

Compilation of input from participants in the workshop convened by the SA National Broadband Forum on 24 March 2009

This is a compilation of input from stakeholders on the draft framework for a national broadband strategy made during a workshop held on March 24 in Johannesburg. The workshop was hosted by the South African National Broadband Forum. The Forum is an initiative of four organisations involved in information communications technologies (ICTs) in South Africa: Shuttleworth Foundation,¹ SANGONeT,² South Africa Connect,³ and the Association for Progressive Communications (APC).⁴ All of the organisations have worked in different ways towards the common goal of creating cheaper and affordable access for South African citizens.

Basic use of terms

Broadband: Broadband is defined in this document as a minimum of 4 Mbps capacity for the end-user.

As a general statement, this document is based on the premise that a South African broadband network should provide South Africans with the network performance, capacity, and connections they need to contribute to the country's social, cultural and economic development and to compete successfully in the global economy.

Access: By access we mean individual, group, sector and community connectivity to the internet. This implies that we are concerned with multiple access points, including mobile, home, workplace, public (e.g. community centres) and schools, amongst them. Access also implies that these individuals, groups, sectors or communities have access to the appropriate technology to connect to broadband.

Affordability: While difficult to define, part of any ongoing strategy would require a continual assessment of what is affordable for the majority of people according to a basic set of access needs. This we call 'essential access', and may entail access to government services, to economic opportunities, or to basic peer-to-peer communication facilities. Once this basket of essential services are determined, 'breadline' broadband pricing can be calculated, which might be tiered for sectors and communities.

Goal

All South Africans should have affordable broadband access to the Internet. This should be illustrated by any number of measures, not confined to, but including:

- Broadband access in every South African village and town by 2014

¹ www.shuttleworthfoundation.org

² www.sangonet.org.za

³ www.southafricaconnect.org.za

⁴ www.apc.org

- A 90% penetration rate by 2014, at a price that amounts to 50% of the average mobile phone expenditure at that time.
- South African regaining its No 1. position in Internet access rankings on the African continent.

Supply-side objectives

The supply-side objectives aim to:

- Take steps to maximize fibre and wireless broadband infrastructure in urban and rural areas in an equitable and environmentally responsible manner
- Take steps to stimulate the provision of content
- Take steps to enhance e-governance and e-citizenship in a broadband environment.

Means to do so

In order to achieve these objectives, all stakeholders should commit themselves to the following:

Access to infrastructure

- i. The government should recognize broadband as an essential facility in line with other basic infrastructure such as water, sewerage and electricity. Essential access (or the most basic level of access) should be conceptualized as a right.
- ii. The regulator should introduce tiered pricing for commercial, community and schools usage.
- iii. National Treasury must create tax and other incentives for the building of more fibre and wireless broadband infrastructure. The needs of education, government services and job creation (e.g. access for small and medium enterprises (SMEs)) should be prioritized in the short-to-medium term. Universal service areas should also receive special attention. Fibre should be the infrastructure of choice. Wireless should be deployed where necessary.
- iv. The Universal Service and Access Agency of South Africa (USAASA), the regulator, and National Treasury must begin providing Universal Service Fund (USF) subsidies for the construction of broadband networks.
- v. The regulator must prepare clear regulatory frameworks for fair access to and sharing of infrastructure in the interests of maximizing the network effect of having as many people online as possible. Pricing for providing infrastructure should be transparent and regulated to avoid price collusion. A responsive and dynamic regulatory policy environment should be created.

- vi. The government should prepare a strategy to support the roll-out of broadband networks to smaller municipalities to ensure equitable access to broadband outside of major centres. This could be done as part of a public works initiative to create jobs, stimulate private investments, and deliver public services.
- vii. Local governments should be further encouraged and supported in the roll-out of municipal broadband networks, including the enabling of other stakeholders, such as the private sector, to build these networks.
- viii. The Electronic Communications Act should be amended to require local government and other government networks to make their considerable excess network capacity available to the public on a cost-based, non-discriminatory basis as a public service and for commercial purposes.
- ix. The regulator must make the spectrum needed for wireless broadband available – timeously, equitably and affordably – to maximize the rapid deployment of infrastructure across the whole country. The minimum requirements of spectrum assignment to ensure efficiency and feasibility from a business perspective also needs to more accurately be determined. Spectrum monopolies should be regulated against. The percentage of dormant spectrum permitted by a private sector stakeholder should be capped, and the remainder of unused spectrum reallocated.
- x. The regulator must make its frequency management policy public and transparent.
- xi. The Department of Communications and other relevant authorities must co-ordinate an integrated approach to stringing cable in co-operation with other infrastructure build-outs, particularly with regard to power lines and roads and in new spatial developments. The potential of regulating this co-operative framework should be explored.
- xii. There should be consultation between all stakeholders on current roll-out challenges and solutions to maximize implementation potential and impact. This could be facilitated by civil society.
- xiii. Communication between local, provincial and national government must be mandatory, as should the public transparency of their roll-out plans. Non-confidential government data, especially geographic data, should be opened up to allow external parties to interface with government in innovative ways.
- xiv. The private sector should be strongly encouraged to share its roll-out plans and strategies where they are of public importance. Where possible, these strategies should be in line with government priorities regarding socio-economic development and universal access. Non-confidential private sector data, especially geographic data, should be opened up to allow external parties to interface with

the private sector in innovative ways.

- xv. The Department of Education should explore new ways of providing broadband access and connectivity to schools and libraries, drawing on successful models such as the Tertiary Education Network that has provided broadband access to universities.
- xvi. The Department of Communications, Department of Science and Technology, and Department of Minerals and Energy should conduct research into renewable and alternative energy sources to find ways of powering up broadband connectivity, computers and handsets in areas of low power. Technology choices should be guided by long-term environmental sustainability considerations as much as by short-term cost benefits, or the use of 'most available' technologies. New infrastructure should rely on renewable energy sources from the outset, wherever possible and practical.
- xvii. The Department of Environmental Affairs and Tourism, the Department of Communications, the regulator and local governments and municipalities should insist that all ICT roll-out initiatives are in line with progressive policies on waste management regarding the environmentally and human-friendly disposal of discarded technology according to the best available disposal option. These disposal practices should be written into government contracts and required by legislation for private sector roll-out initiatives.
- xviii. The Department of Communications and the Department of Health should pro-actively monitor and research the potential negative health impacts of ICTs on people (e.g. the safety of wireless solutions). This needs to inform and update government policy positions, roll-out decision-making and priorities, and regulations. A public communication platform that informs the public of any potential negative health consequences of using ICTs needs to be created.

Content applications and services

While the availability of affordable bandwidth will stimulate the development of commercial content and services, strategies to incentivise the production of necessary uneconomic content and services need to be developed, these could include:

- i. National, provincial and local governments should prioritise the production of digital content relevant to the needs and languages of target communities. This in order to drive the take up of e-government services which have the potential to improve service delivery in a broadband environment. Where possible, beneficiaries should be involved in the development of the content (e.g. in the scoping of content needs).
- ii. Government, development partners, and the private sector should support research and development (R&D) and innovation in content, networks, software and new technologies through

universities and other existing centres of excellence. This could partly be achieved through an expansion of the current Science and Technology R&D Tax Incentives Programme, so that it overlaps with other sectors and includes content industries, amongst others.

- iii. Government should encourage the development of new non-discriminatory intellectual property models, and progressive policy and legislation on digital rights and copyright should be developed. These should take into account the communication and socio-economic rights of people, as well as the strong developmental potential of open access copyright regimes, while paying heed to the reasonable need for the recognition and protection of intellectual labour and content ownership. The reasonable interests of suppliers and users needs to be balanced, as well as the broader objectives of developing a free and open information society that can be trusted by all stakeholders.
- iv. Government, development partners and the private sector should support libraries, archives, and educational institutions to digitize content responsibly, and make the transition into a broadband environment. Public access should be given to archives of public value and importance that have to this point remained closed or inaccessible (such as South African Broadcasting Corporation (SABC) archives, and others).
- v. Government and development partners should incentivise content industries and creators to develop high quality local digital broadband content in languages of choice. Incentives should be equitably distributed across the different stakeholders in the industry, including stakeholders in the private, non-profit, and academic sectors, in the arts, as well as individuals, groups or communities. The access context (including literacy levels) of the intended beneficiaries of the content should shape the kinds of content developed.

e-Governance and e-citizenship objectives

- i. Universal Service and Access policy, including the operation of the USF, should be reviewed and renegotiated with stakeholders, while preserving the progressive policy instruments that are currently articulated in the policy. The policy should also be expanded to support community-based networks and access to the Internet. During this review process legislative anomalies that impede the work of the regulator and other agencies must be eliminated.
- ii. The roles of the State Information Technology Agency (SITA), USAASA, and the Sector Education and Training Authority (SETA) in providing access should be reviewed.
- iii. The mandate of the Media and Diversity Development Agency should be expanded to support the commercial and community media's to transition to a broadband environment.

- iv. The potential of broadband should be leveraged for the provision of essential services, including education (e.g. distance education) and health services. The needs of these services should be clearly articulated by the sectors concerned.
- v. Without compromising existing services, national, provincial and local governments should digitize and distribute public sector information and improve access to interactive public sector online content in anticipation of affordable broadband access for all. Where possible, public services content should also be compatible with mobile phone access. Funding should be made available from National Treasury to do this.
- vi. National, provincial, and local governments should prioritise the recruitment of staff who understand broadband technology and the potential of new media.
- vii. The possibilities of using broadband to stimulate people's interaction with state and other authorities in order to further democracy and to secure the rights of freedom of expression and voice for citizens and others residents in South Africa need to be explored.

Demand-side objectives

The demand-side objectives aim to:

- Take steps to stimulate the responsible creation and use of broadband content by citizens, amongst others resident in South Africa
- Take steps to stimulate the adoption and use of advanced broadband connections in order to fully realise the potential of ICTs and digital media to support learning and teaching

Means to do so

In order to achieve these objectives, all stakeholders should commit themselves to the following:

Content creation and use

- i. People should be encouraged to express themselves freely and creatively.
- ii. The Department of Social Development and Department of Trade and Industry, amongst others, need to develop public awareness campaigns that highlight the opportunities of broadband for citizens need to be developed.
- iii. The Department of Communications, the Department of Arts and Culture and the Department of Public Works in conjunction with relevant agencies, the private sector and development partners should roll out affordable and appropriate access technologies to

disadvantage areas, including through telecentres, libraries, community centres and other access points. The use of good quality refurbished personal computers (PCs) sourced from local markets needs to be encouraged, along with other affordable and reliable technologies.

- iv. National Treasury should consider tax and other incentives for the roll out of technology to disadvantaged communities.
- v. All stakeholders should encourage a culture of responsible e-content use, including the sharing and use of mobile content. Respectful online interaction needs to be encouraged generally, based on universal values of human rights, tolerance and dignity.

Education and training objectives

- i. The Department of Social Development, Department of Trade and Industry, Department of Communications, and Department of Education should develop and roll out a free broad-based national e-citizen training programme. This should focus on basic computer literacy, how to use e-government services, and how to leverage economic opportunities using broadband. This could be rolled out in conjunction with non-profit organisations, schools, universities and other institutions, as well as with programmes such as workplaces skills development programmes.
- ii. The Department of Education, the private sector and development partners should ensure that every school and university student, teacher and lecturer has appropriate technologies that can connect to the network through high speed broadband connections to be able to communicate, collaborate, and participate in effective learning and teaching practices. IT managers should be trained through national programmes and other initiatives to support this.
- iii. The Department of Arts and Culture, together with relevant agencies and stakeholders, should ensure that every provincial and municipal library includes an internet-based learning centre in which citizens can receive guidance in foundational information literacy skills so that they can enjoy meaningful access to the Internet.
- iv. The Department of Social Development should ensure that workplace skills development programmes prioritize information and ICT literacy for all.
- v. An emphasis on universal literacy and numeracy at school-level should be reinvigorated at a national level, and a culture of reading and writing encourage through education campaigns.
- vi. Broadband access should be a critical component of outcomes-based education given that Web 2.0 enables students to collaborate and interact on educational projects. This should be teacher and curriculum led.

- vii. The Department of Education, together with relevant stakeholders and institutions, should conceptualize teacher training and re-training programmes focusing on the use of ICTs and the internet and other broadband platforms. Appropriate curricula should be developed and implemented. This should be used as an opportunity to improve pedagogical practice generally.
- viii. Policies and guidelines need to be put in place to protect young learners from exploitation. This should happen through multi-stakeholder consultation.
- ix. All broadband stakeholders need to be educated about policy and regulatory changes and requirements, and appropriately informed about what is expected of them.

Assessment of progress objectives

The implementation of the national broadband strategy should be monitored according to an agreed set of indicators in order to ensure the goal and objectives are met.

Means to do so

In order to do this, all stakeholders should commit themselves to the following:

- i. Specific timetables and benchmarks should be established to help encourage the successful implementation and advancement of national broadband policies, incentives or programmes.
- ii. A system for regular and timely collection and publication of data concerning the deployment, adoption, and use of high-speed broadband across both the private and public sectors should be instituted to ensure that our national goals and timetables are being met.
- iii. A mechanism should be put in place for roll-out strategy realignment should the targets not be met. This could include a multi-sectoral consultative workshop, with firm implementable outcomes, and government commitment to a reallocation of resources or a rearrangement of priorities in the event of targets not being met.
- iv. The possibility of establishing a multi-stakeholder national research programme that specifically looks to understand and evaluate evolving user needs (including those of individuals, business and local government), universal service access targets, environmental impact and health and safety concerns. This programme should inform roll-out priorities over time, and help modulate roll-out strategies where necessary.

Johannesburg, 6 April 2009