LIGHT READING Networking the Telecom Industry

Reports More Reports

Telecom Market Spotlight: Africa

AUGUST 20, 2009 | Tim Hills | **Post a comment**

Post a Comment **Print | Reprint | Share | Email This | RSS**

Introduction

Like that of the Middle East, with which it is often coupled by analysts, Africa's telecom environment has become hugely active in recent years. This activity has been largely triggered by the rapid take-up of mobile services in many African countries. A rapid growth in mobile subscribers has led to a flurry of interest in the acquisition of African mobile assets by various operators, both from within and without Africa, as they perceive the region to be one of last remaining big potential telecom markets. (See Telecom Market Spotlight: Middle East.)

As *Light Reading* has reported, the now on-again $22.7 billion deal between India's Bharti Airtel Ltd. (Mumbai: BHARTIARTL) and South Africa's MTN Group Ltd. alone represents about 25 percent of the total telecom M&A activity in the first half of 2009, so there is a lot of money riding on a looming reorganization and consolidation of large swathes of Africa's telecom. The idea is for Bharti to take a 49 percent stake in MTN, and MTN to take a 36 percent stake in Bharti, with a full merger as the ultimate goal. (See Telecom M&A Deals Hit $88.3B in H1, Bharti & MTN Extend Exclusive Talks , and Bharti, MTN in $23 Billion Talks.)

Another very big name to plunge into the region's consolidation is Vodafone Group plc (NYSE: VOD), which in May 2009 achieved its long-held ambition of acquiring a controlling stake in South Africa's largest mobile operator, Vodacom, previously an equal joint venture with the country's former incumbent, Telkom. Given Vodacom's existing presence in the region -- it has operations in DRC, Lesotho, Mozambique, and Tanzania, for example -- the deal gives Vodafone a considerable boost there. Vodafone itself already had operations in Egypt, Ghana (where it acquired a controlling stake in Ghana Telecom in August 2008), and Kenya. (See Vodafone Offers $2.5B for Vodacom Stake.)

Other substantial international operators recently bulking up their African interests and services include:

- **AT&T.** Appointed in November 2008 a new regional vice president of Middle East & Africa, based in Dubai, as part of the expansion of its regional management to handle AT&T Inc. (NYSE: T)'s strategic investment in the region for its global business customers. Later, in April 2009, AT&T and South Africa's Telkom SA Ltd. (NYSE/Johannesburg: TKG) signed a Memorandum of Understanding, aimed at improving the connectivity between the companies' networks, thereby giving businesses in Sub-Saharan Africa improved global communications.

- **France Telecom/Orange.** Having acquired a controlling stake in former incumbent Telkom Kenya in December 2007, France Telecom SA (NYSE: FTE) launched Orange as the commercial brand for Telkom Kenya in September 2008, and claimed that the new GSM service would make Orange the first integrated operator in the country. Meanwhile, France Telecom started negotiations with Togo to acquire a new licenses to allow an Orange-branded mobile service to begin in that country. But, to show that everything is not necessarily sweetness and light in Africa's mobile expansion, France Telecom has spent many months in a bitter dispute with Orascom Telecom over control of Egypt's Mobinil , the joint-venture holding company for ECMS, the country's largest mobile operator. Although Orascom said in July 2009 that it would end its legal action, the dispute still seems to be unresolved.

- **Tata Communications.** Tata took a controlling stake in South Africa's second national operator Neotel (Pty) Ltd. in January 2009, following its move to become the majority shareholder six months earlier.

- **Vivendi.** In a mini-saga reminiscent of the Airtel/MTN affair, France-based Vivendi -- which controls the country's second-largest mobile operator, SFR , and already has telecom operations in Burkina Faso, Gabon, Mauritania, and Morocco (where it controls Maroc Telecom) -- spent July 2009 in an on/off pursuit of the African mobile operations of Kuwait-based Zain Group , spanning 15 countries, such as Kenya and Nigeria. By late July, Vivendi had apparently pulled out in a huff, but without ruling out the possibility of restarting the talks.

And it isn't just the extra-regional operators that are involved. Telkom itself, for example, acquired in January 2009 the final 25 percent slice that it did not already own of the Nigerian operator Multi-links Telecommunications Ltd. , which provides fixed, mobile, data, long-distance, and international telecom services throughout Nigeria.

And networks, too

With all this activity in telecom business, it's easy to lose sight of some big improvements to Africa's international links, which have long been a weak spot -- and are becoming crucial in the age of the broadband Internet. Submarine systems in particular have seen a lot of recent activity to improve Africa's connectivity, both internally (via coastal festooning) and with transoceanic links with the rest of the world. These include:

- **ACE (Africa Coast to Europe).** Planned for completion in 2011, the 1.92-Tbit/s ACE cable will run from France to South Africa and link 25 countries in Africa and Western Europe. (See ACE Submarine Cable Extended.)

- **Atlas.** Extra capacity is planned for the Atlas cable connecting Morocco and Europe.

- **Hannibal.** A 3.2-Tbit/s cable connecting Tunisia and Italy, planed for completion in late 2009.

- **Seacom.** A 1.28-Tbit/s cable running along the east coast of Africa and linking South Africa, Mozambique, Tanzania, and Kenya with Europe and South Asia. It went live in July 2009.

- **WACS.** The West Africa Cable System, planned for completion in 2011, is similar in general intention to ACE. Its 3.84-Tbit/s cable will connect South Africa to the U.K., with landings in Namibia, Angola, DRC, the Republic of Congo, Cameroon, Nigeria, Togo, Ghana, Côte d'Ivoire, Cape Verde, the Canary Islands, and Portugal. (See AlcaLu Wins Submarine Deal.)

At the literal other end of the broadband IP revolution -- the access network -- there are early stirrings of significant improvements. Between December 2008 and June 2009, for example, *Light Reading* noted contracts for fiber access in three markets: FTTH in Egypt and Nigeria, and FTTC in

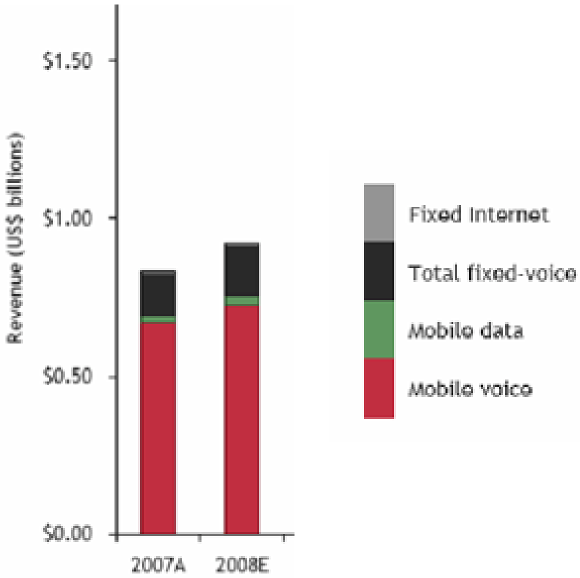
Togo.

WiMax, too, is beginning to tackle the broadband bottleneck, and the region now boasts many rollouts of this wireless access technology. (See WiMax: What's Working Now.) As an indicator, Alvarion Ltd. (Nasdaq: ALVR), a specialist provider of WiMax infrastructure, had supplied systems for more than 60 deployments in over 30 countries by the end of 2008 to a varied mix of service providers, including Tier-1 operators, pan-African operators, incumbents, and local partners.

“WiMax enables new and existing operators in Africa to build networks where there is most demand -- and then to expand to less populated areas at a later stage," says Daniel Levy, general manager for Africa at Alvarion Ltd. (Nasdaq: ALVR). “Voice and data are the main applications demanded because of the increased demand for IP-based services and the limited amount of reliable copper infrastructure in Africa.”

However, like the Middle East, much of the current telecom interest still lies in 2G and (somewhat) 3G mobile -- in terms of impact in developing mass-market telecom in the region, 2G has had more effect than any other technology. This Market Spotlight consequently concentrates on this current aspect of mobile. And it is important to understand how massively dominant mobile is in African markets -- typically, it accounts for about 70 percent to 80 percent-plus of telecom revenues. **Figure 1** shows an example of this.

Figure 1: Cameroon’s Total Telecom Revenues, $ billions



Source: *Light Reading* and Pyramid Research, May 2009

African mobile is also intensely topical because, despite substantial growth, doubts are beginning to arise about the financial rewards that operators can expect, and this is one big factor behind the current moves towards consolidation. That Zain should be prepared to retreat from such a large pan-African operation is an indicator of just how competitive many African markets have become -- half a dozen competitors in some African markets is not unusual. And this is occurring against a backdrop of looming saturation in some markets.

Spotlight data

The table data is supplied by Pyramid Research , a market research and advisory service company acquired by *Light Reading* Communications Network. Pyramid analyzes and forecasts demand for communications and media services, applications, networks and devices in more than 100 countries, with a strong focus on emerging markets.

Future editions of the article will update, replace, or extend the data tables as appropriate.

Here's a hyperlinked contents list:

— Tim Hills *is a freelance telecommunications writer and journalist. He's a regular author of* Light Reading *reports.*

Next Page: Markets, Services & Definitions

Markets, Services & Definitions

This Spotlight is limited to the following 16 Africa markets, which account for the major part of the region's telecom market:

- Algeria
- Botswana
- Cameroon
- Cote d'Ivoire
- DRC
- Egypt
- Ghana
- Kenya
- Mauritius
- Morocco
- Nigeria
- Senegal
- South Africa
- Tanzania
- Tunisia
- Uganda

Services

The Tables are limited to Mobile (Voice and Data) services, and include both business and residential customers.

Subscribers and Service Per-Population Penetrations

Penetration (calculated in various ways) is a measure of adoption of a telecommunications service in a country, and is generally used as a comparative measure of network development with other countries or to compare the different adoption rates of similar service offerings. The *Per-Population* penetrations in this article are calculated by dividing the total number of subscribers, both business and residential, by the mid-year population of the country concerned.

This article looks at the per-population penetrations for Mobile Subscribers defined as the number of registered mobile accounts (prepaid or postpaid) as a percentage of the population.

Revenues

All revenues are retail and exclude VAT. Revenues are calculated on a bottom-up basis from their various components, so Total Mobile Revenues is the sum of Mobile Voice and Data Revenues, for example.

Data Sources

All data in the Tables are sourced from Pyramid Research, which operates an ongoing and phased program of country research, data collection, and forecasting. Figures for 2008 are actuals released as part of Pyramid's Q1 2009 Forecast Release in March 2009 or the second quarter of 2009 Forecast Release in June 2009, as indicated. Revenues are given in U.S. dollars, converted at the average exchange rate for the year concerned.

Next Page: Market Rankings

Market Rankings

Tables 1 – 3, which rank the 16 markets covered in this Market Spotlight by population, nominal GDP, and nominal GDP per-population, illustrate the diversity of the region. In general, all these measures are considerably skewed, with four or five markets dominating each Table, especially for population and nominal GDP. **Table 3**, which shows nominal GDP per-population, is somewhat less skewed and perhaps provides a convenient very broad picture: a more evenly developed extreme south and north, enclosing a lesser and more erratically developed center.

Table 1: Key Africa Markets Ranked by Population, 2008

Market	Population, 000
Nigeria	146,255
Egypt	77,090
DRC	64,706
South Africa	47,800
Tanzania	40,380
Kenya	38,550
Algeria	33,770
Uganda	31,930
Morocco	31,579
Ghana	23,949
Cote d Ivoire	19,568
Cameroon	18,958
Senegal	11,615
Tunisia	10,438
Botswana	1,900
Mauritius	1,268

Source: *Light Reading* and Economist Intelligence Unit, Pyramid Research, March 2009

Table 2: Key Africa Markets Ranked by Nominal GDP, 2008

Market	Nominal GDP, $M
South Africa	284,754
Nigeria	179,747
Egypt	161,370
Algeria	159,890
Morocco	87,009
Tunisia	38,852
Kenya	34,366
Cote d Ivoire	25,640
Cameroon	22,021
Tanzania	16,442
Uganda	15,831
Ghana	14,393
Senegal	13,334
Botswana	12,164
DRC	10,619
Mauritius	9,297

Source: *Light Reading* and Economist Intelligence Unit, Pyramid Research, March 2009

Table 3: Key Africa Markets Ranked by Nominal GDP Per-Population, 2008

Market	Nominal GDP per-population, $
Mauritius	7,332
Botswana	6,402
South Africa	5,957
Algeria	4,735
Tunisia	3,722
Morocco	2,755
Egypt	2,093
Cote d Ivoire	1,310
Nigeria	1,229
Cameroon	1,162
Senegal	1,148
Kenya	891
Ghana	601
Uganda	496

Tanzania	407
DRC	164

Source: *Light Reading* and Economist Intelligence Unit, Pyramid Research, March 2009

This split is naturally (because of the link between individual income and spending on telecom services) reflected in **Tables 4 – 6**, which rank the markets by total mobile revenues, per-population total mobile revenues, and per-population mobile subscribers, respectively. The apparently anomalous appearance of Nigeria in second place in **Table 4** is due to the large number of mobile subscribers there -- nearly 63 million (see **Table 7**). This is the largest in Africa, despite a relatively low penetration rate of 43 percent and is the result of Nigeria having by far the largest population in Africa and having experienced a huge surge in the number of mobile subscribers recently.

Table 4: Key Africa Markets Ranked by Total Mobile Revenues, 2008

Market	Total Mobile Revenues, $M
South Africa	9,735
Nigeria	6,945
Egypt	4,057
Algeria	3,002
Morocco	2,812
Tunisia	1,284
Ghana	1,193
Kenya	1,146
Cote d Ivoire	970
Tanzania	936
DRC	878
Cameroon	758
Senegal	629
Uganda	541
Botswana	230
Mauritius	151

Source: *Light Reading* and Pyramid Research, March 2009

Table 5: Key Africa Markets Ranked by Per-Population Total Mobile Revenues, 2008

Market	Per-population Total Mobile revenues, $
South Africa	204
Tunisia	123
Botswana	121
Mauritius	119
Morocco	89

Algeria	89
Senegal	54
Egypt	53
Ghana	50
Cote d Ivoire	50
Nigeria	47
Cameroon	40
Kenya	30
Tanzania	23
Uganda	17
DRC	14

Source: *Light Reading* and Pyramid Research, March 2009

Table 6: Key Africa Markets Ranked by Per-Population Mobile Subscribers, 2008

Market	Per-population mobile subscribers, %
South Africa	105%
Botswana	90%
Algeria	89%
Tunisia	82%
Mauritius	81%
Morocco	72%
Egypt	54%
Cote d Ivoire	49%
Ghana	48%
Senegal	46%
Nigeria	43%
Kenya	42%
Tanzania	31%
Cameroon	30%
Uganda	27%
DRC	15%

Source: *Light Reading* and Pyramid Research, March 2009

Table 7: Key Africa Markets Ranked by Total Mobile Subscribers, 2008

Nigeria	62,988
South Africa	50,051

Egypt	41,272
Algeria	26,923
Morocco	22,816
Kenya	16,377
Tanzania	12,589
Ghana	11,425
DRC	9,678
Cote d Ivoire	9,574
Uganda	8,688
Tunisia	8,569
Cameroon	5,711
Senegal	5,388
Botswana	1,702
Mauritius	1,030

Source: *Light Reading* and Pyramid Research, June 2009

As **Table 8** shows, Nigeria added over 22 million mobile subscribers in 2008 -- twice that of the next-largest growth market (Egypt), and equal to the entire subscriber base of the fifth-largest African subscriber market, Morocco. But it was not alone in recording extraordinary rates of subscriber growth. Nigeria's near 56 percent was easily beaten by Uganda's near 86 percent, and seven markets managed over 40 percent. (See **Table 9**.)

Table 8: Key Africa Markets Ranked by Annual Change in Total Mobile Subscribers, 2008

Market	Annual change in Total Mobile subscribers, 000
Nigeria	22,593
Egypt	11,178
South Africa	6,422
Kenya	4,948
Tanzania	4,337
Uganda	4,009
Ghana	3,822
DRC	3,086
Morocco	2,787
Cote d Ivoire	2,525
Senegal	1,758
Cameroon	1,175
Tunisia	727

Botswana	275
Mauritius	103
Algeria	-575

Source: *Light Reading* and Pyramid Research, June 2009

Table 9: Key Africa Markets Ranked by Percentage Annual Change in Total Mobile Subscribers, 2008

Market	Annual change in Total Mobile subscribers, %
Uganda	85.7%
Nigeria	55.9%
Tanzania	52.6%
Ghana	50.3%
Senegal	48.4%
DRC	46.8%
Kenya	43.3%
Egypt	37.1%
Cote d Ivoire	35.8%
Cameroon	25.9%
Botswana	19.3%
South Africa	14.7%
Morocco	13.9%
Mauritius	11.2%
Tunisia	9.3%
Algeria	-2.1%

Source: *Light Reading* and Pyramid Research, June 2009

But the inevitable result of such high rates of growth is becoming very clear in **Table 6** -- saturation looms in some markets, particularly in the north and extreme south. Coupled with the high levels of competition already mentioned, it is clear that operators' business models will come under increasing pressure.

Overall, for the 16 markets covered by the Tables, just short of 70 million subscribers were added in 2008, an increase of nearly 31 percent to reach a total of nearly 295 million. In absolute terms, this is considerable, but Africa still has a long way to go to reach the levels of penetration seen in many other parts of the world.

Next Page: Developing Mobile

Developing Mobile

The split that has emerged between the broadly more- and less-developed mobile markets presents operators with different issues and challenges. The more-developed markets, such as South Africa, Botswana, and those of North Africa, are beginning to face a challenge common to mature or maturing mobile markets everywhere.

“ARPUs are going down, even if subscriber numbers are not,” says Vinod Kumar, group president of OSS/BSS vendor Subex Ltd. , which has business in the region. “Penetration is high in some of these markets, and there is intense competition. The problem isn’t churn, it is just that subscribers are taking, say, three or even four different mobile phones, and this is driving ARPUs down.”

The natural response is to try to boost ARPU by making services stickier through added value, and this is what is happening in a variety of ways. One of the most striking characteristics of the region is that operators are looking at both high- and low-tech possibilities for doing so. In North America, for example, any corporate strategist not thinking in terms of 4G (and 3G as a stepping stone) broadband apps would be fired; in Africa, although 3G and 4G WiMax are being rolled out, the bulk of mobile will be under-3G for a considerable time, so exploiting the existing mass-market technology is going to be key for operators.

And this trend is expected to embrace markets that are currently further down the penetration scale of **Table 6**. Kenya provides a typical example. Although the per-population penetration was 42 percent in 2008, Pyramid Research expects it to reach about 70 percent well before 2015, powered essentially by increased competition from the entry of two new mobile operators (Econet and Orange Kenya). This will lower prices and bring mobile services within the reach of a greater proportion of the population.

“Voice revenues will continue to dominate, of course, but data revenues will likely quadruple by 2013,” says Dearbha McHenry, Pyramid analyst and author of the recent report "Communications Markets in Kenya." “This is partly due to the launch of 3G services (including mobile broadband), but also to the explosive growth of low-tech, low-margin mobile data services, particularly mobile money transfers.”

Generally, Pyramid sees basic SMS text messaging as an important revenue driver for mobile operators in both Africa and the Middle East over the next five years. It already dominates mobile data in this wider region, where peer-to-peer SMS text messages accounted for about 60 percent of mobile data revenues in 2008.

Mobile operators are thus continuing to develop SMS services in ways to add value for their users. A recent example is MTN South Africa, which has launched a VoiceMail Xpress service to its prepaid customers. This uses a platform from Movius Interactive Corp. , and gives the caller the option either to leave a voicemail message or to send an SMS with a phone number indicating who called when the called party is unavailable. This provides greater flexibility than the previous use of two separate solutions that offered either regular voicemail or an SMS notification service, but not both. Movius notes that such simplicity can help in emerging markets where adoption challenges may have existed with traditional voicemail.

Developments such as this are an example of how emerging markets can benefit from innovations in relatively straightforward services, such as messaging.

“While the most advanced markets now show wireless telephony penetration exceeding 100 percent, there are millions of people in regions such as Africa who do not own a phone and, crucially, cannot afford to own one,” says Movius’ CEO, Oscar Rodriguez. “That’s a key reason why we are working on a new Community Messaging Service (CMS), which allows callers, who previously would have been without a phone and therefore unreachable, to use any phone to place a call as well as to receive and send voice messages."

Moving money

Mobile financial services, especially money transfers, have enjoyed considerable early success in the region, and are seen by many analysts to have great potential, given the nature of much of the African financial environment: largely cash-based economies, a limited and cumbersome banking infrastructure focused on the better-off urban elite, and large-scale rural/urban migration. By 2008, Pyramid estimated that about 7 million Africans were using such services, of which about a half (such as those in Egypt, Nigeria, and South Africa) are based on a hybrid model in which a bank and mobile operator cooperate, with the bank being the senior partner.

However, mobile-operator-only financial services have appeared, of which the best-known is M-PESA, owned and run by the mobile operator Safaricom Ltd. . This service is currently available in Kenya and Tanzania, and allows users to make simple transactions, such as cash deposits and withdrawals, money transfers and purchases at selected stores, through an SMS-based technology.

A third business model is for a third party, such as a platform provider, to offer the service, but Pyramid is bullish on the future of operator-owned businesses in Africa, and expects them to drive much of the growth in mobile financial services in the next few years.

"That's mainly because the mobile network operators have a very high reach at two levels," says Jan ten Sythoff, Pyramid's manager of EMEA Research, and author of the recent report "Mobile Financial Services in Africa -- The Business Case for Operators and Banks." "Their subscriber bases provide millions of touch points in the targeted customer segment, and their distribution networks are among the most extensive in Africa. MNOs also have expertise in fulfilling millions of low-value transactions in a profitable manner, a necessity in African mobile financial services."

However, this will not necessarily be plain sailing for the mobile operators, as Pyramid points out that governments will need to ensure regulatory flexibility -- not something normally associated with much of the region -- because the mobile service providers will need active central-bank support and flexibility.

A further consequence of the move by mobile operators to capture more value is that their OSS/BSS capabilities are becoming more important -- particularly in areas such as revenue assurance and fraud detection -- obviously highly relevant to financial services. Not only has rapid growth put pressure on existing systems, but operators now see the need to be proactive, according to Subex's Kumar.

"When we signed with our first Nigerian customer a few years ago, they had about 500,000 subscribers -- today we talking of the systems needing to cope with 7 or 8 million," he says. "And, typically, operators would procure a revenue-assurance or fraud-management system only after reaching a certain size after a couple of years or so -- that has changed now. Some of the business optimization components, like fraud, have gone into the stack-one requirements."

Fraud is a particular problem in many African markets, partly because so many subscribers are prepaid, so no bills are issued that can act as flags for the occurrence of fraudulent transactions, whether caused externally or internally -- and the latter can be quite common. Operators are therefore interested in adopting more sophisticated control techniques, such as those that can handle cost-effectively large volumes of low-value transactions, and this is leading to the adoption of a new approach to revenue assurance, according to Kumar.

“There is now a new trend to seek this as a service provided by a vendor, rather than just as a technology purchase and the operator running with it,” he says. “Africa has just started doing this, although in the U.S. or Asia/Pacific, for example, we are seeing the business-optimization side develop a lot of activity for this kind of managed-services mode. Not only does it avoid any problems an operator with more limited resources might have in leveraging the technology to its fullest extent, it can enhance flexibility and agility so as to introduce new services and business models quickly.”

Back to Page One: Intro

Post a Comment **Print | Reprint | Share | Email This | RSS**