ERICSSON

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Attending to this matter: ASL/KN Thabiso Thukani

Your Reference:
Your Date:

The Director-General
Department of Communications
Attention: Ms Mameetse Mphahlele,
Head: ICT Policy Review Project Management Office
Block C, iParioli Office Park
1166 Park Street
Hatfield, Pretoria
Republic of South Africa

RE: National Integrated ICT Policy Green Paper

Dear Director-General,

Ericsson welcomes the opportunity to submit written comments to the National Integrated ICT Policy Green Paper published by the Minister of Communications, Hon. Yunus Carrim in Government Gazette No. 37261 of 2014.

This undertaking is the long-awaited culmination of the National ICT Policy Colloquium, first announced in 2009 by the then Minister, Hon. Siphiwe Nyanda. This vision is also in part buttressed by the National Development Plan (NDP) which envisioned an ICT ecosystem.

Ericsson supports the efforts undertaken by the Ministry and the ICT Policy Review Panel and appreciates the gravity of the Green Paper to broaden communications policy considerations to include all 'communication-related policies' and not just telecommunications. This is in light of the prevailing patterns which indicate increased technological advancements and convergence between the different communications services available.

Ericsson would also like to extend its support in respect of lending its expertise as the Ministry may require facilitating a smooth transition to the new dispensation. We remain at your disposal.

For and on behalf of Ericsson,

Magnus Mchunguzi,

Managing Director

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1 INTRODUCTION

This Green Paper like the National Broadband Policy: South Africa Connect recognizes that growth hasn't been delivered in a proportionate manner; therefore, together with the New Growth Plan (NGP), National Development Plan (NDP), National Industrial Policy Framework (NIPF) and the Industrial Policy Action Plan (IPAP), it seeks to remedy this imbalance and support a more sustainable pattern for the future development of the industry.

The ecosystem that resonates in this document is one of networks, services, applications, content and innovation that will spur significant economic growth, development and competitiveness; employment creation, nation building, social inclusion and cohesion; local, national and regional integration. The depth to which the drafters went into producing this document is laudable.

However, it is respectfully submitted that the tone adopted in the document is of 'a matter of fact' difficult to critique. Moreover, the document remains silent on the many legal instruments that find equal application to those governing the communications sector that will form and or inform the Green Paper. Integration is the golden thread or principle that permeates and defines the very ethos upon which the Green Paper is premised, deference must therefore be given to the spirit of collaboration so that we do not inadvertently undo the gains that have given us a balanced perspective.

The provision of connectivity will probably be telecom's mainstay business for a foreseeable future. Broadband and high-speed transport networks will connect people and equipment all over the world. Ericsson predicts that by the end of 2019, around 90 percent of the world's population will have the opportunity to access the internet using WCDMA/HSPA networks and more than 65 percent of the world's population will be covered by LTE[1].

Governments are demanding broadband connections for everyone. Standardization, interconnection and regulation are essential aspects of future connectivity. That is the only way to provide economies of scale (leading to low prices), fair usage of spectrum and quality of service.

[1] Ericsson Mobility Report, November 2013 http://www.ericsson.com/res/docs/2013/ericsson-mobility-report-november-2013.pdf

To maximize the value of these connectivity services, telecom operators also need to further improve basic communications services and address the potential of, for example, high-definition voice, high-definition TV, virtual videoconferencing, and active address books.

These kinds of improvements require interoperability between service providers, higher speeds (real-time functionality) and higher-quality connections. Other examples could be found in the areas of high-security transactions for payments, for example, e-commerce and e-health. All of these examples point towards the importance of future communications services that are not “media” in the sense of content provided by other market players.

Clear regulatory rules in a competition-friendly environment are some of the most important criteria when operators consider investing in, say, deploying deep fiber or mobile broadband access. On the other hand, ambiguity on the part of regulators is a sure-fire way to stifle investments or market growth.

Spectrum is a critical building block in any new regulatory framework. The supply of spectrum is a key enabler for choice and competition, and spectrum decisions have a major impact on the evolution of the communications sector. As technology advances, allowing more and more spectrum to become usable, the issue ceases to be whether there is a shortage of spectrum. Instead the issue becomes a shortage of rights to use the spectrum.

Spectrum allocation goes hand-in-hand with global standardization and business development, and must also be applied on a global scale. Spectrum harmonization is a decisive factor for the price of terminal devices and network equipment – fragmentation raises the cost to communicate as the equipment and devices gets manufactured in many derivatives.

Lately, policymakers in developing countries of Africa and Asia-Pacific have been intrigued by the idea of TV White Spaces as articulated by its proponents. Some of these policymakers have found the narrative appealing enough to make limited spectrum resources available for TVWS trials in their respective countries. No government has yet taken a formal stand in favor of TVWS approach, nor assigned license-exempt status to TV UHF spectrum. Policy-makers and regulators should exercise forbearance before rushing to declare prime spectrum as unlicensed until such time the digital switchover is completed.

2 FACILITIES-BASED VS SERVICE BASED COMPETION

The question on how to best achieve access to high-capacity broadband networks continues to be a topic for debate. It is without a doubt that a hybridized competitive environment is the desirable approach owing to the prevailing circumstances and market forces in the country. Moreover, we should not overlook the importance of applying 'common sense' standards to the circumstances.

Due to the potential mixed effects of service-based competition (SBC) as well as the challenges surrounding facilities-based competition (FBC), a combination of both SBC and FBC seems to be the logical conclusion as it stimulates investments and achieves a healthy balance between incumbent and new entrants. This approach has been widely articulated by well-known scholars and academics. It is within the exclusive purview of the Ministry and the regulator the Independent Communications Authority of South Africa (ICASA) to determine the exact 'contours' of this hybridized-approach.

2.1 Infrastructure sharing

Infrastructure sharing is the subject of diverse interpretations from various stakeholders, depending on which side of the fence they sit on. Policy-makers and regulators view it as an instrument to grow competition, infrastructure providers as a potential source of revenue and new entrants as a given right that should come at an affordable price.

Infrastructure sharing can provide additional capacity in congested areas where space for sites and towers is limited. It can also expand coverage into far flung rural areas that have minimal or no broadband connectivity.

As a technology and market concept, infrastructure sharing finds application in many countries as it allows operators to share the passive and the active components of the network and thus avoid unnecessary duplication of infrastructure.

While it may at times be advantageous for mobile operators to share infrastructure, network deployment remains an important element of competitive advantage in mobile markets. Sharing should therefore ideally be the result of a commercial arrangement with little or no regulatory intervention wherever possible.

The policy issues related to competition and sharing are complex. Paradoxically, sharing offers both the possibility of enhancing competition and the risk of hindering competition.

If most operators rely on the same underlying infrastructure providers, it is likely that there will be little ultimate differentiation in their services. The benefits of competition like lower prices and consumer choice are reduced as a result.

Ultimately, there is an inevitable tension between the equally important goals of reducing barriers to market entry and stimulating investment in infrastructure. Both of these goals are relevant to maintaining healthy competition in the ICT sector. Striking the appropriate balance between these goals is a delicate matter for policy makers and regulators.

It is in this regard that Ericsson submits that government should not only focus on a single socio-economic development objective when it considers network sharing as an instrument for change. Ericsson further submits that where government employs Wholesale Open Access Network sharing, it should be based on sound principles that make business sense and pass the legislative 'barometer' as outlined below.

2.2 Infrastructure sharing principles

- Transparency – relevant information must be published, government institutions should exercise their powers impartially and give interested parties the opportunity to comment on and to shape the telecom sector.

- Efficiency – measures should be laid down that prevent unnecessary barriers to trade in services, disciplines that are not overly burdensome, and most important, efficient means of applying and enforcing regulatory decisions.

- Non-discrimination – directives and obligations should be administered in a transparent, impartial, non-discriminatory and competitively neutral manner and develop an effective appeal mechanism for the operators.

3 SPECTRUM FOR MOBILE BROADBAND

Mobile broadband is playing an increasingly important role in our everyday lives. It has changed the way we live, work and play; enabling people to perform tasks and activities regardless of physical location. Its power to reduce the digital divide and improve the quality of life will be most felt in the developing world.

While voice remains a cornerstone of most operators' service offerings, it is data growth, driven by the uptake of smart devices and apps that will have the most significant impact on networks globally. Video traffic will grow by around 55% annually and will constitute more than 50% of all mobile data traffic in 2019[2].

In order to be able to meet this insatiable demand for more data, as outlined above, mobile operators will need access to more spectrum. Sufficient, internationally harmonized spectrum is essential to ensuring the quality of service that consumers and businesses have come to expect, and rely on, from mobile networks. Regulators are also actively looking at this issue of network quality with keen interest.

South Africa continues to play an active role in ITU activities of identifying and allocating additional spectrum for IMT. Some of the spectrum bands that were identified a long time ago and have been allocated in the National Table of Frequency Allocation still remain unassigned. Bands such as the 2600 MHz (2500-2570 MHz paired with 2620-2690 MHz) have been lying fallow from as far back as 2006. Swift action is necessary to license this spectrum and allow operators to provide services using these bands.

3.1 Spectrum wholesale open access network

Ericsson humbly submits that the government should avoid the creation of a *de facto* “monopoly” by giving the entire spectrum in the prime bands to a single entity. A balance needs to be struck between the aspirations on new entrants and expansion objectives of incumbent operators.

Where possible spectrum categories can be established to guarantee access for the wholesale network and also reserve some for the incumbents to access through normal market-based mechanisms.

3.2 White Spaces and TV White Space (TVWS)

Ericsson believes that the sub-1 GHz TV UHF spectrum, with its excellent signal propagation properties, is best exploited for social good under a licensed spectrum framework, among other reasons, because the global scale and a robust eco-system associated with 3GPP technologies deployed in the licensed framework will bring down prices for both network deployment and devices. Meanwhile TVWS has no ecosystem.

[2] Ericsson Mobility Report, November 2013 http://www.ericsson.com/res/docs/2013/ericsson-mobility-report-november-2013.pdf

It is worth noting that Ericsson is NOT against unlicensed use of spectrum per se -- only against the unlicensed use of prime spectrum in the lower, sub 2 GHz frequency bands.

We support the unlicensed spectrum use in the 2.4 GHz and 5 GHz bands (the WiFi bands) and serve our customers with carrier-grade WiFi products in that unlicensed spectrum range. We have a large portfolio of products in the unlicensed spectrum range as a result of our acquisition of BelAir Networks.

Ericsson is concerned that an unlicensed spectrum regime such as TVWS would likely make it difficult to attract capital investment and expertise necessary to exploit and utilize the spectrum in these markets to its fullest. Investors seek to be assured of their return on investment before committing funds (for infrastructure deployment, for instance); a free for all, unlicensed spectrum regime would fail to provide that assurance.

Secondly, we are concerned that under an unlicensed spectrum regime, a South Africa would potentially forfeit the enormous scale and scope associated with globally standardized technologies in the licensed spectrum framework.

Thirdly, we fear that such an approach risks inviting the “Tragedy of the Commons.” This is the idea that individual actors, acting independently and rationally according to their respective self-interest, act contrary to the group's long-term best interests by depleting the common or shared resource – in this case, valuable spectrum.

But, above all, as we mentioned above, we worry that an unlicensed spectrum framework invites opportunistic use of the spectrum by market players and, in the absence of policy direction and oversight – such as coverage conditions associated with formal licensing of framework – would undermine the policy goals of inclusiveness and of bridging the digital divide.

The LTE technology, built to globally accepted 3GPP standards, already has a robust ecosystem in place, and has the support of major chip and equipment vendors. WCDMA/HSPA already provides coverage to 60% of the world’s population. Third and fourth generation cellular technologies, beyond the benefits of scale and a robust ecosystem, provide backward compatibility and a roadmap to the future.

South Africa has deliberately embarked on the cause of a developmental state; and an unlicensed spectrum regime envisioned by TVWS proponents flies in the face of this socio-economic development ideology.

4 ABOUT ERICSSON

Ericsson is a world-leading provider of telecommunications equipment and services to mobile and fixed network operators. Over 1,000 networks in more than 180 countries use our network equipment, and more than 40 percent of the world's mobile traffic passes through Ericsson networks.

We are one of the few companies worldwide that can offer end-to-end solutions for all major mobile communication standards. Our networks, telecom services and multimedia solutions make it easier for people, across the world, to communicate.

And as communication changes the way we live and work, Ericsson is playing a key role in this evolution. Using innovation to empower people, business and society, we are working towards the Networked Society, in which everything that can benefit from a connection will have one.

Our vision is to be the prime driver in an all-communicating world.