

# Spectrum: Key requirement for the Nigerian mobile broadband revolution

By [Osondu Nwokoro](#)

5 Mar 2013

Access to "always on" and "fast internet service", generally referred to as broadband, is now an essential ingredient for participating in the global digital society. The presence or absence of it determines what side of the digital divide a country and its citizens would find themselves on. It has now become a basic need and an index of development such as access to electricity and telephones, etc. Indeed in Finland, broadband is now considered a fundamental human right.

The Broadband Commission (a joint initiative of the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organisation (UNESCO) has stated that "the internet and other ICT platforms now constitute critical modern resources and are vital prerequisites for participation in today's growing digital economy".

## Benefits of broadband

It further acknowledges that "the benefits of broadband are profound - in opening up young minds to new horizons through educational technologies; in empowering women to expand their opportunities through genuine choices; in improving awareness of hygiene and healthcare; and in helping family breadwinners find work, a better salary or return on their goods.

Through broadband, the provision of public services is transformed to make them global public goods for the global good. Greater access to the internet and broadband applications and services help accelerate achievement of internationally-agreed development goals, including the Millennium Development Goals (MDGs)."

Broadband facilitates: e-commerce, e-education, e-entertainment, e-health and e-government, as it is more commonly referred to, where online activities bring about huge efficiencies in daily activities and also creates new opportunities. Mobile or m-services have introduced the element of "mobility" to the smart world.

In Europe, the smart concept (running on "e" and "m" services) has been extended to smart-homes and smart-cities. Nigeria is not left out in aspirations in this regard - the Centenary and Eko Atlantic Cities in Abuja and Lagos respectively are smart city developments, with the latter perhaps the first smart-city initiative in Africa.

## Access to broadband - a top priority

The Broadband Commission charges that "access to broadband infrastructure and services must therefore be a top policy priority for countries around the globe, developed and developing alike as well as Least Developed Countries". It urges

"governments and business to work together to develop innovative policy frameworks, business models and financing arrangements needed to facilitate growth in access to broadband worldwide."

Without a doubt, Nigeria has made great progress in telephony penetration over the last ten years. Telephone penetration stands at 81% as of December 2012, according to statistics published by the Nigerian Communications Commission (NCC).

Having addressed telephone penetration, the next challenge on the horizon is broadband accessibility. According to statistics from the ITU, notwithstanding that Nigeria has 45 million internet users, the highest online population in Africa, only 9% or about 14.5 million are actually internet subscribers.

Internet-to-Home Penetration is 4.6% while broadband penetration is at a mere 6%. With a youthful population and growing middle class, the market holds great potential.

A recent media review indicates that Nigerians make up nearly 30% of summer visitors to Dubai where payments for goods and service are commonly made via mobile devices. The foregoing is indicative of a huge market for mobile broadband services in Nigeria.

## **"Open Access" for broadband development**

The recent initiative of the Federal Government in inaugurating a Presidential Committee on Broadband with membership drawn from both the public and the private sectors is very encouraging. The NCC's initiative of an "Open Access" model to facilitate non-discriminatory access for broadband development is also acknowledged.

The dearth of fixed infrastructure and the ubiquity of mobile infrastructure built over the last decade make progression from mobile telephony to mobile broadband the logical path for Nigeria to actualise broadband.

The GSM Association (GSMA) in its 2010 Report on Nigeria acknowledges that "broadband is already mobile". It is the case that our mobile phones have grown from providing basic telephony and SMS to providing multimedia services - to varying degrees, we talk, check our emails and chat, find information, get news online, watch movies and sports, make payments for services, purchase items and make bookings, interact with family, friends and colleagues as well as with business associates and public officials on social media. These mobile devices or phablets have become pervasive tools of the digital society, much like the pen and paper or the hoe and cutlass before it.

## **Delivery of mobile broadband**

The requirements for the effective delivery of mobile broadband are:

- international connectivity to deliver needed bandwidth to the country
- domestic high speed connectivity to move bandwidth inland and,
- radio spectrum to distribute the bandwidth to the "last mile" for consumer access.

Undersea cables have landed impressive international bandwidth in Nigeria, fibre connectivity to switching centers across key cities is in place and growing in capacity - the challenge of fibre deployments and cuts is a topic for another discussion and mobile infrastructure is spreading to support the progression from mobile telephony to mobile broadband. Government therefore needs to take necessary steps to ensure availability of the 700 MHz and 2.6 GHz spectrum for the telecommunications industry.

## **Mobile broadband revolution**

Similar to the situation in 2001 at the onset of the "mobile telephony revolution" in Nigeria, we are today on the brink of a "mobile broadband revolution"; the 3G network will very soon become as pervasive as the 2G, or more specifically, the 2.75G network.

Therefore the industry is poised for 4G deployment on LTE but is constrained by spectrum availability as the 700MHz Digital Dividend band and 2.6 GHz which are acclaimed by the ITU as most suitable for LTE deployment in sparsely (rural) and densely (urban) areas respectively are not currently available for use by the telecommunications industry as they are being deployed for broadcast services by the National Broadcasting Commission (NBC).

We had not met the recommended Analogue-to-Digital Broadcast Switchover in 2012 and this is depriving the country the opportunity of making the 700MHz band available for mobile broadband. A revised plan is yet to be formally announced and there is no certainty that we will meet the internationally agreed timeline of June 2015 for analogue broadcast switch off.

There is also uncertainty as to arrangements for the release of the 2.6 GHz spectrum to the NCC for Mobile Broadband. The present initiative of government to merge the technical departments of the NBC and NCC is noted but there is obviously a need for greater clarity on the modalities of the merger and timely resolution of the various other issues around the transfer of the spectrum to the communications industry.

It goes without saying that government will earn revenues directly from the activities of ICT companies in the mobile broadband ecosystem, while socio-economic development will also be facilitated by the service. The World Bank has stated that every 10% increase in broadband penetration accelerates economic growth by 1.38%, and that 1.4 to 3.6 indirect and induced jobs can be potentially generated from each direct job in the sector. On its part, the GSMA has indicated that with positive policy action, mobile broadband can potentially contribute over 1.7% of non-oil GDP in 2015, supporting diversification of the Nigerian economy.

It notes that "...such economic gains, however, depend on a positive environment created by all stakeholders that addresses infrastructural problems, spectrum management, and access to the internet for women and rural citizens". The developmental benefits of mobile broadband cannot therefore be overstated.

## **Mobile broadband deployment**

Clear-minded public-private collaboration is evidently a key requirement for mobile broadband deployment and adoption in Nigeria. The telecommunications operators are willing to play their part and have demonstrated such intent through continued deployment of infrastructure in the face of very daunting challenges.

What is so far missing in the equation is an investor-assuring statement on the deployment of the 700GHz and 2.6GHz spectrum from government. Indications from the establishment of the Presidential Broadband Committee and the merger of the NCC and NBC Technical Departments, are that this is on its agenda.

However prompt decisions around these spectrum bands as well as clear communication and expeditious implementation of such decisions are required so that the Nigerian telecommunications industry can start preparing in earnest for the forthcoming mobile broadband revolution.

## **ABOUT THE AUTHOR**

Osondu Nwokoro is the director: Regulatory Affairs and Special Projects at Airtel Nigeria.

For more, visit: <https://www.bizcommunity.com>