

For communications professionals in southern Africa

SOUTHERN AFRICAN WIRELESS COMMUNICATIONS

MARCH/APRIL 2019

Volume 23 Number 6

- How IoT will shape the future of the workplace
- Telemedicine: helping the worst off in remote places
- Why satellite technology is becoming more important

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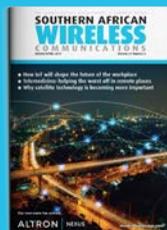
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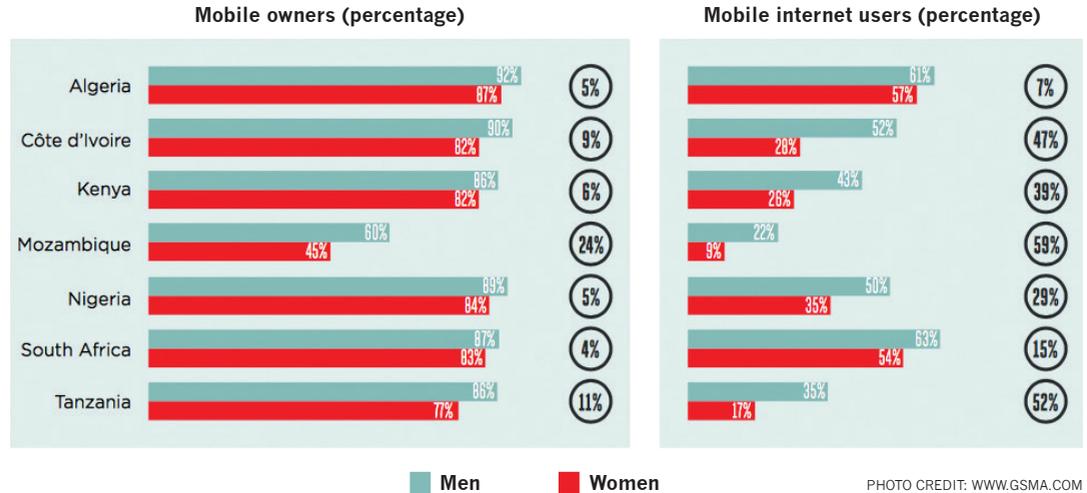
Mobile gender gap evident in Sub-Saharan Africa – GSMA report

Sub-Saharan Africa is the second worst global region when it comes to the mobile gender gap, according to the *Mobile Gender Gap Report 2019*, conducted by GSMA Connected Women.

It found that in that region, women were 15 per cent less likely than men to own a mobile device. The report further found that women in the region were also 41 per cent less likely to use mobile internet, with 86 million in Sub-Saharan Africa still unconnected.

“Mobile access and use has grown dramatically in LMICs [low-and middle-income countries] in recent years, but not equally,” the report said. “A gender gap in both mobile ownership and mobile Internet use persists across these markets, and is significantly wider in certain regions, particularly South Asia (where the widest gender gap exists) and Sub-Saharan Africa.”

Although the report said the gap is not closing, it did find that women’s



ownership had increased since 2014 and the number of who owned a mobile phone rose by over 250 million.

Mobile phones remain the primary source of internet access in LMICs, particularly for women and 48 per cent of them in these countries now use mobile internet. Nevertheless,

women in LMICs were 10 per cent less likely to own a mobile phone, which equated to 197 million fewer women than men owning a device.

The findings were based on the results of over 20,000 face-to-face surveys commissioned by GSMA Intelligence across 18 LMICs.

GSMA's Connected Women programme works with mobile operators and their partners worldwide to address the barriers to women accessing and using mobile internet and mobile money services. The report said south Asia had the widest gender gap.

PHOTO CREDIT: WWW.GSMA.COM

Lava flows into South Africa Zambia and Huawei talk 5G

Indian mobile handset brand Lava International has strengthened its position in Africa by entering South Africa and Ethiopia this year.

Lava already had a presence in Tanzania as well as in north, east and west African nations.

“This expansion in Ethiopia and South Africa has presented us with ample opportunities to take the company to newer heights internationally,” said Vikram

Parmar, business head- Africa, Lava International. “The development also allows us to connect the people of various geographies through our products and services which at the same time help us to increase our brand recognition.

With this determination, we are making these advancements and developments into new markets and opening a pool of job prospects for the citizens of these markets.”

The Zambian government has entered into talks with Chinese tech giant Huawei over the possibility of deploying 5G in Zambia.

The move was disclosed by transport and communications minister Brian Mushimba who met Huawei officials.

Mushimba said Huawei, the technology partner for the GRZ Communication Tower Project Phase II, has committed to upgrading all

the sites seamlessly to 5G capability.

He was speaking at Zamtel House in Lusaka in April when he officiated at the launch of ZamPay Number Neutral Capability Feature.

He added that Zambia does not want to be left behind in innovation and adoption of internet technologies.

5G is the next generation of mobile internet that is expected to enable everything from instant downloads of movies to connected self-driving cars.

Zambia to link up mobile money players

The Bank of Zambia is working on a project to link up all mobile money service providers across the country.

It is being carried out in collaboration with the Zambia Electronic Clearing House Limited (ZECHL) and implemented under the National Financial Switch (NFS), an electronic platform which will link all mobile money operators to increase financial inclusion among the over 60

per cent unbanked Zambian nationals.

The NFS is being established under the National Payment System with the aim of linking with other payment systems (individual operators’ payment systems) without undue restrictions.

According to the Bank of Zambia, providers of payment system services will set pricing structures (under Bank of Zambia and ZICTA supervision)

that “are cost reflective, affordable and do not prohibit the consumers from accessing payment systems”.

Lazarus Kamanga, Bank of Zambia director of banking, currency and payments systems said currently there is no way for mobile money clients of Airtel Zambia, MTN Zambia and Zamtel to send money to competitor operator networks. He added that the NFS (the electronic platform) is

expected to go live by June 2019 under the second phase of the project.

The first phase involved linking up the country’s banks to electronic payment system including automated teller machines (ATMs) and point of sale (PoP) machines.

Latest statistics from the Bank of Zambia showed that the number of mobile money customers stood at over four million.

NIDA ready to facilitate biometric registration of mobile numbers

Tanzania's National Identification Authority (NIDA) said it was ready to facilitate biometric registration of mobile telephone numbers which officially started May 1st, 2019.

The watchdog said in a statement that the authority would implement the biometric registration of telephone lines

across the country in collaboration with the Tanzania Communications Regulatory Authority (TCRA) and telecommunication operators.

Registration of sim cards using the new technology will require mobile phone owners to have NIDA IDs or a NIDA registration number.

The authorities arrived at the

decision to re-register sims after a successful pilot project to register the cards using the technology, which was conducted last year by TCRA in Zanzibar, Dodoma, Dar es Salaam, Singida, Tanga, Iringa and coastal regions.

NIDA said it had so far registered 88 per cent of eligible Tanzanians

who qualify for the national IDs, while the remaining 12 per cent would be identified and registered in an ongoing mass registration across the country.

According to TCRA statistics, subscriptions to mobile networks reached a record high of 41,708,218 in June 2018.

Crypto Wallet start-up lands R18m in funding

Centbee, the South African company behind what it claims is "the world's favourite bitcoin wallet", has landed a new R18.3m round of funding.

The company said Calvin Ayre, an entrepreneur best known for his company CoinGeek, had committed the funding on the back of its proven ability to attract users and make bitcoin easy to use, the company said. The announcement

came just as the variant of bitcoin it backs slumped in price.

Centbee was co-founded by blockchain specialist Lorien Gamaroff and former eBucks chief executive officer Angus Brown and is associated with AlphaCode, a "club" created by Rand Merchant Investment Holdings to find and support businesses that could disrupt the financial sector.

Botswana mobile internet subs up vs fixed internet

Mobile internet subscriptions in Botswana continue to increase in comparison with fixed internet, according to new data.

Statistics Botswana attributed the growth mainly to the rate at which data bundles were being purchased for mobile internet, specifically for social media use.

The latest figures showed that mobile internet subscriptions increased

by 5.4 percent in the second quarter of 2018 with 1,605,727 subscriptions – up from 1,523,545 subscriptions recorded in the previous quarter.

Although there was five per cent in the take-up of fixed internet subscriptions, up from 50,514 subscriptions recorded in the first quarter 2018 to 53,057 in the second, internet subscription on the whole remained low.

Telecel loses half a million subscribers

Telecel, Zimbabwe's third largest mobile operator, has lost over half a million subscribers, according to the sector performance abridged Q4 sector report.

The company was once Zimbabwe's second largest mobile operator, but its continued loss of subscribers and failure to match rivals' network expansion has seen it fall to third place behind Econet Wireless and NetOne, respectively.

According to the *Postal and Telecommunications Regulatory Authority Sector Performance Report of 2018*, Telecel's performance showed no signs of positive gains where other operators managed to experience growth.

Active mobile subscriptions went up 1.3 per cent to 12,908,992 from 12,748,551 recorded in the third quarter of 2018. All the mobile networks, apart from Telecel, recorded growth in active subscriptions.

According to the *Sector Performance Report*, Telecel's voice traffic market share declined from



Telecel Zimbabwe head office, Harare, Zimbabwe

4.2 per cent in the first quarter to 3.8 per cent in the last quarter. The decline is consistent with the decline in its subscriber base.

Mobile internet and data utilisation increased 15.7 per cent in the quarter under review as all the mobile operators recorded growth in this space. Mobile internet and

data usage consistently increased during the course of the year and Telecel moved by 0.1 per cent from first to last quarter, attributable to a declining subscriber base and low connectivity.

The company said it will inject USD540m into its operations over the next five years to improve

service to its subscribers. Telecel chief executive officer Angeline Vere revealed the plan during a familiarisation tour by the Parliamentary Portfolio Committee on Information Communication Technology and Courier Services in March 2019. The committee wanted to understand the operations of the mobile network operator, its operational challenges and how government as a major shareholder could assist it in overcoming them.

"Telecel is looking at a five-year investment plan, in total we are looking at USD540m spread over five years with the biggest investment in the first two years. The investment will bring the network into the modern era," said Vere. "We will have 4G which will assist a lot of businesses in Zimbabwe. We are looking at giving a smart service to the generality of Zimbabweans through that investment, so our customers out there should expect a very modern network."

Eutelsat Konnect payload successfully mates with platform

Eutelsat Communications took a major step toward providing 75gb/s of capacity covering Africa and western Europe after it successfully mated the platform and payload of the Konnect satellite.

Konnect is a next-generation, all-electric High-throughput satellite (HTS) and is the first to use Thales Alenia Space's new Spacebus Neo platform. Eutelsat described it as a "major pillar" of its strategy of return to growth, enabling the company to bolster its presence in the fast-growing broadband market.

According to Eutelsat, the operation was an important milestone in the construction of the satellite in preparation for its

launch by the end of 2019.

The Konnect satellite program supports the group's ambition to contribute to reducing the digital divide with a view to building a more inclusive digital society.

"This mating operation represents

a key step in this significant satellite programme," said Yohann Leroy, deputy chief executive officer and chief technical officer, Eutelsat.

"One that will enable to deliver high-speed broadband services at affordable prices, with a view to

complementing terrestrial networks in western Europe but also in Africa where the drive to increase Internet penetration is a key priority."

Eutelsat successfully mated the platform and payload of the Konnect satellite in Cannes, France.

Subex and BTC agree five-year-deal

Telecom analytics solutions provider Subex has inked a five-year multi-million-dollar deal with Botswana Telecommunications Corporation (BTC) to implement its ROC Revenue Assurance and ROC Fraud Management Platform (iRAFM).

In addition, Subex will implement its ROC Partner Settlement and ROC Route Optimization solutions for BTC.

"This deal also marks the continuation of Subex and BTC's long-standing partnership which dates back to 2010," Subex said.

Through the multi-solution deployment of iRAFM, Subex said it would enable BTC with an out-of-the-box solution to combat prevalent risks such as subscription fraud, internal fraud, premium rate service fraud (PRS Fraud) and international revenue share fraud (IRSF), amongst others.

Furthermore, the solution will also prevent losses through revenue leakage by providing a solution with capabilities to investigate, diagnose and recover any lost revenues.

BTC offers fixed line, mobile (voice, SMS, data) and fixed broadband through ADSL, Fixed LTE and fibre services.

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Telecom Namibia upgrades products

Telecom Namibia has upgraded its Speedlink broadband products as of April 1st 2019.

The free service was launched as a promotion, with a view to making it permanent. The company is introducing a minimum download speed of 2 megabits per second (mb/s) as the entry-level package nationwide to improve the broadband internet experience and doing away with the 1mb/s package.

The firm said in a statement that it upgraded the Speedlink broadband packages for both residential and business customers as follows: 1mb/s was upgraded to 2mb/s, 2mb/s doubled to 4mb/s, 4mb/s went up to 6mb/s, 6mb/s to 8mb/s and 8mb/s went up to 10mb/s.

“Recognising that internet connectivity is essential in the daily communication of all Namibians, Telecom Namibia makes every effort to continually improve its offering to enhance faster connectivity to every Namibian,” said

Calvin Muniswaswa, Telecom Namibia’s acting chief executive officer. “Customers using a 10mb/s Speedlink broadband package last week received a price reduction since they are already on the threshold of the package ranges.”

The 1024kb/s entry-level package has been phased out by the provider.

Zambia sees spike in mobile internet usage

Zambia’s regulator has reported a sharp rise in the number of mobile internet users.

According to the latest statistics made public by Zambia Information and Communications Technology Authority (ZICTA), the number has increased by approximately two million to reach close to 10 million people from 7,910,995 in just over three months.

It said the increase was attributed to, among other things, improved data networks, affordable data services and the expansion of networks by operators who are aggressively competing for customers.

Zambia’s minister of communications and transport Brian Mushimba said people were now taking advantage of 4G roll



According to statistics, the number of users has risen to almost 10 million

out by operators MTN Zambia, Airtel Zambia and Zamtel which meant they now have access to improved internet speeds.

He also assured the sector of the government’s commitment to ensuring access to both internet and mobile phone connectivity and added that he has directed state-owned Zamtel to fast-track the rollout of 4G nationally.

“Every citizen, regardless of which part of the country he or she comes from, is entitled to voice calls and better internet connectivity,” said Mushimba.

Zamtel chief executive officer Victor Mupeta said the company had embarked on an expansion drive that will see 700 communication towers erected by the close of the year.

Mupeta said the new sites would be mainly located in under-served rural areas. “Internet connectivity has become more of a necessity than luxury, added Mupeta. “We are now in an era where mobile device users are constantly using their gadgets to connect to the internet and stay online for very long periods of time navigating different apps.”

Angola orders re-run of telecom tender

Angolan president João Lourenço has annulled the tender for the country’s fourth telecoms operating licence and ordered it to be re-run to ensure “a clean and transparent process”.

The move came shortly after little-known Telstar Telecomunicacoes won the tender, which was announced shortly after Lourenço’s inauguration in 2017. It was also praised as a major step toward opening up of one of Africa’s most closed economies.

However, a statement from the president’s office said the winning

bid failed to meet all the terms with the tender.

“It has been confirmed that there was on behalf of the company declared winner of the tender non-compliance with the terms of the procedure, the requirements relating to the balance sheet and profit and loss statements, and the statement of overall turnover for the last three years,” the statement said.

The statement further ordered work be done over the next 30 days to start a fresh tender process.

Telstar’s victory was the source

of ridicule for many Angolans on social media, who questioned how a company with no history in telecommunications could have won.

When asked about the decision before the president’s move to cancel the tender, Angola’s telecom minister Jose Carvalho da Rocha told state television it was too late for complaints.

“Challenges should have been made at the various stages of the process,” he said hours before the statement was released by the president’s office.

PCCW completes Mozambique internet upgrade

PCCW Global, the international operating division of HKT, the Hong Kong telecom service provider, has completed a major internet infrastructure upgrade in Mozambique.

The upgrade of its internet backbone will improve connectivity in the traditionally underserved southern African nation and vastly improve international communications and increase the number of internet users in the country while lowering overall connectivity costs.

PCCW Global is continuing to extend its network service coverage in hard-to-reach and high-demand markets in Africa with a specific focus on improving network interconnection, access to cloud and lowering the cost of connectivity for end users.

The company was one of the pioneers of African connectivity when it delivered sophisticated hybrid solutions that combine fibre, satellite, microwave and

wireless connectivity to meet the needs of African service providers and enterprises. PCCW Global’s African coverage expanded in 2012 with the acquisition of Gateway Communications, a pan-African provider of carrier and network solutions on the continent.

“In Mozambique, our aim is to provide users such as global enterprises, content delivery networks, Internet service providers, and content providers

with affordable connectivity to and from the country with the hope of gradually increasing the number of Internet users,” said

Frederick Chui, chief Commercial officer, PCCW Global. “We are pleased to be making additional investment to help further reduce the barriers to content availability and distribution that can have a significant impact on the Internet in Africa and will help make existing international content more accessible.”

Fixed broadband subscriptions in sub-Saharan Africa tipped to grow three-fold in 2023 – Ovum report

Fixed broadband subscriptions in sub-Saharan Africa (SSA) are tipped to multiply three-fold to 17 million in 2023, from the current levels of 6.6 million, according to Ovum, a London-based global technology research and advisory firm.

The report, called *Fixed-Wireless Access Broadband Drives Development in sub-Saharan Africa*, said that the region's legacy of poor fixed-network coverage represents a significantly large and untapped market for broadband service providers. However, strong

demand for broadband connectivity in SSA is not being adequately addressed by wireline technologies such as XDSL and fibre.

"Coupled with the speed of growth and the clear appetite for new digital-media and internet-based services among consumers, among businesses and the public sector, this calls for broadband solutions that are cost-effective and can be quickly deployed," Julian Bright, a senior analyst at OVUM and the author of the report said. "Where the economics are favourable, FWA provides an effective

complement to or even substitute for, fixed wireline connectivity. Further opportunities for FWA will continue to open up as operators and service providers in the region realize the benefits of LTE-based FWA."

In addition to providing internet connectivity for remote and rural populations, FWA can support the growth of digital media, provide the wider population with access to government services and meet the demands of businesses for high-quality broadband services.

FWA has emerged as one of the

most significant growth drivers around the world, demonstrated by explosive user growth both developed markets like Japan, Germany and Italy as well as emerging countries like South Africa, Philippines and Mexico. Some commentators have claimed that eventually 5G FWA will have a significant impact on fixed broadband just as 2G had on fixed voice over 20-years-ago. According to a financial report published by Telkom in South Africa, its WTTx new subscriber base increased by 340,000 in the fiscal year 2018, versus 35,000 new fibre users.

Angola loses 800,000 mobile users in four years

Angola's two mobile telecommunications operators lost approximately 800,000 users from 2014-2018, the chief executive of the Angolan Communications Institute (INACOM) announced.

António Moniz Gonçalves said that the number of users fell from 14 million in 2014 to 13 million in 2016. This was followed by a short-lived spike to 13.3 million in 2017 before it

fell again to 13.2 million last year.

The operators, Unitel and Movitel, share 13.3 million users, representing about half of Angola's population.

The secretary of state for telecommunications, Mário Augusto da Silva Oliveira, said that the fall in the number of users was due to updating telephone numbers and the economic financial crisis that the country was experiencing.

Telecom Namibia opens teleshop in Nkurenkuru

Telecom Namibia has officially opened a teleshop in Nkurenkuru and launched its services in various parts of Kavango West Region.

The telecom service provider's acting chief executive officer Calvin Muniswaswa said that multi-service access node (MSAN) has been installed in certain parts of the region.

"These devices connect customer telephone lines to the Telecom

Namibia core network in order to provide telephone and broadband services through technologies such as Asymmetric Digital Subscriber Line (ADSL) and very high bit rate digital subscriber line (VDSL) all from a single platform," he said.

He added that these sites can be upgraded further in future to fibre-based technologies such as gigabit passive Optical networks (GPON).

Accessories market to grow 5.8 per cent in 10 years

The Africa mobile phone accessories market is anticipated to grow from USD2.3bn in 2016 to just over USD4bn by 2026, registering a compound annual growth rate (CAGR) of 5.8 per cent in terms of revenue during the 10-year forecast period.

A report called *Mobile Phone Accessories Market: Africa Industry Analysis and Opportunity Assessment, 2016–2026*, published by Future Market Insights, follows the market in terms of value and volume and then calibrates for market revenue estimates.

"Increasing disposable income and rapid urbanisation are factors

anticipated to drive growth of the Africa mobile phone accessories market over the forecast period," said the company. "Increased internet usage and smartphone penetration, along with a robust growth of m-commerce is further expected to push the demand for mobile phone accessories in Africa during the forecast period."

It said that factors likely to hamper the growth of the Africa mobile phone accessories market, include poor economic conditions and a largely segmented marketplace.

"Poor economic conditions and an established market captured by

Chinese vendors are some of the major challenges expected to be faced by market players in the Africa mobile phone accessories market during the forecast period," the report added. "The overall Africa mobile phone accessories market is segmented on the basis of type, price, distribution channel, and region."

The study also showed that the mid-priced segment is expected to expand at the highest CAGR of 6.2 per cent in terms of value during the forecast period.

With regards to market share, the low-priced segment alone accounted for more than one-third

of the revenue share of the overall market in 2015 and analysts said this segment would dominate the Africa mobile phone accessories market in the coming decade.

"The online store segment is expected to expand at the highest CAGR of 7.2 per cent in terms of value during the forecast period. In terms of market share, the multi-brand store segment alone accounted for more than one-third of the revenue share of the overall market in 2015 and is expected to dominate the Africa mobile phone accessories market between 2016 and 2026," added Future Market Insights.

Finance house buys stake in Liquid Telecom

Pan-African firm Liquid Telecom has completed a deal with CDC Group, which will see the development finance house become an eight per cent shareholder in the operator for a USD180m investment.

CDC, formerly known as the Commonwealth Development Corporation, is owned by the British government and it is focused on investments in Asia and Africa.

Liquid Telecom said in a statement that the planned deal, first announced in December, had gone through as all conditions have now been met, with the money received

It is reportedly the largest ever investment by CDC in an African firm.

Liquid Telecom is headquartered in London and was created by Zimbabwean billionaire Strive Masiyiwa, who also founded Econet Group. It operates fibre-optic networks in 20 African nations and has fibre infrastructure spanning from Cape Town to Cairo. It acquired South Africa's Neotel in 2017 in a R6.5bn deal.

The process was started in December 2018, which meant Liquid Telecom was then able to push back its listing on the London Stock Exchange.

ICG invests in Réunion

ICG's newly-created infrastructure team has completed its first deal by investing an undisclosed amount in Océinde Communications to support the rollout of the company's services across the French overseas department of Réunion. Benoît Durtteste, the CIO and CEO at ICG, said: "This deal is a perfect illustration of our strategy in the infrastructure space: a focus on mid-market opportunities, with a flexible approach to capital structuring and the ability to partner with best-in-class industrial groups." Océinde Communications is a FTTH operator in the department of Réunion. Its network currently covers 80 percent of the island.

Econet Wireless goes solar

Zimbabwean telecom giant Econet Wireless has commissioned a 450 KWp solar power plant at its Willowvale industrial complex.

The grid tied solar system will operate under a 25-year Independent Power Producer (IPP) licence. It was implemented by Distributed Power Africa (DPA), Econet's solar business in line with the company's commitment towards the adoption of clean and renewable energy in Zimbabwe.

The Willowvale solar plant has a total of 1,435 panels installed at car-ports and rooftops.

It comes complete with a real-time power monitoring system and the solar plant will generate an estimated 780MWh of energy annually.

Under the terms of the licence, Econet Willowvale will generate and supply power for self-consumption and at peak the plant will provide close to 45 per cent of the business's electricity needs.



At peak the plant will provide close to 45 per cent of the business's electricity needs

During the commissioning ceremony, group chief executive officer Douglas Mboweni, said the commissioning of the Willowvale solar power plant demonstrated the company's focus to ensure that all its offices nationwide transition

to clean and reliable energy as rapidly as possible.

"Our organisation launched a Green campaign in 2018, which has seen the company investing in alternative renewable energies, starting with six of our own business premises," he said.

Uzi gets permission from ZICTA to further delay network launch

The Zambia Information and Communications Technology Authority (ZICTA) for the third time permitted the nation's prospective fourth mobile phone operator Uzi Zambia to postpone the launch of its network.

Uzi, whose major shareholder is Unitel International Holdings and owned by the country's richest woman Isabel dos Santos, secured a network licence in March 2018, valid for 15 years, to compete against MTN Zambia, Airtel Zambia and Zamtel.

The network was initially slated to launch in December 2018 but this was delayed because the company was reportedly unhappy with specific licence terms and conditions issued by ZICTA.

At the start of 2019, Uzi issued a statement confirming it would launch operations in February and said the delay was the result of making sure equipment was properly installed and thoroughly tested.

Brian Mushimba, minister of

communications and transport confirmed the third postponement and said the launch would take place towards the end of this year.

"The project completion of the behind the scenes technical deployment is October or November, 2019," he said. He added that he remained confident Zambia shall have a new mobile phone operator before the close of 2019 and said the company had made progress in rolling out its network.

Lusaka resident sues MTN and ZICTA

A Lusaka man has brought legal action against MTN Zambia and Zambia Information Communication Technology Authority (ZICTA) for negligence and allowing mobile money fraudsters to breach his privacy.

Zephrantheniah Mudenda has claimed that a scam message was sent to his device from an unregistered number after fraudsters allegedly listened to his phone conversation.

Mudenda is also seeking an order

to force ZICTA to suspend MTN's operating licence until the company has, among other things, deactivated all unregistered sim cards.

In a statement filed at the Lusaka High Court, Mudenda claimed that on January 28th, 2019, he received a message on his registered mobile number from 0961197368, which directed him to send money to 0973244240, using the name "Webby Siwelwa".

Mudenda subsequently reported

the communication to MTN and he was told the number was not registered and so had no name attached to it. He further claimed that an MTN staff member who identified herself as Emma, then turned rude and refused to connect him with MTN head office.

Fearing for his family's safety, Mudenda reported the matter to the police and then tried to lodge a complaint with ZICTA, but to no avail.

The case continues.

MTN could cut Jumia stake



Africa's biggest mobile network operator MTN is likely to proceed with plans to cut its Jumia Technologies stake significantly even as the Nigerian-based e-commerce company soared after listing on the New York Stock Exchange. Africa-focused Jumia's share price rose 75 per cent in New York on the day, giving it a market value of USD1.9bn (R26.6bn). In response, MTN rose one per cent to R98.51 on the JSE early on Monday April 15th, the best level since the mobile operator ran into regulatory troubles in Nigeria in August 2018.

Movitel back online



Mozambican mobile operator Movitel said it had generally restored services following the devastation caused by Cyclone Idai. Movitel said it had recovered 75 per cent of its base transceiver stations and the remaining stations are in the process of being restored. It said it expected in the coming weeks that weather-related incidents would be completely remedied and the whole telecommunications system in Mozambique would be recovered. The cyclone wreaked havoc in the country, killed thousands of people and caused extensive damage.

Ikimobile to build factory



Portuguese mobile phone manufacturer Ikimobile said it expected to complete a mobile phone assembly unit in Benfica, Angola in October 2019, as a result of an investment close to AOA1.6bn. The company's chief executive officer Tito Cardoso said that the factory would produce around 100,000 units per month for both the Angolan market and other SADC countries. He also said that the brand hopes "to be present" throughout the country, particularly in the provinces, "to give the Angolan people a better and more competitive product".



Talking satellite

Martin Jarrold, chief of international programme development, GVF



Africa's satellite ascendancy

Africa's mobile communications market has been satellite-dependent for decades, ever since roll-out of early 2G networks was built on a foundation of cellular backhaul over satellite. Today, as Africa's wireless operators continue an accelerated roll out of 3G and 4G networks, satellite is being used to deliver backhaul, particularly to serve remote/rural areas, quickly, reliably and cost-effectively. The total number of satellite-backed cell sites in 3G and 4G networks is expected to grow to well over 10,000 by 2020, just to keep up with customer demand and in order to avoid the prohibitive costs of (non-satellite-based) backhaul in remote locations.

Also well-recognised is the growth in VSAT (very small aperture terminal) networks serving Africa's expanding enterprise sector, but that growth is particularly evident outside of the already historically strong VSAT country-markets, a phenomenon leveraging-off the same availability of HTS (high throughput satellites) capacity over the continent that is serving increased broadband access for consumers.

In addition, more developments have proven that Africa's domestic ascendancy in the satellite field comes as the continent reaches an inflexion point in its: (1) information and communications technology (ICT)-related social and economic development generally and (2) in its contributions to, and its future derived benefits from, space-based communications and non-communications-related space activities specifically.

April 2019 also showed that across Africa the leveraging of opportunities

surrounding satellites and space-related activity has never been greater. Many nations – Egypt, Algeria, Angola, Morocco, Ghana, Nigeria, South Africa, Kenya, Ethiopia, and Mauritius – are now introducing or have announced satellite programmes to kickstart wider innovation. Tunisia has now joined this list. However, whereas many of these newer space-nations are looking primarily at 'smallsat' technologies for the Earth observation applications arena – recognising that remote sensing information has the potential to improve agriculture, guard against deforestation, improve disaster planning, facilitate maritime domain awareness, enhance border security, etc., etc. – Tunisia is aiming towards building a future constellation of 30 communications satellites.

Collaboration between the Telnet Group and Russia's GK Launch Services – established by Roscosmos, the Russian state space corporation and authorised to conclude commercial contracts for the launch of spacecraft using the Soyuz-2 family launch vehicles from Russian spaceports – will see lofted to orbit during 2020 the Challenge One satellite. The Challenge One spacecraft will be a development of a scientific research and innovation programme exploring the practical applications of new ICT concepts, ultimately leading to the deployment of a complete communications constellation.

Additionally, in 2020, Angola plans finally to get a 16 C-band plus 6 Ku-band transponder communications payload to geostationary orbit on Angosat-2, the replacement for Angosat-1 which failed shortly after attaining orbit in 2018. Its National Space Programme Management Office (GGPEN) has defined Angosat-2's footprint coverage as Angola, Africa and parts of Europe.

Africa's commitment to satellite-related

endeavour is not only manifest as a result of a general recognition that designing and building 'smallsats' can help promote national capacity-building and development objectives, but more specifically in the identification that the applications to which they are applied can foster the achievement of a range of particular scientific and technological goals.

It is also the result of international geo-politics, the pursuit, by other actors, of economic influence, and associated bi-lateral collaborations between national space agencies – those of the bigger, long-established, space-nations and those of the much smaller and new-entrants to an increasingly commercialised space ecosystem. One example falls within the realms of China's Belt and Road Initiative and features Ethiopia's journey to orbit.

One facet of Beijing's increasing influence over the economies of Africa has taken the form of both state-run and private space companies selling "Made in China" satellites to the continent's space-ambitious nations. Whilst the China-Ethiopia space connection is not as well-known as the China-Nigeria technology transfer relationship – wherein China gifted USD550 million to Nigeria for the purchase of two Chinese-built spacecraft – with Chinese help Ethiopia too will soon be heading to space.

Ethiopia's space ambitions have accelerated in recent years, with the creation of a space science council and the 2016 establishment of the Ethiopian Space Science and Technology Institute (ESSTI). Assuming that the national space programme proves resilient enough to survive political and economic uncertainties, Ethiopia wants to reduce reliance on foreign telecoms by launching its own communications satellite and to develop and manufacture its own satellites for national security, disaster management and response, weather monitoring, and crop and land management applications.

However, firstly will come the China-aided satellite-build. The satellite – an Earth observation platform to collect data on climate change – will have its Ethiopian specification-design and manufacturing costs 75 per cent funded by the Chinese. Launch will be from China; but command and control will take place from a centre in Ethiopia.



Ethiopian Space Science and Technology Institute, Addis Ababa, Ethiopia

PHOTO CREDIT: GOOGLE MAPS

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Ibrahim stands down from big job at Ericsson to advise CEO

Ericsson announced that Rafiah Ibrahim, senior vice president and head of market area Middle East and Africa will step down from her role to become advisor to company chief executive officer Börje Ekholm.

Ibrahim joined the Swedish firm in 1996 and has since held various managerial positions across the company. She had been in her most recent role since April 2017.

Ekholm praised Ibrahim for her contribution to Ericsson over the years and highlighted some of her key achievements in that time.

“Rafiah has been a very important leader in our sales and delivery organisation,” said Ekholm. “In her latest assignment, she successfully led the merger of two important markets, Middle East & Africa, increasing customer value and securing scale and efficiency as well as implementing a robust operational structure.”

Ericsson made no further comment on Ibrahim’s move but said in a statement that a recruitment process was already in place and that a successor would

be named in due course. However, the company did not indicate whether Ibrahim would be replaced before she takes on her new position in late August. It is also unclear at this stage whether the replacement is most likely to be an internal or external candidate.

Speaking at the Mobile World Congress 2019 in late February, Ibrahim said affordability would be no barrier to people embracing 5G as devices will become cheaper when the technology is more commonplace. “When I download a lot of video,



Ibrahim will take on her new role August 31st 2019

PHOTO CREDIT:
WWW.ERICSSON.COM

it becomes obvious that soon 4G will not be enough,” she said. “Soon even consumers will want more. The more you have the more you want. Is it affordability (that is the problem)? It won’t be.”

Dark Fibre Africa opens Zimbabwe office

Open-access fibre telecommunications firm Dark Fibre Africa (DFA) has marked its first network expansion into markets outside South Africa, by opening an office in neighbouring Zimbabwe.

The new Harare hub will be headed up by Simon Chimutsotso, who has “extensive experience” in rolling out telecoms infrastructure in Zimbabwe, Zambia and South Africa.

DFA said it plans to roll out a high-speed fibre network in Zimbabwe, which will be made available on a wholesale open-access basis.

“We have rolled out network infrastructure in all of the major South African metropolitan areas and have extended our footprint to large and small towns, amounting to over 13,000km of ducting space,” said

DFA executive for strategy, mergers, acquisitions and innovation Vino Govender. “Our entry into Zimbabwe is in line with our strategic intent of expanding into sub-Saharan and other African markets.”

Chimutsotso said DFA Zimbabwe will “build on the extensive experience from its South African counterpart to give, among others, Zimbabwean

telecoms operators and internet service providers access to the same premium connectivity infrastructure that DFA South Africa is known for”.

He added: “We are excited to build our customer base in this new territory and at the investment opportunity and value to be derived by the telecoms sector of Zimbabwe and the economy at large.”

PAT and WATT pen Nigerian infrastructure agreement

Nigerian firm Pan African Towers (PAT) and Canadian company WATT Renewable Corporation have signed a N7.2bn infrastructure investment financing agreement to address the energy needs of Nigeria’s telecoms industry.

Speaking at the signing ceremony in Lagos, chief operating officer and founder, WATT Renewable Corporation, Oluwale Eweje, said it is an infrastructure-based partnership in which his company will provide power supply to the tower firm.

Eweje said power accounts for about 70 per cent of the company’s operating cost (OPEX), adding that the mandate of WATT is to provide between 40 and 50 per cent savings.”

“So, part of what we are doing is we are using a combination of technology and conventional energy sources to provide power to (the) off-taker which is PAT,” he said. “The offshoot of all of these is

the socio-economic component of what we are doing. We are not just providing power to the business, part of what we are doing is that we are looking at using that as anchor station so that we can provide power to businesses within the country which currently do not have power.”

Eweje added that the partnership had been in the works for about a year before the final signing of the deal.

He said investors have committed to spending about N7.2billion (over USD20m) on the project.

Safaricom signs new Chinese e-commerce pact

Safaricom has expanded its e-commerce reach in Kenya by providing mobile payment services on online store Aliexpress.com.

The company has partnered with the Chinese run web business under Alibaba Group, to use M-Pesa as a payment option.

It has been predicted that it could boost the telco’s daily

mobile money transactions, which currently stand at 17 million or 25,000 transactions per minute, as more Kenyans start to favour online shopping driven by increased internet access.

“This partnership seeks to connect Kenyans to even more business opportunities by enabling them to seamlessly source, purchase and import goods from the world’s leading manufacturers,” said Safaricom chief customer officer Sylvia Mulinge.

Under the terms of the deal, Ant Financial, which runs the portal’s payment services, will offer M-Pesa as one of the payment options with transactions denominated in the Kenyan shilling.

Telecom Egypt signs Microsoft Azure deal

Telecom Egypt has partnered with Microsoft to extend the latter’s cloud network in the country.

The telecom firm said it will provide low-latency connectivity into and across Egypt to help enhance

performance and increase reliability for customers of Microsoft services.

The partnership will increase Microsoft’s reach to the large Egyptian market in addition to improving its connectivity across that region of the continent.

“Through our collaboration with Telecom Egypt we are extending Microsoft’s global network in Egypt and improving connectivity across north Africa and the Middle East,” said Yousef Khalidi, Microsoft corporate vice president for Azure Networking.

The new partnership was announced at Mobile World Congress 2019 in Barcelona.

Aurecon chooses Orange to manage global communications

Engineering and infrastructure advisory giant Aurecon has chosen Orange Business Services (Orange) to manage its global communications infrastructure, including SD-WAN and cybersecurity services, as part of a USD25m five-year network

transformation agreement.

The French telecom giant said the deal will affect 60 sites across more than twenty countries, including African nations such as Angola, Botswana, Kenya, Mozambique, Namibia, Nigeria and South Africa.

It is based on the provision of Orange's SD-WAN service, which the carrier described as a fully managed end-to-end solution that will provide a four-fold increase in agile network capacity.

"This increased capacity is critical for worldwide collaboration, cloud-based CAD software and work-sharing," Orange said in a statement. "It will offer more visibility and flexibility to grow and evolve across its business operations. The scalable, cloud-based security services from Orange will enable Aurecon and its partners to work securely from any location, while securing its cloud-based business applications."

Orange entered into partnership with Aurecon in 2014, when it redesigned, consolidated and managed the latter's network

infrastructure and deployed a high-speed global WAN, connecting sites across Africa and other parts of the world. Aurecon is based in Australia and South Africa.

Dos Santos clings on...for now

Isabel dos Santos, known to the media as Africa's richest woman, has been re-elected to the board of Angolan telecom giant Unitel.

The decision came after speculation that dos Santos could have been cast aside in a shareholder dispute at the company that dominates Angola's telecoms market.

The daughter of former Angola president José Eduardo dos Santos, she owns a 25 per cent stake in the business. Brazilian telecom company Oi, Angolan state oil company Sonangol and Angolan businessman and former government official Leopoldino do Nascimento also have an equal share.

The three co-owners previously always voted as a block, but Sonangol recently indicated that it was looking to sell its stake and wanted to reduce the influence of dos Santos in the process.

Dos Santos went through a turbulent period after her father was replaced by president Joao Lourenco in September 2017.

The latter has since moved to push aside powerful figures associated with his predecessor and fired Isabel dos Santos as chairwoman at Sonangol.

It is uncertain whether she will hang on as Unitel chairwoman when the board convenes for its first meeting, which is scheduled for May 6th.

MTN Group announces divestment plan

MTN Group has announced a USD1 billion divestment programme over the next three years that will slim down the continent's biggest mobile phone operator and refocus it on high-growth markets in Africa and the Middle East.

Chief executive Rob Shuter, who joined MTN from Vodafone in 2017, has drawn up a turnaround plan that includes shedding loss-making e-commerce assets and exiting countries where MTN has little or no prospect of reaching second position by market share.

Shuter is also pushing the company into different avenues, such as mobile financial services, music streaming and mobile gaming. The aim is to target a burgeoning young tech-savvy population to offset falling prices for basic telecoms services.

Founded in 1994, MTN has been one of South Africa's biggest corporate success stories. However, clashes with regulators in Nigeria, Uganda and elsewhere in Africa have curtailed its growth.

NuRAN adds Fouladi to board

NuRAN Wireless, the mobile and broadband wireless infrastructure solutions provider, has added industry veteran Babak Fouladi to its board of directors, replacing the outgoing Francis Létourneau.

Fouladi, who is currently chief technology and digital officer at Dutch landline and mobile telecommunications company KPN, has joined as an independent and non-executive director. He will assist NuRAN with both the technical and business challenges of rural and remote connectivity. He

PEOPLE MOVES & CHANGES

Date	Name	New employer	New position	Previous employer	Previous position
11/1/19	Jens Thstrup	DAMM Cellular Systems	chief executive officer	Airbus	head of PMR terminals business and indirect sales
15/1/19	Nicolas Hauswald	NA	chief executive officer, ETELM	NA	sales and marketing director, ETELM
01/3/19	Douglas Craigie Stevenson	Cell C	Interim group CEO	NA	Still chief operating officer
26/3/19	Babak Fouladi	KPN	Independent and non-executive director on NuRAN Wireless board	NA	Still chief technology and digital officer at KPN
28/3/19	Foster Plender	AfricaOnline (subsidiary of Gondwana International Networks (GIN))	Managing director	GIN	Consultant
1/6/19	Hauke Holm	DAMM Cellular Systems	Vice President R&D	Hytera Mobilfunk	Chief technology officer
31/8/19	Rafiah Ibrahim	Ericsson	Advisor to the CEO	NA	Head of market area Middle East and Africa

INVESTMENTS, MERGERS, ACQUISITIONS

Date	Buyer	Seller	Item	Price	Notes
14/1/19	Bharti Airtel	Helios Investment Partners	Telkom Kenya	NA	MPs have raised concerns regarding the proposed deal so it may not go ahead
22/3/19	Maroc Telecom	Millicom	Tigo Chad	NA	The acquisition forms part of Maroc Telecom's strategy to expand operations in north and central Africa, while Millicom focuses its efforts on Latin America

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has also held a number of senior executive roles in the telecom industry, including chief technology and information systems officer at MTN, chief technology officer (CTO) of Vodafone Spain and Vodafone Romania, as well as vice president of multimedia and services for Ericsson.

Martin Bedard, chief executive officer and president of NuRAN Wireless stated: “We expect this addition will further strengthen NuRAN’s marketing and sales strategy, as well as increase NuRAN’s visibility throughout the telecom industry.”

Due to company by-laws regarding the maximum number of directors, Létourneau resigned from the board to allow Fouladi’s appointment.

Fouladi said he was looking forward to contributing to the efforts at NuRAN and to help the company achieve its goals of connecting rural African communities and other areas of the world. “Often times it is the smaller participants in a market who can move swiftly and really change the landscape, I feel that NuRAN has this potential,” Fouladi added.

Morocco passes new law to safeguard sector and attract new business

Morocco has passed a new law to safeguard competition in the telecommunications sector, as well as attract more investors and business ventures to the country.

Law 121.12 has identified three primary axes to improve both the customer and competitor experience of the Moroccan market of telecommunications.

The first axis is to uphold “complete transparency” with the objective to “inform and protect consumers”.

Axis two relates to mechanisms and “tools to reinforce regulation and competition”. The third and final axis increases the discharging and regulatory powers of the National Agency for the Legalisation of Communications (ANRT).

Prior to the passing of this new law, ANRT did not have complete regulatory powers. If it received complaints about anti-competition practices, it had to start a legal process, which could take years to complete. The new law allows ANRT to directly punish a company that falls foul of the rules.

MTN claims “world first” airtime top-up deal with WhatsApp

MTN South Africa has claimed it will become the first mobile network in the world to let customers purchase airtime and data bundles as well as check their balances directly on WhatsApp.

Its new MTN Chat service, a joint venture with global customer engagement company Clickatell, will enable users to purchase airtime and data bundles within their WhatsApp chat session. Going forward, customers will be able to also access customer support and self-service options, including performing upgrades, managing their accounts and receiving low balance alerts.

“Clickatell understands that mobile operators are under increasing pressure to deliver excellent customer service over the digital channels their customers prefer,” said Pieter

de Villiers, Clickatell founder and chief executive officer. “By offering convenient services over a secure, convenient channel, MNOs can both increase their transactional volume and attract and retain customers – something that is paramount in an age of continuous digital transformation and growing competition.”

Clickatell said it already helped Absa Bank, GTBank, First Bank of Nigeria and United Bank of Africa successfully deploy chat banking capabilities on WhatsApp across Africa.

Ethio Telecom opens Joint Innovation Centre with Chinese tech firm

Ethio Telecom and Chinese international provider of telecommunications, enterprise and consumer technology solutions for the mobile internet, ZTE, have launched a Joint Innovation Center in partnership in Ethiopia.

The collaboration will help Ethio Telecom to undertake verification on new technologies as well as tests of products and services. It will also aid the business to organise seminars, workshops and conferences.

Located in the Telecom Excellence Academy, the Joint Innovation Center, complete with a lab exhibition hall, is equipped with mobile broadband, fixed broadband, core network NFV, IP, BSS/OSS, RCS and IPTV facilities. ZTE donated and deployed various cutting-edge technologies.

Following the opening ceremony in early March, the companies also signed a memorandum of understanding for future cooperation expecting to make full use of the Joint Innovation Center

and optimise its operation. Ethio Telecom and ZTE have collaborated on various projects since 2000.

Telkom Kenya gets to work on fibre loop

Telkom Kenya has started to build a fibre loop for the city of Mombasa to meet growing demand for faster data from both its business and individual customers.

The new metro loop will connect the seaport city and link it to Telkom’s over 10,000km national backbone and the 1,000km redundancy backbone between Mombasa and Tororo, town in the eastern region of Uganda.

The idea is to improve connectivity and enhance quality of service to customers, following the recent completion of a fibre metro loop for the city of Nairobi and its environs.

Mugo Kibati, chief executive officer at Telkom, said that the company intends to set up similar fibre loops in all large towns within the country to meet the growing demand for broadband by businesses, homes and individuals.

“This demonstrates our commitment to connect the people that keep Kenya on the move with the provision of fast, reliable internet,” Kibati said. “These metro loops will facilitate access to the internet, which plays an important role in the lives of individuals and businesses. It further serves to entrench our position as Kenya’s preferred data network.

Kibati added that “for broadband revolution to be a reality”, the metropolitan bottleneck must be broken with architectural transformations that will help

LATEST COMPANY RESULTS

Date	Company	Country	Period	Currency	Sales (m)	EBITDA (m)	EPS (units)	Notes
21/2/19	Orange	France	Annual	EUR	41,381	13,005	NA	A 1.5 per cent increase in revenues in Africa and the Middle East accounted for almost half of the group’s growth in 2018, driven by data and mobile financial services.
07/3/19	MTN Group	South Africa	Annual	ZAR	134.56 bn	48.246 b	NA	MTN noted that service revenue also increased by 10.7 per cent year-on-year, supported by growth in MTN Nigeria (up 17.2 per cent), MTN Ghana (up 23.0 per cent), MTN South Africa (up 4.2 per cent) and MTN Uganda (up 8.9 per cent). However, MTN Cameroon and MTN Ivory Coast delivered a 7.3 per cent and 6.6 % decline in service revenue respectively.
27/3/19	C-COM	Japan	Annual	USD	13.53 m	NA	NA	Sales figure is revenues. The company saw a 31.6 per cent increase year-on-year.
29/3/19	Huawei	China	Annual	USD	107 bn	NA	NA	NA
23/4/19	C-Com	Canada	Q1	CND	2,948	NA	NA	Relates to revenues
25/4/19	Nokia	Finland	Q1	EUR	5.032 bn	NA	NA	In the three months to March, revenues rose two per cent to EUR 5.032 billion but were down two per cent on a constant currency basis.
25/4/19	Telia	Sweden	Q1	SEK	20.85 bn	NA	NA	Revenues of SEK20.85bn (-1.0% vs cons).
25/4/19	Ericsson	Sweden	Q1	SEK	2.4 bn	NA	NA	Net profit for the first quarter of 2019, partly as a result of the growth opportunities being afforded by 5G.

convert bandwidth demand into opportunities. "As more and more applications are emerging, we must have matching or even better bandwidth in place," he said.

Mobilis selected for universal access

Mobilis, the mobile arm of Algérie Télécom, has been selected by the Algerian telecoms regulator to provide universal access in 750 areas with low population density and on 178 roads axis the north African country. The company was chosen by Autorité de Régulation de la Poste et Télécommunications (ARPT) after bids were submitted during the tender process, which launched in February 2019. It is understood that Mobilis was helped by the fact its competitors Djazzy and Ooredoo failed to submit a bid because of "restrictive clauses" in the tender call, such as the submission deadline.

Vodacom starts 5G talks with prospective partners

Vodacom has entered talks with South Africa's mobile data-only network operator Rain and data, voice and IP provider Liquid Telecom, in a bid to launch 5G products in the country when commercial 5G routers become available.

The mobile communications giant wants to offer South Africans affordable fixed-broadband products and faster mobile services, but it currently faces the obstacle of lack of spectrum.

Vodacom has already deployed standards-based 5G technology in the country but can only launch 5G services in the region once it secures access to 5G spectrum.

"We reiterate our call to license 5G spectrum in South Africa as soon as possible, as this spectrum is not subject to any digital migration processes," Vodacom said.

Rain recently announced at Mobile World Congress in Barcelona that it has launched the first 5G commercial network in South Africa in partnership with Huawei. The move will make South Africa one of the first countries in the world to launch 5G.

Zimbabwe plans telecoms merger for future investors

Zimbabwe is planning to merge two of its state-owned telecoms businesses, particularly in South Africa, according to finance and economic development minister Mthuli Ncube told a media briefing recently.

The Zimbabwean government is looking to sell a significant stake in the two state-owned telcos, namely mobile network provider NetOne and fixed and broadband network provider TelOne.

Ncube said the move would make the businesses more attractive to would-be investors.

South African telcos Telkom and MTN have reportedly previously expressed interest in the two Zimbabwean companies, but nothing concrete followed.

"If these entities (Telkom and MTN) are still interested – and we will approach them by the way and let them know – then they have a much bigger asset to compete for in the form of the two assets together, as opposed to a TelOne or NetOne, which was the case before," said Ncube. "But there will be other suitors that we will invite."

Shares in MTN Group plummet

Shares in MTN Group fell almost seven per cent March 26th after Nigeria's government said Africa's biggest mobile operator evaded taxes and urged a Lagos court not to block a USD2bn penalty.

Government lawyer T.A. Gazalo said the high court of Lagos should throw out the Johannesburg-based company's attempt to stop it from paying backdated taxes. Wole Olanipekun, a lawyer for MTN, argued Nigeria's attorney-general, who imposed the penalty on the mobile carrier, had no right to do so.

MTN had previously denied the charge and the case was adjourned to May 7th. The share price nosedived 6.8 per cent, the most in more than five months of trading, before paring losses to 2.1 per cent by midday in Johannesburg.

Rwandan government and OneWeb launch pioneering satellite

The Rwandan government and UK-based OneWeb have launched the first ever satellite that will connect remote schools to the internet.

According to the government, the global satellite shows its commitment to preparing the country for a hyper-connected future.

The first school to benefit from the broadband satellite is St Pierre secondary school, which is on Nkombo Island. Its location had made it very costly and inefficient to be connected to standard fibre connections and so the government said satellite was the

best solution to get it connected to the internet. OneWeb's partnership with Rwanda will ultimately enable orbiting satellites to connect more schools in remote areas across the country. Nicknamed 'Icyerekezo' by pupils at the school, the broadband satellite is one of the first six satellites to be launched by the UK firm. The telecom giant had already announced plans to install 650 more satellites in public facilities worldwide.

Paula Ingabire, the country's minister of Information, communications technology and innovation said satellite internet was a good opportunity because circa USD2bn would have been needed to extend the traditional backbone to Nkombo Island. "Investing in space technology is part of our broader mission: reduce the digital gap by providing equal digital possibilities to rural and remote communities," she said.

Major spike in Zambia's mobile internet usage

The number of mobile internet users in Zambia has rocketed to 10 million from 7.9 million in just over three months, according to the latest statistics from regulator the Zambia Information and Communications Technology Authority (ZICTA)

An increase of approximately two million users was attributed to a number of things, such as improved data networks, affordable data services and the expansion of networks by operators aggressively competing for new business.

The minister of communications and transport Dr Brian Mushimba said much of it was down to faster internet speeds, combined with the roll out of 4G by main operators MTN Zambia, Airtel Zambia and Zamtel.

"Every citizen, regardless of which part of the country he or she comes from, is entitled to voice calls and better internet connectivity," said Mushimba.

Zamtel chief executive officer Victor Mupeta said the company would erect 700 communication towers by the close of the year.

"Internet connectivity has become more of a necessity than luxury," he said. "We are now in an era where mobile device users are constantly using their gadgets to connect to the internet and stay online for very long periods of time navigating different apps."

Cost of internet access has dropped, unless you live in Africa

The cost of internet access dropped globally 2018, except in Africa, according to data from an initiative to make the internet more affordable to people worldwide.

With Internet users on the continent already more for mobile data compared to average monthly income, the Mobile Broadband Pricing report from the Alliance for Affordable Internet (A4AI) reported the average price of a gigabyte of data (relative to income) increased over the past year in Africa, but dropped or remained the same in other parts of the world.

Nigeria, Egypt and Rwanda offered the cheapest tariffs on the continent, the research said. At the end of 2018, A4AI ranked Nigeria behind Egypt as the country with the lowest tariff in Africa.

IN BRIEF...



Vodacom and MTN stand accused of fleecing their customers – particularly the poor ones – when it came to data, by South Africa's Competition Commission (CC).

Both companies charge more for data in South Africa than any other country they operate in.

The CC found that overcharging was especially acute for more under-privileged consumers who typically use small, prepaid data bundles.

Giving mobile operators until June to comment on the report, the CC's Tembinkosi Bonakele said the findings of benchmarking studies were disturbing. "International benchmarking confirmed that SA data prices are high, particularly for mobile pre-paid data," Bonakele said in an e-mailed statement.

"They found that lower-income consumers were exploited more compared with wealthier consumers."

Bonakele said those buying smaller data bundles pay up to twice as much compared with consumers who buy larger ones.

"The cost of mobile data is anti-poor and lacks transparency, with lower-income consumers being exploited compared to higher income consumers," he added.

Shares in Vodacom and MTN fell sharply on Wednesday April 24th after the CC released its scathing report.

Vodacom fell by 4.68 per cent, while MTN dropped 2.65 per cent.

The CC said it wants networks to introduce data price cuts immediately.

GL introduces new Network Simulation Test Suite

GL Communications, the telecom test and measurement solutions specialist, has announced its End-to-End Wireless Network Simulation Test Suite (4G LTE + IMS, 3G, 2G).

GL says the new suite is enhanced to support variety of procedures for testing inter-operability between the networks simulating voice, and SMS (circuit switched (CS) traffic) and WEB HTTP browsing (packet switched (PS) traffic) with roaming/non-roaming users in the network. It adds that the test suite also supports a “massive number of subscriber profiles” (up to 64,000 Voice/SMS) using a single CSV database system shared across the 4G, 3G, and 2G networks.

“GL’s Wireless Network Simulation Test Suite (4G LTE + IMS, 3G, 2G) along with radio access elements is used to provide an advanced full-fledged “live network” at your company premises in any customized package to suit test requirements,” says Vijay Kulkarni, chief executive officer at GL Communications. “The test suite provides reliable integrated solutions to vendors and service providers for simulation, monitoring, troubleshooting any wireless network, including, 4G, 3G, 2G and upcoming 5G. The test suite is an invaluable tool for protocol characterization and testing, performance measurement, training, and education.” www.gl.com

Airgain releases new family of 5G antenna solutions

Fresh from the introduction of its embedded LTE antennas for LPWAN applications, Airgain has announced the release of its new family of 5G antenna solutions. The company says the new suite is designed to enable customers to easily add support for new 5G NR (Next Generation Radio) bands and deliver maximum performance with a range of form factors that fit their needs.

The new sub-6GHz (FGR1) NR antennas, according to the company, “leverage and build upon Airgain’s experience in development of multi-resonant, multi-band antenna design, providing ultra-wide-band performance out of a single antenna”. These new products enable



customers to swiftly add 5G support to their small cells, gateways, access points, and end user devices using a single antenna solution, it claims.

“The new 5G bands hold the promise of enabling much faster connections for equipment. However, they are incompatible with existing antennas, which means customers face the challenge of how they can swiftly and cost-effectively provide access to the new capabilities,” says Kevin Thill, senior vice president of engineering

at Airgain. “Our new family of 5G antenna solutions gives customers a range of options for how they can add 5G support to their equipment, enabling them to choose the right antenna to match their equipment form factor and use case and get their solutions to market quickly.”

Airgain says its new 5G NR antenna family features four new designs to match the needs of a range of equipment use cases. They are an embedded global broadband antenna, embedded Q-series CBRS antenna, external CBRS and C-band high performing omni dipole antenna and the CBRS and C-band high gain panel array reference antenna. www.airgain.com

Sepura expands communication accessories with introduction of mRSM

Sepura has extended its range of communication accessories by introducing the mRSM – a compact remote speaker microphone compatible with Sepura’s SC2 and STP Series TETRA terminals.

Described as “small, robust and lightweight”, the mRSM has been specifically designed for users operating in a wide range of environments including public safety, commercial and industrial operations.

Sepura says the design ensures that users are protected whatever the conditions. What’s more “the

positive tactile feel of the PTT and emergency buttons ensure that the mRSM is easy to use even in dark environments or when wearing gloves, while a 2W speaker ensures outstanding audio even in crowded or busy environments”.

Despite its compact size, Sepura says the mRSM boasts IP67 environmental protection and WaterPorting technology, ensuring that, like Sepura’s SC2 Series radios, the mRSM can maintain clear audio

even in continuous, heavy rain.

“The mRSM offers superior audio quality and robustness in a lightweight form factor, suitable for many public safety users, or those in industrial or manufacturing facilities,” says John Drewnicki, head of products – accessories at Sepura.

“For users seeking a compact RSM with all the audio capability of a larger device, the mRSM answers their needs.” www.seapura.com



Giesecke+Devrient debuts new security platform

Giesecke+Devrient Mobile Security used Mobile World Congress 2019 to debut a new platform that enables the integration of multiple security applications on a single security chip – for mobile connectivity, mobile payment, transit and other security applications.

Targeting device manufacturers, the platform combines the eUICC (Embedded Universal Integrated Circuit Card) and the eSE (Embedded Secure Element) on a single chip.

The firm says this allows the embedded SIM functionality to be combined with other services such as mobile payment, ticketing or secure authentication. G+D also claims the platform meets all relevant specifications and certification requirements of the GSMA as well as international payment and transit organisations. In addition, it successfully completed tests against all relevant back-end systems of MNOs, banks or transit authorities.

The new converged platform is based on the Sm@rtSIM CX secure element product line and the AirOn eSIM management platform provided by G+D, including the required secure personalisation and data management services.

G+D says device makers and end users will benefit from the new integrated solution as the space-saving format of the single-chip

enables device makers to develop smaller, leaner and therefore more attractive products, enabling a wide range of functions easily, quickly and securely. www.gj-de.com

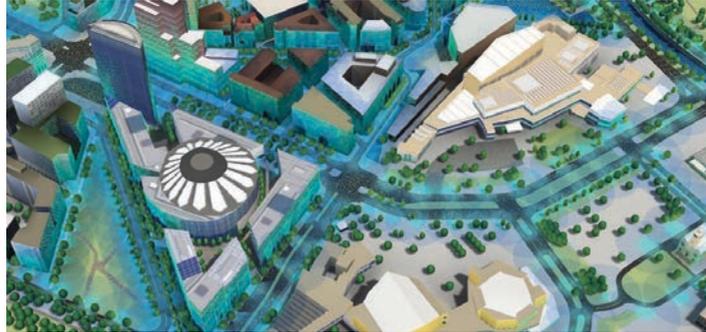


HERE Technologies, Shields and Infosys team up

HERE Technologies, Shields and Infosys are collaborating on a powerful and cost-effective way to perform 5G network design and deployment.

The new solution, demonstrated at MWC 2019 in Barcelona, is designed to help enterprises including mobile network operators (MNOs) save both time and money when performing 5G radio frequency planning. The companies estimate that it would enable enterprises to reduce the time to identify real estate acquisition for 5G small cells as well as cut the cost of RF design by more than 40 per cent.

They reckon the solution is “a unique blend of technologies”. Put simply, it embeds machine learning software and a service delivery framework from Infosys; expertise in RF and C-RAN (cloud radio access network) design from Shields; and large, precise, scalable 3D datasets derived from terrestrial LiDAR and other remote



sensed content from HERE.

The experience of HERE in extracting features and 3D derivative objects such as poles, trees, terrain models and buildings “lends a new level of precision to RF planning for 5G mmWave networks that far surpasses the accuracy of conventional GIS data”, it is claimed.

In theory, that means greater efficiency in the mmWave RF planning process. Furthermore, the partners

claim more accurate network planning takes the guesswork out of transmitter selection and placement. It also enables MNOs to cut costs by significantly reducing the number and length of physical site-surveys.

A further claim, that network design tasks take just a few days, MNOs can more quickly perform upgrades, install new equipment, add capacity or respond to environment changes. www.here.com

Amphenol RF releases new line of 18 GHz N-Type connector series



Amphenol RF has released a line of 18 GHz N-Type connectors, which it claims is ideal for more rugged, outdoor applications that require low PIM performance.

The firm says the latest N-Type connectors are designed to reach an extended frequency range of 18 GHz, they feature the familiar threaded coupling mechanism and provide engineers with a durable,

weatherproof interconnect solution with excellent low PIM performance.

Amphenol also waxes lyrical about the “greater design opportunities” with a robust and familiar interface. The higher frequency and single body construction make this connector appropriate for applications that require durability and faster data transfer rates, the company says. Additional features include low

VSWR and insertion loss, high power handling and ruggedized construction.

These interconnects are fully interchangeable with N-Type connectors made to the MIL-C-39012 specification. They are said to be ideal for use in systems where reliable RF and mechanical performance is critical such as wireless infrastructure, military and industrial applications. www.amphenolrf.com

Digi international offers cellular extender

Digi International has made available its Digi EX15 cellular extender. The company claims that it is designed to be used for primary or backup LTE connectivity at LTE-Advanced Pro (CAT11) speeds and for quick installations and remote management through either Digi aView or Digi Remote Manager.

It is claimed that the Digi EX15 is an affordable LTE cellular solution that can protect businesses from

network disruptions, so they can mitigate the risk of lost revenue and damaged reputation if their primary broadband connection fails. As a reliable, scalable business continuity failover solution, with CAT11 support to boot, Digi says it supports even high-bandwidth applications including video streaming and internet-connected security cameras. This is in addition to primary connectivity for kiosks, ATMs and digital signage.

Digi EX15 cellular extenders reportedly are suited for large deployments and ship with everything needed for rapid installation. The Site Survey Battery identifies optimal mounting locations for strongest cellular signal. Meanwhile, the Remote Mounting Kit allows installation of the device to dry wall, drop ceilings, unfinished open ceilings or glass so users do not have to compromise effectiveness. www.digi.com

Look out for...

SK Telecom & Samsung perform 5G EN-DC tests

Korean giants SK Telecom and Samsung Electronics have successfully completed a network device interoperability test that applies dual connectivity technology, using both 4G and 5G networks provided by the latter.

This technology, known as E-UTRAN New Radio Dual Connectivity (EN-DC), is based on the 3GPP 5G New Radio standard.

During the test, the companies witnessed 2.65 Gbps in data speeds on a 5G smartphone, combining both 1.5 Gbps in 5G using 100 megahertz of the 3.5 GHz band, with 1.15 Gbps in LTE using a combined 65 megahertz of 1.8 GHz, 2.1 GHz, and 2.6 GHz frequencies — all of which are available for commercial use by the carrier.

Carried out at Samsung Electronics facility located in Suwon, Korea, the test used Samsung’s commercial 4G and 5G NR end-to-end networks solutions. The firms also used Samsung’s virtual core that supports simultaneous 4G and 5G as well as its Galaxy S10 5G smartphone.

In a statement, Samsung said SK Telecom would be able to boost the overall transmission data speed by 80% by leveraging the 4G and 5G dual connectivity. It will allow users who are in 5G service coverage to download ultra-high-definition videos of 2 GB in just 6 seconds, and large video content such as 4K virtual reality video of 10 GB in less than 30 seconds.

“In the early stages of 5G era, the combined capabilities of 4G and 5G networks are important forces for mobile carriers to maximise the characteristics of the 5G network—ultra-fast speed, low-latency, and massive-connectivity by leveraging widely deployed 4G network coverage,” Samsung said.



During the test, the companies witnessed 2.65 Gbps in data speeds on a 5G smartphone

Satellite technology for inclusive connection



Antenna installed at a mining site

Forget the notion that satellite is old and irrelevant, it's changing perceptions and breaking new ground, writes Dr. NICOLA DAVIES

The term "satellite" may conjure a traditional image of a large satellite dish mounted on the ground and pointed toward the sky, requiring a clear, uninterrupted view to enable a connection with a device floating high up in space. In many remote areas, this is still one of the most effective ways to connect far-flung communities to the rest of the world.

The satellite advantage

Satellite technology has one primary advantage over other technologies: "The sole benefit is that communications can be achieved in areas so remote that conventional land-based fibre or copper cannot be deployed." This is according to Phil Thomas, operations manager at New Era Systems - a company that sells satellite equipment to markets in Africa, North America, and South America. This capability to provide connectivity in hard-to-reach locations makes satellite technology a viable choice for companies in industries such as energy and banking that are aiming to increase coverage for customers situated in underdeveloped locations, miles away from the urban centres in northern and southern Africa. With further innovations in the field, satellite may have an opportunity to become the chosen method of connection, particularly for industries aiming to serve the needs of untapped communities.

Demand for connectivity in Africa

Global consultancy firm McKinsey describes the African region as the world's next big growth market. A continent of 54 countries, with an

estimated population of 1.2 billion, Africa is bigger than the combined land mass of the continental United States, China, India, and Europe.

The median age in Africa is 20 years, offering a region of young people keen to adopt (and innovate with) digital solutions. Indeed, active users of mobile financial services amount to 122 million and Smartphone connections are expected to grow from 315 million to 636 million from 2015 to 2022.

In McKinsey's 2018 book *Africa's Business Revolution: How to Succeed in the World's Next Big Growth Market*, the consultancy group outlines five trends:

- A rapidly-growing and urbanizing population, with corresponding increase in spending power.
- An opportunity to industrialize the region to address domestic demand and gain a foothold in export markets.
- A determination for governments and private companies to close gaps in electricity, transport, and water infrastructure.
- Abundance of natural resources including agriculture, mining, oil, and gas. This offers the potential to innovate within the fields of food production and energy, helping create wealth for the region.
- Swift adoption of mobile and digital technologies, helping Africa overcome numerous obstacles to economic growth.

Demand for digital solutions to essential services, such as electricity and banking, is growing rapidly. Thomas says, "Our clients are the hub operators in Europe or the Middle East who sell service to Africa and other regions.

There is a strong demand for service in the interior of Africa, places that terrain and remoteness make it difficult for any other form of connection. Africa is large and the population increasing; they have the wish to get access to global communication networks."

While some may see it as a hindrance to doing business, the lack of existing infrastructure in many areas and industries could in fact be an opportunity for smart companies to offer services in innovative ways. Digital-only methods may be some of the most cost-effective ways for energy companies and financial institutions eager to expand their markets, and satellite technology can help these companies overcome the lack of infrastructure. "Satellite connection only requires power and a direct view of the sky where a suitable satellite is located," says Thomas. "Land-based systems need either a wireless tower or copper cable connections between the provider and the consumer. The cost of deploying cable internet connections to low density rural areas, possibly over difficult terrain, makes the task unprofitable. The downside is that satellite bandwidth costs are dramatically higher than terrestrial costs. Urban areas can benefit from hard-wire or Wi-Fi connections and are adverse to paying the higher cost of satellite bandwidth."

Rural electrification

The household electrification rate in the Sub-Saharan African region remains the lowest globally, according to a 2018 report by the World Bank. 2 In 2016, 42

per cent of households had access to electricity, the majority of which are located in urban areas. Of rural households, the electrification rate is estimated to be 22 per cent. Thus, extending access to electricity is one of the most important development issues in the region. Electrification is one of the factors that will help increase productivity in many untapped areas of the continent.

According to McKinsey, the continent continues to experience large gaps in energy. The lack of power in rural areas is still described as one of the major challenges for Africa. While people living in urban centres may now have little or no problem getting connected, the needs of communities in far-flung areas lacking infrastructure remain unmet. Electricity and an Internet connection go hand-in-hand, and satellite companies may be able to help connect rural communities with energy providers in the region. This is why opportunities still abound for satellite technology within the energy industry.

One example of how satellite is helping energy companies reach remote areas is the hybrid wind farm/power station in Amdjarass, Republic of Chad. The plant is operated by Vergnet Group, a French company delivering renewable energy solutions. The facility has allowed Amdjarass to become the first city in Chad to run on 100 per cent renewables. Its operations control centre is located in France, but a premium VSAT (“very small aperture terminal”) service by Marlink, a global provider of satellite communication services, enables the centre to remotely monitor and maintain the plant. The connection is secure and “always-on,” ensuring the plant is constantly delivering energy to the community. In a media release, an executive from Marlink says that terrestrial networks are either unavailable or unable to provide the bandwidth or reliability necessary for the delivery of sustainable energy production in remote regions. The connection has a guaranteed redundant link for Machine-2-Machine (M2M) data transmission, as well as Internet access and email. This reliability is why satellite communication technologies are essential in energy production and delivery.

Reaching the under-banked

In a February 2018 report, McKinsey described the African overall banking market as the second-fastest-growing, as well as second-most profitable, in the world. Challenges particular to retail banking include low banking penetration, minimal credit coverage, frequent use of cash in transacting, and the presence of only a few branches and ATMs. There are 54 separate markets comprising the rapidly growing African banking sector. In 2012, 170 million had access to banking services. As of 2017, this number grew to 300 million. In 2022, the estimated number of Africans with access to banking will be 450 million, almost half of the continent’s population. From 2012 to 2017, banks in the continent grew revenues at twice the global average. Additionally,

they were more than twice as profitable (on average) as banks in developed markets.

Since there are still many unserved or underserved individuals, enterprises, and communities, there are also many opportunities within the banking and financial services sector for satellite technology. The technology’s ability to reach areas not served by terrestrial networks makes it a dependable tool for banks and other institutions who intend to take advantage of the rapid economic growth and the need to address financial inclusion.

One example of a financial institution using satellite communications is in the East African region, where Liquid Telecom works with Kenya Commercial Bank (KCB) to expand its network with satellite services. Specifically, the KCB uses VSAT technology to connect 24 branches in South Sudan. Lacking an effective Information and Communications Technology infrastructure, companies in countries such as South Sudan can take advantage of satellite services that can provide reliable links for branch-to-branch or other internal connections. They can also take advantage of dependable networks for essential services such as ATMs or the use of point-of-sale terminals.

Another example in the financial sector is the partnership between iDirect, a global provider of satellite communications, and Q-KON, a telecommunications system integrator with 30 years’ experience operating in various parts of Africa. Q-KON specializes in the development and operation of “off-grid” connectivity for businesses throughout the region, with expertise in the financial services industry. The telco group focuses on locations and services that are not provided by national telecom networks or cannot be met by existing infrastructure.

While mobile networks provide 3G, the finance sector requires higher reliability and guaranteed Service Level Agreement (SLA) services for operational concerns, such as ATM connection, point-of-sale services, and branch back-up. Q-KON and iDirect have created unique satellite solutions which combine the advantages of satellite (constantly on, access from anywhere, and high dependability) with the efficiency, optimized costs, and SLA support of network services.

A Swaziland-based bank has approached Q-KON to build primary and backup communication networks for ATMs and branches not just within the country but also to its headquarters based in South Africa. Pan-African banks are facing increasing pressure to develop both regional and

national markets. Local monetary regulations require that processing must be done in-country, and companies must find an efficient and cost-effective way to decentralize infrastructure and build local networks and country-specific processing hubs. iDirect helped create what they call a regional node mesh solution to address this need. The service uses one main network core to provide connection to Pan-Africa, with the option to install a regional node, using a mesh receiver, in each country to provide full local connectivity. This way, the company does not need to invest too much on infrastructure in each new location, but still complies with local regulations.

Advantages of satellite technology

Today, satellite communications technology is developed enough to be able to deliver a quality connection, whether this is for voice, video, or data. Networks are reliable, enabling consistent connectivity in areas where terrestrial solutions fail or are unavailable or too expensive. In addition, the technology is modular. It is easy and quick to deploy, making it a convenient option for companies that need to continuously add a new location to its existing network. Even in disaster scenarios, companies would be able to use satellite as a back-up connection to immediately restore communications in affected areas.

Innovations push satellite forward

While satellite has traditionally been known for its “last mile” proposition, innovations in space satellite technology may help push the industry forward. The development of low earth orbit (LEO) mega-constellations is one such development.

LEO satellites are those that orbit the earth at an altitude of 160 km up to 2,000 km. Since this type of satellite is close to the ground, it requires less power and less time to transmit data, compared to satellites in higher orbits.

The new LEO satellites are lighter, smaller, and less expensive to develop than traditional satellites meant to go in higher orbit. With competition increasing, the cost of LEOs may continue to drop. Satellites can be built with lower-cost mass-produced parts. In case one of these parts malfunctions, it can simply be replaced instead of fixed. In the same way, if one satellite within a mega-constellation fails, an operator may simply send up a new one instead of spending time and other resources repairing the broken satellite. A constellation or group of satellites are designed to communicate with each



other in such a way that data is not returned to the ground. Instead, the information is bounced along the sky. Operators on the ground have a terminal that automatically picks out which particular satellite within the constellation has the best signal at that moment in time, and then makes a connection to this satellite. The terminal will need to switch satellites frequently because LEOs move relative to the planet. However, since there will be a large number of these small satellites, on-the-ground terminals will always have one available to them. The terminals themselves will also be smaller and easier to install compared to traditional satellite dishes. Information will travel along Ka (26.5GHz to 40GHz) and Ku (12GHz to 18GHz) frequency bands.

LEOs move and are distributed around the Earth, so some satellites may temporarily go to a different part of the sky, over a region where there could be little to no usage of the satellite. There is an opportunity, then, for satellite companies to offer connection services to these areas for a lower price than other markets, because any additional business from these previously untapped regions would increase overall revenue.

Beyond energy and banking

These developments in satellite technology are an opportunity for further digital innovation. Local African businesses and foreign companies may find it worth taking the high risk (and potentially high returns) of investing in the region. One company helping enterprises and consumers in the region is YahSat, a satellite communication company from the United Arab Emirates (UAE). Optimistic about Africa, the Abu Dhabi-based group invested more than \$200 million on its Al Yah 3 satellite, which started operations in early 2018. The new satellite has enabled YahSat to launch its broadband service, branded as YahClick, in eight new markets, which include Cameroon, the Democratic Republic of the Congo, Ghana, Ivory Coast, and Zimbabwe. Rural areas in these countries can now have access to the internet.

YahClick has been available to customers in Kenya, Nigeria, and South Africa for some time. Satellite broadband services can help improve the quality of life of remote communities, ensuring businesses are constantly connected. Affordable, easy-to-install, uninterrupted internet services help entrepreneurs, government agencies, schools, and healthcare providers become efficient in their daily operations. This, in turn, enables them to effectively serve the people within the community.

Combining solutions

Satellite technology is one of the most effective ways to help remote locations get connected to the Internet. It is now as fast as terrestrial solutions, with the added benefits

of easy installation, low cost, and “always-on” dependability. However, as the needs of individuals, households, and communities grow, it may be necessary for companies to come up with combined terrestrial and satellite-based solutions. Thomas says, “Increasing populations in rural areas will see an expansion of satellite connectivity. At some stage when the population reaches a certain level there will be a tipping point and somehow the terrestrial connections will be brought into that area and will replace satellite. We have been focusing on two-way satellite connections, but as we have seen in the US, platforms transmitting television and other streaming content will hold their own and have a much longer life even when cable reaches a particular area.”

Increasingly complex data requirements may

Demand for VSAT satellite services growing as Africa strives for a bright digital future

Thanks to the arrival of HTS (high-throughput satellite) in Africa, the demand for VSAT satellite services is on the increase and remains critical to unlocking connectivity on the continent where over 70 per cent still remain unconnected. This sentiment was also evident at the Mobile World Congress 2019 where Intelsat made clear that delivering on the promise of 5G would depend heavily on the provision of satellite networks.

Once thought destined to be obsolete as mobile and fibre networks were ever increasing penetration in Africa, HTS satellite services are proving they can deliver on today’s customer expectations for high speed affordable connectivity in areas where even mobile networks do not reach.

Elsewhere in the world, Africa is seeing a greater reliance on internet connectivity as governments strive to enable new digital economies and the many associated economic benefits. Every 10 per cent increase in broadband penetration can trigger a 1.38 per cent increase in a country’s GDP, and every one per cent increase in broadband connectivity can generate a five per cent increase in job creation. Clearly, the wider the prevalence of broadband, the higher the probability for improved economies, and satellite is definitely key to widening the reach of broadband access in Africa.

While satellite is often the only means of delivering broadband connectivity in Africa, even if used for mobile backhaul to bring 3G services to remote areas, or as a central point for connectivity in a village, there has been little to no price improvements on VSAT modems. CPE equipment pricing remains amongst the biggest obstacle to the successful rollout of satellite broadband on the continent. Until we see large reductions or innovative financing approaches for end-user satellite modems, the utopian goals of mass-scale satellite broadband penetration in Africa may be limited.

Despite some challenges, and iWayAfrica’s investment in fibre services and wireless

also need a network that seamlessly utilizes a mix of Low Earth Orbit (LEO), Medium Earth Orbit (MEO), and Geostationary Orbit (GEO) satellite constellations, as well as land-based technologies. This could be the case with the low latency and gigabit connectivity needs of native 5G networks.

As Africa continues its journey of vast economic growth, it is essential that every community can access essential services, including power, banking, education, healthcare, and small-business support. The importance of the internet in promoting inclusion, efficiency, and innovation cannot be understated. Satellite technologies have a massive potential to help many remote African communities not only catch up, but flourish with the rest of the region.

Michèle Scanlon,
managing director,
iWayAfrica
(wholesale VSAT
division)



networks to evolve alongside changing customer requirements, satellite continues to be a core service offering, and one which spans over 25 years on the continent. More recently, iWayAfrica was appointed as an Avanti Master Distributor following the launch of the HYLAS 4 satellite. The importance of HYLAS 4 to Africa is the near ubiquitous coverage of sub-Saharan Africa that it provides. Previously HTS Ka-Band services were not able to deliver ubiquitous coverage of the continent, rather focusing on key areas for coverage. With HYLAS 4, we are excited to take Avanti’s high-speed service plans to West and Central Africa for the first time.

An example of the impact of satellite broadband connectivity can have is iWayAfrica’s community project in Uganda, which utilises its Jupiter platform with Intelsat’s IS-28 wide-beam capacity. The wholly solar powered JOLAspot service provides WiFi connectivity across the village with vouchers sold by women agents, while the additional power generated by Winch Energy powers device charging facilities, a printer for photocopying and print services, as well as a fridge selling the only cold drinks in the village. The next phase is to expand the site to offer micro-finance online banking facilities to the community that require both power and connectivity.

iWayAfrica is investing in new markets, especially West and Central Africa, through establishing new distributor channel partners for VSAT growth. We already have our own licenses in eight markets and are open to new license opportunities to expand our footprint even further. Our aim is to bring broadband happiness to Africa to facilitate a bright digital future, especially in areas where there is no, nor likely to be, alternative means of connectivity.



Maternal and child healthcare unit in Aweil, South Sudan

The best medicine for the worst off patients

The advent of telemedicine in some of the most rural and underprivileged parts of the world has been a game-changer for medics and patients alike

Daniel Martínez, a coordinator of the Médecins Sans Frontières (MSF) telemedicine service, receives an alert on his mobile phone. The organisation's team in South Kivu, Democratic Republic of Congo (DRC), has a question about a paediatric case – a five-day old baby with suspected tetanus.

The question is immediately forwarded to the system's near 350 experts from more than 30 medical specialties around the world who answer cases requiring expert opinion very swiftly. That's a typical day for the MSF (known in the Anglophone world as Doctors Without Borders) telemedicine operation carried out in Africa and in more than 72 countries worldwide.

Telemedicine allows remote medical teams to consult with a network of experts whenever they are confronted with cases outside their area of expertise.

Nearly a decade on from its launch in 2010, the store-and-forward telemedicine services (where questions are submitted via secured online platforms) is being used by medical practitioners has not stopped growing. Now it's invaluable.

Currently, an average of eight to 10 cases are received a day, but the figures can spike significantly in any given month. In 2016 there were 3,000 cases. As of 2018, there were over 10,000 cumulated cases.

However, it's not as straightforward as it sounds. Scaling new technology is often tricky,

but when your raison d'être is urgent crisis response in resource-poor locations, the pressure to react and deliver can be immense. For that reason alone, clear communication is vital.

For the service to be functional 24/7, coordinators work with their counterparts across the globe to diagnose and treat patients as soon as possible. On average, the coordinator takes less than 10 minutes to forward the query coming from any MSF project to the expert. The response time from specialists largely varies depending on the nature of the case. However, some urgent cases are closely followed up by coordinators and the response from a specialist can arrive within one or two hours. For rest of the cases, depending

upon the nature and number of specialists involved, the response time five to 24 hours. In some cases they are followed up for days or even months with input from multiple specialists.

"I was so impressed with both the quality and accuracy of the answers that I couldn't stop using it," says Kay Hodgetts, an Australian doctor, who worked for a few weeks in an emergency intervention to assist displaced people and victims of violence in Leer, South Sudan.

She recalls her first assignment with MSF in Ethiopia. A four-year-old was one of the patients she treated with the support of telemedicine. "It was a particularly complicated case: the child was malnourished, had fever and pancytopenia (a reduction of red cells, white cells and platelets in the blood that is usually related to diseases that affect bone marrow), and was not responding to multiple lines of treatment," she says. Kay and the medical team used the telemedicine service and sent the patient case history, details of how they had treated him, photos, a video and the results of a blood test. After weeks of treatment, the patient was finally discharged.

"Currently, increasing widespread internet access in MSF projects helps bridge the gap between the level of care in the field and in large medical centres," says Kay. "In fact, it makes even more sense that we use telemedicine in these contexts because we have fewer diagnostic tools."

Helping to compensate for lack of medics and reducing isolation in remote locations

Many of the countries where MSF operates are plagued by conflict or with dysfunctional health systems. The upshot is a lack of health workers and hardly any medical specialists outside the referral hospitals. For example, a number of patients in the system are children under five and so demand for paediatricians often outweighs supply.

The referral hospital in the district of Madaoua, southern Niger, is taking steps to address this. Every year, Niger faces the same problem – a peak in malaria and malnutrition from May until September, when the number of paediatric beds triples to 300. Doctors at the hospital send their queries via the telemedicine platform and then, every Thursday, they connect with a Canadian and British paediatrician based in Gambia to discuss the most complicated cases in depth with MSF specialists via video-conference.

Accessing highly specialised expertise

Treating diseases is one thing, but treating serious wounds brings its own pressures.

"We need to know whether plastic or orthopaedic surgery will be possible or if the best option is to amputate the hand." That's the desperate message an MSF team in the DRC received shortly after sending a photo of an eight-year-old patient with a horrific hand and wrist wound.

The response came fast: "Don't amputate. Children's capacity for recovery and adaptation



Rutshuru Hospital, Rutshuru, DR Congo

is tremendous. So just check the infection, try to close or graft the wound, and put the wrist in the correct position with a sling. Keep me informed."

According to 2017 figures from MSF, enquiries about surgery represent more than 10 per cent of the total received by the telemedicine service,

Drugs delivered by drone

Malawi reached its very own aviation milestone in January 2018. A team from Virginia Tech in the US supervised a fully autonomous, 19km simulated drug delivery flight in a drone designed at the university and built by Malawian students.

The aircraft, EcoSoar, was designed at the Unmanned Systems Lab for it to be fabricated and operated in Malawi for remote medicine delivery.

EcoSoar flew in the drone testing corridor in Kasungu, which was opened by the Malawi government, in conjunction with the UN's children's agency Unicef, in June 2017. The corridor was designed to explore the impact of drone applications in emergency supply delivery, vaccines, sample delivery for diagnosis and remote sensing.

Across a two-day workshop, Kevin Kochersberger, Zack Standridge and James Donnelly from Virginia Tech coached 13 students from Malawian universities through the construction of the aircraft that is made of foam core (poster board) and 3D printed parts to facilitate local production to keep costs to a minimum.

The corridor is the first of its kind in Africa and allows for beyond visual line of sight (BVLOS) testing in a territory over 5,000km² and up to 400 metres above ground level.

It is designed to provide a controlled platform for the private sector, universities and other partners to explore how drones, also known as unmanned aerial vehicles (UAVs), can help deliver services that benefit communities and schools.

"This humanitarian drone testing corridor can significantly improve our efficiency and ability to deliver services to the world's most vulnerable children," says Christopher Fabian, Unicef office of global innovation principal adviser.

This corridor is now used for to provide humanitarian assistance, including vaccinations.

Early in the morning, health worker Amidu Malope holds his regular clinic for children under five-years-old, in the shade of some trees on the edge of the village. He arrives by bicycle and sets up an outdoor consultation area: a wooden table with benches and a box full of drugs, malaria test kits and other medical

so doctors on the ground can receive very specialised opinion for their cases, often faster than in the developed world. Paediatrics then radiology are two major specialities that account for number of cases on telemedicine platform.

The range of cases are diverse: radiology, dermatology, burn and wound care, snake bites, critical care, surgery, mental health, cardiology, nephrology, obstetrics and gynaecology.

Dr. Joanne Liu, a Canadian physician who currently serves as MSF's international president, was instrumental in developing MSF's use of telemedicine after realising the critical support it can provide to the organization's doctors in the field. "Suddenly you're not all by yourself in the middle of South Sudan or Congo," she says. "Telemedicine can make a huge difference."



A group of 13 students from Malawian universities make drones from foam core (poster board) and 3D printed parts

supplies. His waiting room is a mat on the dusty ground, which by 8am is already full of waiting mothers and children.

Regular deliveries by drone will allow Amidue to vaccinate children on schedule, as opposed to once a month. Connectivity drops will allow him to inform the district hospital of urgent medical cases and arrange transportation. What's more, aerial mapping could help him create an accurate map of the villages in his area, along with water sources and other relevant information.

Global businesses that participate in the corridor are required to spend time training and working with local students, engineers and entrepreneurs. They are also required to share skills and best practices.

"Malawi has limited road access to rural areas even at the best of times, and after a flash flood earth roads can turn to rivers, completely cutting off affected communities,"

Unicef Malawi representative Johannes Wedenig adds: "With UAVs we can easily fly over the affected area and see clearly what the impact has been on the ground. This is cheaper and better resolution than satellite images".

Now, with the help of telemedicine, care is given to the poorest and hardest to reach families in Malawi. The choice of location for the corridor allows companies to test drones in a rural setting with a variety of landscape and several remote areas, where health clinics and schools struggle with transportation and mobile reception.

Unicef is also exploring the potential for drones to be used to support immediate search and rescue efforts.

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Ericsson factories across the world are developing and implementing the first 5G and Industrial IoT (IIoT) systems in a real manufacturing environment

Internet of Things shaping the future of the workplace

Everyone is talking about the Internet of Things, but not everybody knows how it is about to change the way we all live and work, as Nora Wahby explains

The Internet of Things is one of the most talked-about topics in the tech industry today. You cannot attend a technology event without hearing this term over and over again. But the Internet of Things, or IoT for short, is not always easily explained.

IoT is set to have a profound impact on our future. Enabling anything to be connected and providing 'smartness' to these connected things will bring value across a number of sectors. By 2024, there will be 4.1 billion cellular IoT connections. Such connections are not specific to one region or industry – they're emerging everywhere.

IoT connects 5.7 million devices every day and promises additional revenue potential of up to 36 per cent, depending on your ecosystem role. For service creators providing end-to-end ecosystem

offerings, the value adds up to USD619bn by 2026.

Companies all over the world are vying for position, eager to capture new IoT business potential as there are high expectations for commercial possibilities. Three Ericsson factories in Sweden, Estonia and China are fast-tracking the introduction of a new generation of smart manufacturing by developing and implementing the first 5G and Industrial IoT systems in a real manufacturing environment.

On the other hand, IoT is being widely embraced by the MENA region with the number of connected devices growing rapidly – and it is helping to turn the communications sector in the Middle East and Africa into one of the most dynamic and vibrant in the world.

The success of IoT does not only depend

on 5G. While 5G is undeniably the underlying connectivity platform for IoT, our research found that 85 per cent of the applications needed in what we call optimizer countries and cities can be achieved over 4G connectivity. That also applies to industries like mining. Then there's weather forecasting and water management services, smart metering – the list goes on.



Nora Wahby,
head of west Africa,
Ericsson

Evolution to 4G can lower your cost per Gigabyte, deploy multi-Gigabit 5G ready radios and basebands, boost capacity with Massive MIMO, and address new opportunities in Fixed Wireless Access and Critical Broadband Networks.

Optimizer countries such as Morocco, Egypt, parts of South Africa and Nigeria, are adopting future-proof, scalable 4G network architecture with innovations that are built for tomorrow's demands.

Now that we know the connectivity is no barrier to IoT, what can it be used for?

Communication and connectivity are key enablers for GDP across Africa and IoT is an enabler for the majority of the industries. Let us look at three sectors critical to everyday life.

Security

By 2024, we're going to have more than 22 billion connected devices in the world. It's a vast opportunity but it also brings vast risk. How do you keep billions of devices secure? How about the networks they run on? How do you make sure the data from all those devices isn't compromised?

IoT security cannot be an afterthought or an add-on. Security must be built in from the beginning. There is an imperative need for enhanced security enablement and IoT can drive that security business and improve the security conditions in bigger cities like Lagos, Johannesburg and others.

When it comes to IoT, security requirements are unique. Connecting devices is different from connecting individual people and personal computers. To verify its identity, an IoT device can't simply enter a password as a person would. Similarly, the systems that run our PCs are regularly updated, but IoT has to work all time.

A reliable infrastructure is a must, and this is especially true for mission-critical applications. 3GPP technologies provide this reliability. The IoT expands rapidly, and security must be end-to-end.

Agriculture

When you think IoT, agriculture and cultivation may not be the first industries that come to mind. But agricultural businesses can benefit greatly from IoT solutions. As in any industry, repeatable processes become trackable and more efficient with help from sensor-equipped machinery connected to the cloud.

For instance, IoT-based solutions can be used to keep constant watch over fields and greenhouses, using sensors to monitor conditions such as temperature, humidity and soil saturation. AI is applied to correlate that environmental data with the predefined ideal growing conditions for any particular crop. Based on this formula, appropriate adjustments could be made to machinery such as fertilization, irrigation and greenhouse ventilation systems.

We are in talks with many farms and government entities across Africa to provide IoT technology which helps farmers maintain an ideal growing environment for any crop.



Every industry will benefit from IoT

Road traffic management

Big cities like Lagos and Addis Ababa are obvious use cases for IoT solutions that apply real-time data from traffic sensors and cameras to automate and dynamically control traffic lights, warning signals and message signs, resulting in improved traffic flow and operational decision-making.

What are the key steps toward 5G innovation in Africa?

IoT provides an opportunity for mobile operators to bring new products and services to underserved markets, opening new possibilities for growth within the region.

Africa remains the region with the highest growth rate in mobile subscriptions globally and ICT and broadband are becoming central to its development. As digital infrastructures and interactions become increasingly central to the functioning of our societies and economies, affordable broadband access will need to be extended to billions of individuals who remain economically excluded.

Broadband is further enabling new technologies environment like cloud, big data, artificial intelligence and IoT. We can already see IoT is making in-roads, but there has to be a readiness within the industries to deploy additional services that improve the quality and service delivered to

the customer and at the same time help monetize the platform from a service provider perspective.

There is high demand for data connectivity in the big cities and capitals like Abuja and Dakar. The roll out of applications that can run on 4G do fulfil the requirements of the use cases in those markets. So, despite 5G being the underlying connectivity platform for IoT, we believe 85 per cent of the applications needed in optimizer countries and cities can be achieved over 4G connectivity.

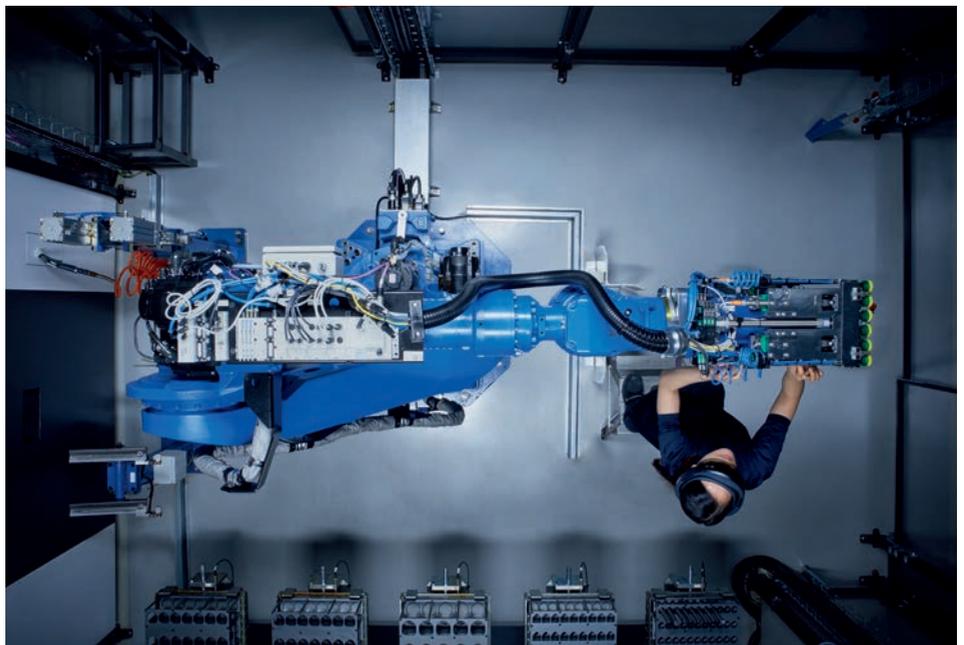
In order to unlock IoT's potential in Africa, regulatory authorities, mobile operators and stakeholders will need to work together. Africa is still looking at spectrum availability and prices of licenses – regulation needs to be in place to promote and drive this. The government should not look at this at a one-time sale opportunity of the spectrum. Instead, it should look at it as a growth engine for the economy.

Failure to understand and fully develop the links across the various stakeholders in the ecosystem could stunt the growth of IoT in the region.

It's also key to remember IoT has two prongs. One is for creating new opportunities and the other is efficiency. With industrialization, if you automate you might optimize and become less head count intensive – like in factories, for example. At the same time, the amount of data you collect will definitely make firms like ours better understand the needs of industry and help us create more opportunities and offer better services to them.

Naturally, there will be questions surrounding security, but I don't see any risks. We see countries that suffer from security issues, but connectivity and monitoring can help us create and understand the need and opportunities for improved security services.

To enable all this is the technology, the willingness of the operators and service providers is crucial. Service providers count on innovation to deliver growth, so the impact of IoT cannot be ignored.



IoT will connect machines of all different shapes and sizes

Moving Wireless Forward

Mobile Mark is a leading supplier of innovative, high performance antennas to wireless companies across the globe. We've been in the wireless industry for over 30 years and have our roots in the early Cellular trials. We have grown and evolved over the years, along with the industry.

Today, we benefit from enhanced design capabilities and expanded production capacity – along with a greater understanding of new and emerging markets – all of which have allowed us to become one of the best antenna developers in our field.

Our customers have been our partners throughout the years. We believe in taking the time to understand our customers' individual needs. Through close consultation with clients, we are able to deliver innovative, tailored solutions that meet specific antenna requirements.

Rapid prototyping capabilities allow us to take our designs from concept to reality in an extremely short time span, and to verify the performance of the antenna. A variety of network analyzers and an anechoic chamber enable us to conduct measurements up to 13 GHz, and ensure that the antennas designed meet or exceed customer requirements.

We have onsite injection molding equipment and a fully equipped modeling shop staffed with skilled model makers to assist in the design phase and help us come up with a superior product – an antenna that not only meets the customer's electrical specifications, but is also very attractively packaged.

Mobile Mark antennas are used in many sectors of the wireless industry. Here are just a few examples:

Asset Tracking & RFID

Managing and tracking important assets can be a challenge in the field, and both RFID and WiFi offer effective wireless solutions. RFID / WiFi technology allows us to identify, monitor and track items ranging from medicine to fruit to parcels to people. Since each application has its own challenges, Mobile Mark offers a range of antennas so network developers can choose the right mix.



We are now looking for distributors throughout Africa

Commercial Fleet Management

Mobile Mark has consistently lead the industry with the most extensive and innovative range of antenna solutions that combine multiple wireless technologies: from simple GPS & Cellular antennas to complex 6-cable antennas combining LTE MIMO, WiFi MIMO, DSRC and GNSS in the same antenna housing. This combination of wireless technologies allows fleet owners to track and/or redirect their fleets of cars and trucks for optimum efficiencies. Mobile Mark antennas are rugged enough to handle tough environments and efficient enough to maintain reliable connections.

Public Transit & Bus Management

From monitoring the location of the bus to monitoring the condition of its tires, wireless has become an essential part of professional bus management. Mobile Mark's multiband antennas allow the system to capture that information and transmit it back to a central monitoring station with real-time connectivity. For an added touch, real-time WiFi service can also be added for the passengers. That's why companies like INIT have selected Mobile Mark antenna to complete their product offerings. And they have made the following endorsement:

"INIT GmbH – as a worldwide leading supplier of integrated planning, dispatching, telematics and ticketing systems for buses and trains – uses Mobile Mark bus antennas in public transportation projects all over the globe.

For example: INIT has installed Mobile Mark antennas in projects located in Abu Dhabi, Hertfordshire UK, Turku Finland, Oslo Norway, Montreal Canada, Luxembourg, as well as several German projects.

In 2017, a fleet of more than 1,500 buses will have Mobile Mark Antennas installed in one of INIT's

current major projects for National Express, West Midlands, UK."

Remote Monitoring & Surveillance

Surveillance plays an important role in maintaining secure settings. Network deployments need to be low maintenance and weather resistant. Broadband surface mounts offer flexibility for multi-frequency coverage and are rugged and dependable. YAGI antennas provide practical point-to-point coverage. Our antenna solutions are designed to handle tough conditions while providing the reliable wireless connection you would expect from a Mobile Mark antenna.

Mining & Exploration

Modern mining operations rely on a battalion of vehicles, ranging from massive extraction vehicles to modest-sized material transport trucks. These vehicles operate in tough environments where high vibration is a frequent wear and tear challenge. Mining companies throughout Africa have relied on our rugged, foam-filled mobile antennas for consistent connections. Mobile Mark's infrastructure antennas have been used for rapid deployment and redundancy coverage for effective wireless coverage in isolated settings.

Smart Cities & Smart Highway

For cities and highways, the lynchpin of a successful "Smart" system will be dependable wireless connections. Companies like Kapsch understand this, and have worked with Mobile Mark to find ideal antenna solutions. Wireless networks must reach seamlessly into hard-to-cover corners of city intersections and along vast expanses of highways. They must be carefully embedded in city lighting and electrical meters. Mobile Mark offers both small network infrastructure as well as embedded antenna elements to help network designers tie all the pieces together.

Let us know how we can help

We understand the RF wireless world and are ready to help you evaluate your options. Contact us by email, phone or fax and let us know how we can help.

Mobile Mark Europe Ltd

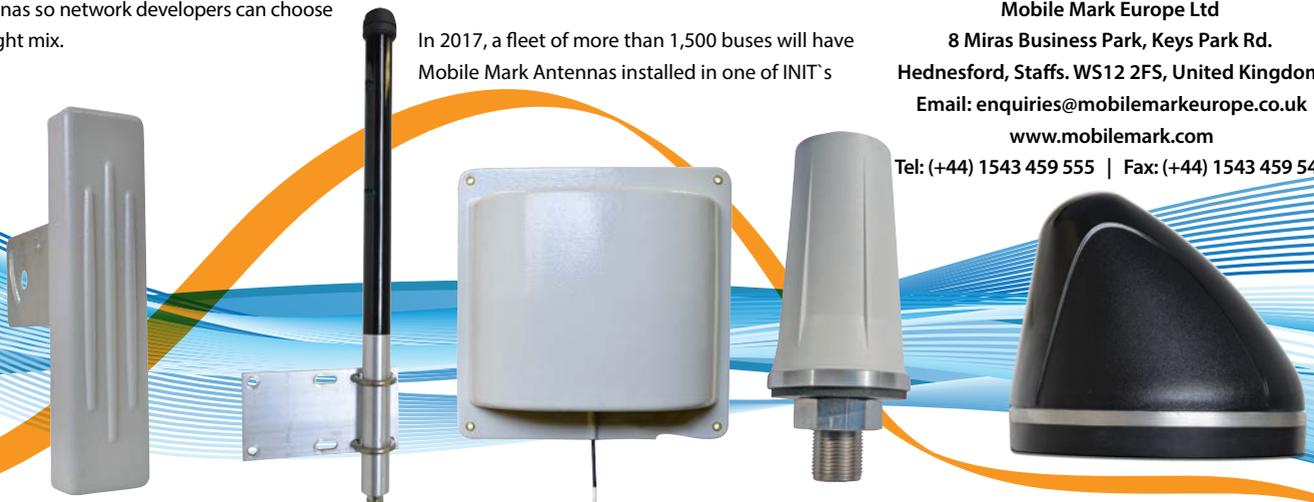
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Telefónica's download upgrade

 Spanish giant Telefónica said it plans to soon offer download speeds of up to 2.5 Gbps through its FTTH network. It currently offers 600 mb/s via its Fusión packages. Telefónica's FTTH speed has long been viewed as key to securing subscribers and Spain's operators have been involved in a fierce battle to provide the fastest networks, with Vodafone and MasMovil already offering 1Gbps speeds to some customers. The provider had 21.3 million FTTH passed homes by year end with 3.9 million customers after capturing 517,000 new subscribers last year. In total, Spain had 8.55 million FTTH lines by year end, representing 57 per cent of the total broadband market.

MegaFon extends Mastercard partnership

 MNO MegaFon has teamed up with Mastercard to roll out Credit via Mobile, a full service financial marketplace for its mobile network subscribers across Russia.

The latest feature enables customers to use their smartphone to apply for credit from Russia's largest financial institutions without having to visit a bank. The loan request is analysed and the approved funds are sent immediately to the customer's mobile phone bank account.

Subscribers will then be able to use the funds to make payments "anywhere they want using a virtual Mastercard card linked to Apple Pay, Google Pay or Samsung Pay," MegaFon said.

MegaFon's customers can already turn their mobile phone account into a bank account using the MegaFon Bank mobile app and use their mobile credit balance to pay for goods and services anywhere that accepts Mastercard.

InfiNet solutions deployed to create digital oilfield

 Fixed broadband wireless connectivity specialist InfiNet Wireless has successfully delivered a wireless infrastructure solution at a major Kazakhstani oilfield to provide real-time control and accounting of oil production, marking a major step in the transition to a digital oilfield future.

InfiNet and JSC Karazhanbasmunai, one of Kazakhstan's major oil producers, collaborated to provide the solution at the Karazhanbas oil field located in Mangistau region. With telecommunications firm KRIS-Service responsible for the development and implementation of system of facility remote monitoring (SFRM), the solution was designed to automate oil production processes and reduce illegal oil turnover.

The infrastructure allows for the transmission of real-time data on the volume of oil produced, the number of different impurities, the condition of the equipment and



In total, 114 existing wells and 100 new wells were equipped with devices

other parameters of the automated system from the intelligent control stations installed at each well.

In total, 114 existing wells and 100 new wells were equipped with devices, from which data was

transmitted online to the operator's console to enable full control of the oil production process. The project includes a planned upgrade of 370 wells and installation of new ICS for 2,500 wells.

Vietnam is fastest growing market for mobile payments in the past year

 Vietnam has witnessed the highest growth in mobile payments in the past year, according to the *Global Consumer Insights Survey 2019* conducted by PwC.

The survey, which covered over 21,000 respondents from 27 territories, showed that the percentage of consumers using these services in Vietnam increased to 61 per cent, up from 37 per cent last year. The increase was also the largest in the six southeast Asian countries that took part in the survey.

In Singapore, mobile payments climbed from 34 per cent in 2018 to 46 per cent in 2019.

The rest of Southeast Asia also saw increases in mobile payments with Thailand up 19 percentage points to 67 per cent, Malaysia up 17 percentage points to 40 per cent, and Philippines up 14 percentage points to 45 per cent.

Indonesia reflected the slowest increase in the usage of mobile payments with a rise of just 9 percentage points to 47 per cent.

In the Middle East, which was the second fastest growing region with regards to mobile payments adoption globally, the percentage increased by 20 percentage points to 45 per cent. However, China remained unchanged at 86 per cent. Across all territories, 34 per cent of consumers paid for purchases using mobile payments, up from 24 per cent a year earlier.

The survey further found that consumers in Asia are more socially engaged online than their counterparts in Europe and the Americas.

Respondents from Thailand, Indonesia and Vietnam led the way globally in making purchases directly through social media posts on platforms like Instagram and Facebook, with 50 per cent,

49 per cent and 48 per cent of survey respondents indicating they do so, respectively.

Globally, only 21 per cent of respondents made purchases directly through social media. Among product and service categories, the survey found that social media is most likely to affect purchasing decisions related to fashion.

"Social media platforms are already mature in Southeast Asia. The trend in online shopping, moving forward, is the consolidation of e-commerce players with fewer big players providing that gateway," said Charles Loh, southeast Asia consumer and industrial products consulting leader at PwC. "There seems to be a consolidator present in every market."

Elsewhere, nine per cent of global consumers said they use voice technology to shop online either weekly or even more frequently.



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MTN launches affordable smartphone in Nigeria

 MTN Nigeria has launched its new Smart S 3G phone – an affordable new smart feature device that runs on the Kai Operating System (KaiOS) in Nigeria.

The MTN Smart feature phone is said to come with almost all of the features of the high-end smartphones and allows customers to upgrade from a typical feature phone with just voice and capabilities, to a fully connected device with a fast 3G connection, Wi-Fi, bluetooth, GPS and dual SIM 3G capabilities.

It also comes with two cameras, a 2-day battery life with 2,000mAh battery, the SC7731EF processor, 2.4-inch screen, 256MB RAM and 512MB of storage. The MTN Smart is available in all MTN stores across Nigeria for USD22.14 and comes with 500MB monthly data free for the first six months.

MTN Nigeria, chief marketing officer (CMO), Rahul De described the development as the first African smart feature phone.

“We want to bring connectivity to everybody,” he said. “We believe that connectivity leads to growth in the nation’s economy. With connectivity, the growth of the economy becomes faster.” He added that affordability of smartphones remained a challenge, “hence the reason for a smartphone with so many features selling at USD22.14”.

Bahrain moves forward in race for 5G rollout

 The Kingdom of Bahrain said it has finished preparations for the rollout of 5G networks and claimed it will be one of the first countries globally to provide commercial 5G services by June 2019.

The news was announced by Bahrain minister of transportation and telecommunications, Kamal bin Ahmed Mohammed, who added that the achievement was pending availability of consumer handsets and equipment.

All of the regulatory requirements for full 5G implementation have been met, with the licensing and spectrum allocation set to be finalised before mid-April by the Telecommunications Regulatory Authority (TRA).

“Bahrain’s state of readiness is a testament to the leadership



Manama, the capital and largest city of Bahrain

of the government of the Kingdom of Bahrain in enabling the implementation of cutting-edge technology and promoting innovation, and the continuous support of all stakeholders including the TRA and the national Spectrum Strategy and Coordination

Committee (SSCC), all of which serves to highlight the Kingdom’s continued role as a regional leader in telecommunications and ICT,” said Mohammed.

Mobile operators in Bahrain have already begun rolling out the necessary network infrastructure.

Maroc Telecom acquires Millicom subsidiary

 Maroc Telecom has acquired Swedish-listed Millicom’s subsidiary Tigo Chad, the leading provider of digital services in the African nation, for an undisclosed sum.

The acquisition is part of Morocco’s largest operator’s plan to step up operations in the region. For Millicom, it is part of its strategy to gradually exit Africa and increase its focus on Latin America. However, the deal is not expected to have a material impact on the group as a whole.

Controlled by the United Arab

Emirates’ Etisalat Group and the Moroccan government, Maroc Telecom already has a presence in more than 10 African countries, including Chad’s neighbours Niger and Central African Republic.

The completion of the deal is subject to approval by Chadian authorities. Once the sale goes through, Millicom’s only remaining market in Africa will be Tanzania.

Maroc Telecom offices in Marrakech, Morocco



Côte d’Ivoire operators in mobile money tax row

 The Telecommunications/ICT Regulatory Authority of Côte d’Ivoire (ARTCI) has issued a stark warning to the country’s mobile operators to stop passing the additional cost of mobile money transactions onto the end user.

In a statement, the regulator accused operators of ignoring the law on telecommunications and telecommunications technologies, which requires them to communicate the tariffs and T&Cs of the service offered, one month

before making them public.

“The new rates on mobile money transfer services have not been subject to prior notification to the ARTCI,” the regulator said. “Therefore, ARTCI requires all mobile operators to immediately stop their application.”

Operators in Côte d’Ivoire have increased the rate charged for mobile money transfers to 7.2 per cent, which they argue is in line with a government increase in mobile money tax.

The warning from ARTCI followed complaints from consumer association Confederation des Consommateurs de Cote d’Ivoire, which was angered by taxes on mobile money transactions in the country and demanded the complete removal of the levies.

In a statement to the media, the federation, which represents 10 different consumer groups across the west African nation, stated that less than a fifth of consumers in the country have access to bank accounts.

It noted that the traditionally low cost of transactions using mobile money services had led to a “dynamic” industry, but the increase in government levies made it “more expensive for consumers to use an accessible service that has started to enter our habits”.

ARTCI was created through the merger of the Telecommunications Council of Côte d’Ivoire (SITC) and the Telecommunications Agency of the Côte d’Ivoire (ATCI).

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A1 chooses Nokia for 5G

 Austria's flagship telecoms firm A1 has penned a deal with Nokia to build 5G mobile networks in the country. A1 Group, which is controlled by Mexico's America Movil and the Austrian state, said Nokia would provide it with 5G wireless technology and cloud-based core network technology. The rationale is to deliver super-fast connectivity and facilitate new applications from self-driving cars to medical robots. "Together with Nokia, we will leverage the full potential of 5G," said A1 Austria chief executive, Marcus Grausam.

Huawei given restricted role

 Britain will allow Huawei Technologies a restricted role in building parts of its 5G network as it seeks a middle ground in an unpleasant row between the US and China over the next generation of communications technology. Huawei, the world's biggest producer of telecom equipment, is under intense scrutiny after the US told allies not to use its technology because of fears it could be a vehicle for Chinese spying. "It's essential that we get the balance right, ensuring that our networks are built in a way that is secure against interference from whatever source, but also are competitive," said chancellor Philip Hammond.

SP to build fibre network

 SP Telecom has commissioned PCCW Solutions as a consultancy partner to help design and deploy the company's planned alternative fibre network. SP has provided details of its plans to build an alternative to Singapore's next-generation national broadband network (NG-NBN). A joint venture between ST Engineering and Singapore Power Group, SP is deploying its network alongside the power lines operated by SP Group to create a separate fibre infrastructure to the NG-NBN.

NCC & ONSA join forces to tackle mobile cybercrime

 The Nigerian Communications Commission (NCC) has joined forces with the Office of the National Security Adviser (ONSA) and other government agencies to address a surge in cybercrime, by tackling fake, counterfeit and shoddy mobile devices.

A Project Steering Committee made up of the Infrastructure Concession Regulatory Commission (ICRC), the Federal Ministry of Communications and the NCC; as well as the Project Delivery Team (PDT) (representing the Federal Ministry of Communications, the ICRC, the Federal Ministry of Finance and the NCC) wants to implement a mobile device management system (DMS) to address the problem.

The minister of communications,

Adebayo Shittu, urged encouragement of local production of mobile devices as a means of tackling the growing problem.

Shittu said Nigeria's most popular mobile phone market, the Computer Village in Lagos, has a daily turnover of about NGN2bn. He said if 10 per cent of the devices being sold were fake, the country's formal mobile phone market was losing about NGN200m daily.

"Substandard and fake mobile phones are a bad omen, and an economic sabotage for Nigeria," he said. "We need urgent attention to address this issue."

The Association of Telecommunications Companies of Nigeria (ATCON) added that more than 20 mobile phone brands that are being sold in

Nigeria have not been approved by the NCC. ATCON also described the fake phones as significant contributors to poor quality of service challenge that operators in Nigeria struggle with.

"The principal objective of the DMS project is to establish a secure and comprehensive single-window solution that will enable the Commission to implement a proven solution in the Nigerian environment... that is sustainable and demonstrate value for money in addition helping to address the various concerns that have been raised with the NCC from the Office of the National Security Adviser (ONSA), in our regular interactions on security matters as it concerns the telecommunications industry," said NCC executive vice chairman Umar Garba Danbatta.

TDC shuns Huawei for Ericsson

 Denmark's biggest telecom group TDC has chosen Swedish firm Ericsson and turned its back on existing provider Huawei to roll out its ultra-fast 5G mobile network across the country.

The US and several other western nations have shut Huawei out of tenders for the development of

5G networks, because they are concerned about the company's close ties to the Chinese government.

"TDC has chosen Ericsson to build and deploy its 5G network," TDC chief executive officer Allison Kirkby said in a statement. "Over the past year, TDC has negotiated with several suppliers about the

upcoming 5G rollout."

However, there was no mention of Huawei, which had equipped TDC's network since 2014.

TDC did not disclose the value of the Ericsson deal, which will run until the end of 2023.

The firm said it hopes to offer its customers 5G by the end of 2020.

Airtel-Telkom Kenya merger under threat

 The proposed merger of Airtel Kenya and Telkom Kenya is under threat after a committee in the Kenyan National Assembly refused to approve it until more information is revealed about the proposal.

The committee claimed "the deal has the hallmarks of a scandal where private individuals are buying off a public entity through the back door for a song" and called on government agencies to provide further details about the merger.

In 2014, the Public Investment Committee released a report which made several suggestions for privatising and restructuring the finances of Telkom Kenya and



The Kenyan National Assembly took place at the Parliament of Kenya in Nairobi, Kenya

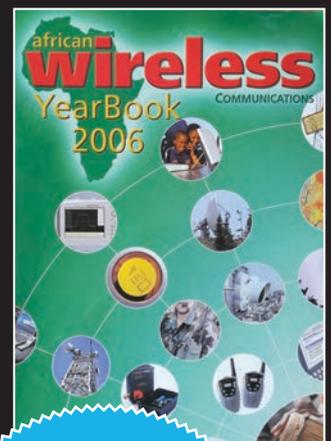
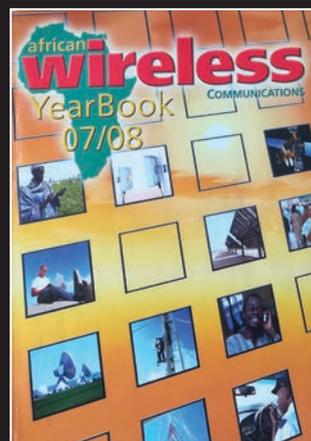
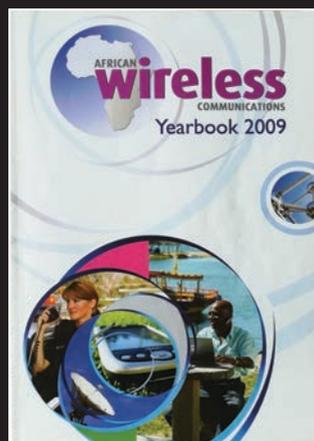
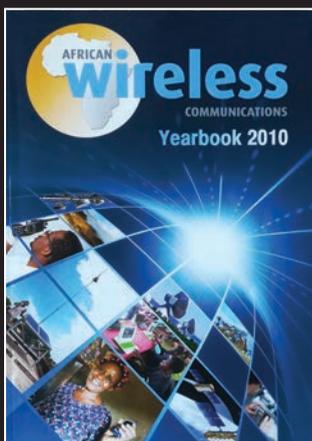
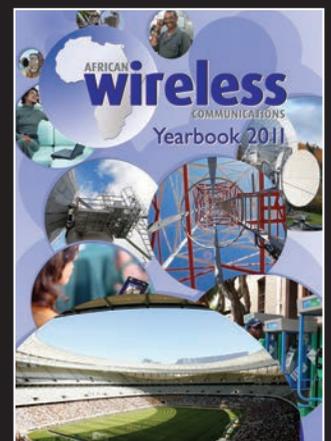
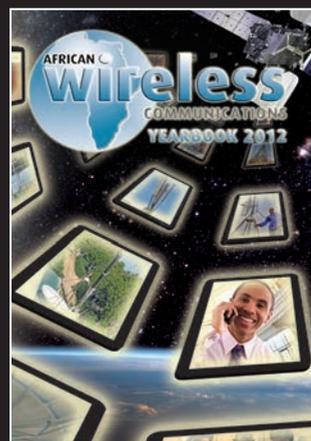
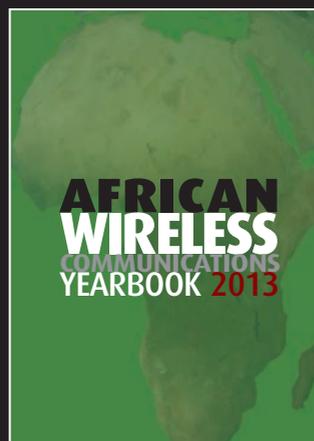
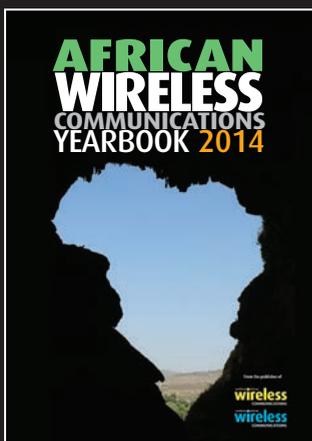
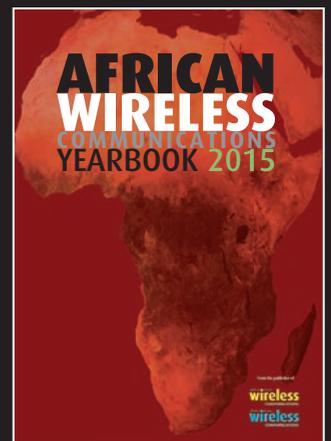
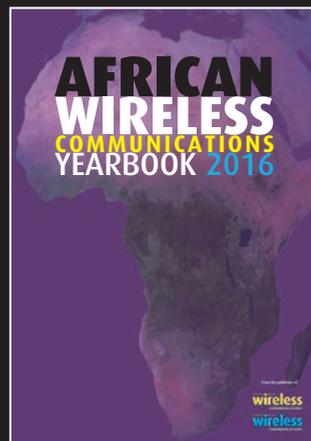
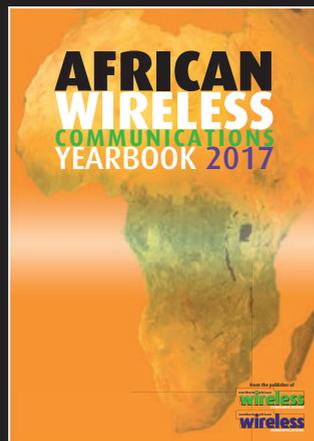
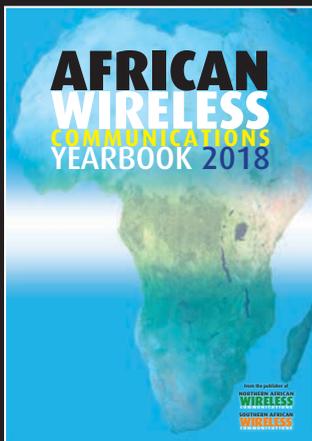
it has been claimed that these have been ignored.

Alongside Telkom Kenya, the agencies mentioned in the report include the Communications Authority of Kenya, the Ethics and Anti-Corruption Commission, the Ministry of ICT and the National Treasury. All of them have been

summoned before the committee.

If the merger went ahead, it would create a new joint venture formed from Airtel Kenya and the mobile, enterprise and carrier service units of Telkom Kenya. In addition, it would allow the operators to compete more effectively against the dominant market leader Safaricom.

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