Connecting rural Africa

by Bill Hearmon, African Broadband Forum

Imagine Africa, connected. The African Broadband Forum is encouraging the penetration of broadband into Africa and aims to lead the rapid deployment of 4G technology systems based on open standards encompassing all core architectures. This will lead to a massive increase in the use of the internet to meet the needs of markets in Africa.

Open standards and the broadband challenge in Africa

With internet penetration at only 2%, Africa has more to gain from broadband and open standards than any other continent. Governments view broadband as an essential utility, like water and electricity. Open standards, which result in more competition and easier access, are coming. Android devices are outselling Apple's iPhone in the US. This bodes well for lower cost smartphones and will deal a death blow to monopolies. An abundance of fibre capacity to the coastline will soon be a reality. The challenge is to make the capacity available to the 880-million, mostly rural, inhabitants living in the 48 Sub-Saharan countries. Fibre to the base station and wireless for the last mile is the call.

Prior to a telecoms handset conference in the US in January 2011 about 26% of US smartphone users said an Android device was their primary phone in the three months ending in November, compared with 25% using Apple's iPhones, according to Internet market research company comScore. BlackBerry maker Research In Motion Ltd. still held the first-place spot, but its share of users declined to 33,5% from 37,6% in August as reported by Dow Jones & Company on 5 January 2011.

Other estimates, like those from market-research firm NPD Group, have shown Android devices outselling iPhones, or moving ahead among consumers only. But comScore's numbers show Android now has the larger user base overall, even counting business users and people who still have older phones.

Quoting Bloomberg News: "The shift underscores Android's importance in the mobile market: While the iPhone system runs only on Apple devices, Android has opened up the world of smartphones to a variety of manufacturers, and it is paying off. At the recent Consumer Electronics Show in Las Vegas, device makers touted a plethora of gadgets that run on Google's platform."

"But Android's meteoric rise doesn't tell the whole story," said comScore senior analyst Mark Donovan in an interview with Digits technical journal. He pointed out that Android was spread across dozens of different phones in comScore's survey, while Apple's iOS operating system is only on iPhones.

"If you put on your hat as a (software) developer or publisher," it can be easier to make products that work on the iPhone," he said. "Android is doing a great job of getting consumer penetration. But there are still challenges vis a vis Apple."

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He said the 'big wrinkle'could come in 2011 if the iPhone moves to Verizon Wireless, after being exclusively on AT&T since its launch. "Certainly if it does, you will see an uptick in iPhone ownership," he added.

Competition aside, the market looks rosy for both platforms, as smartphone ownership overall increased by 64% from last year.. The iPhone saw an increase of 61% – a good number, although it was overwhelmed by Android's astronomical leap of more than 1,000%. One in four Americans now owns a smartphone, Donovan said, and at the current rate of growth, we'd be looking at about 80-million smartphone owners a year from now. "And that's probably a conservative estimate," he added.

The potential losers in all of this? Other platforms. Although it is holding on in first place and its user base grew 35% over the past year, RIM is losing ground to both Android and the iPhone. And Microsoft's numbers, already much lower than the others', fell by 22%, to about 5,6-million, said Donovan.

The African Broadband Forum (ABF) sees this open market strategy for handset operating systems playing a major role in the solution to assist in overcoming the many obstacles facing the introduction of the internet to the remotest African villages.

Bring the internet quickly to Africa

Encouraging ongoing investment to extend the high speed internet's capacity and reach is essential to the health and growth of Africa's economy. This bodes well for the arrival of innovative, broadband-driven advances that bring quality education, health care, and good governance to our communities. The availability of open standards with robust broadband services and applications across the continent, hinges on policies that encourage vigorous, private sector investment in this essential modern infrastructure. However, many entrepreneurs are confused on which path to take and technology to use. The goal of the ABF and its members is to help them make the right choice.

The ABF 's plan of action.

- ABF arranges visits to operators in Africa. Their broadband challenges and needs are assessed and catered for
- ABF promotes best practices followed by winning countries
- ABF urges you to attend conferences in Africa and promotes the ideals and aims to all interested parties of the ABF, encouraging them to join the Forum
- ABF provides the facility of using the web-based forum that includes White Papers with links to founding members and technology suppliers. This includes current news on the front page together with terminology definitions, event advertising and notifications, staffing requirements and a Q&A Forum Service page. A private members section with lists of operators and vendors and their private contact details is extended. The Forum has published conference presentations, minutes of aggregation buying meetings and country regulator best practices, recommendations and more details

- ABF holds annual regional conferences on specific and pertinent topics with founding members having a priority access to speakers and exhibitions
- ABF entices active participation in international conferences with emphasis on the goals of the ABF and its members.
- ABF will help you lobby and champion the spectrum and licensing requirements for all broadband technologies with individual country regulators.

Strategies to connect rural Africa

At the Connecting Africa eStrategies conference in Cape Town in October 2010 the roundtable chaired by Bill Hearmon of the African Broadband Forum reported that after much lively discussion and the launch of the descriptive vision: Imagine Africa, Connected. Great comments and discourse was held and the results were amazing.

Requests were made for regulators to speed up, universities and technicons to teach relevant material, operators to share infrastructure, vendors from China to train customer staff, operators to employ technicians that can be trained, mobile operators to become the mainstream thrust for broadband and standards be enforced on the Chinese suppliers. A few people commented on how well companies like Cisco, HP and Ericsson ran their training programs which set a high standard for others to follow.

The participants felt that it was worth noting that while the connectivity challenge for many countries in Africa reflected in part the income levels, experience elsewhere showrf that connectivity was not solely determined by income. Policies and regulations that promote technology adoption, private investment, and competition also played a major role and positioned countries to take advantage of the leapfrog opportunity that ICT could represent.

The panelists felt that technology, fortunately, is expanding the range of options available to countries that want to promote high-speed connectivity. In addition, the good news is that - contrary to infrastructure hurdles at earlier stages in history - network infrastructure has much lower costs and the solution is not one that most countries will find unaffordable.

The general consensus was that the solutions and intervention processes needed in Africa is that "Government leadership, in concert with business and community leadership, is essential to accelerate broadband deployment and use across Africa." Five major action areas for an effective strategy are clear:

- Policies and regulations affecting network market structures: encourage competition and technology diversity in access to and provision of, telecommunications services.
- Policies and regulations affecting content development and applications: encourage multiple voice, data, and video content and service providers; encourage open access to networks by content and service providers.
- Government operations and services, including spending power: use broadband to support effective and efficient delivery of programs and services, including quality healthcare and education; aggregate government requirements to create "demand pull" for broadband.
- Skills for information and communications technology: increase number of university graduates in engineering and IT; increase ICT technical training in colleges; train new graduates and unemployed in basic ICT skills; increase computer literacy of small-business owners, not-for-profits, teachers and community groups.
- Direct and indirect investment in infrastructure and access: offer tax incentives; award grants to community groups to develop plans for broadband usage and localised content; provide computers to schools, community centers, students; provide access to rights-of-way, ductwork, towers; subsidise network providers to extend networks into low service areas ahead of market demand; invest in underlying core network in badly served areas

Facing reality and paths forward

At the Cape Town conference the panel discussed that given the extent of the challenge that most African countries face, it may not be possible for governments or the private sector to extend broadband networks to all communities at the same time. Two paths forward were suggested.

If broadband is not already in place, one model is to start with the higher density areas. For example, the strategy could be to focus first on targeted development regions, likely in or near urban areas, where there is the potential to establish a "cluster" of broadband service providers, ICT-related businesses, businesses that are intensive users of ICT, and other users (e.g., colleges, universities, and researchers).

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Another path forward is to deliver broadband capability to regional centres and establish community access points at these centers. This simultaneously addresses the lack of broadband to every community as well as the lack of computers and general lack of readiness of many individuals and businesses, especially those in smaller centers, to receive electronic services.

The ABF website is at www.4gafrica.org. We promise you a rich and informative experience. Should you wish to enter the Private Members section, send Bill an email to request a temporary password. In this section you will gain access to all of the operators' and vendors' private addresses and contacts, the minutes of the handset buying group meetings, together with recommendations, conference photographs and conference papers. With your active participation we have made the site and service even more valuable to operators in Africa.

Contact Bill Hearman, ABF, Tel 082 990-4443, bill@4gafrica.org

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