

Driving the evolution of mobile broadband in Africa

As consumer and business demand continues to drive the evolution of mobile broadband in Africa, operators are faced with the challenge of not only increasing network speed and capacity but also improving coverage, customer service levels and network quality to attract and retain this rapidly growing user base.

By [Karri Kuoppamäki](#) 11 Apr 2012

The importance of Africa as a growth market for operators is clearly evident, as the continent remains the fastest growing telecommunications market in the world. In 2011 the mobile penetration rate in Africa was 78% and is expected to cross the 100% mark by 2014, as it tracks the more mature South African telecommunications market. South Africa, which currently leads the continent in terms of telecommunication technology, crossed the 100% mobile penetration rate in 2010 and is expected to continue along this growth curve, reaching 150% penetration by 2015.

The adoption of smart mobile devices

In addition to the increased volume of subscribers using mobile networks in Africa, the continent is also experiencing rapid growth in the adoption of smart mobile devices like smartphones and tablet PCs. These devices are increasingly being used to access 'always-on' mobile broadband-intensive services like social media, stream and play online videos, and much more, which puts significant pressure on mobile networks. This trend is driving exponential data growth in the African and South African telecoms market, with data demands expected to grow 10-fold by 2015.

The importance of mobile broadband services to subscribers is clearly reflected in the 2011 Acquisition & Retention (A&R) study conducted by Nokia Siemens Networks (NSN), where heavy mobile broadband users who are currently dissatisfied with their current service will have a higher probability of switching operators. This is an important segment of consumers as revenues from voice services are dropping and mobile data will be the most important revenue generator for operators in the future.

Network coverage and voice quality were rated as the most important criteria for selecting and staying with an operator in 2010 and continue to be among the top criteria to retain customers in 2011. However, customers who are classified as 'heavy users of advanced services' now rank mobile broadband quality alongside voice quality and network coverage in determining whether to stay with or leave their current mobile operator.

The A&R findings also clearly indicate the importance and impact that customer care and experience can have on subscriber retention, which means operators cannot overlook or underestimate these elements. Technology is one avenue that operators can use to assist them in enhancing their customer care capabilities. For instance, intuitive self-care systems like NSN's Customer Experience Management (CEM) solutions can help operators utilise the extensive customer data from across their organisation to understand and predict customer expectations and behaviour. This can significantly enhance value and boost customer care.

Importance of mobile broadband

In addition, the study also highlighted the importance of mobile broadband in terms of customer retention and as a revenue stream for operators, especially as global mobile broadband usage is currently just 60%. This figure is higher in in-transition markets, where 68% of users have mobile Internet access. 46% of users access the mobile internet via their smartphones, followed by data cards, dongles or web sticks at 29% and netbooks or tablets at 19%. WiFi hotspot access accounts for 36% of the market, with 42% of users in in-transition markets using this form of wireless access.

With such growth potential NSN believes that mobile broadband is the future of telecommunications, especially in the Africa region, and is committed to providing the world's most efficient mobile networks, the intelligence that maximises the value of those networks and the services that make it all work seamlessly.

Mobile broadband technology

As mobile broadband technology will serve as a key differentiator for operators and early adopters of mobile broadband, NSN began realigning our strategy in 2011. This is aimed at helping African operators deliver the next evolution in mobile broadband as they look to improve the capacity and speed of their networks by increasing their emphasis on technologies that can carry more data, like 3G to support the mass market and LTE (4G) to deliver premium services. By offering technologies like 3G, WCDMA, HSPA and HSPA+, TD-SCDMA, LTE and LTE-Advanced, as well as innovations like NSN's Liquid Net, African operators can overcome conventional network limitations and redirect spare capacity where it is needed, when it is needed.

By unleashing frozen network capacity into a reservoir of resources, NSN's Liquid Net technology provides an end-to-end solution that enables mobile broadband networks to instantly adapt to unpredictable change in end-user demand and boost the network utilization. This technology helps create a network that is able to understand the traffic and service demands placed on it by a broad variety of daily users.

Next-generation technologies

For example, if a business person moves from his home in the morning to a commercial area for work during the day and then to a recreational area in the evening, Liquid Net helps the network adapt to these movements and continue to provide an exceptional level of service quality. If there's a concert or football game in Johannesburg, South Africa, the network becomes aware of the concentration of people in a particular place and adapts to meet the demand of mobile connectivity. This enables operators to make the most of their network resources and also opens the door to new revenue streams for them.

These next-generation technologies also boost network, voice, messaging and internet quality by helping operators predict patterns of bandwidth usage and avoid spikes in network demand, while delivering high speed ubiquitous mobile broadband services through expanded network coverage, which all positively impact on customer loyalty.

With this level of technology in place operators are able to meet the ever-changing demands of end-users who increasingly use mobile broadband to stay connected to applications and internet-based services via a number of new mobile devices as they move around.

Liquid Net is based on evolutionary change rather than wholesale revolution, the process of transforming a network into a more fluid and dynamic one can be started in any domain at any time, be it the radio, core or transport layer. This allows operators to deliver a 'unique experience' to their customers, win them over and secure a valuable market share in the highly competitive and important African market.

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