2 Policy Options: Key Principles and Approaches

2.1 Introduction

There are inevitably some principles and approaches that underpin all ICT related sectors and therefore relate to all chapters/policy options papers that follow. These include:

- Regulatory principles
- The approach to facilitating an open Internet and the debate around net neutrality; and
- Green ICTs.

2.2 Regulatory Principles

Since the then Independent Broadcasting Authority was established in 1994, the policy and legislative focus has been on regulating the ICT sector "*in the public interest*". This core approach still guides regulation of the sector and is reflected in the Framing Principles set out in Chapter One. It will remain the primary consideration in all policy-making and regulation.

The following principles and approaches are also key to ensuring the vision and objectives for policy outlined in Chapter One are realised:

- **Distinct roles and responsibilities:** There must be clearly defined roles and responsibilities for Parliament, Government, the ICT regulator and other regulators in order to avoid duplication and forum shopping. Proposals on how to facilitate this and ensure the independence of the regulator are dealt with in Chapter Seven: Policy Options – Institutional Frameworks.

- **Transparency and accountability:** Policy formulation and regulatory interventions should take place in as transparent a manner as possible, with involvement of both direct stakeholders and the general public. Policy-makers and regulators are accountable to the nation, through the appropriate channels. Both transparency and accountability rely on the widest possible public availability of the necessary information and relevant documentation.

- **Consumer Protection:** Policy and regulation place end-users, from the most disadvantaged individual to the largest corporate, at the centre of their activities. Effective protection and empowerment of consumers and end-users, superior quality of service and affordable pricing are therefore key objectives of policy and necessary areas of regulatory intervention, balancing the interests of all stakeholders.

- **Universal Access and Service:** Addressing the ongoing historical legacy of the apartheid digital divide, and ensuring universal, affordable access to and effective adoption and utilisation of ICT infrastructure and services remain central policy and regulatory objectives, requiring specific intervention. The recognition of the possibility of a new information divide is also crucial and the need therefore to mitigate against this.

- **Technology Neutrality:** In an environment dominated by ongoing convergence of infrastructure and services, regulatory interventions should as far as possible be technologically neutral in order to stimulate innovation and facilitate the development of innovative new product and service offerings.

- **Open Access:** Regulatory intervention should wherever possible be based on open access principles to ensure maximised, efficient and fully-leveraged use of available infrastructure and services, through encouraging infrastructure sharing, spectrum re-farming, optimal interconnection, balanced with the need for fair returns on investment.

In line with this, the following overarching regulatory principles will underpin regulation-making:

- Any interventions must be *necessary* to meet clearly defined public interest objectives.
- Any interventions must be *proportionate, consistent and evidence-based* and determined through *public consultation*.
- The policy maker and regulator must consider the *least intrusive mechanism* to achieve the defined public interest goal/s, and will consider, where appropriate, alternative models such as *co-regulation and/or self-regulation.*
- The *regulatory impacts of any action will be assessed* and considered before imposing regulations, rules and/or conditions.
- The policy maker and regulator will act *fairly* and ensure *regulatory parity* in defining markets and deciding on interventions.

There will be ongoing assessment of the impact of policies, rules and regulations in order to, if necessary, amend approaches which are not achieving the identified objectives, address any unforeseen implications of interventions and/or determine if the interventions are still necessary.

2.3 Open Internet

Several submissions to the Green Paper and Framing Paper argued that a net neutrality policy is critical to ensuring fair competition between different content and service providers. Others, however, cautioned that a blanket open Internet policy could inadvertently undermine key objectives, including the promotion of innovation and universal service.

A net neutrality policy would mean that rules are set to ensure that Internet traffic should be "*treated equally, without discrimination, restriction or interference, independent of the sender, receiver, type, content, device, service or application*".[1] Such a policy could also specify that no preferential treatment should be given to any data and include requirements relating to equal charges regardless of user, content, site, platform, or mode of communication.

Stakeholders that proposed a net neutrality policy raised concerns that if the policy framework does not enforce this, broadband providers might act as gatekeepers of content and use their last mile infrastructure to block internet applications, content (websites, services, protocols) and competitors

[1] European Parliament definition of net neutrality included in proposed amendments to the telecommunications package for Europe. These were approved by the Parliament in April 2014 and are due to be discussed by the European Council of Ministers in October 2014. http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+AMD+A7-2014-0190+237-244+DOC+PDF+V0//EN

by, for example, using deep packet inspection to discriminate between over the top content, services or applications. It was argued that this is a particular concern given convergence as, for example, network providers could themselves provide or partner with content services and limit access by audiences to competitors.

The SOS, R2K, Media Monitoring Africa (MMA) and ACT-SA proposed similar approaches to net neutrality in South Africa. They expressed concern that "*access tiering*" would be introduced by broadband providers if a net neutrality policy is not developed. SOS stated that this could result in a "*'fast-lane' for rich and powerful creators, and a 'slow lane' for less powerful users*". It proposes that South Africa follow the Netherlands model for full network neutrality.[2]

M-Net and MultiChoice in a joint submission seemed to adopt a slightly different approach, proposing that such a policy should require broadband providers to be transparent about their network management policies, thus suggesting that fair traffic management should be permitted.[3]

The Wireless Access Providers' Association (WAPA) raised a concern that the lack of any policy and/or regulation in this area could lead to unfair competition between incumbents and smaller players and decrease consumer choice. It said, however, that any net neutrality policy should not "*entirely prohibit*" paid-for placement or prioritisation of certain data traffic as many emerging businesses relied on product differentiation to compete with bigger monopoly players. The focus it said should therefore be on promoting fair competition and particular limitations on monopolies. [4]

The Internet Service Providers' Association (ISPA), however, gave a more guarded response, saying that it welcomed the start of the debate on net neutrality. While the Association did not specifically either support or oppose such a policy, it noted in its submission that it would be necessary to distinguish "*between traffic or network management undertaken by ISPs in order to deliver the quality of service required by their subscribers…. and the prioritisation of a provider's own service over the service of a competitor*". It focused on the need for transparency of traffic management policies and said that providers should be upfront if they limited streaming from any media source. It also said that providers should "*probably be prevented*" from manipulating access to specifically harm a competitor but should not be stopped from providing more choice to customers.[5]

While no respondents explicitly argued against a net neutrality policy, internationally objections to this concept generally centre around the impact this will have on the availability of bandwidth given the amount of content that will be made available and the need therefore to manage traffic during times of congestion to enhance efficiency. Opponents have also stated that on-demand content providers and over-the-top television (OTT TV) consume greater bandwidth and therefore should be charged to upgrade networks they are carried on. Some have stated that there would be no incentive to extend networks if there was no such compensation.

[2] SOS: Support Public Broadcasting Coalition, Green Paper Submission, Paragraph 5.5, page 8
[3] M-Net and MultiChoice, Green Paper Submission, Paragraphs 54-57, Pages 21 & 22
[4] Wireless Applications Providers' Association, Green Paper Submission, pages 10-11
[5] Internet Service Providers Association, Green Paper Submission, Paragraphs 62-67, Pages 13 & 14

A number of jurisdictions have introduced net neutrality policies, including Chile, the European Union, Brazil and the Netherlands. In others such as the UK, laws provide for the regulator to decide whether to introduce requirements on transparency on traffic management to protect the open Internet. The regulator in that country has stated that it has not as yet found reason to intervene, but has retained the right to regulate should self-regulation of quality of service and transparency not be effective. The Office of Communications (Ofcom) has not therefore set anti-discriminatory rules, though it has outlined guidelines on provision of understandable information to users about traffic management policies. Ofcom monitors the sector closely in the meantime.

OPTIONS

The first issue to decide is whether or not there is a need to now develop a net neutrality policy in South Africa. If you propose such a policy is necessary (Option Two), then a range of decisions will have to be taken about the nature of the policy.

Option One: Wait and see

Adopt a "wait and see" approach to the finalisation of rules on net neutrality. The White Paper would make commitments to promoting an open Internet, the need for transparency and minimum quality of service requirements. It would stipulate that specific rules on net neutrality would however only be introduced should monitoring show there is a need to intervene to achieve these objectives. The regulator would be empowered to develop guidelines/rules on transparency of agreements with users and minimum quality of service requirements if necessary. It would further be required to actively monitor and regularly report on whether or not the open Internet is under threat. If necessary, the regulator could introduce more specific net neutrality rules or make recommendations on amendments to legislation/government policy.

Option Two: Introduce a net neutrality policy

If it is decided that a net neutrality policy should be put in place now; there are a number of options to be considered.

- The policy would need to set out **who determines** the rules to be applied. This could be government or the regulator. Some countries have set out broad principles for net neutrality provisions and delegated a regulator to develop specific rules on these (e.g. the UK)[6]. Others, such as the Netherlands, have developed a specific law relating to net neutrality and required regulators to monitor and enforce compliance with these.[7] Brazil recently passed an Internet Bill of Rights.[8]
- Linked to this are decisions on **who enforces** the rules. In many countries, the sector specific regulator handles this. In Australia, however, the competition and consumer protector

[6] Office of Communications, "Ofcom's approach to net neutrality", 24 November 2011, http://stakeholders.ofcom.org.uk/consultations/net-neutrality/statement/

[7] Bits of Freedom, "Translations of key Dutch Internet freedom provisions", 27 June 2011, https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/

[8] Pedro Abromovay, "Brazil's Virtual Statue of Liberty", Project Syndicate, 6 May 2014, http://www.project-syndicate.org/commentary/pedro-abramovay-highlights-the-global-significance-of-the-country-s-new-internet--bill-of-rights-#x00R3PBQ5Dli6DaY.99

authority oversees all telecommunications related competition and access regulation in terms of industry-specific provisions set out in competition legislation.[9]

- **If a net neutrality policy is introduced, who should determine the policy in South Africa and which body should be responsible for monitoring and compliance?**

- There are also different approaches to **which providers** the rules apply to. In the USA, proposals on net neutrality focused only on wired networks, thus excluding mobile access to the internet[10]. In other countries such as Chile and the Netherlands the provisions focus on an open Internet regardless of the means of access to broadband.

- **Which entities should such rules apply to?**

- There are many different approaches to **exceptions** to net neutrality rules. While all net neutrality policies considered stipulate that an ISP may not block any data (except when provided for in law or ordered by a court), some condone discrimination in specified circumstances (*fair discrimination*). Approaches to consider include:
    - **Full neutrality:** Exceptions only to ensure privacy and security (e.g. Chile),[11] or allowances to address congestion, security, spam or to comply with other legislation (e.g. Netherlands).[12] Chile was the first country to amend its legislation to promote net neutrality. In May 2014 its regulator banned zero rating of certain social media sites (Twitter, Facebook and Wikipedia Zero) by mobile companies. Mobile companies were entering into deals with such service providers to allow access by users to their sites for free. The regulator however stated that this was illegal in terms of the country's net neutrality provisions.[13]
    - **Specialised services:** The proposals from the European Parliament adopted in April 2014 state that ISPs and content providers would be entitled to offer what are termed "*specialised services*" with enhanced quality of service to end-users. A specialised service is defined as "*an electronic communications service or any other service that provides the capability to access specific content, applications or services*". The Dutch law in contrast to this does not mention specialised services but rather stipulates that net neutrality rules apply only to services or applications on the Internet – therefore excluding only anything provided over a closed network.[14]
    - **Reasonable traffic management/Fair Discrimination**: Some proponents of net neutrality have argued for allowances for "*reasonable traffic management*" (to, for example, ensure access to emergency services) and said that rules should define what would be regarded as reasonable. Others have argued that broadband providers should be allowed to discriminate based on the type of data being

[9] Australia: Competition and Consumer Act (2010), sections 45-47
[10] Original FCC rules were struck down and the concept is still under debate
[11] Openmedia.ca, "Chile: A Leader in Net Neutrality Legislation", https://openmedia.ca/plan/international-comparisons/chile
[12] Bits of Freedom, "Translations of key Dutch Internet freedom provisions", 27 June 2011, https://www.bof.nl/2011/06/27/translations-of-key-dutch-internet-freedom-provisions/
[13] Belen Maty, "Chile to Fine Phone Companies Offering Free Access to Social Networks", PanAm Post 3 June 2014, http://panampost.com/belen-marty/2014/06/03/chile-to-fine-phone-companies-offering-free-access-to-social-networks/
[14] Inge Graef, "Why not 'Go Dutch' and Protect Net Neutrality without Defining Specialised Services?", the London School of Economics, Media Policy Project Blog, http://blogs.lse.ac.uk/mediapolicyproject/2014/04/04/why-not-go-dutch-and-protect-net-neutrality-without-defining-specialised-services/

transmitted, but that there should be equal treatment for similar applications.[15] In the UK, for example, the regulator, Ofcom, has indicated that network operators can prioritise certain traffic such as high quality IPTV service over other traffic in order to enhance efficiency. Ofcom has however warned that it would consider intervening if the management of traffic resulted in insufficient network capacity for new and innovative services and content.[16]

- Internationally there has also been debate about whether or not policies should **allow for paid-prioritisation of bandwidth** while barring throttling or blocking of data. Proponents argue that the focus should be on ensuring end-users are informed about individual providers traffic management policies so they can make an informed choice about which ISP to use.

- **What limitations, if any, should be set in a South African net neutrality policy? Should it include "fair discrimination" (such as those proposed above) provisions or not?**

Other issues

It has been argued in the US that policies set by the regulator should declare broadband a common carrier/essential service. South African laws currently set out provisions for a common carrier for broadcasting transmission for rules for essential services.

- **Should policy declare broadband a common carrier or essential service?**

2.4 Green ICTs

The ICT industry accounted for 1,9% of the total global Green House Gas (GHG) emissions in 2011 according to the Global e-Sustainability Initiative SMARTer 2020 Report.[17] The industry's GHG emissions will inevitably grow unless mitigated, given rapid growth in ICT penetration as well as increases in processing power. Green Sustainable ICTs – defined as those which produce low levels of carbon emissions - have an important role to play in reducing carbon emissions. Government's National Climate Change Response Policy (2004)[18] emphasises the need for policy implementation across all sectors in order to:

- Effectively manage the inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity; and
- Make a fair contribution to the global effort to stabilise greenhouse gas (GHG) concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system, within a time-frame that enables economic, social and environmental development to proceed in a sustainable manner.

In line with this, an integrated ICT Policy needs to ensure that it specifically considers how to promote Green ICTs.

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[15] Timothy Wu, "Network Neutrality, Broadband Discrimination", Journal of Telecommunications and High Technology Law, Vol 2, page 141, 2003, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=388863

[16] Office of Communications, "Ofcom's approach to net neutrality", 24 November 2011, http://stakeholders.ofcom.org.uk/consultations/net-neutrality/statement/

[17] http://gesi.org/SMARTer2020

[18] This policy is in the process of being updated.

POLICY ISSUES

The core policy issue is whether to introduce formal or information interventions (or a combination of both) to reduce the GHG emissions by the ICT sector.[19]

Option One: Formal Regulation

The policy would set broad principles, objectives and approaches to this issue and require ICASA to set rules, regulations and licence conditions to address climate change. emissions for electronic network and other relevant licensees. It would also be required to consider potential environmental outcomes in all decision-making.

Option Two: Guidelines and voluntary codes

Non-formal measures can also be used to achieve regulatory objectives. Many such measures are based on voluntary compliance. These measures can take many forms such as:

- Codes of practice and codes of conduct;
- Key Performance Indicators ;
- Targets;
- Voluntary agreements;
- Guidelines;
- Industry labels;
- Best practice information; and
- Public consultation, publication, information and education.

Option Three: A combination of approaches (formal and informal)

- **Should the ICT regulator/s go beyond their current scope to address climate change?**
- **Which option would best enhance Green ICTs?**
- **Should benchmarks and targets be set in policy or regulation against which South Africa's progress could be measured? If so, please propose what benchmarks and/or targets would be appropriate.**

2.5 Conclusion

- **Are there any issues that you believe have been neglected?**
- **Can you suggest any benchmarks and targets which may be incorporated to monitor progress against policies objectives?**

[19] Policy options based on: Young, S. 2010. "ICTs and Climate Change: A Role for Regulators?", 10th Global Symposium for Regulators, "Enabling Tomorrow's Digital World", Dakar, Senegal, 11 November 2010, ITU. 2010. Climate Change, ICTs and Regulation and GSR 2010 Discussion Paper.