African Tech Review

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Why This Special Report?

The tech space in Africa has been going through interesting transformational phase, this is very evident to the world and tech bloggers that make the tech space vibrant collaborated on a special issue sharing their thoughts on different areas of African tech that interest them. We invited many blogs and if you didn't get an invite from us, it wasn't deliberate and this special issue is by no means exhaustive but a start of tech bloggers synergy.

Many thanks to every blog that made entry to this maiden issue and hope the blogs that couldn't make this year's issue will make it next year. I hope you find it insightful.

-Abiodun Thorpe
tech360ng.com

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Tech Report for Africa – oAfrica.com

The past year was another 'year of the mobile' for Africa, with an increase in telecoms competition that led to lower access costs, and in turn, greater mobile adoption.

For one, governments understand the importance of broadband to drive economic growth and are creating policies and private partnerships to achieve progress. Since 2009, an unprecedented amount of international fibre capacity has arrived on African shores, with 10,000 gigabits being added in 2012. Wholesale broadband costs in many nations decreased by upwards of 30%. Many countries added at least one mobile operator in 2012, and others offered 3G services for the first time.

Still, a huge disparity exists between rural areas and the more affluent cities. Although currently only a fraction of a percent of the population has mobile Internet access (due to cost and coverage), many areas now offer 3G. A few (South Africa, Angola, Namibia, Tanzania) even offer 4G LTE service. The majority of cities now boast 100% mobile subscription rates (partially due to multiple phone ownership). Continent-wide, the rate is around 50%. However, most rural areas have no Internet at all and what's available is expensive given local income levels.

Kenya has been the paradigm for successful African Internet growth and leads the East Africa region, let alone continent, in terms of overall market stage. Technology hubs continued to incubate new businesses and encourage entrepreneurship. Extreme government censorship continued to stifle telecoms competition and Internet innovation in Eritrea and Ethiopia.

South Africa, once the clear-cut Internet leader in Africa, lost ground to nations with more focused economic growth such as Nigeria, Kenya, Ghana, and Rwanda. Still, the nation has roughly 10% mobile Internet penetration, suggesting huge growth potential. In Southern Africa, the WACS fibre cable, launched in May, is providing an abundance of Internet capacity while reducing wholesale broadband costs. Tech scenes in Zimbabwe and Zambia continued to show promise as centers for app development.

Led by good regulatory environments, Ghana and Nigeria led the West Africa region in connectivity gains. The Nigerian government has been extremely hands-on with the telecommunications industry and makes great effort to further ICT education among its citizens. Election activity in Senegal and Ghana were thoroughly tracked via social media. Still, the infrastructure in countries like Mali, Burkina Faso, Guinea, and Guinea-Bissau lags coastal areas by years. Internet penetration rates in these countries ranged from 1-5% at year's end.

Central Africa continued to be the least connected region of Africa. Although Cameroon supports quite a few tech entrepreneurs, the nation only has two competing mobile networks. Plus, fixed-line incumbent Camtel has been allowed to monopolize access to international fibre,

which has led to high prices. The deployment of advanced technologies such as 3G networks in the Democratic Republic of Congo and Gabon has allowed mobile broadband subscribers to outpace fixed broadband connections.

Still, only 16 African countries have true telecommunications competition. Six still have a monopoly. This number must change if Africa is to meet its potential as tech innovator.

Africa, Think Again

The boom in Africa has increased interest in ICT and providing lots of attention to the industry. Some of the major tech happenings for this year had been the rise of mobile computing while tech gathering like the hackertons tech hubs is beginning to surface in major African countries. Nigeria was expected to have grown into a full mobile payment economy with the frameworks put in place the government. More African businesses now see the need to get online to do business the force of social media is redefining beliefs and shifting traditions. In Nigeria the number portability will define a new vista for mobile phone subscribers as this will make telcos clarify their business objectives and offerings. More and more Africans now value friend or colleague opinions or review online as 83% of consumers say user reviews often or sometimes impact their purchase decisions. Also video content consumption and sharing in areas of music, movies, humor, fashion and instructional videos also became hugely popular amongst young people as we experience quit some African YouTube stars. Africans are power searcher and much of those traffic comes from mobile devices to search engines like Google, Bing, Yahoo because the digital space is where more Africans are getting more vocal, commenting or advocating on issues that matters to them and twitter gives a platform for anyone to have a significant no

made a purchase online	visited a specific brand's website
68%	**67%**
visited an online video website	visited a social networking site
49%	**40%**

of users - because they have something to say. With the strides achieved in 2012, tech industry will likely surge in data collection and storage which would raise issues like data access and security, identity theft is real and African government must be proactive in area. Also areas like intellectual property (IP) its definition and infringement as most African governments do not have punitive laws or structures in place to protect African IP infringed on by a multinational for instance it will then become a case of David vs Goliath and Goliath may likely win. Year 2013 more data consumption will take place on mobile more crowed-sourced funded projects will spring up more also it will be a year where serious ground breaking ideas will receive funding like the four Nigerian girls that created the urine powered generator. Also the African consumer is becoming choosier in purchase decisions and will do thorough repurchase decisions to get user reviews from friends, colleagues and blogs they visit regularly. Also any business serious about online purchase will have to really dive into mobile space as consumers will prefer interacting with brands on their mobile phones. Sectors like consumer goods, clothing apparels, and real estate are all likely to get disrupt by mobile commerce particularly a country like South Africa

where likelihood of buying is high once entertainment apparels and gifts is included and as such online research drives offline sales. Also hubs like iHub, CchubNigeria, Wennvation, InnovationHub and so on will play a very key role in driving Africa creative ingenuity.

Tech Outlook for Africa – oAfrica.com

Africa's tech scene is poised to strengthen in 2013. We anticipate a shift from "early majority" to "late majority" users. In other words, the coming year will see a conversion of Internet skeptics into believers of the Internet as an enabler of positive societal change.

At a high level, most economies are seeing double-digit economic growth. In fact, seven of the ten fastest growing economies in the world are in Sub-Saharan Africa! A large portion of this growth is tied to mobile operators that have directly and indirectly created millions of jobs. All signs point to further growth of the mobile telecommunications industry. 25 Tbit/s of submarine capacity will be in place by 2013. Mobile internet traffic is forecast to grow 25-fold over the next four years as 3G service expands. Expect a greater number of 3G base stations for 2013, along with 4G access beginning in Egypt, Kenya, Morocco, Botswana, DRC, and Zambia. Accordingly, expect governments to focus more on spectrum allocation and adjusting telecoms taxes. Also, a proliferation of Internet Exchange Points (IXPs) will further reduce regional access costs by peering bandwidth. If all goes well, many cities, especially coastal ones, can expect continued double-digit mobile Internet access price drops.

Tech innovation will be at an all-time high. Dozens of business incubators and hubs will continue to support local entrepreneurs to create mobile apps that are capable of generating profits. We wouldn't be surprised if tech scenes in Kenya begin to shift from an emphasis on quantity to one of sustainable quality. Great attention will still be given to Africa's successful mobile money systems, of course. Competitions and 'hackathons' – many funded by international companies like Microsoft, Google, Nokia, Samsung, and Ericsson – will no doubt continue to flourish across the continent. Expect one every weekend somewhere in Africa.

On the regulatory side, governments will further realize the need for comprehensive ICT policies. Such frameworks provide structure for long-term technology growth across all sectors of society. Along these lines, we also foresee greater coordination between governments and telecoms companies through an independent regulatory body.

Social media, especially Facebook, will continue to be a driver of Internet adoption. Hopefully, streaming video can make grounds as mobile broadband takes hold. Also, e-agriculture, m-health, e-learning, and women in ICT initiatives will create a foundation for economic growth in

the period 2014-2020.

Challenges will remain, especially for rural areas. Widespread Internet access is still limited to cities. In most countries, mobile ownership is common but mobile Internet access is a luxury. A lack of electricity continues to present challenges. Political censorship will no doubt limit freedom of expression in nations like Eritrea, Ethiopia, and Guinea-Bissau for years to come. Furthermore, e-commerce will still not likely become widespread until disposable income increases, payment systems adapt, and online retailers become more common. Still, the overall picture of Africa's tech scene is one of phenomenal potential.

Year of What Exactly? – Lordbanks.com

2012 in Nigeria has been something of a blur, where technology is concerned. In a bid to describe its overall complexion, I've watched some people try to label it with some convenient moniker, along the lines of "2012 was the year of..."

And that exactly is where it gets a bit tricky. Year of what exactly?

For one, I'm certain that it was the year of social media powered citizen governance. The country had hardly said "happy new year" before it was swept up in acute occupy fever became epidemic, taking two weeks to run its course. Throughout the duration of the nationwide fuel subsidy protests, ordinary citizens armed with internet enabled phones became journalists, broadcasting events as they happened, from right inside the action zones all over the country. NGOs and civil society groups organized demonstrations and co-ordinated relief efforts in real-time via social media, while online media and data platforms like BudgIT had their day making sense of all the information coming in and steering conversation on the issues around which the protests were convened. In 2012, Nigerians have become more politically aware, more outspoken and more participative in governance than in many previous years combined.

Then I could also swear that it was the year digital entertainment as technology entrepreneurs launched a technology onslaught on the media industry in the film, music and gaming categories. Together, they're heralding a whole new world of possibilities for the creative industry, rethinking the media consumption experience for consumers and cracking open a Pandora's box-full (not the streaming service) of game changing realities for the entrenched kingpins of Nigeria's media and entertainment industry.
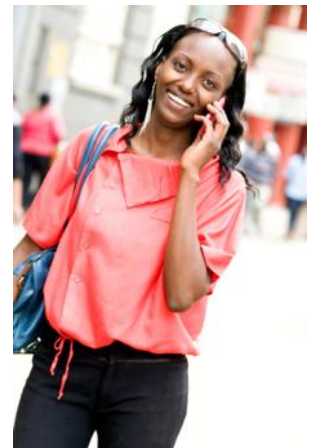
But wouldn't it be unfair if I didn't say it was also the year of Mobile Money? Already, there are more products than licenses, and I've already given up on counting the number of mobile money products that appear to have been launching every over week since the third quarter. The irony is that in spite of all these launches, happening upon a working MM product in the wild is still the rarest thing.

I suspect I would have to turn in my blogger's badge and retreat into technology exile if I didn't acknowledge that 2012 could also have been the year of Nigerian e-commerce. Having gotten over the initial bewilderment at the sheer number of players scrambling into online retail and the weird names, I've come to look at the development with a certain degree of equanimity. There's

a huge market no doubt, and a great many auspicious developments in Africa's economics and technology suggest that it is a mother lode of opportunity. But the will and ability to buy online will take a while to catch up to the potential. In my opinion, it's not so much about if it's a bubble (as some have been announcing) as much as it is about who will survive the long trek to critical mass.

By now I hope it's fairly obvious why I resist the temptation to settle for some half-assed 2012 label, because for technology in Nigeria, it was the year of all these things and much, much, much more. Ahead then, to 2013!

Don't Underestimate the Importance of Tech in Africa – NigeriaReviews.com

The digital revolution has changed much of Africans, but nowhere has it been more noticeable than the delivery of news. Social media sites like YouTube, Facebook and Twitter have changed how news is gathered and presented to the public. We don't have to wait until the evening to get the day's news it's a "constant flow. Knowledge has also been improved because of the modern technology. There are lots of new equipment's that we use in schools and universities to add a more convenient way of teaching.

The Use of technology in health care sector has helped us develop many ways of diagnosing dangerous diseases. Development in the communication and telecoms sector has helped business houses stay connected at any given time, thus increasing their efficiency to a great extent. Modern technology has become very useful and important in our lives. Our daily lives have been improved and work became a lot easier. Still, technology will not work and improve without us. We are the ones that give life to it and control it. There are lots of improvements we can still do, but it needs to be given serious and careful thinking. We should be the one controlling our modern technology instead of it controlling us.

Africa Is Coming – Technessivity.com

Africa faces some hurdles in developing information technology. Even though global Internet penetration is about 32%, it's lower in Africa, where only around 13.5% of the population has ac cess to the Internet through a computer or mobile phone. Within the continent, there are enorm ous divides. While a country like Nigeria has 28% of its population online, Ethiopia has less than 1%. But all that is changing: Internet usage in Africa has grown faster than on any other contine nt over the past decade. There are startups in every field popping up more today than there were just a couple of years ago. Most of them aim to ease access to daily necessities and capture the essence of our culture, especially in retail and gaming. The Tech Review in Africa 2012 is a revie w of all those startups and aspects of technology we feel made an impact this year. The Tech Outl ook, although intended to be a prediction of what could happen in the next year, cannot be set i n stone. We can only expect developments from what we already have and wait to see what the n ewer ones have in store.

Power Plays From the Communication Giants

Telecommunication companies in Africa are looking at Broadband Wireless Access technologies as the key to make Internet available to the population at large. In the same view, 2012 saw Airt el Nigeria adding 2,000km to their fiber optic cable system. Currently the cable system is over 4, 000km long, and serves around 20 million subscribers in the country. The growth of Internet pe netration in Africadepends on more telecoms firms strengthening the Internet backbones on th e continent. To speed things up, Bharti Airtel, Vodacom, MTN, Smile Telecoms all announced th eir progress in strengthening their respective 3G networks across the continent and to show thei r commitment to deploying LTE technology. The Mobile Web West Africa conference in April rev ealed some astounding stats about mobile use. The implementation of 3G connectivity is a great deal for users and developers. Users can experience these apps and startups the way they were i ntended to be experienced.

First Push for Real Development

More developers have stopped talking about projects and have star ted them. They are finally paying attention to design, especially thos e in the ecommerce and application space. Maliyo Games, Gamsol e, Kuluya.com and Skillpod Media all started roughly this year. They have brought attention to the gaming scene in Africa in a short spa ce of time. The core of these startups lies in the investors and venture capitalists funding young
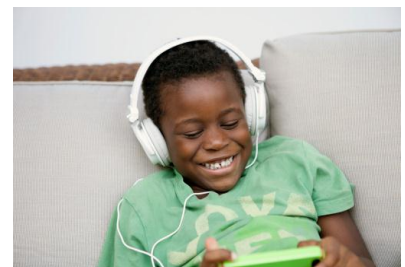
and determined developers in Africa. Another noteworthy aspect is the quality of services offere d from these young companies. Their games have originality and a "realness" that makes one real ize that these people mean business. 2012 saw rise in the beginning of what could be a hot mar ket for the next eight years. For users with feature phones that lack internet access, ForgetMeN ot created SMSpowered apps that engage users in real time and saves them some money. Thes e SMS apps can also be used for Interaction with social networks.

A Market For Online Retail

Rocket Internet launched Sabunta and Kasuwa in Nigeria earlier this year, later merging them to becomeJumia. Other sites like Konga and MHQ Store followed suit, including a couple of other s ites by former Sabunta CEO, Leonard Stiegler. These sites brought ecommerce to the forefront of discussion with careful marketing strategies like free shopping credit upon a customer's first p urchase and ads targeting the new generation the essential users of digital media. Though they d o have some aspects that could be made better, like delivery, they've been able to break in as o ne of the major aspects of Nigerian technology.

Government and Policies

This year, the Federal Government of Nigeria banned the user of imported computers in its mini stries and agencies. The initiative is to encourage the use of Nigeria
assembled computer products made by companies like Omatek, Beta Computers and Zinox, wit hin government and the population at
large. However, Foreign OEMs might not be affected as the government expects because a larg e number of computer parts are imported from China, Japan and South Korea. Also within the ye ar, Ministry of Finance, the Ministry of Communication Technology and the Ministry of Youth De velopment collaborated on a business plan competition for students in universities, polytechnics and colleges of education. YouWin's objective is to attract and spur ideas from Nigerian youths a nd provide them with a grant to start companies that will eventually create jobs for unemployed y ouths. The YouWin programme hopes to generate 80,000 to 110,000 new jobs for currently une mployed Nigerian youth over the three years during which the three cycles will be implemented. The Ministry of Communication Technology in collaboration with the House of Assembly has dra fted a bill to curb cyber crime and the new wave of hacking. This year, over 20 government entiti es had their websites hacked. Private entities weren't left out, as Dangote Cements and Arik Air had their websites taken down as protests for various reasons.

Strategic Considerations

2012 in the African market has seen the mobile sphere growing in strength and the gaming sph ere emerging. There are many pieces to this board; the developers, the telecoms giants, the ma nufacturers and our Internet growth, all these factors have done well on their own in 2012. In 2 013 they could come together and sparkoff a digital industry boom. We've seen it happen with F orgetMeNot and Glo, as well as Pledge51 and Nokia. Smartphone usage could also rise due to t he availability of cheap Androids. By creating apps for Android, this will create better opportuniti

es for developers to reach more users and keep the app ecosystem constant. Everything menti oned in the review will continue to develop and make significant progress. It won't be easy to say how, that's up to them to determine.

The Gold Rush – Otekbits.com

2012 has been a wonderful year as far as technology and innovation is, in the local space – Nigeria and even Sub-Saharan Africa.

So here are my highlights for 2012: Saya at TechCrunch Disrupt, Tiketmobile App going live – looking to disrupt a chaotic transportation industry, Growth Academy – accelerator program by the Co-Creation Hub and Nokia, The E-Commerce or Online-retail madness, Maker Faire Africa 2012 hosted in Lagos, Nigeria, DEMO Africa Investors round table meeting, and Mobile Web Africa 2012, also hosted in Lagos. All of these proves the tech space is really growing into an ecosystem and all players – developers, investors, policy makers, and even the government is waking up to the reality for the need to innovate.

As for 2013, I see more startups spring forth, and Lagos becoming our own Silicon Valley. Looking forward to more in the area of local content: discovery, serving, and distribution; data accessibility from telecoms, Beni American, the hybrid university taking its place in the heart of modern education, and 5 more replications of the Co-Creation Hub in terms of location and initiatives.

Much have been said and seen in the Mobile OS market in the last 2 years with every major Mobile OS fighting to get a good bit in the market place as either the most preferred or most relevant. However the race to which Mobile OS is best choice has most recently become a two horse race with Apple IOS and Google's Andorid. Other Mobile OS such as RIM's Blackberry, Microsoft, Symbian are fighting tooth and nail to get a market share with various innovative products in its mobile device offerings. Android recorded a huge success Q2, 2012 with a whopping 68% share of the global smartphone market which was 4 times more that of Apple. With the fall of RIM's blackberry shipment, and the new Apple devices (iPhone 5, iPad Mini, New iPad] in Q3/Q4 2012, Apple and Android combined controls about 85% of the Mobile OS market share. With the increasing internet penetration (PC and mobile) and various local electronic payment platforms springing up, Nigerians are beginning to embrace online shopping.

It used to be more common place to hear about how international companies were extending their business activities to the online frontier but it seems quite a number of Nigerian entrepreneurs and businesses have caught on to this trend. Electronic commerce (e-commerce) is now being seen as an opportunity to advance business operations and make profits while also giving customers a more convenient way of accessing products and services 24/7.

As a result, it is no surprise that in 2012, there was a boom in Nigeria's e-commerce scene with businesses providing an array of products to purchase from using different payment and delivery options. The competition has been stiff with the likes of Jumia, Konga, and StyleRebirth, to mention a few, making waves in the industry. 2013 is going to see more but clearer winners and loosers.

2012 has been a hot battle in the mobile scene. Apple's iPhone has been the undisputed Champion in profitability globally, growing rapidly in Asian countries like China, Singapore and Japan. Samsung has been selling so much, that the number of their Android phone has overshadowed the other OEM who makes phones using Android, like HTC. They have since been responsible for propelling Android to the top of the Mobile OS ladder. They took the number one position from Nokia in the first quarter of 2012.

Blackberry has been seeing its share drop month on month. The Blackberry BB10 OS, the OS to bring Blackberry on track was to be debuted this year, 2012, but because it was not ready, Thorsten Heins moved it to first quarter of 2013. Despite the global decline of their share, they have continuously seen growth in Nigeria and other emerging countries. Application developers are also excited about what Blackberry 10 has to offer. Nokia went into bed with Microsoft and produced the first sets of Windows Phone 7. The sales globally weren't as impressive. The phone was launched with some mobile telecos in the US and this was one move by Nokia/Microsoft to push the adoption of the new phone and the OS.

The events that really did it for me are NigeriaCom (with AppGig) and Mobile and Web West Africa 2012, as both event established their subject at the presentation of the event, they also brought together the important figures of the industry, making both events educative, informative, and insightful. TENT by PIN is another I look forward to as 2012 closes.
The Nigerian Telecom Industry has witnessed an all year round growth this year with the Teledensity percentage increasing all through the year. According to NCC Subscriber data the Teledensity increased from 68.68 in January 2012 to 76.69 by September 2012.
The major growth occurred for GSM companies but decline for CDMA service providers – and near-death decline for Fixed (Wired/Wireless) service providers. This is an indication that people are much more shifting to the use of GSM network other than using a CDMA or Fixed Wireless lines.
People are now looking for quality services, and I believe that in 2013, People will gladly switch to any Telecom operator that they believe can fulfill their dream of quality service rendering.

Research Credits
Proofreader: Adenike Adebanjo
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