whole world.<sup>5</sup>

There has been much literature on how mobile phones have had a beneficial effect through “leapfrogging”. Mobile phones “leapfrogged” to some extent the need for land-line infrastructure to conduct electronic communication. This has had beneficial effects for economic development from the local through to the national level. This has also been well outlined by many scholars.<sup>6</sup> Currently mobile phones allow many people to access the Internet that would not usually be able to do so. Mobile phones thus offer the possibility of “leapfrogging” another technological obstacle – the requirement of a computer on a fixed-line connection to connect to the internet.

### 2.1 Challenges

The developmental potential of mobile phones bring access issues to the fore. What is the cost of mobile phone internet access compared to access from a fixed line? The other is an issue of quality of access. What is the quality of access and the user-experience of the mobile web as compared to websites accessed from computer's? What websites and applications work on computers, but are

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<sup>3</sup> Ibid.

<sup>4</sup> International Telecommunication Union cited in *Balancing Act Africa* issue 499 8<sup>th</sup> April 2010, <http://www.balancingact-africa.com/news/en/issue-no-499>

<sup>5</sup> Matthew Ingram, Mary Meeker: Mobile Internet Will Soon Overtake Fixed Internet, 12 March 2010 [gigaom.com/2010/04/12/mary-meeker-mobile-internet-will-soon-overtake-fixed-internet/](http://gigaom.com/2010/04/12/mary-meeker-mobile-internet-will-soon-overtake-fixed-internet/)

<sup>6</sup> Africa: The Impact of Mobile Phones, Vodafone Policy Paper Series, Number 2, March 2005, [http://www.vodafone.com/content/dam/vodafone/about/public\\_policy/policy\\_papers/public\\_policy\\_series\\_2.pdf](http://www.vodafone.com/content/dam/vodafone/about/public_policy/policy_papers/public_policy_series_2.pdf). See also Michelle Fong (2008) *Technology leapfrogging for developing countries*. In: Encyclopedia of Information Science and Technology, IGI Global, pp. 3707-3713.

inaccessible or impossible to use on the mobile web. How can access and quality issues be improved? In terms of the differences in usage and functionality of the internet over mobile phones compared to internet usage on a computer; is there a new digital divide emerging?

Lisa Horner, Head of Research and Policy for Global Dialogue states that while mobile phones are:

“are also helping to bridge the digital divide for people who do not have access to computers and fixed-line connections...a number of challenges need to be addressed in order to harness the full potential of the mobile internet for universal human rights and citizen empowerment. These include: high access costs, limitations in the usability of hardware and software for first time users, unequal capacities to create and access relevant content, the closed architecture of the mobile internet, the persistence of social inequality and lack of respect for cultural diversity.”

Horner furthermore reminds us that fixed-line internet access still remains a development priority:

“Even once these issues are addressed, the mobile internet should not be viewed as a substitute for fixed-line connectivity and computers. Fixed-line computers are better suited to internet activities that require large bandwidth and powerful data processing. Moreover, the impact of mobile communications on human rights is often greater when they are operating in synergy with other media and technology.

Whilst the mobile internet may help to overcome connectivity gaps in the short term, focus on mobile internet access must not undermine efforts to achieve universal access to desktop computers and advanced fixed-line fibre optic networks. Mobile, computer and fixed-line access must be thought of as mutually compatible and synergistic technologies, to which all people should have access.”<sup>7</sup>

## **2.1 Access and infrastructure**

The point that mobile and fixed line access must be thought of as mutually compatible and synergistic technologies is important. The mobile internet and the wired internet are not neatly divided and supported by different infrastructures. A large degree of the access problems regarding the mobile internet also involve issues of access to non-mobile infrastructure that bring up the costs of mobile phone use. Furthermore in all mobile networks, a fibre backbones and wireless and fibre back-haul remain important. Also in many telecoms environments, fixed-line and mobile operators often contract each others services.

Issues related in the paper 1a. with regards to Quality of Service also apply. Mobile phones requiring broadband infrastructure with high speed and low latency will require good functionality of all internet infrastructures in a particular country including wireless and wired infrastructures.

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<sup>7</sup>Lisa Horner, A human rights approach to the mobile internet, Association for Progressive Communications, June 2011, <http://www.apc.org/en/node/12431/> . This is part of a series on the mobile internet from a human rights perspective <http://www.apc.org/en/pubs/issue/mobile-internet-human-rights-perspective-collected>

## **2.2 Emerging issues in telecoms policy and regulation**

What role can network operators play in increasing accessibility, affordability and the quality of the mobile internet? Many network operators are making available special content at discounted prices or free on mobile phones. Blackberry has agreements with many operators which allow for uncapped internet content for many users at a very cheap price, but downloads and other data are charged for. Some operators (for example in South Africa) offer a certain amount of free YouTube streaming. Facebook has agreements with some operators in Africa and other emerging markets to offer a certain amount of free data allocated to Facebook. Whilst these offers are development opportunities in that they lower prices, these developments also bring to the fore the issue of Net Neutrality.

Net Neutrality refers to the principle that there should be no restrictions on the content and quality of access provided by different service providers/operators.<sup>8</sup> If services are tailored to give preference of better speed or quality to certain types of devices, or users of certain devices are blocked from accessing particular services this would be a breach of net neutrality? Is Net Neutrality an important principle to ensure equitable access to the internet and to prevent the development of a mobile internet / computer internet divide?

All operators and service providers may need under certain conditions to “shape” content so that everyone has quality access to the internet. Shaping involves slowing down certain types of content. For examples operators faced with bandwidth constraints may need to slow down downloads of movies and music (requiring large amounts of data), in order to give preference to people who are mainly just using websites with pictures and text, in order to not negatively affect the internet quality of everyone using the internet. Shaping according to devices and content however seems intuitively against the principle of Net Neutrality. Should operators privilege the quality of certain types of connections? What would be the implications of privileging for example mobile phone connections, computers accessing the internet over mobile networks, or computers accessing the internet over ADSL? All should be in principle (if resources allow) afforded the same quality of internet access. Neither should operators encourage the use of certain kinds of data on mobile phones and discourage other kinds of data without legal reasons, or problems with network overload.

## **2.3 Diversity and local specificity**

One issue would obviously be with regards to the handsets themselves. There are no handset makers domiciled in Africa, the phones we use are devices made in Europe, the US and in Asia. Do handsets exhibit biases towards users in developing countries? Do handsets take advantage of African sensitivities? Of course there are many models of handsets designed explicitly for emerging or “bottom of the pyramid” market, and many handset makers do explicit research on these markets and developed handsets for these markets. There are cheap handsets from Nokia, Samsung, as well as Huawei, which are also beginning to offer cheaper mobile internet devices. Are mobile internet devices suited to African specificities? Are there enough handsets that allow a decent and reasonably functional mobile internet experience and applications that support African

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<sup>8</sup> See Wikipedia, [http://en.wikipedia.org/wiki/Network\\_neutrality](http://en.wikipedia.org/wiki/Network_neutrality)

languages, as well as Arabic script? What role can governments and corporations play in securing access to affordable mobile phones which are adapted to African markets?

In addition to diversity of linguistic groups being reflected in handsets, diversity of linguistic groups as well as diversity of interests must be reflected in the mobile web as well as in locally oriented mobile applications and mobile internet services in order to encourage take-up of the mobile internet.

### **3. The mobile internet and human rights**

From a human rights perspective, security access and privacy are pertinent to the mobile web. Mobile phones allow for surveillance on the users of mobiles in a much more detailed and accurate way. The source of a mobile connection may be easier to trace than the source of a fixed line connection. Furthermore the position of a mobile phone can be "triangulated" (calculated due to the strength of the signal in relation to the nearest base tower). Mobile phones with GPS, especially mobile phones with "apps" to share location can add to the surveillance potential of mobile phones.

In many countries, like for example Namibia and South Africa, operators are now required to record the information of mobile phone users before they open a contract; mobile phone users are required to provide proof of residence before opening an account, and to verify residential details on existing accounts. Despite possible obstacles, like for example registration of phones possibly hindering the use of mobile phones to those without housing or living in informal settlements, many states see this as important for law enforcement. Mobile phone calls and SMS, as well as websites accessed are recorded for a legislated amount of time in order that they be available to law enforcement agencies (through subpoena or other legal processes) when required.

How secure is this data? What are the security policies of the bodies involved in storing this data, and how is it regulated. Is the data protected with solid and updated information security tools? Is it stored in encrypted format? Is this data offline? In that it cannot through some kind of security breach be accessed by hackers over the Internet? What measures are in place to prevent cell-phone operators and governments to spy on citizens, outside legal processes - without the use of a warrant. What safety measures are in place to prevent this information being exploited by corrupt officials? Is this information made available to third parties for storage? If this is the case, how is this regulated?

Recently there has been much attention given towards the role of mobile phones, in particular internet content created on mobile phones, in struggles for democracy and human rights, as well as the role of social media in societal conflicts. We have seen in 2011 crackdowns on the internet, internet content and social networking involving shutting down these services or arrests, detentions and harassment of those involved in creating this content. These crackdowns were witnessed in Egypt, Libya, and Syria, as well as other countries during the events that have come to be known as the "Arab spring", and which still continue to unfold. This was widely condemned by countries in the North, including the United Kingdom.

Can the mobile internet really cause protests? Does the mobile contribute to unrest and riots? Or are these rather caused by underlying structural factors? ICTs were not the causes of the protests

and uprisings in Tunisia or Egypt, or indeed in any other country. The causes of the protests involve a combination of non-technological factors including: decades of repression, political and economic marginalisation, the long-term structural decay of the effectiveness and legitimacy of state institutions, and soaring food prices. Ascribing an overly-important role to the mobile internet in the uprisings in Tunisia and Egypt overlooks ICT access in these countries. In 2009 in Tunisia and Egypt there were only 34.1 and 24.3 internet users per 100 inhabitants respectively.<sup>9</sup>

The UK has recently which publicly considered shutting down Blackberry messenger, as well as tried to organise meetings with Facebook and Twitter, which the latter declined. Prime Minister, David Cameron stated "We are working with the police, the intelligence services and industry to look at whether it would be right to stop people communicating via these websites and services when we know they are plotting violence, disorder and criminality." The UK courts have since the riots handed down harsh sentences on a number of offenders for comments made on social networks, this includes 4 years for a post made on Facebook. In San Francisco the Bay Area Rapid Transit Police shut down mobile phone service pre-emptively to stop a protest, which many argue goes against the principle of prior constraint (attempting to stop a protest before it has become illegal or disorderly).

The APC and GreenNet reacted firmly to events in the UK by stating:

"We urge that no new regulatory interventions be imposed until this investigation is finished, and that any proposals comply with and uphold the human rights of UK citizens. Access to communications is a basic right and there should be no 'prior restraint'. British laws already include powers against incitement.

In June 2011 at the United Nations Human Rights Council (UNHRC), the UK government told other governments that internet-related rights and freedom limitations on human rights (which includes internet shut-downs and blocking websites) should not be taken lightly. The UK government stated that it would only consider such drastic censorship "if convinced it is appropriate, proportionate and in accordance with international legal obligations and is effective on the basis of evidence". Government officials must not let the intensity of the moment drive them to make hasty decisions which could have long-term consequences for communications rights in the UK. APC and GreenNet call on the British government to stand by their statement to the UNHRC in June."<sup>10</sup>

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<sup>9</sup> Internet Telecommunication, ICT Eye 5 [itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx](http://itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx) cited in Alex Comminos, Twitter revolutions and cyber crackdowns: user-generated content and social networking in the Arab spring and beyond, Association for Progressive Communications, June 2011, This is part of a series on the mobile internet from a human rights perspective (<http://www.apc.org/en/pubs/issue/mobile-internet-human-rights-perspective-collected>).

<sup>10</sup> APC and GreenNet, London Riots: Social media does not cause social problems say APC and GreenNet, 15 August 2011, [apc.org/en/node/12807/](http://apc.org/en/node/12807/)