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BROADBAND ROLLOUT AND THE REGULATORY AND INFRASTRUCTURAL CHALLENGES

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INTRODUCTION

The rapid growth of the digital economy coupled with broadband presents huge opportunities for economic and social development, creating global markets for ICT applications and services, improving productive capacity, reducing the cost of doing business, and unleashing creativity and innovation.

The growth of broadband networks will accelerate this trend, offering the opportunity to leapfrog time and distance limitations. These networks have and will continue to provide new ways for all members of society to obtain

information that will promote greater education, employment, health, safety and security, and for economic gain.

BROADBAND CAN UNLOCK TRANSFORMATIONAL GROWTH

Telehealth and Telemedicine

Broadband can facilitate provision of medical care to unserved and underserved populations through remote diagnosis, treatment, monitoring, and consultation with specialists (through telehealth and telemedicine). Broadband and health information technology (IT) will transform health care, simultaneously enabling better outcomes and lowering costs.

In this connection, government needs to put the necessary incentives in place to encourage private sector initiatives. Electronic health records will provide a treasure of useful data, which could transform medicine if fully unlocked, however patient privacy needs to be fully protected.

Education, Culture and Entertainment

Broadband can overcome geographical and financial barriers to provide access to a wide range of educational, cultural and recreational opportunities. Education does not stop at the schoolyard gate or the library door. Digital textbooks and other mobile learning devices allow students to learn in a real-world context, inside the classroom and beyond. Because of their low cost and accessibility, these mobile devices can also help advance digital equity, particularly for children from economically disadvantaged communities.

E-government

E-government can help streamline people's interaction with government agencies, and provide information about government policies, procedures, benefits and programs.

Broadband-enabled online services can create paths across government's bureaucratic silos. Broadband holds the potential to move all government forms online, eliminating paperwork. Broadband allows for online tutorials for simple government services, which can help free government employees to focus on the most complicated cases. Broadband can increase efficiency by increasing the speed and depth of cooperation across departments and across different levels of government.

Economic development / e-commerce

Broadband can promote economic development and revitalization through electronic commerce by creating new jobs and attracting new industries, and provide access to regional and world markets. The United Nations Conference on Trade and Development (UNCTAD) recent information economy report (2010) shows that the increase in use of ICTs by small and medium sized enterprises (SMEs) has led to improvements in their business performance. ICTs could easily enhance efficiency in productive activities and improve competitiveness of SMEs.

DISCUSSION(S),

In the light of the above:

The South African government is taking steps to ensure that mobile broadband penetration reaches optimum levels in our country. According to a recent study commissioned by the Department of Communications, fixed-wireless broadband penetration is estimated at 2 percent.

Nevertheless more South Africans – in excess of 50 million – use mobile phones than radio (28 million), television (27 million) or personal computers (6 million). In addition, only 5 million South African use landline phones. However, the number of mobile phone users needs to be interpreted with circumspection. Using 2010 figures, of the more than 50 million mobile subscribers, less than 10 million were 3G phone subscribers. It is therefore clear that the need for mobile broadband has increased significantly.

Rapid growth in mobile broadband traffic is driving the need for additional mobile network capacity, thereby increasing spectrum requirements in markets across the world.

Similar to most countries this exponential growth in mobile data and video traffic is driven by uptake of smartphones, tablets and dongles in South Africa. This in the end requires additional radio spectrum, not just any spectrum but frequencies that can provide a combination of extended coverage and indoor penetration, complemented with frequencies enhancing capacity.

Therefore, a combination of low frequencies for coverage requirements, particularly of sparsely populated zones and high frequencies to add capacity in traffic hotspots is vitally important.

However, achieving this with fewer base stations and low cost is equally critical, which further raises the question of accelerating the release of the "Digital Dividend".

POLICY AND REGULATORY FRAMWORK

South Africa is working on a policy and regulatory framework that will assist Mobile Network Operators (MNOs) by ensuring equitable access to spectrum. The use of the "Digital Dividend" will be vital in ensuring rural connectivity and improvement in universal access and service. We are also aware that to be an effective national Mobile Network Operator, one would need both high capacity and coverage radio frequencies.

Our Government policy seeks to have a holistic approach in dealing with the "Digital Dividend" and we have developed a national broadband plan similar to that adopted by many developing and emerging economies.

Ladies and gentlemen,

From our perspective broadband is needed for economic development as well as social inclusion. It is for this reason that the South African Government has prioritized high speed broadband. Similarly, universal access to quality broadband is equally important to achieve social inclusion and reducing the digital divide.

South Africa's national broadband policy and e-strategy will inform the spectrum policy framework. The national e-strategy should, amongst other things, outline requirements for mobile services for deployment of mobile

broadband, interventions on lowering the cost of telecommunication services and a model that will address market failures, especially lack of sufficient rural connectivity.

This national e-strategy is outlined in our National Development Plan vision 2030 and will cut across all Government departments and sectors.

The national e-strategy aim to create sector growth and innovation through policy coordination that drives public and private sector investments in areas such as network upgrade and extension, particularly in mobile broadband.

The national e-strategy will also ensure that South Africa engages effectively and coherently on issues of regional integration and harmonization – interacting with various institutions, including Information Communication Technology (ICT) governance agencies such as the International Telecommunication Union (ITU) and the World Trade Organization (WTO).

FUNDING CHALLENGES

We have observed a lack of funding for unprofitable areas which then implies that Mobile Network Operators must cross-subsidize rural areas from profits in urban areas. In this regard the Government intends to work hand-in-hand with the private sector to find solutions within the framework of the national e-strategy.

We are also convinced that to stimulate investment growth in South Africa mobile broadband is the future for supporting a path to universal access particularly for Internet, e-government, e-economy, and e-society.

Great progress has been shown in this regard as our surveys indicate that the South African broadband market is dominated by 3G/HSPA connections and ADSL connections, together accounting for 95% of broadband connections.

In our view mobility is vital for supporting entrepreneurship and uplifting communities by connecting schools, health centres and other public institutions.

However, given low levels of disposable income this can only be a reality through affordable and exciting mobile broadband offerings.

Clearly, the mobile market and the potential of mobile technology to increase access and communication hold much promise for South Africa and other developing countries.

However, despite the tremendous growth of mobile, there remain significant obstacles to its uptake. High prices and the fact that older and cheaper phones are not enabled with key technologies are just two of these obstacles.

In June 2008, our regulatory body, the Independent Communications Authority of South Africa (ICASA) gazetted regulations aimed at preventing

consumers from being locked into long-term contracts with mobile operators.

According to the new regulations, consumers will be given the option to choose the period of their mobile phone contracts, from six, twelve, eighteen, to 24 months. This move, as well as efforts in the policy and regulatory environment, is to promote increased competition, and more affordable pricing.

Modernizing universal service programmes and funds

We believe that including broadband internet access in the universal service definition can be a first step to bridging the current digital divide. In addition, a national universal service programme that incorporates a framework to ensure blanket access to essential broadband services can be chosen. Universal service needs to be defined in a technologically neutral manner, that is, by defining services rather than networks or technologies.

Regulators and policy makers may consider transforming existing universal service programmes into programmes for digital inclusion that support broadband services for all citizens. Universal service programmes could be financed by revenues raised from the activities of a wide range of market players as well as from alternative sources.

Universal Access/Service Fund (UASF) could be modernized:

A. To serve as a facilitator of the market, piloting innovative rural services and applications, creating demand for advanced ICT connectivity and services (i.e., through financing broadband access for schools and hospitals, and direct subsidies to users); and/or

B. To serve as a funding mechanism for broadband networks into rural and high-cost areas through support both at the retail end (e.g., shared access), as well as at the wholesale end (e.g., through subsidizing intermediary network facilities such as backbones, wireless towers and other passive infrastructure).

IN CONCLUSION,

100% broadband possible with satellite:

In South Africa, the government's target of 100% broadband penetration by 2020 could be reached sooner than that — if it uses satellite services. There is a potential role of satellite in the national broadband project. The present geographic coverage of around 30% could be widened using Satellite technology. Including satellite services could take these parameters to 100% geographic coverage and 100% population coverage, but [with] limited speed and affordability.

Most of the existing coverage is in urban areas, leaving huge tracts of rural regions without internet access. It is not economical for telecommunications

companies to lay fibre in these areas, owing to fewer potential users. The lack of rural connectivity is due to "market failure". Although some mobile operators may see rural markets as the next growth frontier, it remains very hard for them to find commercial viability in connecting remote connectivity to national backbones.

USE OF TV WHITE SPACES FOR BROADBAND

The TV “white spaces” could be made available for unlicensed use enabling more powerful broadband services.

TV White spaces are the unused channels in the broadcast TV spectrum. New radio and database technologies allow that spectrum to be used to transmit wireless Internet over distances up to ten kilometers. As a result, white spaces can be used to deploy broadband access and other mobile data technologies.

For example, In South Africa we have piloted a project in Cape Town on the use of the unused spectrum for television broadcasting. The Cape Town TV White Spaces Trial is being conducted with the support of ICASA, the communications regulator of South Africa. A group of partners is setting up a TV White Spaces (TVWS) trial for ten schools in the Western Cape over a six month period. The trial partners include CSIR Meraka, and Google. The goals of the trial are to:

1. Demonstrate that TV White Spaces can be used to deliver affordable broadband and Internet services without interfering with TV reception

2. Increase awareness of the potential for TV White Spaces technology in South Africa and across the continent.

The partners will periodically update ICASA, Sentech, the Joint Spectrum Advisory Group, broadcasters and other constituents on trial outcomes, including spectrum measurements and reported interference.

The TV White Spaces network will consist of multiple base stations located at Stellenbosch University's Faculty of Medicine and Health Sciences in Tygerburg, Cape Town, which will deliver broadband Internet service to ten schools within a 10 kilometer radius. The ten schools have been pre-selected based on proximity to the base station, local IT and network support, and other connectivity requirements.

In summation, we have provided an overview of South Africa's broadband rollout strategy, as well as the infrastructural and regulatory challenges that we seek to address. We hope that this input adds value to the deliberations of the Workshop as well as to the ongoing work on e-commerce in the WTO.

Thank you.

END OF THE SPEECH