Issue 1 2023

Communications Africa Afrique

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NEW ORBITS, NEW IDEAS

The transformative effect of MEO and LEO satellites

Power

Alternatives to diesel for towers

Nigeria

MTN enhances customer engagement

Kenya

New ways to consume content

Network architecture

4G, 5G or 6G?

Wireless telemetry

Putting antennas to the test

Abayomi Adebanjo, MainOne: "We will be expanding our digital footprint in Ghana"

FEATURES: ● Sport via smartphones ● Internet via Wi-Fi 6E ● Streaming content via social media

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Cover photograph: SES. See page 21.

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A note from the Editor

We have been here before. The role of satellite communications in affordably extending voice and data to remote areas of Africa has been a recurring theme of much of the past 20 years but change has come slowly.

Similarly, fibre has been much discussed – but the reality for a long time in Africa has been limited penetration.

However, companies like Wyld, SES, MainOne and Liquid, interviewed in this issue, are hoping to make satellite and fibre viable, affordable and available.

In the meantime, of course, cellular isn't doing too badly. As 4G rollout continues, phones are ousting newspapers, cinema and TV as the primary African source of entertainment, news and sport.

According to our story on page 18, an increase in digital media consumption in Kenya has been boosted by the growing access to smartphones. One out of every two Kenyans now owns a smartphone, according to the Communications Authority of Kenya (CA).

Again, such claims are not new but today, with ultra-low-cost smartphones close to reality, cellular is part of a group of technologies – one that also includes satellite, fibre, Wi-Fi and FWA – that really is making Africa more connected more affordably than ever before.

FEATURES

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Events 2023

FEBRUARY			
27-2 March	**MWC Barcelona 2023**	BARCELONA	https://www.mwcbarcelona.com
MARCH			
14-16	**Africa Agri Tech 202**	PRETORIA	https://africa-agri.co.za/
16-17	**Blockchain Africa Conference 2023**	JOHANNESBURG	https://blockchainafrica.co/
29-30	**Tech Unite Africa**	NIGERIA	https://techuniteafrica.com/
APRIL			
15-16	**NAB Show**	LAS VEGAS	https://nabshow.com/2023
25-26	**East Africa Com**	NAIROBI	https://tmt.knect365.com/eastafricacom/
MAY			
9-11	**Smart Cities West Africa**	NIGERIA	https://www.securexwestafrica.com/smartcities
16-18	**CABSAT**	DUBAI	https://www.cabsat.com/
31-2 June	**GITEX Africa**	MOROCCO	https://www.gitexafrica.com/
AUGUST			
3-4	**ICABCD 2023**	DURBAN	https://icabcd.org/2023/
OCTOBER			
2	**Technext Coinference**	LAGOS	https://coinference.technext.ng/

The world's largest connectivity event

Global mobile operators, device manufacturers, technology providers, vendors, and content owners are coming to MWC Barcelona. Here's what they can expect.

It's all happening here!

Photo: Adobe Stock

THIS YEAR'S MWC Barcelona (27 February - 2 March 2023) is again able to describe itself as the world's largest and most influential connectivity event.

The theme for the event this year is Velocity, a theme that the organisers say will be woven across five key discussion and thought leadership tracks: 5G acceleration, Reality+, OpenNet, FinTech and Digital Everything.

Keynote speakers come from such major names as NEC Corporation, Ericsson, ZTE, Nokia, and Vodafone, to name only a few, along with a wider list of session and panel speakers that includes many companies directly relevant to Africa such as Airtel, Crop2Cash, CoAmana, EthioTelecom, Helios Towers, MFS Africa, MTN Group, Safaricom, Tecnotree, Vodacom, Zain and more.

One of the new additions to MWC Barcelona is Journey to the Future, an experiential, hands-on journey into the future of technology and connectivity solutions. Meanwhile, the returning Industry City will showcase innovative demos from across the fintech, manufacturing, and smart mobility industries and the Sports Tomorrow Congress will create a space to identify and create new business opportunities across the mobile and sports ecosystems.

Other returning popular programmes include 4YFN, MWC's start-up-focused platform, Diversity4Tech and Beat Barcelona, the official after-work 'Place to B' for networking and entertainment.

On a more serious note, the MWC Ministerial Programme will again convene ministers, heads of regulatory authorities and data protection authorities to meet with mobile industry CEOs and senior representatives of international organisations, share knowledge, and debate priority policy and regulatory issues.

The GSMA Pavilion will host the Mobile World Live Broadcast Studio with live panel discussions broadcast on screens throughout the venue and online at mobileworldlive.com and mwcbarcelona.com. Also at the GSMA Pavilion, visitors can enjoy a showcase of the latest innovations in mobile with demos and immersive experiences such as a mobile IoT football challenge.

And, of course, there's a massive exhibition which last year attracted close to 2,000 exhibitors. MWC Barcelona is attended by global mobile operators, device manufacturers, technology providers, vendors, and content owners – and you can expect to see many of them exhibiting at, or visiting, the Fira Gran Via this year.

Tigo Tanzania and Ericsson launch 5G

TIGO TANZANIA AND Ericsson have entered a partnership to launch 5G and to fully modernise and expand the existing 4G network across the country. 5G is now launched in Dar Es Salaam, Dodoma and Zanzibar and will be gradually rolled out across the country at strategic locations.

Ericsson is currently upgrading Tigo Tanzania's existing 4G network with Radio Access Network (RAN) products and microwave solutions (MINI-LINK 6000). Leveraging the latest energy-efficient products from the 5G Ericsson Radio System portfolio, Tigo's network is being expanded and upgraded to increase network capacity, providing the benefits of a fast and reliable connection. The Ericsson Radio System 5G portfolio is designed to manage all site types and traffic scenarios, even as networks grow in technology and capacity across generations, delivering high performance on the smallest site footprint with the lowest energy consumption.

Ericsson will also optimise Tigo Tanzania's network by deploying Artificial Intelligence (AI)-enabled Cognitive Software to align network performance with strategic objectives. Ericsson will optimise the network by applying AI-powered technologies, evaluate future network demands through active monitoring and predictive forecasting, and meet increasingly critical performance demands while improving the user experience.

Kamal Okba, CEO at Tigo Tanzania, says: "We have witnessed outstanding progress so far; the performance of the network has been elevated, and the customer experience has been greatly enhanced by the modernisation and expansion of the existing 4G network and the launch of 5G in Dar Es Salaam, Dodoma, and Zanzibar. Tigo Tanzania and Ericsson are working to roll out the service to other regions and the rest of the country. This is a major milestone for the nation and the African continent where we are committed to grow and expand our reach in collaboration with our partner, Ericsson. Every improvement made to our network is a step in the right direction to support the Digital Tanzania Project and ensure the initiative realises its goals to increase access to broadband internet services and improve the delivery of connected services."

Under the partnership, and as part of the Ericsson Product Take-Back Program, Ericsson will collect, decommission, transport and recycle Tigo Tanzania's dismantled and obsolete equipment with the highest industrial standards, to minimise the potential environmental impact of the end-of-life electrical equipment.

Photo: Adobe Stock

5G is now launched in Dar Es Salaam, Dodoma and Zanzibar and will be gradually rolled out across the country at strategic locations.

The partnership between Tigo Tanzania and Ericsson spans many years, with Ericsson supplying a suite of solutions and software capabilities to provide 2G, 3G, 4G and 5G connectivity and enhance customer experiences across the country.

Liquid and Nokia partner to drive connectivity in Africa


Photo: Adobe Stock

Liquid has deployed Nokia's innovative transport network technology in the new terrestrial fibre route connecting Mombasa (Kenya) to Johannesburg (South Africa).

LIQUID INTELLIGENT TECHNOLOGIES, a business of Cassava Technologies, a pan-African technology group, has partnered with Nokia. Through this partnership, Liquid has deployed Nokia's innovative transport network technology in the new terrestrial fibre route connecting Mombasa (Kenya) to Johannesburg (South Africa).

This announcement comes in light of the imminent launch of the new terrestrial data superhighway built by Liquid, connecting Kenya and South Africa. The technology used has allowed Liquid to build its first terrestrial route that will provide 12 terabits of capacity for carriers and service providers in South Africa, Kenya, Uganda, Rwanda, Zambia, Zimbabwe, and the DRC. The route, which measures 16,576 km, has been designed to cater to the demand for more capacity from Liquid's hyperscale customers.

In addition, the route will provide thousands of businesses and millions of households in many of Africa's landlocked cities, towns and villages with more resilient connectivity and access to numerous data centres and cloud resources. At the same time, it will provide an alternative option in case of a subsea cable outage between the two countries.

Mastercard partners with Nigerian fintech NowNow

MASTERCARD HAS PARTNERED with Nigerian digital payment startup NowNow to help SMEs reduce the risk of cyberattacks.

There has been a significant increase in cybercrime in recent years. According to the Nigerian Communications Commission, Nigeria loses an estimated US$500,000,000 yearly due to cybercrime.

SMEs are a huge target for cybercriminals as they typically do not have the resources to defend themselves or to act accordingly once they have been breached. NowNow supports SMEs with regular web application penetration tests to ensure that applications are not vulnerable to any cyber threats. It is currently available in Nigeria and Angola and is expanding into several other markets (Equatorial Guinea, Liberia, and UAE).

As part of the Mastercard Start Path Global Programme, which is designed to help later-stage startups innovate and scale, NowNow was provided with operational support, commercial engagement, and the opportunity for strategic investment.

The health and sustainability of SMEs is essential for economic prosperity. According to the World Bank, SMEs represent about 90% of businesses globally and employ more than 50% of the global workforce.

Recognising the devastating impact of COVID-19 on SMEs, Mastercard committed US$250,000,000 over a five-year period to help SMEs, including establishing the Mastercard Trust Centre to address their cybersecurity needs.

The Mastercard Trust Centre is a microsite on the Mastercard.com site. It helps SMEs to defend their critical assets, business, and reputation by providing online access to trusted cybersecurity research, curated education, resources, and tools from Mastercard and trusted external sources. Recognising that each business has unique needs, the Mastercard Trust Centre provides a tailor-made approach, whether the business involves entrepreneurs starting to learn about cybersecurity, or business owners expanding their knowledge or mastering cybersecurity.

Mastercard develops partnerships with external businesses such as NowNow, non-profit organisations, and governments to bring the Mastercard Trust Centre to its partners' SME communities.

"From a pricing perspective, our pricing strategy is generally to be either in line or just slightly at a premium, but not to go for any price competition [with Ethio Telecom]. The intention is actually generally to be closer to what the main operator is offering, especially on voice."

- Peter Ndegwa
chief executive
Safaricom

"Vodafone Egypt was consolidated from 8 December 2022, contributed over R1.8 billion to group service revenues and was a key factor, alongside currency gains and operating model resilience, in the 16.1% improvement in our service revenue."

- Shameel Joosub
CEO
Vodacom Group

"Expanding our [loan] offering to the people of Guinea through valued partners MTN and Ecobank is a significant step in our growth plan as a company."

- Mark Muller
CEO
Optasia

"In order to revive the telecommunications sector and promote digital development in Niger thanks to a resumption of investments, particularly in the field of infrastructure, the State through the 2023 finance law has decided to abolish the Tax on the Termination of the Incoming International Traffic (TATTIE)."

- Communiqué from the Council of Ministers,
Niger

"The rollout of Mafab 5G network is the beginning of immense opportunities for the country as it represents Nigeria's capabilities and infinite possibilities."

- Musbahu Bashir
chairman and founder
Mafab

"Our decision to increase our investment in our data centres in Kenya is in recognition of the position the country now occupies as a leader in the adoption of digital technologies in Africa."

- Hardy Pemhiwa
Group President & CEO
Cassava Technologies

"Safety and security of data and equipment is a monumental concern for the association and particularly for the Corridor Trip Monitoring System (CTMS) project. Armada protects its clients against any such risk and offers total resilience because the Paratus Group owns and manages multiple international links from Namibia into the SADC region."

- Daniel Joaquim
Sales Account Manager
Paratus on welcoming the Roads Authority Namibia as its latest client

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"We are excited to expand our broadband internet services to more locations in Nigeria. We will build last-mile digital infrastructure in these states that will move internet capacity to them and help millions of Nigerians participate and contribute to the digital economy."

- Kendall Ananyi
Founder and CEO
Tizeti

No price war in Ethiopia says Safaricom

SAFARICOM HAS RULED out price competition in the Ethiopian market to win customers from Ethio Telecom.

The operator says it will instead keep its prices for voice and data within the ranges of Ethio Telecom – the Ethiopian government-owned telco that operated as a monopoly before Safaricom's entry last October.

Safaricom chief executive Peter Ndegwa was quoted in local press reports as saying, "From a pricing perspective, our pricing strategy is generally to be either in line or just slightly at a premium, but not to go for any price competition. The intention is actually generally to be closer to what the main operator is offering, especially on voice."

Safaricom crossed the one million mark in subscriber numbers in Ethiopia just a month after the launch of operations last October.

CTGNET IP transit service comes to Africa

CHINA TELECOM HAS launched its premium IP transit service, CTGNET, in several new African cities – including Cape Town, Durban, Johannesburg, Nairobi, Mombasa, and Djibouti.

CTGNET is the latest global IP network built by China Telecom and joins Chinanet AS4134 and CN2 AS4809 in China Telecom's list of IP transit services.

It has been launched to carry traffic that serves the requirements of China Telecom's global internet client base and has been designed and built with multiple 100Gb OTN capacities across various diverse cable systems.

This means clients can provision 100G and upward IP transit ports through China Telecom's network in locations like Cape Town, Durban, Johannesburg, Nairobi, Mombasa and Djibouti.

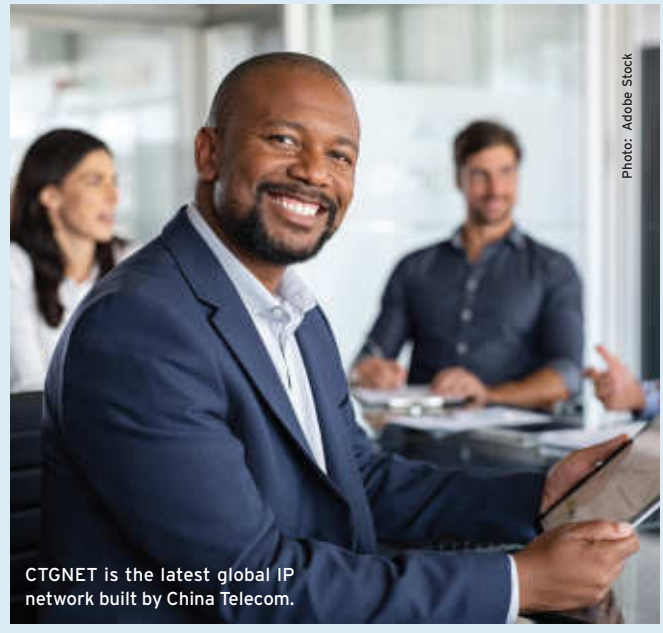


Photo: Adobe Stock

CTGNET is the latest global IP network built by China Telecom.

The CTGNET network is part of China Telecom's global tier 1 backbone and provides access to local and European peering, along with direct access to content and customers in the Middle East and Asia.

CTGNET also has the lowest latency and the most direct routes to the Asia-Pacific region thanks to the investments China Telecom has made in new routes and cable systems in the region. CTGNET is Mutually Agreed Norms for Routing Security (MANRS)-compliant.

MTN Guinea pilots 4G+

Photo: Adobe Stock

The launch of the 4G+ pilot phase aligns with MTN's ambition to improve the quality and coverage of its telecoms network.

MTN GUINEA HAS launched the pilot phase of its 4G+ mobile network in the Republic of Guinea. The operator intends to deploy 36 sites in the Greater Conakry area, thus giving access to this service to 13% of the population.

MTN Guinea dedicated the month of December to improving the quality of the pilot network through subscriber feedback. This is to be followed by a massive rollout to reach 200 4G+ sites by June 2023. The company will continue to expand the network in the interior regions of the country until 2024.

It was last February that MTN obtained its 4G license from the Post and Telecommunications Regulatory Authority (ARPT) of Guinea. The company joined its rival Orange Guinée, which had obtained its 4G license in March 2019 for US$90mn.

The launch of the 4G+ pilot phase aligns with MTN's ambition to improve the quality and coverage of its telecoms network, in a context marked by growing demand for broadband connectivity and the emergence of new habits of digital consumption among populations. A complete modernization process of the current network is also underway.

Bank of Africa to use NetGuardians fraud prevention software

SWISS FINTECH NETGUARDIANS has announced that Bank of Africa, a pan-African bank present in 31 countries worldwide, 20 of them in Africa, will use NetGuardians' fraud prevention software to further safeguard its assets and branches in Morocco against internal and payment fraud.

More than 25 client banks across Africa & The Middle East are using NetGuardians as their anti-fraud solution; it is trusted by 40% of the largest banks in East Africa. NetGuardians is working with banks to protect more than US$7tn in assets from fraudsters.

NetGuardians software forms customer profiles through its innovative behavioural analytics, machine learning, and artificial intelligence. The software monitors all transactions and provides a risk score by comparing it against the customer profile.

The software reduces the volume of false positives, providing an excellent customer and user experience while decreasing operational costs. Machine-learning algorithms help financial institutions to discover and stay on top of emerging threats from fraud schemes.

Photo: Adobe Stock

Bank of Africa says: "NetGuardians' anti-fraud software is a welcome addition to our network as we continue to strengthen our fraud mitigation."

MTN Benin improves spectrum use

MTN BENIN AND Ericsson have partnered on the deployment of an artificial intelligence (AI) and machine learning (ML) solution in Africa to address throughput challenges. A network management system utilising AI and ML was designed to address throughput degradation and ultimately provide improved customer satisfaction. This is building on the existing Ericsson Operation Engine designed to provide data-driven network operations including state-of-the-art AI-enabled cognitive software for network optimisation.

The ongoing rise of connected devices has led to an increase in spectrum requirements putting a strain on certain sites. Ericsson devised its latest algorithms to act on highly accurate predictions of future lower throughput based on historical data. As a result, MTN Benin can maximise the use of available spectrum, in turn improving user experience through reliable and best-in-class network experience for MTN Benin's subscribers.

The AI and ML solution addresses throughput degradation in the most efficient manner by anticipating it, offering zero-touch corrective action, increasing throughput for service-level agreements (SLAs), and making the best use of network resources.

Satcom services deal to benefit Sudan

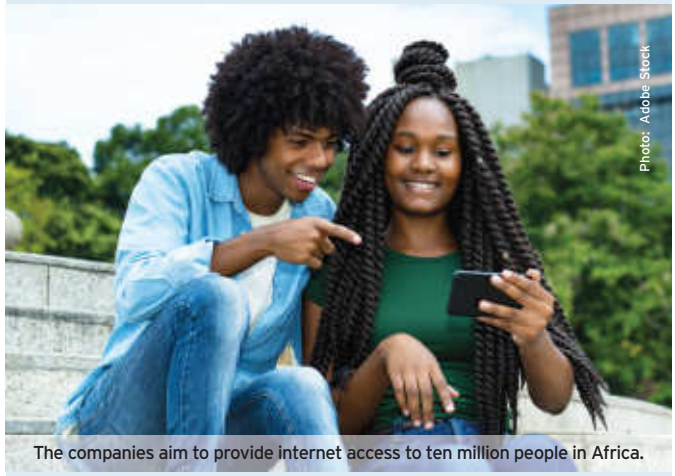
YAHCLICK, THE DATA solutions subsidiary of operator Al Yah Satellite Communications Company, has signed a US$15mn six-year strategic partnership agreement with Canar Telecommunication Co of Sudan.

Under the agreement Canar has procured significant satellite capacity from YahClick, which will be used to deliver consistent, reliable and fast broadband internet connectivity to consumers and businesses in Sudan.

YahClick says that the expanded connectivity it delivers will enable Canar to build on its position as a broadband market leader based on quality of service, with superior network performance and availability.

Canar is seeking to provide enhanced connectivity to support a series of e-government programmes and revitalise the country's banking and private sectors. The telecoms provider is also aiming to support entrepreneurs in the country to digitally empower their businesses by offering them more affordable and reliable internet services.

Internet access initiative targets million in Africa



The companies aim to provide internet access to ten million people in Africa.

MICROSOFT AND VIASAT have announced a new partnership to help deliver internet access to ten million people around the globe, including five million across Africa. Viasat, a global communications company, is the first satellite partner to work with Microsoft's Airband Initiative. Together, they will deepen Airband's work in the Democratic Republic of the Congo, Nigeria, Guatemala, Mexico and the United States, as well as prioritize expanding the programme in Senegal and Angola to deliver much-needed internet connection, often for the first time.

Working together, the companies will combine expertise and assets to help enable telehealth, distance learning and education, precision agriculture, clean power and other services to reach new areas through the transformational provision of power and connectivity. The companies will collaborate to provide and pilot technologies including, but not limited to, satellites (both geostationary orbit and low earth orbit) and fixed wireless.

Universal, affordable internet access is part of the United Nations' Sustainable Development Goals (SDGs), and by focusing a large portion of this new partnership on Africa, Microsoft and Viasat are working to deliver connectivity and digital literacy for better education, healthcare and economic opportunity in critical markets.

Launched in 2017, Microsoft's Airband Initiative works through partnerships with local and regional internet and energy access providers, telecom equipment makers and non-profits, as well as governmental and nongovernmental organisations, to advance access to affordable internet and relevant digital skills around the world.

Namibia wants private sector boost for 4G

THE CHIEF EXECUTIVE of the Communications Regulatory Authority of Namibia (CRAN), Emilia Nghikembua, has called for more private sector investment to improve telecom network coverage, particularly 4G, in the country. In a statement following the launch of the watchdog's Telecommunications Market Report for 2021, which revealed that Namibia's 4G population coverage stood at 85% that year, the executive stressed improved connectivity is particularly necessary in underserved communities such as the Kunene, Oshikoto, Kavango West, Zambezi, Omaheke, Otjozondjupa and Hardap regions.

According to the report, only seven of the country's 14 regions were covered by 4G networks, while the Kunene, Kavango West and Omaheke regions had less than 50% 4G population coverage. It also highlighted that the country continues to suffer from a lack of digital skills and high prices for mobile data and smartphones, as evidenced by the fact that only 66% of the 2.9 million mobile subscriptions at end-2021 accessed mobile data services – up from 61% in 2016. To address these concerns, the CRAN plans to implement measures to promote technological innovation and improve quality of service, including the release of additional spectrum to ensure costs for end users are affordable.

More private sector investment is being called for to improve coverage in Namibia.

Internet reaches new heights in Tanzania

FOR THE FIRST time, high-speed internet coverage has been provided on Uhuru Peak, at the top of Kilimanjaro at 5,985m above sea level, as well as rest huts along the way, including Horombo and Kibo.

Visitors will be able to share updates via the internet as they ascend to the summit. Most importantly, if there is an emergency, visitors will also be able to call for help. Earlier in 2022, all rest camps below 3,795m on Kilimanjaro were connected to high-speed internet and Wi-Fi coverage.

The high-speed network on Mount Kilimanjaro is part of the national ICT broadband backbone network project, built by Tanzania Telecommunications Corporation (TTCL). Huawei Tanzania donated most of the telecommunication equipment for the Mount Kilimanjaro network deployment.

Kilimanjaro is Africa's highest mountain, attracting around 50,000 climbers per year.

ICASA to expand spectrum availability

SOUTH AFRICAN COMMUNICATIONS regulator ICASA is planning to sell, through another auction, new radio frequency spectrum bands suitable for 4G, 5G and future mobile broadband technologies.

This comes after the successful auction last year of hundreds of megahertz of spectrum to mobile operators — the first new frequencies for mobile applications that had been sold in South Africa for about 15 years.

The seven bands ICASA has earmarked for licensing have all been identified internationally for the provision of so-called IMT, or mobile telecommunications services. They are: IMT700 (703-733MHz and 758-788MHz); IMT750 (733-758MHz); IMT800 (791-821MHz and 832-862MHz); IMT900 (880-915MHz and 925-960MHz); IMT2300 (2.3-2.4GHz); IMT3300 (3.3-3.4GHz); and IMT3500 (3.4-3.6GHz).

"Together, these assignment plans will achieve a 215% increase in the high-demand spectrum available for licensing through a competitive process," ICASA said.

ICASA has also promised soon to engage in further consultations on the licensing of three additional bands: IMT450 (450-470MHz); IMT850 (825-830MHz and 870-875MHz); and IMT1400 (1.427-1.518GHz).

The regulator is also moving to make additional radio frequency spectrum available for Wi-Fi broadband through a proposed amendment to regulations.

It has published draft amendment radio frequency regulations that include an updated list of radio apparatus whose use or possession doesn't require a spectrum licence.

"The authority is proposing the incorporation of the key lower 6GHz band (5 925MHz to 6 425MHz) as well as the 122GHz to 246GHz band for non-specific short-range applications," it said. "This will provide a much-needed boost for Wi-Fi availability and uptake, and is expected to enable faster data communications between devices connected to wireless infrastructure, reduce latency, and improve efficiency and data throughput."

The move by the regulator comes after lobbying by industry players to open up the 6GHz band for Wi-Fi in South Africa. The Wireless Access Providers Association (Wapa) has been at the forefront of this lobbying (see article on page 19).

ICASA is the official regulator of the South African communications, broadcasting and postal services sectors. The institution develop regulations for these sectors, issue licences to telecommunications and broadcasting service providers, monitors licensee compliance with rules and regulations, and plans and manages the radio frequency spectrum.

5G-enabled mine launched at Phalanndwa Colliery

HUAWEI, MTN, MINETEC Smart Mining and opencast Phalanndwa Colliery have launched a 5G connected coal mine operation, which the partners have described as a major step toward digital transformation of the coal industry.

This collaboration, at Canyon Coal's Phalanndwa Colliery, sees Huawei and MTN provide an advanced 5G solution to ensure guaranteed connectivity within the mine and plant area in the initial stage. The mine is taking the lead in combining digital applications with 5G, achieving the first trial use of 5G applications of mining solutions in South Africa, leading the digital transformation of South Africa's mining industry.

The systems will reduce the occurrence of accidents and protect workers from being harmed by trucks. Furthermore, they will be able to monitor the movement trajectory and status of trucks in real time to shorten downtime.

Minetec, which provides proactive, dynamic, new generation solutions within the mining sector, is making the 5G technology capacity a reality on the Phalanndwa Mine. The 5G technology allows for real-time notifications of any technical problems within the operation, monitoring vehicle movements, engine health and fuel levels, for example.

Huawei is a global provider of information and communications technology (ICT) infrastructure and smart devices. MTN, a mobile network operator in Africa, provides voice, data, fintech, digital, enterprise, wholesale and API services. Minetec Smart Mining helps streamline processes and improve safety.

Photo: Adobe Stock

The solution will ensure guaranteed connectivity within the mine and plant area.

Orange Maroc signs submarine cable deal

TELECOMMUNICATION COMPANY ORANGE Maroc has announced the signing of a deal with Medusa Submarine Cable System for the construction of a submarine cable that would enhance Morocco's digital interconnection to Europe.

According to a statement from Orange, the new submarine cable system will be the longest of its kind in the Mediterranean and, it is hoped, will enhance Morocco's attractiveness as a gateway for digital exchanges in Africa.

The cable will link the two shores and will have 16 landing points in a number of countries, including Morocco. Orange Maroc said that it would share the infrastructure with other telecommunication operators.

"We are particularly proud to contribute to the trans-Mediterranean digital connectivity by deploying the landing and submarine cable infrastructure in the Nador region, which will connect Morocco to the North African and Southern European countries involved in this project," CEO of Orange Morocco, Hendrik Kasteel, said in a statement.

The Orange Maroc network is already connected to Europe via four submarine cables that offer a significant broadband network.

The company also plans to strengthen its market foothold in Africa by investing in a major fibre optics network in West Africa. Called Djoliba, the network provides stable interconnection between eight African countries, by relying on 20,000 kilometres of terrestrial and submarine infrastructure.

Orange Maroc is a prominent licensed telecommunications operator in Morocco. The operator's offers range from mobile, fixed-line and cybersecurity to mobile payment. It serves approximately 14.2 mn customers and has nearly 450 shops in Morocco.

Medusa interconnects South European countries – Portugal, Spain, France, Italy, Greece and Cyprus – with North African countries - Morocco, Algeria, Tunisia and Egypt.

2Africa subsea cable lands in South Africa's Eastern Cape

THE 2AFRICA SUBSEA cable, the largest subsea cable system in the world, has landed at the Vodacom network facility in Gqeberha, South Africa. This is the first submarine cable landing in the Eastern Cape region, promising greater internet capacity and acceleration of connectivity across the province and supporting South Africa's growing digital economy.


Photo: Adobe Stock

The submarine cable promises greater internet capacity.

The 2Africa Consortium includes eight international partners that have com together to build 2Africa: China Mobile International, Meta (Facebook), MTN GlobalConnect, Orange, center3 (stc), Telecom Egypt, Vodafone/Vodacom and WIOCC.

Launched in May 2022, the subsea cable project aims to significantly increase the capacity, quality, and availability of internet connectivity between Africa and the rest of the world.

The Gqeberha landing is the 2Africa project's third on the coast of South Africa, following two recent landings in the Western Cape by MTN GlobalConnect. Vodacom is the designated landing partner, providing facilities for the cable's installation at an existing site in the Summerstrand area.

Through the 2Africa landing at Gqeberha, service providers will be able to obtain capacity on a fair and equitable basis, encouraging and supporting the development of a healthy internet ecosystem. Direct international connectivity can then be provided to data centres, enterprise, and wholesale customers. Once the fibre cable system has been deployed, businesses and consumers will benefit from improved quality, reliability, and lower latency for internet services, including telecommuting, high-definition video streaming and advanced multimedia and mobile video applications.

Equinix enters South African market

DIGITAL INFRASTRUCTURE COMPANY Equinix has announced plans to enter the South African market with a US$160 million data centre investment in Johannesburg that augments its current footprint on the African continent in Nigeria, Ghana and Côte d'Ivoire. The new data centre is expected to open mid-2024.

The new 4.0 MW data centre, JN1, will provide 690+ cabinets and more than 20,000 gross square feet of colocation space. Two additional phases of development are planned. The fully completed 20.0 MW premium retail campus will provide 3,450+ cabinets and more than 100,000 gross square feet of colocation space.

In 2022, Equinix announced its acquisition of MainOne, its first step into Africa.

Raxio plans data centre for Angola

THE RAXIO GROUP, a pan-African data centre developer and operator, has announced that it is investing in and establishing Raxio Angola, the first state-of-the-art, carrier neutral, Tier III data centre in the country.

Angola's digital and telecommunications ecosystems have been developing rapidly, with the country now reaching an internet penetration rate of about 27%. New connectivity providers have been entering the market and others are actively enhancing their networks, footprint and services. Together, these factors provide a growth opportunity to become a strategic connectivity hub in the region, including significant cross-border traffic with the Democratic Republic of Congo (DRC), where Raxio is already building a state-of-the-art facility in Kinshasa.

With no existing carrier-neutral, Tier III certified data centres, Raxio Angola will be a key interlink between terrestrial and submarine connectivity in the country, serving both local and international demand.

Set to be commissioned in February 2024, Raxio Angola will be the seventh data centre in Raxio's portfolio of facilities in Africa. The facility will be located in the Cacuaco district, on the outskirts of Luanda, in close proximity to submarine cable landing sites and not far from the Luanda business district.

Once commissioned, Raxio Angola will deliver an ideal colocation environment for local, regional and international enterprises, content delivery networks and cloud service providers; will enable cross connection between local and international carriers; and will provide a series of value-added services.

Raxio Angola will offer its customers an optimised environment for their IT equipment in a state-of-the-art "metro-edge" facility. The data centre will be fully equipped with technology solutions that not only ensure full redundancy and maximised uptime, but also optimise power consumption and energy efficiency.

Robert Mullins, CEO of Raxio Group said, "Angola has a growing demand for connectivity and related services. It is also geographically placed to become a connectivity hub in the region, making it an important market for our growing portfolio."

Mobile sports subscription service targets Egypt

TOD, THE FASTEST-GROWING streaming platform for the Middle East and North Africa (MENA) has struck a strategic partnership with TPAY, the payments leader for the Middle East, Turkey, and Africa (META), allowing users to subscribe to its rich sports and entertainment content via their mobile numbers.

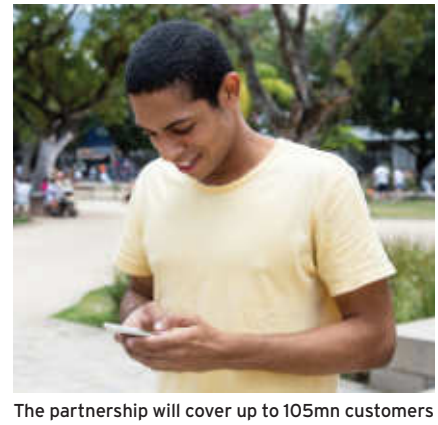


Photo: Adobe Stock

The partnership will cover up to 105mn customers in Egypt and will be expanded across MENA.

The partnership will cover up to 105mn consumers in Egypt as a start and will expand to more countries across MENA.

In the initial partnership phase, TPAY will enable TOD to accept subscription payments from consumers via DCB direct carrier billing, bringing its content within reach of consumers who don't have access to traditional payment methods, such as credit and debit cards.

John-Paul McKerlie, vice-president of sales and marketing at TOD, commented, "TPAY offers unrivalled coverage across META, has relevant local payment methods, and a track record of enabling merchants such as TOD to accept payments quickly and simply. This allows us to instantly deliver our premium content to millions across the region."

Raj Soni, TPAY COO, added, "This partnership validates our status as the payment processing partner of choice for premium merchants, especially in the streaming vertical. We are happy to have built payment rails that can remove all the complexity while our merchants remain focused on their core business and expansion."

MTN Uganda upgrade

MTN UGANDA HAS tapped Huawei to update its network with a cloud-native 5G-capable core, advancing MTN's goal to carve out a leading position in the continent's broader digital transformation.

Huawei will integrate core network elements into a single cloud network over the course of a five-year deal. The move is expected to boost operational efficiency, customer experience and services across all business verticals.

MTN stated the project spans unifying legacy core network elements "into a single vendor", in turn simplifying management of the infrastructure. It added the partnership marked an important step in the continent's digital push along with its own preparations to deploy 5G in Uganda.

Huawei Uganda MD Gavin Gaofei stated the deal solidifies a working relationship spanning 20 years and will remove complexity in network operations.

Ericsson report predicts 5G advances in Africa

THE NOVEMBER 2022 edition of the Ericsson Mobility Report projects that 5G subscriptions in sub-Saharan Africa will grow from 7mn in 2022 to 150mn by the end of 2028, accounting for 14% of total connections at that time.

In sub-Saharan Africa, 2G connections still constitute about half of the total mobile subscriptions. These are projected to decline as subscribers are migrated to 4G and 5G networks. 4G will be the main contributor to new connections up to 2028, accounting for more than half of all mobile subscriptions at that time.

Currently, 4G represents 29% of mobile subscriptions in sub-Saharan Africa, with 4G subscriptions expected to rise from 260mn in 2022 to 600mn in 2028. The monthly data traffic per smartphone in sub-Saharan Africa will increase by 26% from 4.6 GB per month in 2022 to 18 GB per month in 2028.

Global 5G subscriptions remain on track to top five billion by the end of 2028. On 5G itself, about 110mn subscriptions were added globally between July and September 2022, bringing the total to around 870mn.

By the end of 2028, five billion 5G subscriptions are forecast globally, accounting for 55% of all subscriptions. In that same timeframe, 5G population coverage is projected to reach 85% while 5G networks are expected to carry around 70% of mobile traffic and account for all contemporary traffic growth.

The report also forecasts global fixed wireless access (FWA) connections to grow faster than previously expected. FWA is one of the major early 5G use cases, particularly in regions with unserved or underserved broadband markets. FWA is forecast to grow at 19% year-on-year through 2022-28, and top 300 million connections by the end of 2028.

Overall mobile subscriptions are expected to top 9.2bn by the end of 2028. Most subscriptions are associated with smartphones. At the end of 2022, 6.6bn smartphone subscriptions are estimated, accounting for about 79% of all mobile phone subscriptions

The latest report also highlights the importance of reducing environmental impact, pointing out that the growing data traffic needs to be managed with smart network modernisation combined with a balanced approach

Nokia partners UNICEF for digital education in Senegal

NOKIA HAS ANNOUNCED a new collaboration with UNICEF to bridge the digital divide by helping to improve digital education and training in schools in select parts of Senegal. This activity is in line with Nokia's enhanced Environmental, Social and Governance (ESG) strategy, as well as Nokia's commitment to advance digital skills. The principal beneficiaries are more than 100 teachers, as well as more than 10,000 middle school students in underserved areas.

The focus will be on digital education and training activities so students can develop their digital skills, including coding.

AI assists Egyptian customs services

WEBB FONTAINE, A provider of AI-powered trade technology and customs facilitation solutions to governments and trade administrations around the world, has launched the advanced Integrated Risk Management (IRM) service in Egypt in partnership with Misr Technology Services (MTS) representing the government of Egypt.

This new development will pave the way for the efficient digitalisation of customs procedures across the country. In Egypt, after the successful implementation of the system in Dekheila Customs facility, the system was rolled out to the rest of the customs offices in Egypt.

For each step in the customs process, the new Integrated Risk Management system uses cutting-edge tools like AI and data analysis to pinpoint potential risk areas. In addition to identifying and categorising risk indicators, the system also assigns weighted scores to each pre-identified element based on the severity of its possible impact.

Photo: Adobe Stock

The partnership will pave the way for the digitalisation of customs procedures throughout the country.

To initiate the deployment for the system, an operations room was formed inside Dekheila Customs Centre to work on quickly solving any potential problems during the pilot implementation stage. Once the system was implemented in Dekheila Customs with no issues reported, it was deployed in all customs centres across Egypt.

This major project marks Webb Fontaine's foray into the rapidly expanding Egyptian trade and customs industry, which aspires to grow and develop in the near future into one of the region's most cutting-edge cargo handling and forwarding destinations.

Fibre on the right tracks in Zimbabwe

DARK FIBER AFRICA (DFA) and Bandwidth and Cloud Services Group (BCS) have completed the first stage of a long-haul fibre backbone project aimed at providing better connectivity between Zimbabwean towns and cities by deploying fibre along the country's rail tracks.

In the first phase, 1,180km of fibre will stretch from Zimbabwe's border town of Beitbridge in Matabeleland South province to Victoria Falls in the north of the country.

The second phase will extend an additional 800km from the village of Somabula to Harare, via Gweru. The infrastructure will also extend the network from the city of Bulawayo to Plumtree as well as from Harare to Mutare by the middle of 2023.

The project will have three additional stages that will see Zimbabwe interconnected with South Africa, Botswana, Zambia and Mozambique.

Djibouti plans satellite launch site

DJIBOUTI'S PRESIDENT ISMAIL Omar Guelleh has signed a technological cooperation agreement with the Chinese company Hong Kong Aerospace Technology to build a US$1bn satellite and rocket launch site. The project will include the construction of port infrastructure and highways in the northern Obock region to ensure the reliable routing of aerospace materials coming from China.

President Guelleh said construction works could be completed as early as 2027 and infrastructure will be handed over to Djibouti upon the completion of a 30-year co-management contract with Hong Kong Aerospace Technology.

Hong Kong Aerospace Technology Group owns five technical centres and manufacturing bases, including a satellite manufacturing centre and a centre for satellite data.

A tale of three generations

5G is on the way and 6G is attracting interest even though it's very much on the drawing board. But should African operators be worrying about new network infrastructure or software investments at a time when 4G is still rolling out? Simon Fletcher, CTO of wireless advisory firm Real Wireless* isn't so sure.

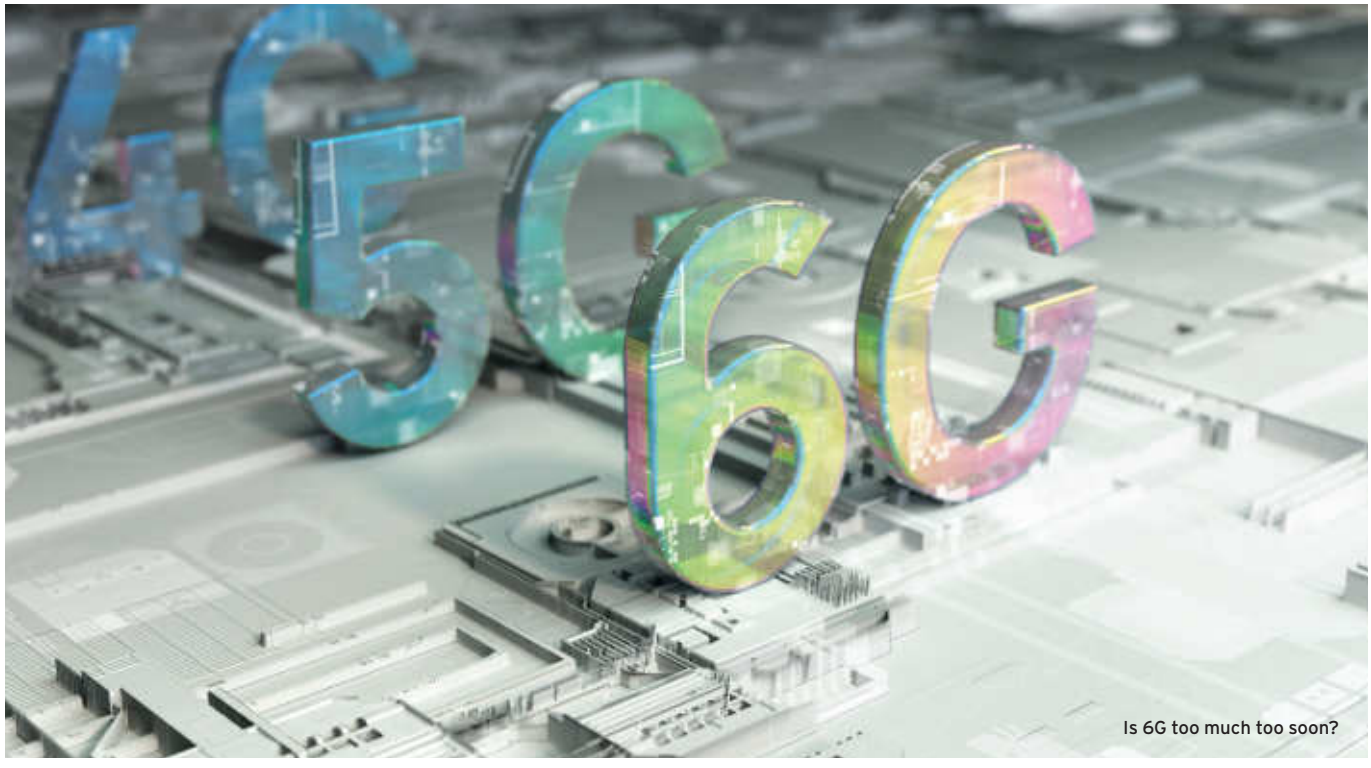


Photo: Adobe Stock

Is 6G too much too soon?

WHAT IS 6G and does anyone actually want it? It's a question that some commentators are asking well in advance of the next generation's mooted arrival, sometime in the 2030s.

It's true that spectrum allocation work and research are already underway. In fact IMT 6G spectrum will be recommended at WRC 2023 (the ITU World Radiocommunication Conference taking place in Dubai in December).

In the 2027 WRC, the frequency bands will be debated. The millimetre wave and the terahertz range are among the bands being targeted. Standards bodies like 3GPP and IEEE are waiting in the wings, albeit 5G work will keep them busy for a few years yet. In other words, there is a lot of serious 6G research going on all over the world already. Ostensibly, at least, many groups are working towards making 6G happen.

But will everybody end up working together – even if spectrum allocation goes ahead, areas of spectrum harmonisation are defined, and research offers a roadmap? After all, the wireless landscape is already fragmented, with 5G spectrum harmonisation by no means universally accepted.

And don't forget legacy networks. By 2030, say, 2G, 3G, 4G, 5G and 6G may coexist in some regions. In others, there may be an aggressive switching-off of old technologies so that perhaps 4G, 5G and 6G continue alone.

In other words, we can't be sure that harmonisation of the 6G spectrum will happen and that operators will agree to a smooth rollout path. Regionalisation of standards and spectrum choices could follow.

As for how a standards body will manage, 6G risks being mind-bogglingly complex in terms of what it can do and how it works. It won't just be 3GPP and IEEE dealing with standards or capabilities like holographic telepresence, immersive communication, connected vehicles, AI everywhere, mobile robotics and near instant and unrestricted complete wireless connectivity. Other standards groups will want to be involved.

The context may be a converged future that includes all wireless technologies, plus satellite, plus fixed. Given all this complexity, can 6G standards be defined and accepted by everyone in a timely manner, let alone a unified approach to infrastructure?

6G risks being mind-bogglingly complex in terms of what it can do and how it works.

Probably not. This means that some vendors and MNO combinations may decide to go their own way rather than wait for everyone else to agree. And certain sectors, like verticals, may decide they don't need to coordinate with anyone for their private networks. They could even drive a completely distinct 6G vision.

Should this be a cause for concern? Not necessarily. However, the question: "Who will make 6G happen?" could be less relevant than whether anyone can agree on what 6G is.

By contrast, 5G is here, but, again, for many countries the question is when and whether it's worth investing in network infrastructure.

Given sluggish smartphone take-up globally and current consumer attitudes to the costs associated with mobile data consumption, doubting the prospects of rapid RoI on 5G investments seems a pretty safe position to adopt. That said, it's unlikely that anyone directly involved really believed that the 5G business case was either straightforward or, indeed, singular.

Of course, some of the commentary is pertinent; for example, pointing to the urgent

need to improve deployment regulation as well as using planning and orchestration tools to cut costs and maximise assets in the dense networks that some 5G use cases will require.

Real Wireless has been interrogating the 5G value proposition for some years. At the beginning of 2018 a techno-economic analysis pointed to the most likely scenario that there would be little increase in willingness to pay for enhanced mobile broadband (eMBB – the prime 5G use case for consumers). Commoditisation of data and utility-like margins was the likely mid-term outlook.

At some point down the road, consumer scale will undoubtedly be a significant factor shaping the economics of 5G. But it was never going to be the starting point. The new architectures associated with 5G were seeking to reposition based on cloud-oriented techno-economics to address the specific requirements of particular verticals. Industrial and enterprise use cases are going to be important; already private 5G networks are mooted or happening. In South Africa, for example, operator MTN plans to build private 5G networks for mines and ports, which, it is claimed, will provide the firms with guaranteed coverage and capacity.

Making 5G successful will depend on many other factors, in addition to compelling service propositions. They include progressive siting and spectrum regulation, effective virtualisation strategies, the developing role of neutral hosts, the growing adoption of sharing strategies and network aggregation.

With global market demand for 5G services still in its nascent phase, LTE could well be enough for many countries.

However, while the importance of 5G IoT and 5G-delivered mobile broadband should not be underestimated, some of what 5G promises is already being delivered or is about to be delivered. It's happening thanks to mobile broadband and IoT offered by LTE, LTE-A and other flavours of what you may or may not call 4G. Quite a few countries will still be running 4G — or a version of it — for many years.

And making the most of 4G is not all about sweating ageing assets. Some 4G networks only arrived in the past year or so. We need strategies that deliver on investment regardless of the generation of mobile communications.

This has already occurred to some of the operator community. Indeed, the GSMA has suggested that 5G need not be standalone and that, as it notes, "non-standalone 5G networks would run on existing infrastructure supplemented by targeted small cell deployments in areas of high density, allowing 4G and 5G services to run in parallel". That seems a logical approach. Meanwhile, if LTE can support 5G-like demands in the near to medium term, it probably will.

Some countries may not need 5G for a long time.

Photo: Adobe Stock

Yes, the excitement that 5G generates is certainly merited. Standards, spectrum harmonisation and business models for 5G are important. But we're not ripping up 4G to replace it with 5G — or rather, we shouldn't be. At the same time, however, operators should not be deterred from doing some fundamental changes to the core network architectures that will allow them and their customers to benefit from 5G.

With global market demand for 5G services still in its nascent phase, LTE could well be enough for many countries – at least in the short-to-medium term. In fact some countries may not need 5G for a very long time. In the developing world for instance, 5G is promoted as potentially boosting mobile health, distance teaching and cashless payment (more so than ever in the light of the recent pandemic), but LTE can also enable many of these services. It's also tried and tested, as we outlined in issue 2 last year.

In addition, for most countries, developed or developing, rolling out mid and high spectrum band 5G to rural areas will be uneconomic. Many rural end users will cope just fine with LTE – as billions of city dwellers already do.

As for apps, LTE is still a good fit for trackers, smart meters, wearables, and other low-cost, low-bandwidth and often battery-powered applications. IoT applications can be and are being developed using LTE. More importantly, LTE enhancements are still happening. LTE, LTE-Advanced, LTE-M, LTE-A Pro, NB-IoT and beyond won't be obsolete anytime soon; in fact, as 5G connectivity evolves so will LTE.

5G rollout is way behind LTE, but they will eventually co-exist in many cases. Thanks to innovations like dynamic spectrum sharing, 4G and 5G services will be available concurrently in the same band and non-standalone (NSA) mode, giving mobile operators more flexibility in the technology transition timing and allowing LTE users to leverage 5G for additional bandwidth when needed.

In any case, why rush? LTE has coverage, users and an ecosystem, it has secured its place as a platform technology. It also has VoLTE – and room for further improvements and efficiencies, like LTE-A Pro, which takes advantage of unlicensed spectrum and common Wi-Fi networks to increase speed even further. LTE should take a significant role in indicating the feasibility of certain 5G markets.

Advances in 4G LTE are allowing operators to continue upgrading their networks while they test the 5G waters. Even the private network concepts that are emerging for various industry sectors can operate using LTE platforms.

And don't forget the consumer. Yes, 5G will bring once undreamt-of broadband capacity but end users aren't going to be rushing to upgrade their smartphones, especially during a massive economic downturn.

LTE and 5G have more in common than, say, 3G and 4G. They will coexist for some years to come. Therefore operators need a viable combined LTE and 5G business strategy, focused on the best possible use of each technology. Co-existence makes sense – and will save money. It's all a question of timing.

And Real Wireless can help. In a world where service providers want to continue squeezing value from their existing 4G assets, preserving investment while transitioning to 5G, we can advise operators, towercos and investors on how best to do that. We can also advise them when and where to evolve from non-standalone (NSA) to fully independent 5G standalone architectures and the new use cases that will drive their deployment and the KPIs that operators need to take care of as they transition services from 4G to 5G for their subscribers.

It's a question of timing – and sometimes being the first doesn't make you the winner. ✆

**Real Wireless is the world's leading independent wireless advisory firm. Its network of experts includes engineers, physicists, economists, security advisors, business strategists and deployment specialists. More information, and its recent paper The Road to 6G, can be found at www.real-wireless.com*

A greener, cleaner future for towers

Towers require power. But not all towers are close to reliable power supplies. This historically – and especially in Africa – has meant reliance on diesel where other supplies are not available. However, two companies are looking at ways to better manage power, including solar panel and battery storage solutions and even AI, as Vaughan O'Grady discovered.

Solar support for a tower installation in Cote D'Ivoire.

Photo: IHS Towers

WHAT ARE THE specific power needs of the average tower? William Saad, executive vice-president, chief operating officer and co-founder, IHS Towers, pointed out that this very much depends on tenancy type (for example 3G, 4G, 5G) and tenancy count, but starts at around two kilowatts of load. He added: "Site configuration – indoor versus outdoor sites – also plays a role in how much power is utilised."

Battery storage and solar panel solutions are very much seen as the way forward under Project Green, the next significant step in the IHS Carbon Reduction Roadmap, through which, he said, "we will integrate solar panel and battery storage solutions at some off-grid locations, as well as supplemental solutions at some on-grid locations. We will also connect more of our sites to the electricity grid."

The company's last significant investment in hybrid solutions was made between 2016-2018 when it upgraded over 9,000 towers in Nigeria, its largest market. "While we have continued upgrading sites since, Project Green is our latest sizable upgrade project," said Saad.

In 2021, approximately 73% of IHS sites in Africa had access to grid, hybrid, and/or solar solutions. He continued, "By 2025, after we complete Project Green, we expect just 9% of our sites in Africa (excluding Egypt and South Africa) to rely solely on generators, while we expect the remaining 91% will have a combination of other power sources including grid, hybrid, and/or solar solutions. By deploying these solutions we can both help limit outages and decarbonise our footprint by reducing generator run time."

> **"By increasing our deployment of renewable energy sources, we believe we can significantly contribute to our sector's lowering of emissions."**

These solutions are part of a comprehensive strategy for decreasing IHS emissions and achieving its goal to reduce the Scope 1 and Scope 2 kilowatt-hour emissions intensity of its tower portfolio by approximately 50% by 2030. However, the largest IHS source of emissions is tower diesel use, which accounts for 85.8% of its total carbon footprint. That's because in Africa, reliability of the main electricity grid varies considerably. Saad explained, "To bridge the power gap, we currently source a substantial amount of our power needs from a combination of diesel generators, solar panels, and stored power from batteries."

Diesel is particularly critical in Cameroon, Côte d'Ivoire, Nigeria, Rwanda, and Zambia, where the number of IHS sites connected to the grid is less than 99%. However, electricity is not available 24 hours a day and varies market to market. To ensure it delivers the strong network uptime its customers require (99.7% as of December 31, 2021) to deliver their voice and data services, IHS uses the diesel generators and combined power sources referred to earlier.

Saad said, "As of October 2022, approximately 56% of our sites across our total tower portfolio are connected to the grid. Going forwards, savings in these markets will be achieved by connecting more sites to the grid and via the deployment and integration of battery storage and solar panel solutions."

And yes, there is a potential cost-saving from rolling out alternative power generation at scale. He explained, "We believe that by increasing our investment in more renewable power sources and increasing the number of towers connected to the electricity grid, we can deliver notable cost savings."

He continued, "Under Project Green, we expect to spend US$214mn in capex towards

these efforts between 2022 and 2024, and to deliver annual recurring levered free cash flow (RLFCF) savings of US$77mn in 2025. This, in turn, is expected to generate an implied return on investment of 30%."

As a result, in October 2022 when IHS announced Project Green, it raised its 2022 capex guidance. IHS expects to spend US$645-685mn (previously US$545-585mn), including US$110mn of the US$214mn spent for Project Green, and used this opportunity to narrow its former range based on actual spend year-to-date.

Saad added, "As the third-largest independent multinational towerco globally by tower count, we believe we have an important role to play in lowering our sector's emissions. As MNOs shift to 5G technology, greater power resources will be required. This in turn will put increased emphasis on the need to find ways to reduce our GHG emissions that are attributable to power production. That's why we are actively ramping up our alternative energy solutions to help fill this gap. Our Carbon Reduction Roadmap outlines our path forward as we continue to assess options to reduce tower emissions intensity and to encourage renewable energy access."

He summed up, "Given our presence in sub-Saharan Africa, by increasing our deployment of renewable energy sources, we believe we can significantly contribute to our sector's lowering of emissions."

Redefining tower management with AI

Meanwhile, in Angola, telecoms infrastructure solutions provider Megmar has announced plans to use AI automation from PowerX, which says it is redefining tower management with artificial intelligence, to autonomously enhance performance and supply live maintenance information to tower network operations centres (NOCs). How can this approach help optimise power efficiency?

Andrew Schafer is CEO of PowerX. He explained, "Mobile technology is transforming communities and industries worldwide but there are significant inefficiencies experienced today in the tower networks and the operation of their assets. MNOs and tower companies need to rapidly transform to meet consumer demand for mobile connectivity and coverage with resilient, efficient and sustainable infrastructure."

It's true that tower networks are complex and difficult to manage, with multiple generations of technology and a plethora of challenges that impact operations and lead to inefficient performance and waste, such as suboptimal use of power sources and incorrect configurations.

An answer to this problem is PowerX, a data intelligence platform that uses artificial intelligence (AI) to optimise power management for tower sites, providing automated tools for

Photo: PowerX

Andrew Schafer, PowerX: "The days of manual operations with poor network transparency and an inability to scale must end."

operational teams to quickly identify and resolve issues, leading to efficient operations, cost savings, and power use reduction.

Schafer explained, "PowerX is the first real-time AI platform that optimises complex tower infrastructure at scale by using data science models to identify inefficiencies and optimise power sources across diesel, solar and grid. This leads to over 10% more energy availability, 20-30% reduction in diesel consumption and significant increase in efficiencies for the tower management teams."

> **"Tower operators are typically collecting data today, but that data is not being efficiently used to determine anomalies or detect inefficiencies."**

The AI platform is cloud-based, delivered as a SaaS solution that sits across tower networks. It is designed exclusively for mobile towers and integrates with any IP-enabled hardware onsite to collect data. Machine learning algorithms, leveraging site-specific data patterns and trends, make the models even more effective over time and accelerate automation and efficiencies at scale.

Schafer said, "Information [to the NoC] travels across the mobile network using 4G or 3G connectivity or, where available, over fibre. If the tower site goes "dark," that would itself be a reason for a notification and automated resolutions begin."

So how specifically can PowerX help to lower greenhouse emissions from cell towers?

Schafer explained, "PowerX provides insights to optimise operations at every level of a site, measuring and autonomously adjusting thousands of parameters in real time. One example of lowering greenhouse emissions is in maximising the use of solar and battery power. The platform uses weather forecasts, available solar irradiance and battery performance to optimise solar yield, reduce diesel consumption, cut down emissions and increase overall efficiency."

He added, "Issues requiring manual intervention are also flagged to operations teams in real time, reducing mean time to detect and repair issues from months to weeks and days."

As for why is this the first AI platform to optimise tower infrastructure performance, he pointed out that Africa is experiencing a digital boom, with tower operators needing to rapidly expand and optimise their infrastructure in response to capacity needs, while also managing spiralling energy costs, ensuring resilient uptime and reducing emissions.

The PowerX approach was in part inspired because Justin Head, the founder, worked on the passive network side with global MNOs for many years and foresaw the need for data intelligence to transform mobile network infrastructure performance.

Schafer said, "Tower operators are typically collecting data today, but that data is not being efficiently used to determine anomalies or detect inefficiencies. Only with a scalable AI platform can vast data sets be analysed in real time to detect inefficiencies that would otherwise remain hidden in large complex data sets. PowerX brings a range of applications of data science models that are uniquely tailored for mobile tower data and enable lean expert management teams to drive incremental efficiencies and savings."

He believes that, as he put it, "the days of manual operations with poor network transparency and an inability to scale must end. It is critical to digitise operations with integrated software platform capabilities like PowerX to drive efficiency and optimise asset performance, sustainability and resilience."

As is happening in Angola. In fact the partnership announcement with Megmar International in Angola in October 2022 was the first such in Africa for the company. "Across Africa, we see huge opportunity for growth in mobile subscribers, requiring fast, reliable data services across the continent and our customers: tower companies, MNOs, and energy services companies (ESCOs), are focused on expanding the tower infrastructure to support this demand.

"PowerX now works with industry-leading customers across Africa including Kenya, South Africa, Nigeria, Uganda, Angola and many more." ✆

Taking the stress out of antenna selection

Do you know how to select an antenna system for a wireless telemetry application? In case you don't, we asked Ian McNeilage of wireless telemetry specialist Omniflex, who has not only supplied a guide to wireless antenna selection but discussed some of the guide's points in an exclusive interview with Communications Africa.

WIRELESS TELEMETRY IS a broad term, but it tends to refer to automatic measurement and wireless transmission of data from remote sources.

In most cases this means there are sensors attached to something being measured – for voltage, temperature or pressure, say. The data is wirelessly sent from the measuring device to a place where it can be monitored and analysed.

As you might guess, this approach has real-time applications – making sure everything is working – but is also useful for data gathering that can have longer-term planning uses: in the agriculture or healthcare sectors, say.

A number of companies work in the wireless telemetry equipment space. One such is Omniflex, which serves, among other markets, South Africa, Zimbabwe and North Africa.

Omniflex recently produced a guide to effective antenna selection. Why? Well, as the company points out, a wireless telemetry application is only as good as the antenna system that serves it. Whether it's a radiological system in a nuclear plant, an industrial alarm, or even a utility gas or water meter, it's important that the signals are reliably transmitted and received. Here then is the Omniflex five-step plan for effective antenna selection, followed by a brief interview with engineering manager Ian McNeilage in which we look at use cases and markets.

The first step to take when choosing an antenna is to consider the radio application itself. The reason why you will have chosen to transmit your signals wirelessly is because it's not feasible to lay cable over a long distance, or there isn't already existing cabling on site. It's also important, then, to consider where you need to get your signal from and to. For example, is it a single point-to-point network, a multiple point, or peer-to-peer network?

Next, carry out the site survey. The time-tested visual survey is still one of the best methods to do this. It's called a line-of-sight survey, and it means just that. You physically stand at point A and look towards point B with the naked eye, visually checking for obstructions and buildings. Also consider any future obstructions or weather interference issues at this stage.

The third step is to determine the distance between the two points. If it's a very short distance, you could judge this by eye, but the important thing to remember is that radio transmission distance is finite, based on factors such as the power of the transmitter, the sensitivity of the receiver, the type of antenna you're using and the weather conditions. These factors will determine whether you get a good signal or not.

Photo: Omniflex

The Teleterm M3R range of programmable remote terminal units can report back the strength of the received signal.

The fourth step is to run a test for signal strength. Set up a test rig by placing the actual monitoring equipment you intend to use in this project at point A and point B and run a simulation to allow the two pieces of kit to communicate with each other. Alternatively, you can use a general-purpose radio test set up. If you work with a supplier like Omniflex, the company can use equipment like its Teleterm M3R range of programmable remote terminal units. These can report back the strength of the received signal, allowing Omniflex to compare against what it knows to be a strong, reliable signal.

Now that you've established the lay of the land, the next step is to consider the antenna hardware. The two major types of antennas are omnidirectional and directional. Omnidirectional antennas are useful if you have a multipoint setup, for example a water or gas telemetry application, where you need to receive signals at one central receiver from many transmitters. The other type is a directional antenna, which is ideal for single transmission devices, such as an outlying telemetry device sending its signal back to a central mast.

It's important to note that in most countries around the world, to prevent interference between different users, the radio spectrum is regulated using licensed and unlicensed frequency bands. However, regardless of which you're using, the gain of your antenna cannot result in your exceeding the effective radiated power (ERP) allowed on that frequency band. On the 868MHz frequency in the UK for example, the maximum ERP for short-range devices and wideband devices is limited to 25 dBm with a duty cycle of 10%.

In other parts of the world, however, this can differ. For example, South Africa falls into the same EMEA zone and largely follows the same radio standards, although short-range devices in the country must register type-approval for radio devices with the Independent Communications Authority of South Africa (ICASA). At the same time, Australia, New Zealand and Asia are considered a separate region and have their own standards.

Antenna selection may at first seem like a daunting prospect, but by following these simple steps, you can ensure your wireless telemetry application has a reliable and strong signal. ✆

Use cases and markets

Ian McNeilage of Omniflex discusses the whys and wheres of wireless telemetry.

Communications Africa: Could you define some use cases that involve wireless telemetry and how they would differ in antenna requirement terms from, say FWA, 3G or backhaul networks? You refer to asset managers among typical users. Can you expand on this?
Ian McNeilage, engineering manager at wireless telemetry specialist Omniflex: Radio Telemetry uses the same antennae as GSM. Antennae are chosen based on the frequency range the radio telemetry equipment is going to use. Asset managers can be anyone who has an asset remote from the control room that needs to be communicated with. An asset can be a pump, motor, electrical panel, instrumentation etc etc.

Communications Africa: What distances would wireless telemetry involve?
Ian McNeilage, Omniflex: Typically line of sight 10 to 15km using 868 to 920MHz and probably 1 km for a 2.5GHz band.

Communications Africa: You mention a site survey checking for obstructions and buildings. Will such obstructions typically have to be avoided or worked around when using wireless telemetry antennas?
Ian McNeilage, Omniflex: Yes. Buildings attenuate the radio signal. Even wet trees have been known to affect radio propagation

Communications Africa: Would the test for signal strength as you described it be applicable in most cases, or would it differ depending on size of network, distance, information carried etc?
Ian McNeilage, Omniflex: Yes. During commissioning the antennae will be set up in a position to optimize the radio transmission – ie often on a pole and never on the inside of a metal housing. Since the radio telemetry units can give signal strength as a parameter they are used to best position the antenna.

Communications Africa: How can Omniflex support a user wishing to test antennas to find one that is appropriate for their needs?
Ian McNeilage, Omniflex: Omniflex chooses antennas that fit the majority of cases, and in many cases Omniflex provides on-site commissioning assistance.

Communications Africa: Is this a growing market? I'm thinking of IoT and M2M.
Ian McNeilage, Omniflex:K Yes. IoT and M2M are using the cellular network providers and you require a SIM card to use their service. You are able to use their network to send and receive your data but you pay for it. Radio telemetry users have to provide their own network and thus have no ongoing costs but you own and have to maintain your radio infrastructure. Each approach has its place and its pros and cons.

Omnidirectional antennas are useful if you have a multipoint setup, for example a water or gas telemetry application


Photo: Omniflex

Ian McNeilage: "Omniflex chooses antennas that fit the majority of cases"

Buildings attenuate the radio signal. Even wet trees have been known to affect radio propagation

Communications Africa: You have markets in South Africa and North Africa. What are the main wireless telemetry needs there?
Ian McNeilage, Omniflex: The main needs are hard-to-reach areas on a plant where there are no communication cables – for example, remote pumps, motors control and monitoring of remote analytical instruments on, say, effluent or water. ✆

Cheaper, faster and convenient

Kenyans are depending more than ever on social media and blogs for news and entertainment. Mwangi Mumero discusses recent reports and surveys that document the changing media consumption habits of the Kenyan population.

RARELY DOES KENYAN data scientist Nick Mwangi watch news on television or even buy and read newspapers sold on city streets. Every nugget of information Mr Mwangi consumes comes through numerous social media outlets as well as news websites.

"It is cheaper, faster and convenient to obtain news from social media. One can also select required content as compared to TV and newspapers, which serve different interests," observed Mr Mwangi, a 27-year-old data science graduate who recently launched his own company.

According to the 2021 State of the Media survey conducted by the Media Council of Kenya (MCK), fewer Kenyans are watching television, and many are depending more on social media and blogs for news and entertainment information.

The report, released in 2022, indicates that approximately 17 million Kenyans (58% of the population) watched television in 2021, a 16% drop from the 74% viewership in 2020.

In 2021, however, Kenyans spent more screentime on their social media platforms than in 2020. Respondents spent approximately three hours per day tweeting, posting, liking, commenting, and sharing on social media. That is longer than the global average of two hours and 24 minutes.

"Social media or digital media is gaining every other minute. Mainstream media has also introduced paywalls. This has reduced free news content – pushing more Kenyans to social media," noted Leo Mutisya, the lead researcher of the MCK survey.

This increase in digital media consumption has been boosted by the growing access to smartphones. One out of every two Kenyans now owns a smartphone, according to the Communications Authority of Kenya (CA). This has led to an accelerated adoption of digital products and services.

The media industry is experiencing a revolution as digital platforms transform viewers' video consumption behaviour

According to CA, by 30 September 2021, active mobile subscriptions stood at 64.9 million. By the same date, the number of mobile phone devices accessing mobile networks stood at 59 million, of which 33 million were featurephones and 26 million were smartphones. The penetration levels of featurephones and smartphones stood at 67.9% and 53.4%respectively.

According to the MCK survey, more Kenyans are moving to free news sites for fast consumption of information, in particular local news and gossip.

"Sites such as tuko.co.ke – a Kenyan free news site – have become favourite for young people. Most of such sites were started by bloggers, some of them former journalists," observed Mutisya.

The survey also found that 25 % of Kenyans now access newspapers online. "It means that Kenyans are impressed by the idea of consuming a lot of online content as opposed to buying the hard copy newspaper," observed Mutisya, adding that a substantial number of Kenyans still purchased newspapers.

The study noted that the market for online newspaper subscriptions is bound to grow in the coming years as Kenyans go online for news.

Photo: Adobe Stock

Airtel phone shop. One out of every two Kenyans now owns a smartphone.

However, even with the phenomenal growth of social media in consumption of local news, radio still remained king in 2021, with 74% of Kenyans getting news through this medium. In fact about 21.4 million people consume radio content daily, with Kenyans spending at least two hours listening to radio.

Both the urban and rural populace consume radio content, but FM radio stations broadcasting in vernacular languages and tackling topical issues affecting people are especially popular with rural folks.

In urban areas, daily commuters are known to enjoy morning shows mainly on politics, relationships and money on FM stations airing their content in English and Kiswahili languages.

"Of the respondents, 96% turn to their radios for entertainment, with news coming second at 93%. Other Kenyans prefer music, lifestyle and other 'soft topics'," the MCK report noted.

Another finding of the expansive MCK report is that 70% of Kenyans prefer locally created content. Local TV and radio programmes have increasing pushed out foreign films, comedy and entertainment from the screens and airwaves.

Analysts believe that the consumer preference for locally created TV and online content may offer opportunities for companies and individuals to develop local talent, films, short stories and comedy.

Another surprising discovery was that a section of Kenyans relies on family, friends, relatives, social media icons and bloggers as their primary source of news and information.

According to Joshua Obuya, a research consultant, there is a need to create awareness of accessing media. "Kenyan should know the bias that comes with getting information from others. They should interrogate news sources," he said.

According to another study by GfK, a market research firm, 97% of Kenyan adults with internet access are using some form of online video service, with nearly two-thirds paying to view digital content.

The study surveyed 1,250 people representative of Kenyan adults with

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A quantum leap in service delivery

The Wireless Access Providers Association (WAPA) recently called for South Africa's government to free up vast tracts of radio frequency spectrum in the 6GHz band, claiming that doing so could drive a wave of economic growth. But this isn't a plea for spectrum for cellular. This is about Wi-Fi, as Paul Colmer of the WAPA executive management committee, explained.

Photo: The Wireless Access Providers Association (WAPA)

Colmer: "WAPA is tirelessly lobbying for more progressive and efficient spectrum management"

Photo: Adobe Stock

Wi-Fi6 and 6E could compete with LTE and 5G.

THE WIRELESS ACCESS Providers Association (WAPA), established in 2006, is a South African non-profit trade association acting as a collective voice for the wireless industry. WAPA's primary objective is to promote the wireless industry's growth by facilitating self-regulation, promoting best practices, and educating members and the market about new wireless technologies and business models. In addition, WAPA offers its members regulatory advice, technical training, a code of conduct, a forum for knowledge sharing and business-enablement opportunities.

Paul Colmer of the WAPA executive management committee added: "WAPA currently has around 250 members, of which 200 are ICASA [South African regulator]-licensed ISPs, so this forms the industry side of WAPA's core business. From a consumer prospective we offer a 'Find a provider' service via our website where you can request internet services and the request is distributed to our members who can then assist with their offerings. We also deal with any complaint or dispute from consumers against a WAPA member ISP's service and strive for resolution in this regard."

WAPA is also positioned to be an interface between ICASA, network operators, service providers, and consumers. WAPA regularly makes submissions and presentations to the South African government on wireless industry regulations.

Wi-Fi has become the dominant last hop connectivity for access to the internet in South Africa and globally

In particular, said Colmer, "WAPA is tirelessly lobbying for more progressive and efficient spectrum management in South Africa and is focusing on the possibilities of spectrum for interference-free access."

A recent focus has been on spectrum for Wi-Fi. So what role does Wi-Fi in particular play in South Africa today?

Colmer said, "Wi-Fi has become the dominant last-hop connectivity for access to the internet in South Africa and globally. Although its application varies between industry and consumer it remains dominant in both. The increase in personal devices, industrial, IOT, smart appliances, security and CCTV has pushed the demand and given it a key role in how we connect. Nearly all fixed line broadband connectivity, whether fibre, satellite, fixed wireless, DSL or LTE, will ultimately end up linking via a Wi-Fi link to the target devices.

And it's evolving. In recent years it's gone from the IEEE 802.11b/g/n standards to the new 802.11ac/ax/be, now renamed as Wi-Fi 5, 6 and 7 respectively. "It represents a quantum leap in service delivery driven much by advancement in chipset technology and will continue to do so."

He explained, "Wi-Fi6 is simply just an advancement of Wi-Fi5 with regard to speed and its ability to deal better with multiple users, Wi-Fi6E, however, is an enhancement of Wi-Fi6 in regards to spectrum in the 5.925MHz to 7.125MHz band and has been split into upper and lower bands: 5.925-6.425MHz and 6.425-7.125MHz."

Global adoption of these bands has been mainly in the lower band but the US, Canada, Brazil, Saudi Arabia and South Korea have all adopted the full band. The final global outcome for the 6E upper band will probably be decided at the ITU World Radiocommunication Conference 2023 (WRC-23) in Dubai in December.

Colmer said, "I question the fact that if upper band 6E is declared IMT spectrum at WRC23 that 5G will battle to co-exist with incumbent users already within the band and therefore believe that it should be opened for unlicensed Wi-Fi and not IMT. The advantages are clear of 6/6E over Wi-Fi 5 as it is not just an advancement but a whole new swathe of spectrum too."

This of course leads us to Wi-Fi 7 which is not only a step up from 6E but has the ability to aggregate all Wi-Fi bands – 2.4, 5.8 and 6GHz – together coupled with massive MIMO to deliver phenomenal speeds and 320MHz channels. "10Gbps download speeds have already been achieved and we envisage that peak speeds in the future could be over 30Gbps as the technology advances."

The countries that release the 6E band in standard power for fixed wireless broadband could certainly compete with LTE and 5G but most are still only using it in low power for local Wi-Fi as the technology and regulatory landscape evolves. "It is of course already complementing all other technologies such as fibre and fixed wireless, as all devices that connect to these mediums are using Wi-Fi and requiring greater speeds and more connected devices – to which Wi-Fi 6 and 7 are ideally suited."

The advantages are clear of 6/6E over Wi-Fi 5 as it is not just an advancement but a whole new swathe of spectrum too

As for how Wi-Fi 6E could benefit South Africa if the regulatory environment supported it, Colmer's appearance in a podcast on the subject went into some depth on the topic, but the short version is that for South Africa, the cumulative economic value between 2021 and 2030 associated with enabling license-exempt access to the 1200MHz in the 6GHz band amounts to up to US$34.81bn in GDP contribution, US$13.32bn in producer surplus to South African enterprises, and US$9.63bn in consumer surplus to the South African population. Colmer summed up, "The total contribution amounts to up to US$57.76bn to the South African economy over the next ten years."

He also quoted Martha Suarez, president of the Dynamic Spectrum Alliance (DSA) an organisation promoting unlicensed access to the 6 GHz band: "License-exempt use of the entire 6 GHz band for Wi-Fi will be critical to address current pressing bandwidth demands for end users, new applications and industries. It will also play a crucial role in bridging the digital divide in these countries, enabling improved access to remote education, work and commerce. Wi-Fi needs greater spectrum access in the 6 GHz band to effectively support the modern digital ecosystem."

So is he optimistic that ICASA is moving in the right direction?

He said, "With regard to ICASA they have already drafted an amendment to the radio frequency spectrum regulations in regard to opening the lower 6GHz band. WAPA will be responding with a submission to them and will support all work in the future with regard to opening the bands further for the benefit of all."

The podcast WAPA's Paul Colmer on why Icasa should open up 6GHz for Wi-Fi can be found on the techcentral.co.za website. The Draft Amendment Radio Frequency Spectrum Regulations, 2022 can be found on the icasa.org.za website. ✆

For more information on WAPA, go to wapa.org.za

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internet access and showed that 98% of online adults watched linear broadcast televisions, with one in four downloading pirated content from the internet. At least 94% watched some digital video on YouTube.

Kenyans surveyed spend around six hours and 37 minutes a day consuming some form of video content, with more than half that time (52%) spent watching free video.

"The media industry is experiencing a revolution as digital platforms transform viewers' video consumption behaviour. This study helps to quantify how linear and online forms of content distribution fit together in the dynamic world of video consumption," observed Benjamin Ballensiefen, managing director for sub-Saharan Africa at GfK.

Meanwhile, another study by Statista shows that nearly all internet users aged 16-64 years in Kenya consumed online video content in the third quarter of 2021. Comedy, memes, or viral videos had the highest audience, followed by music videos. Roughly 60% of Kenyan internet users watched each of the categories. A little over 40% consumed tutorial or how-to videos, while 38% watched educational videos.

Mainstream media has also introduced paywalls. This has reduced free news content – pushing more Kenyans to social media

Are Kenyans abandoning mainstream media?

Photo: Adobe Stock

With declining revenues in the media business, online subscriptions for media outlets have become a silver lining. "Media organisations have made losses due to reduced advertisement revenues. They are pinning their hopes on the growth of digital subscriptions, even though paying for news online is not popular with consumers," observed Ms Catherine Gicheru, a veteran Kenyan journalist and director of the Africa Women Journalism Project.

And things could get worse. According to Ms Gicheru, a digital tax introduced in January 2021, which is charged on subscription-based media, including news, magazines, and journals, may further dampen the expected growth. ✆

The role of satellites in Africa's digital transformation

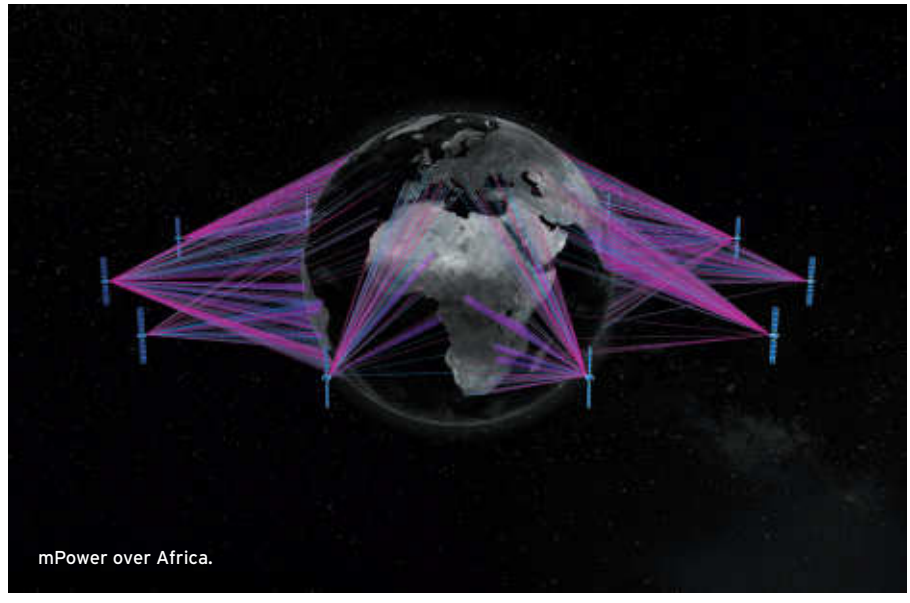
Satellite operator SES recently launched the first two satellites in a new medium earth orbit (MEO) satellite constellation. O3b mPOWER promises to meet the connectivity needs of a wide range of customers and in particular the growing demand for connectivity in Africa, as Caroline Kamaitha, vice-president, fixed data Africa, SES, explained.

ON 16 DECEMBER, satellite operator SES announced that the first two O3b mPOWER satellites had been successfully launched into space by a SpaceX Falcon 9 rocket from Cape Canaveral Space Force Station in Florida in the United States.

Built by Boeing and designed to deliver unprecedented performance with its first-of-its-kind software-driven payload, O3b mPOWER is SES's second-generation medium earth orbit (MEO) system. Customers leveraging O3b mPOWER are, SES says, set to transform their operations.

The O3b mPOWER ecosystem enables SES to address current and future connectivity needs for governments, mobile network operators, energy companies, world-class cruises, and enterprises across the globe. This is underlined by the diversity of the customers who have already signed up for O3b mPOWER. They include Microsoft, Princess Cruises, Marlink, Jio Platforms, Orange, Claro Brasil and Vodafone Cook Islands.

We asked Caroline Kamaitha, vice-president, fixed data Africa, SES, to tell us more about the new satellites, and how they can benefit SES customers globally in general and its African customers in particular.



mPower over Africa.

Photo: SES

Connectivity over MEO offers unrivalled high throughput, unmatched flexibility, constant low-latency and uncontended capacity

Communications Africa: Why MEO (as opposed to LEO or GEO?)

Caroline Kamaitha, vice-president, fixed data Africa, SES: While satellites in various orbits can provide connectivity, SES's constellation operating in medium earth orbit (MEO) has an edge over LEO constellations.

SES's O3b MEO constellation has been operational since 2013 and for the last ten years we have been seeing its positive impact on our customers and how it is shaping their lives for the better. Because of that, we decided to make the constellation more powerful and more flexible, and that is how we envisioned our second-generation MEO constellation O3b mPOWER that just launched in December.

The O3b mPOWER communication system is based on the proven technology of O3b MEO that has positively shaped communities and business all around the world for over ten years now. Connectivity over MEO offers unrivalled high throughput, unmatched flexibility, constant low-latency and uncontended capacity that no other non-MEO constellation can offer. With these characteristics our customers can support a multitude of segments including government, fixed data, energy, cloud and mobility.

The O3b mPOWER system is designed to deliver unprecedented performance with first-of-its-kind software-driven payload. O3b mPOWER is SES's second-generation medium earth orbit (MEO) system. It is easily scalable and comprises an initial 11 powerful satellites, each equipped with more than 5,000 digitally formed beams, and an extensive next-generation O3b mPOWER ground infrastructure. It enables SES to address current and future connectivity needs for governments, mobile network operators, energy companies, world-class cruises, and enterprises across the globe.

Customers leveraging O3b mPOWER are set to transform their operations and benefit from terabit-level scale; the highest, most flexible, guaranteed throughput; roundtrip latency of less than 150 milliseconds; and unmatched service availability. It will also enable them to tailor their network to match their connectivity needs to dedicated cloud connectivity or adaptive traffic management, all designed to elevate the customer experience, improve users' satisfaction, and reduce operational risk and complexity.

These, coupled with global redundancy provided by SES's world-leading GEO and land-based infrastructure, mean we can satisfy the growing demands of our customers no matter where their geographical location is or their industry.

Communications Africa: How can O3b mPOWER support MNOs with rural and remote coverage?

Caroline Kamaitha, SES: We've been present on the African market for over 30 years now and we have worked with many customers, including MNOs and telcos, to help shape their business and elevate it through connectivity. To name a few, in the Central African Republic, a service from O3b has enabled Orange to roll out 3G and 4G cellular services in ten cities. Orange was also able to provide better quality broadband services to businesses, boosting secured mobile data and payment services across the country.

In the last couple of years, our partnership with Orange led to the deployment of SES's first

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The Internet of Things goes into orbit

A new service aims to allow business and governments to connect their Internet of Things (IoT) devices anywhere in the world using low earth orbit (LEO) satellites. Alastair Williamson, CEO, Wyld Networks, discussed the technology, the business model, and the potential benefits to Africa of this way of enabling IoT applications to be deployed across remote locations.

Photo: Wyld Networks

Alastair Williamson: "Only 15% of the earth's surface has cellular coverage"

ON 9 DECEMBER 2022 a new satellite Internet of Things (IoT) service launched, enabling IoT applications to be deployed across remote locations without the need for terrestrial connectivity. The company behind this launch, described as "game-changing", is Wyld Networks, which develops and sells innovative wireless technology solutions that enable affordable connectivity anywhere in the world.

As Wyld points out, only 15% of the world's surface has access to the internet. According to consulting company McKinsey, it is this lack of global connectivity that is holding back the growth of the IoT from adding US$2-3tn to the global GDP over the next ten years.

Wyld Connect is the name of the new service that will help to solve this problem by allowing business and governments to connect their IoT devices anywhere in the world using low earth orbit (LEO) satellites.

This means that utility and energy companies can monitor systems and equipment without costly site visits, data can be collected for vital agriculture and environmental management, and goods and assets can be tracked on sea or land across global supply chains.

Low earth orbiting satellite constellations have been launched by Wyld Networks' satellite partners, with further satellite launches throughout 2023, enabling Wyld to satisfy more use cases with its customers. Data from anywhere is becoming a reality – from condition monitoring on remote pipelines to forestry management, soil monitoring for agriculture and container tracking across oceans.

Furthermore, developments in big data analytics are driving the need for more data from sensors on the ground. Big data platforms are hungry for the type of information Wyld's satellite IoT can deliver.

With the launch of its satellite IoT network Wyld says it can address part of satellite IoT market demand, which, according to a forecast by Rethink IoT (RIoT), will be worth US$5.9bn by 2025.

We asked Alastair Williamson, CEO, Wyld Networks to tell us more about the service and in particular how it could benefit Africa.

Communications Africa: What remote connectivity applications are you looking at in general? And what do you think might be the opportunities in Africa?
Alastair Williamson, CEO, Wyld Networks: The key verticals that will most benefit from satellite-connected IoT are agriculture, energy, utilities, logistics and environmental monitoring. In Africa, many consider agriculture and energy, with their distributed activity and infrastructure, are poised to benefit from the digitisation of their remotely located assets and infrastructure. With a considerable percentage of farms in Africa being less than two hectares, there is an opportunity to democratise data [from sources] such as weather stations, soil moisture and nitrogen by sharing information across localities.

> **The key verticals that will most benefit from satellite-connected IoT are agriculture, energy, utilities, logistics and environmental monitoring**

Communications Africa: What sort of business model/models would be involved? How do you adjust your offering to the needs of different partners who may have many different requirements (environmental, power, asset tracking, say)?
Alastair Williamson, CEO, Wyld Networks: The fundamentals are the same: low-cost modules and data and 100% global coverage. End users are interested in the data. They want to access the information they need to model their business, to make decisions based on real information from the ground.

What satellite IoT enables is a cost-effective massive increase in data points. In the case of agriculture, for example, much of the global activity is carried out outside of cellular range where currently there is a very low level of digitisation. Whatever is being monitored, data will pass via a satellite to earth, through our software platform and on to the customer's chosen analytics package.

Communications Africa: For an end user, what sort of infrastructure (sensors, VSATs etc) could be involved?
Alastair Williamson, CEO, Wyld Networks: The new satellite IoT networks utilise low earth orbiting (LEO) satellites. These satellites are relatively inexpensive to launch because they can be as small as a shoebox. Connecting data to LEO satellites requires sensor manufacturers to embed small modules (15mm x 15mm) into their sensors. These modules send the data to the LEO satellites. Very low-cost modules, low power requirements and a low data transfer cost make this solution an obvious choice – and in many cases the only choice compared to older satellite connectivity options.

Communications Africa: And what sort of savings? I assume site visits and reactive responses to problems are much less cost-effective than preventive maintenance and remote monitoring by satellite IoT.
Alastair Williamson, CEO, Wyld Networks: Yes. This is a key benefit to agriculture and industry. Reducing truck rolls reduces cost and carbon footprint and is a key driver for installing satellite-connected Internet of Things. Additionally, the mass digitisation of those parts of the world currently underserviced will bring new insights enabling improvements to efficiency, predictive maintenance and optimisation of technology. Satellite IoT delivers the ability to reduce carbon footprint and improve sustainability.

Communications Africa: I notice this is a LEO-based approach. Why is this? I tend to assume some IoT applications are not latency-sensitive and can function with GEO. Or are there other reasons for using LEO satellites?
Alastair Williamson, CEO, Wyld Networks: LEO satellites are cheaper to launch than MEO or GEO satellites. They can also work with low power transmission, which is essential for applications in difficult-to-reach locations. In many cases data will be required infrequently and in small packages. For example, temperature, humidity or water level data may only be needed once or a few times per day, so constant access is not necessary. Even a small constellation of LEO satellites can easily provide this global connectivity.

Communications Africa: Finally, I assume this is a big opportunity for Wyld. Is this because, essentially, satcoms can still reach places cellular cannot and, thanks to today's advanced but more affordable satellite technology, can do it much more cost-effectively?
Alastair Williamson, CEO, Wyld Networks: That is correct. Only 15% of the earth's surface has cellular coverage. The aim with satellite IoT is to digitise activities in the other 85%, much of which has to rely on very expensive fixed satellite connections that usually require high power and high-cost equipment. LEO satellites can be reached with very small low-cost kit that runs on very low power such as 2 x AA batteries that will last years – or small solar cells that can last indefinitely. It is this cost angle that is enabling the digitisation of 100% of the planet. ✆

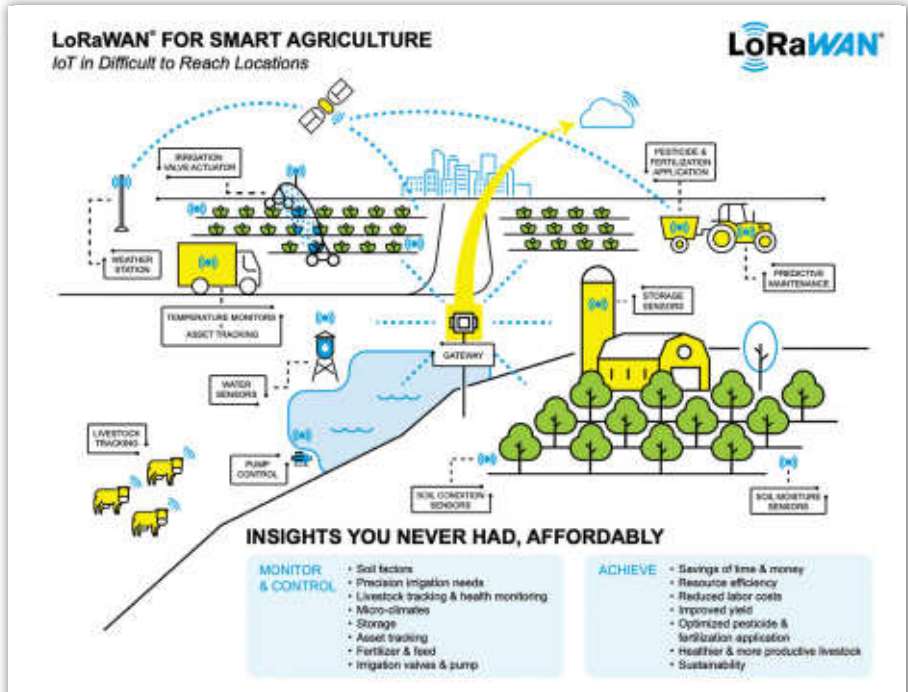

Photo: LoRa-Alliance

How IoT can boost agriculture.

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O3b mPOWER gateway in Africa. It will be used by Orange and Sonatel in Senegal to deliver high-performance, low-latency, and cloud-optimised connectivity services throughout Africa. One of the unique features of O3b mPOWER is the ability to enable our customers to land hundreds of beams wherever they choose. This means that our MNO customers who are keen to have their own O3b mPOWER gateways can choose its location depending on their operations and connectivity usage – something which is highly valued by our customers in this region.

Communications Africa: Orange and iSAT will use O3b mPOWER to support the growing demand for connectivity in Africa. What sort of opportunities could Africa – and the developing world in general – offer?
Caroline Kamaitha, SES: Once the O3b mPOWER system is operational, we will be able to offer our customers all around the world the carrier-grade unwaveringly low-latency services that are ideal for bandwidth-intensive applications as well as the cloud. This will help with the digital transformation that businesses and governments are trying to adopt nowadays throughout Africa, allowing users to connect


Photo: SES

Caroline Kamaitha: "We decided to make the constellation more powerful and more flexible"

and to have great performance for the applications they need to capitalise on the productivity, scalability and operational agility that low-latency and cloud computing enable, regardless of geographical barriers. With its ability to power a wide range of telecommunications needs, including cellular backhaul and cloud connectivity, O3b mPOWER, together with other terrestrial infrastructure, will allow the connection of remote and underserved regions in the most economically viable way.

SES's O3b mPOWER will allow African customers to better manage their networks as they can choose to build their own O3b mPOWER gateway and choose where they want the beam to land.

Communications Africa: Why do connectivity gaps still exist in the 21st century and why is modern satellite technology like yours well suited to bridge such gaps?
Caroline Kamaitha, SES: Connectivity gaps exist even in the most developed countries where it is not cost-effective to deploy terrestrial networks and where satellite continues to play a key role in ensuring and delivering global coverage. O3b mPOWER is even more suited to bridge gaps because its satellites are digital and have beam-steering capabilities which can adapt to the market's evolving needs.

Another unmatched characteristic of O3b mPOWER is its small and easy-to-transport antenna systems, which help to reduce any excessive transportation costs. On top of this, customers are also able to self-install and activate the O3b mPOWER antenna systems without any assistance from SES technicians – and to do so in a matter of hours. ✆

Enhancing MTN Nigeria's digital presence

Digital business support systems company Tecnotree recently announced its partnership with MTN Nigeria on a new initiative: Metamorphose. CEO Padma Ravichander explained how this will improve the MTN Nigeria customer experience to Ron Murphy.

MTN METAMORPHOSE IS described as a transformation programme that will enhance MTN Nigeria's digital presence for consumers and enterprises powered by business support systems (BSS) expert Tecnotree's digital suite.

As Tecnotree's original announcement put it, "The programme's objective is to adapt to customer needs, improve customer experience, and become the enabler of digital life through tailored customer-centric offerings."

So, we asked Padma Ravichander, Tecnotree's CEO, why is now a good time for MTN Nigeria to introduce the Metamorphose initiative?

As she pointed out, the telecommunications industry today is characterised by its digital transformation to address the need to move to 5G monetisation, cloud infra enablement, and the need to innovate in a dynamic business environment. This demands communication service providers become more customer-centric in their core businesses. Improving the customer experience starts with not just technology transformation, she noted, but equally with organisational culture and business process and mindset transformation as well.

Photo: MTN Nigeria

Padma Ravichander: "Metamorphose will focus on total customer experience management"

This initiative will play a vital role in modernising MTN Nigeria's digital infrastructure

So, she explained, "MTN Nigeria, through its Metamorphose initiative – powered by Tecnotree – has commenced a customer-centric approach to help grow revenues and improve efficiency, productivity and quality of service. Metamorphose will focus on total customer experience management, and create new digital engagement and multi-experiences, thus laying the critical foundation to capture customer intimacy and customer delight."

This initiative, then, will play a vital role in modernising MTN Nigeria's digital infrastructure, enabling it to build stronger relationships with both enterprise and consumer subscribers by offering them rapid personalised and customisable experiences. Ravichander summed up, "This innovative programme will help MTN Nigeria take a strategic step towards bringing world-class technology solutions to create immersive customer experiences on Tecnotree's digital platform."

Of course, the Nigerian mobile telecom market is the biggest and one of the most competitive on the African continent. Therefore, in today's highly competitive market, achieving significant market performance is critical for organisations like MTN Nigeria. Customer engagement is required across telco, digital or hybrid channels and, said Ravichander, "Metamorphose will be able to offer an omnichannel experience across campaigns, service fulfilment, and payments. Intent-based analytics, powered by Tecnotree's Sensa platform for artificial intelligence and machine learning, will be used for end-to-end digital experiences, across various channels."

She added, "Customer engagement is now evolved from textual to graphic to live and interactive chatbots/videos. Metamorphose will explore different kinds of total experience engagements across different kinds of customers and enterprises, to create a social commerce platform integrated with a partner ecosystem on Tecnotree Moments."

The press announcement also mentioned the TM Forum. Why is it important that Metamorphose conforms to TM Forum Open API standards?

Ravichander explained, "It is important that Metamorphose conforms to TM Forum Open API standards as Tecnotree's adoption of opensource technologies – open API-based plug and play capabilities, and highly configurable and templatised design – are some of the factors that empower service providers to choose the best partners for specific services." Importantly too, "Conforming to TM Forum Open API standards reduces operational expenses, which makes it easy to quickly deploy innovative and personalised multi-experiences in response to market demand."

She added, "Service providers are further able to use the Tecnotree Digital Accelerator Platform (DAP) with low-code/no-code capability to their advantage, which further reduces their TCO. Tecnotree thus has been able to bring successful transformations in different areas of the CSP's ecosystems by replacing the buy vs build through blended partnerships. Customers get to purchase hand-picked solutions from the complete digital portfolio of Tecnotree and using the Tecnotree DevOps offering can further customise these solutions to meet their business goals."

But that's not all. The programme's objective is to proactively understand and respond to customer sentiments during customer engagement across multiple channels and

Continued on page 26

A major interconnection hub in the making

MainOne is one of the most exciting technology businesses to emerge from Africa in recent years. While it first emerged in Nigeria, it is enjoying growth in a number of markets, notably Ghana, as Abayomi Adebanjo, vice president, regional operations for West Africa, told Phil Desmond.

MAINONE IS A leading provider of innovative telecom services and network solutions for businesses in West Africa. In early 2022 digital infrastructure company Equinix completed a deal to acquire MainOne for an enterprise value of US$320mn, describing the company as one of the most exciting technology businesses to emerge from Africa, and its home base, Lagos, as rapidly becoming a key connectivity hub for the wider West Africa region.

Founded by Funke Opeke in 2010, MainOne has enabled connectivity for the business community of Nigeria and now has digital infrastructure assets, including a growing number of operational data centres, through its MDXi subsidiary.

Abayomi Adebanjo, vice-president, regional operations for West Africa, said: "MainOne provides premium connectivity and data centre services to businesses in Ghana and West Africa at large. We deliver reliable network services to major telecom operators, internet service providers, content providers, government agencies, small-to-large enterprises, and public and educational institutions. In other words, we operate a business-to-business (B2B)-focused clientele."

Turning, then, to Ghana, the company has a data centre subsidiary in this market. Is more expansion likely in this particular business area given data demand and pressure to localise data?

Adebanjo explained, "Our data centre subsidiary, MDXi, an Equinix company, builds and operates data centres across West Africa. The state-of-the-art Appolonia data centre in Ghana, which launched in 2021, was built to the highest standards required for today's digital infrastructure and we are expanding our facilities in Ghana and across the region with plans to continue to stimulate the local market, grow additional capacity both locally and within the region and enrich the digital ecosystem."

As well as market opportunities, there are some specific advantages to working in the Ghanaian market, where MainOne launched services in 2010 to deliver wholesale connectivity services. "The market had presented a need for digital transformation with its budding start-up economy, growing industrial and agricultural economy, and government's commitment to ICT development, as well as the ease of doing business in Ghana," said Adebanjo. He continued: "Doing business for over ten years in Ghana has been productive and we continue to enable its digital economy with infrastructural investments in the country."

Abayomi Adebanjo: "We will be expanding our digital footprint in Ghana"

Ghana is one of the fastest-growing economies in Africa and is among the digital leaders in sub-Saharan Africa

No market is without some challenges, however. Though the ease of doing business in Ghana remains a comparative and competitive advantage compared to other sub-Saharan countries, there is a continued need to build and sustain the network infrastructures needed for a disruptive digital economy.

Adebanjo pointed out, "Significant macro-economic headwinds due to rising inflation, currency fluctuation, devaluation and rising taxation continue to impact on infrastructure provisioning and deployment costs for digital services. Additionally, stronger governmental regulations that will stimulate local data domiciliation and strengthen local capacity are required. At MainOne, we address some of these challenges by investing in critical infrastructure to deliver advanced technologies that support the growth of local businesses."

Of course MainOne has a strong interest in submarine cable systems and regional and metro terrestrial fibre optic networks. Can these be extended further into the interior of countries like Ghana?

Adebanjo agreed that "pervasive broadband penetration is the key to much-needed digital freedom in our part of the world. As a business, while we are open to further invest in extending fibre beyond the urban regions, it is conditional on commercial considerations and the right incentive framework through government intervention." That said, the company has partnerships with multiple local internet service providers that have the extended reach to the hinterlands – and this further supports the delivery of internet services to the last mile.

Overall, however, the company's vision is to bridge the digital divide between West Africa and the rest of the world to ensure that its people enjoy the numerous transformational benefits that digitisation brings – and this certainly applies to Ghana. "Ghana is one of the fastest-growing economies in Africa and is among the digital leaders in sub-Saharan Africa. By investing in infrastructural development, we support the government's digitalisation agenda by ensuring our data remains local on our shores and local businesses have access to advanced technologies to scale and accelerate their growth."

As for MainOne's future plans for the Ghanaian market, he began his answer to that query with a single word. "Expansion! We will be expanding our digital footprint in Ghana by building more data centres, deepening our fibre footprint and delivering more products and services. As an Equinix company, our customers will enjoy more access to a network of over 249 data centres in 71 metros and 32 countries. Ghana will become one of the major interconnection hubs for landlocked countries in West Africa such as Burkina Faso, Mali and Niger."

In the more immediate future, MainOne is hosting the African Peering and Interconnection Forum (AfPIF) to take place in Accra, Ghana in 2023. AfPIF is an annual event organized by the African IXP Association (AFIX) in partnership with the Internet Society.


Photo: MainOne

The state-of-the-art Appolonia data centre in Ghana launched in 2021

Ghana will become one of the major interconnection hubs for landlocked countries in West Africa such as Burkina Faso, Mali and Niger

This forum will bring together all stakeholders of Africa's internet society from chief technology officers, peering coordinators, internet service providers (ISPs) and operators, telecommunications policy-makers and regulators, content providers, internet exchange point (IXP) operators, infrastructure providers, data centre managers, and national research and education networks (NRENs), as well as carriers and transit providers, to Ghana to address the key interconnection, peering, and traffic exchange challenges on the continent as well as the opportunities to grow Internet infrastructure and services in Africa.

Adebanjo agreed that it's undoubtedly an appropriate event for MainOne. "Hosting this event in Ghana aligns with our commitment to drive the digital transformation conversation in our continent and provide solutions that bridge the divide." ✆

Continued from page 24

improve the customer experience through tailored customer-centric offerings and services. With what Tecnotree calls a 360-degree view of the customer, says Ravichander, the service desk assistant will be able to quickly understand the customer's profile and engagement history and respond to their needs in an immersive and personalised manner. "This will enable dynamic and improved user experience with enhanced productivity of the workforce. Tecnotree has further augmented these experiences with artificial intelligence and machine learning capabilities to enrich customer experience in our 360-degree offering."

The company has also referred to converting ecosystem partners into instant revenue generators across health, education, gaming, and esports. Why are these areas particularly promising?

Ravichander explained, "Tecnotree's digital multi-experience platform – Moments – in collaboration with MTN Nigeria – is a gateway of digital services and lifestyle bundling products. The multi-experience partner ecosystem offering and social commerce engine touch customers with insights on channels of their interests, and create lifestyle bundles of content, applications, and connectivity through a pre-integrated digital partner ecosystem for high-demand and hyper-growth sectors such as education, entertainment, gaming, sports, health, and wellness."

She added, "The sectors across health, education, gaming, and esports are particularly promising for converting as ecosystem partners, as they have the potential for several monetisation opportunities and can create successful ecosystems to win market gains and provide value for all participants."

Conforming to TM Forum Open API standards reduces operational expenses, which makes it easy to quickly deploy innovative multi-experiences

It's not just about consumers, of course. The Metamorphose initiative aims to transform the enterprise business with an end-to-end, integrated lead management CPQ, (configure, price, quote) product catalogue-led customer life cycle management, and order fulfilment processes. A single view of the customer along the enterprise and consumer segments of the business will be maintained, ensuring the integrity of customer, product, price, catalogue and order. Ravichander summed up, "It will ensure a seamless experience for the enterprise customers."

And this BSS service will evolve within Nigeria. After all, recent years have seen strong growth in the Nigerian market with a forecast that it will continue to grow, within healthy parameters, until 2025. The rise of the urban population, along with the rising adoption of mobile phones with 3G, 4G, and 5G services across the country, and the increasing adoption of the Internet of Things (IoT) in the sector that connects with wired and wireless broadband are leading to expectations of further growth in Nigeria. Ravichander pointed out, "Developing customer engagement capability means that organisations can better understand the changing environments and customer expectations, and consequently use that information to further develop new products and experiences."

And it's not just about Nigeria, of course. "The Tecnotree Digital stack is already implemented and servicing across 18 telecom providers in Africa, and the Tecnotree Moments social commerce engine will also be rolled out across Africa." ✆

When sport meets smartphones

Telecoming and the MTN Group are taking a strong interest in the potential of sport allied with mobile phones. Cyrille Thivat, CEO at Telecoming, told Vaughan O'Grady why this combination is appropriate for the African market and how it can be monetised.

TELECOMING, AN INTERNATIONAL company specialising in sport and entertainment monetisation technologies, has reached a strategic agreement with MTN Group to monetise its sports offer in 21 countries.

Telecoming isn't new to Africa. As Cyrille Thivat, CEO at Telecoming, explained, the alliance with MTN Group is a natural evolution of what the company has been doing in Africa since 2015, "and we cannot be happier with it as it strengthens our structure on the continent".

He continued, "We are very well positioned to lead this alliance, with such an extraordinary partner like MNT Group, to success. On one hand, we have a solid track record in helping carriers offer amazing mobile services to their customers beyond data and voice. And, on the other hand, we have the expertise in helping top global sports firms monetise their official mobile experiences. We know what really cuts through the noise."

Why then is this offering appropriate for the African market? As he pointed out, "We have witnessed the extraordinary dynamism of the African continent in terms of mobile consumption. But," he added, "it has not reached its peak; according to GSMA data, the mobile industry's contribution to GDP in the region will exceed US$250bn by 2025."

Looking at the sports industry, then, he feels it is important to understand how people's way of enjoying sports content has changed because the digital era opens the door to interaction, e-sports, and multiscreen consumption. As he said: "Sports fans are an audience that consumes the product beyond the length of a match."

He continued, "We develop unique mobile experiences for this industry's supporters. They are created through the creative activation of content and state-of-the-art technological features that add value to the proposals we deliver, make them stand out, and highly engage users.

In technology terms, users will only require their mobile phones. "Basically, every MTN Group customer can access our services with a subscription they will pay through direct carrier billing (DCB). This means they will pay for the service through their mobile bill and/or pre-paid carrier cards."

As for how Telecoming technology innovates in the mobile monetisation space, "Most of our services include innovations such as AI, XR, augmented audio, data visualisation, live streaming, bots or NFTs."

But the key is sports content. As Thivat said, "Mobile sports fans are more than just spectators: they are loyal, emotional and highly interactive."

Not surprisingly then, "Sports fans are always on the hunt for new digital content that helps them get the best experience. Imagine if you support a specific sports discipline and/or team: you would always want to get the best intel about it."

As for the business model, Telecoming distributes digital services through mobile operators, turning fan communities into recurring paying audiences. "Our payment technology allows users to subscribe by charging the amount of the service to their mobile bill. It is perfect for subscription models and digital consumption because it's 100% mobile and frictionless."

Partnerships are also possible. "We are here to help any sports organisation monetise its audiences. So we are open to partnering with local clubs and leagues".

Of course continuing reliance on mobile technology in the developing world, and growing access to smartphones, is a long-term opportunity for a business like Telecoming.

"Nowadays, accessibility from any device and at any time is essential if we talk about creating quality and relevant content for users. Just bear in mind that in 2022, almost 8.3 billion mobile phones were connected worldwide, 2.9% more than the previous year. For a company like Telecoming, whose model is based around sports mobile experiences, that is key." ✆

Sports fans are an audience that consumes the product beyond the length of a match.

Cyrille Thivat, CEO at Telecoming: "We know what really cuts through the noise."

Photo: Telecoming

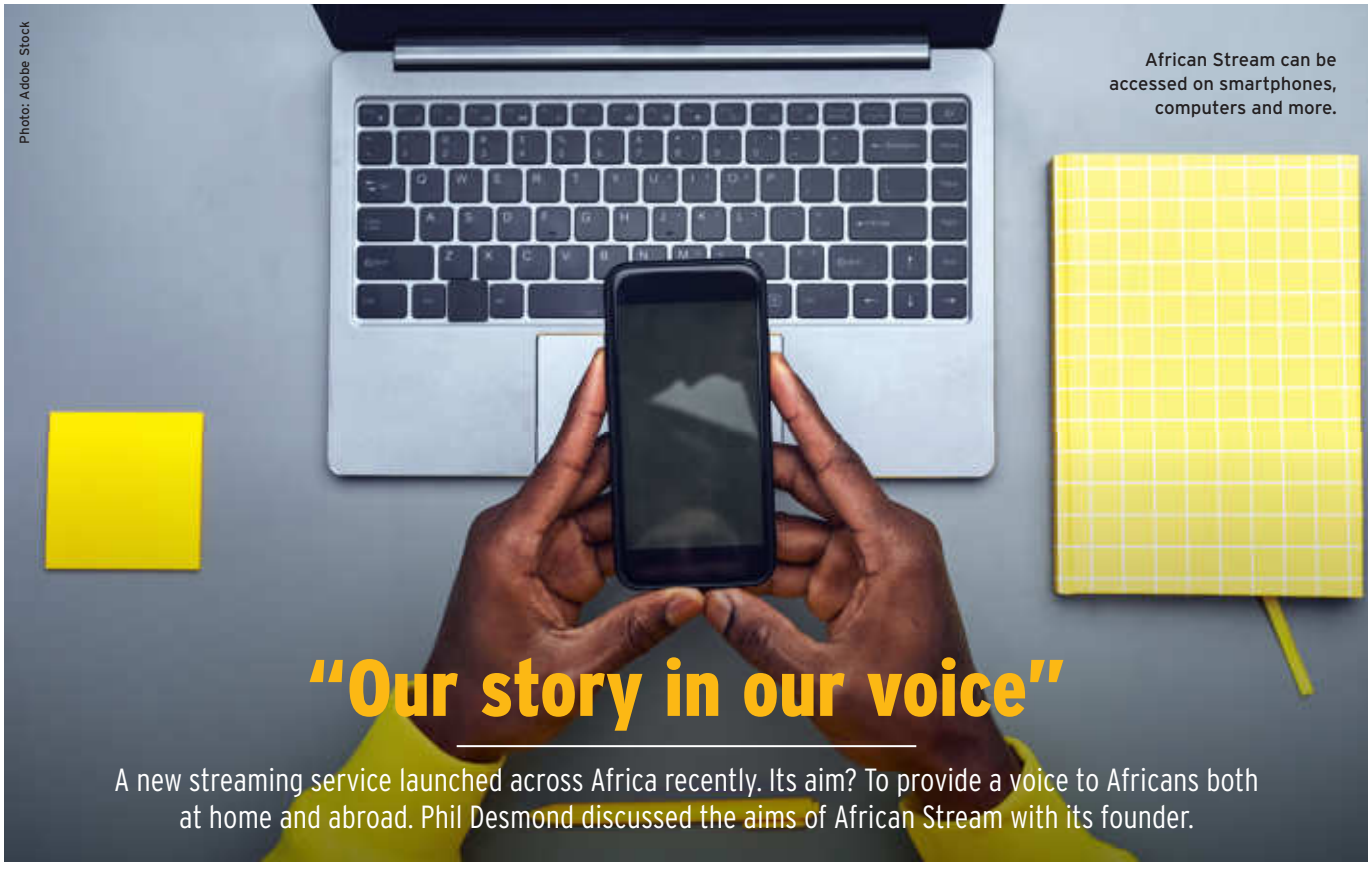


Photo: Adobe Stock

African Stream can be accessed on smartphones, computers and more.

"Our story in our voice"

A new streaming service launched across Africa recently. Its aim? To provide a voice to Africans both at home and abroad. Phil Desmond discussed the aims of African Stream with its founder.

SOCIAL MEDIA-BASED PLATFORM African Stream officially launched across Africa in January this year. Its stated aim is to challenge existing negative stereotypes and give a voice to Africans through cutting-edge, African-centred content.

African Stream says its mission is to reshape conversations and narratives about – as well as knowledge and appreciation of – Africa and its people.

Ahmed Kaballo, founder and CEO of African Stream, said during the launch event, "I've been in the media my entire career and I am excited to create an African news platform to define our story in our voice. This continent is the birthplace of civilisation and humankind. Africans are innovators, entrepreneurs, leaders, revolutionaries and cultural influencers, as well as a host of other amazing things. I want to build a platform that represents all of that with emphasis on Africa on the rise.".

African Stream is a pan-African digital media organisation based exclusively on social media platforms. Currently, it is present on Twitter, Facebook, Instagram, TikTok and YouTube. The organisation's main office is in Kenya, with partners, analysts and reporters across the African continent and in the diaspora.

Soon after the launch, Ahmed Kaballo spoke to Communications Africa about the technology driving the service and what he hopes it can achieve.

Firstly we asked what sort of devices will be able to access African Stream platforms. Kaballo said: "African Stream is based exclusively on social media platforms. Hence, the drivers of our content are any interactive electronic gadgets with access to good internet connectivity and social media platform log-in ability. The devices include smartphones, laptops, tablets, TVs etc. Our content is available on Facebook, YouTube, Twitter, TikTok and Instagram."

The drivers of our content are any interactive electronic gadgets with access to good internet connectivity and social media platform log-in ability

Connectivity is obviously an important part of the African Stream business model. GSMA figures in its publication The Mobile Economy Sub-Saharan Africa 2022 suggest that by the end of 2021, 515 million people subscribed to mobile services in sub-Saharan Africa, representing 46% of the population – an increase of almost 20 million on 2020.

There will be nearly 100 million new subscribers by 2025, taking the total number of subscribers to 613 million (50% of the region's population). By 2025 smartphones will be 61% of connections. It's no surprise then that, as Kabalo said, "It is most definitely perfect timing. This [smartphone growth] coupled with the rapid penetration of social media definitely makes for a great time to enter the market."

There's also the question of sourcing content. However, there's no shortage of willing contributors. Kaballo said, "We have stringers and freelancers throughout the continent and diaspora that support us in developing content on top of our professional team in Nairobi where we have our headquarters. One of the key things for us at African Stream is to share African stories by Africans. We have set a budget towards continuous training on professional content writing for optimum credibility. In addition, we have access to credible data sources."

Which, inevitably, brings us to revenue. Where will this come from? "Our primary business model will be advertising revenue ranging from sponsorships to ads. With earned loyalty from our audiences, we have wide reach, which is our capital."

One of the important selling points of African Stream is that it offers a new approach. So how will it differ in tone from Western content on Africa? And why is this necessary?

Ahmed Kaballo explained, "It is African-centred, meaning African-led, and content is created by Africans on the ground from their own point of view and insight and not from a Euro-centric lens. The lions will be telling the stories from their experiences and the hunter will also have a chance to give their understanding or opinion. The reader will have the freedom to choose from the two sides."

Or, as the announcement of the service's launch put it, "Until the lions learn how to write, every story will glorify the hunter." ✆

Improved access – with and without fibre

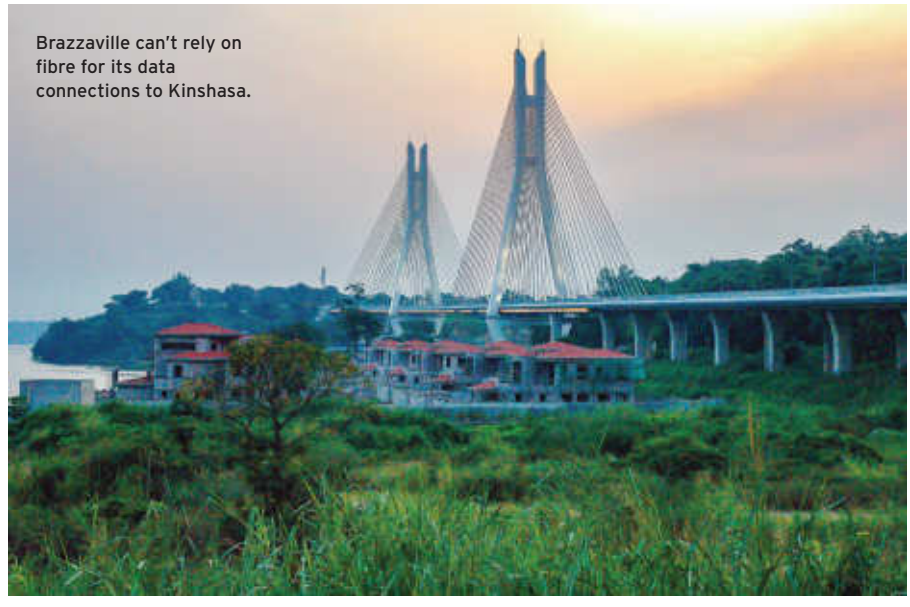
Fibre is becoming a viable way of offering connectivity to a growing number of African consumers and businesses, as pan-African technology group Liquid Intelligent Technologies can demonstrate. But when it's too expensive or difficult to deploy fibre, evolving wireless technologies can offer other ways.

LACK OF ACCESS to affordable internet connectivity across the continent remains a challenge for many Africans. But things are changing, as Liquid Dataport, the scalable connectivity platform of Cassava Technologies, within pan-African technology group Liquid Intelligent Technologies, can prove.

Liquid Dataport has acquired a fibre pair on Equiano, the new West Coast submarine cable, capable of delivering up to 12 terabytes of new capacity. This will significantly empower the development of businesses in Southern African countries through improved access to high-speed, affordable connectivity and increased access to digital technologies.

This acquisition is yet another addition to the company's steadily growing pan-African telecommunication network, which includes satellite connectivity, subsea links, and its cross-continent terrestrial fibre network – the largest independent network of its kind in Africa.

"The additional capacity we are bringing through the Equiano, 2Africa and PEACE subsea cables augments Liquid's existing pan-African terrestrial fibre network and reiterates to our customers that we offer a highly resilient and redundant network to help them achieve their digital transformation objectives," said David Eurin, CEO of Liquid Dataport.



Brazzaville can't rely on fibre for its data connections to Kinshasa.

Photo: Adobe Stock

Our new SDN offering allows customers to choose packages based on their size and requirements

Because the new sea cables are enabling a step change in the amount of international capacity available, Liquid foresees a much-needed drop in internet connectivity prices and improved quality in South Africa, Nigeria, Kenya and many neighbouring landlocked sub-Saharan countries.

It's even bringing new technologies to its customers' doorsteps. Liquid Dataport has established itself as the first African organisation to launch and commercialise its software defined network (SDN) platform, called Dataport. This will be deployed in South Africa, Kenya, Tanzania and Europe in its first phase, with more regions set for coverage in the near future.

"Through the newly launched Dataport, we also see increased opportunities to connect smaller and medium-sized businesses that can now pay for only what they use," said Eurin. "In addition, because our new SDN offering allows customers to choose packages based on their size and requirements, more and more people should be able to access stable, high-speed and affordable connectivity irrespective of their size."

Customers will get instant quotes and be able to order services online, as the SDN platform orchestrates service provisioning to configure their service requirements automatically on the Liquid network. In effect, customers can have a tailor-made network to suit all their connectivity requirements, app usage and costs – but with a high level of security thanks to Liquid's cybersecurity teams.

But it's not always about fibre. A recent Liquid Intelligent Technologies project connecting the capitals of Democratic Republic of Congo and Congo Brazaville used a wireless-based approach. Why?

Kinshasa and Brazzaville are 4.8 km apart and separated by the Congo River. Laying and maintaining fibre across the river is a challenging and cost-intensive exercise. Therefore, data traffic had to be directed through cable landing stations over 400 km away.

Now, using innovative wireless optical communication technology (WOC) from Project Taara at X (part of Alphabet), Liquid has ensured that the cities have a direct broadband link.

WOC links use narrow, invisible beams of light to deliver high-speed connectivity. To create a link, Taara's terminals search for each other, detect the other's beam of light, and lock in like a handshake to create a high-bandwidth connection.

WOC hasn't been considered a viable option for a long time because the signal reliability is compromised by conditions like fog and haze or interruptions like birds flying in front of the signal. However, over the last few years, Taara has been able to overcome some of these challenges.

The link went live in September 2021 – and a second optical link provides redundancy and resilience, with each link capable of transmitting up to 20Gbps. Faster speeds, increased reliability, solid SLAs and falling prices are now a reality for the 17 million people living in Kinshasa and Brazzaville.

So fibre is clearly making inroads into the African market, but where it's either impossible or too expensive to lay fibre cables – for example, across mountains, national parks, or in post-conflict zones – there are other options. Satellite, of course, will also continue to be vital in providing capacity to remote areas and now, thanks to WOC, the Kinshasa-Brazzaville deployment also offers a blueprint to provide high-speed connectivity in other places worldwide. ✆

Heifer and Mastercard to empower smallholder farmers in Africa

HEIFER INTERNATIONAL, A global non-profit organisation, and Mastercard have announced an agreement to connect millions of smallholder farmers in Sub-Saharan Africa to Mastercard's Community Pass – a digital platform that makes it safer and easier for farmers to get paid more and faster for their produce.

Under the partnership, Heifer International and Mastercard will focus on advancing digitalisation and financial inclusion among smallholder farmers in Africa. Mastercard Community Pass is designed to address infrastructure challenges that arise in digitising rural communities, such as unreliable connectivity, low smartphone ownership, and lack of consistent identification or credentials. Community Pass provides farmer visibility through simple and affordable issuance and acceptance infrastructure that enables digital transactions and creates a farmer digital presence that will then enable Heifer International to better reach and serve them.

The partnership supports Heifer International's objective of leveraging technology and innovation to accelerate Africa towards a digitally dominant agriculture sector with strong value chain networks that create sustainable living income and stability for smallholder farmers and farming communities through access to finance, access to markets, and partnerships.

Access to finance remains a critical issue for farmers on the continent, and Heifer International is working to enable financial inclusion by working with innovators and leveraging innovative platforms that utilise data to create digital footprints, providing visibility for farmers who on average are unable to account for everyday data they generate from business transactions and commodity exchanges for goods and services. By working to improve farmer visibility, Heifer International aims to connect

Photo: Adobe Stock

An innovative solution that helps connect smallholder farmers to financial and agricultural value-chain ecosystems.

social entrepreneurs to farmers and farmer data, enabling these innovators to provide tailored solutions to support farmers and co-ops at scale. This is in line with Heifer's plan of reaching six million smallholder farming households in Africa by 2030.

To achieve this digital visibility for smallholder farmers in Africa, Heifer International through Mastercard Community Pass will initially focus on smallholder farmers in selected African markets, starting with Tanzania.

Mastercard is working to connect individuals in underserved, remote and frequently offline communities with digital tools, including millions of farmers in Africa who use Community Pass to access agricultural markets, inputs providers and financial services to help build and grow their enterprises.

Cellulant licence renewed by Central Bank of Nigeria

THE CENTRAL BANK of Nigeria has renewed Cellulant's Payment Service Solution Provider Licence in Nigeria. This licence enables Cellulant to continue providing online and offline payment solutions, including collections, check-out, biller aggregation, and payout services securely to thousands of businesses across Nigeria.

Cellulant's digital payments platform, Tingg, enables businesses to seamlessly accept and make payments offline and online. A single integrated digital payments solution, Tingg addresses the complex needs of managing payments by simplifying the payment experience for the end user and providing tools and processes for a merchant to manage their collections from a single dashboard.

Nigerian consumers have different payment options, including card, mobile money, bank transfer and cash, but with volatile currency fluctuations and no single settlement framework. As a result, the demand for digital payments continues to increase. Roughly 50% of retail customers request to pay for their purchases using digital payment options. However, this demand presents several challenges for most merchants who might not always support the customer's preferred payment method, resulting in merchants having to enable multiple solutions to support multiple wallets and varying processes for settlement and reversals for a merchant.

Tingg solves these challenges by delivering a single solution to accept all digital payment methods (bank transfers, USSD payments, cards and mobile money) maintained with the highest compliance and security standards.

In addition to being licensed to operate as a payments service provider in multiple African countries, including Kenya, Ghana, Uganda, Botswana, and Zambia, Cellulant has also achieved global security, privacy, business continuity and service management standards. The company's certifications include ISO 27001 (ISMS), ISO 27701 (PIMS), ISO 22301 (BCMS), ISO 20000-1 (Service Management) and PCI-DSS.

MDXi Appolonia most certified data centre in Ghana

MDXI APPOLONIA, THE data centre subsidiary of MainOne, an Equinix company in Ghana, has received its Tier III Constructed Facility certification (TCCF) from the Uptime Institute. With this new milestone, MDXi Appolonia becomes the leading data centre provider in Ghana with the top four certifications in the industry; the Tier III Constructed Facility certification, TCCF; the PCI-DSS certification which certifies the Data centre to process payment card information; and ISO 27001 and ISO 9001 certifications, all of which assures information security and quality management at the MDXi Appolonia data centre, and further reinforces MDXi's position as the leading data center provider in West Africa.

The MDXi Appolonia facility received this TCCF following onsite testing by the Uptime team; this is a

Photo: Adobe Stock

MDXi Appolonia data centre offers open access connectivity options to all the leading telecom networks in Ghana.

progression from the Tier Certification of Design Documents (TCCD) that was issued by Uptime following the review of designs of the facility during construction.

The data centre, which features private data centre suites, enterprise-grade 24+7 multi-level security and video surveillance, precision cooling, safety and fire suppression systems with multiple redundancies built into the power, cooling and security infrastructure, has maintained 100% uptime since launch, and is managed by highly trained, best-in-class engineers operating from a state-of-the-art operations centre matching international standards.

MDXi Appolonia data centre offers open access connectivity options to all the leading telecom networks in Ghana and direct access to MainOne and other submarine cable systems. It offers access to various internet exchanges including the GIX (Ghana), IXPN (Nigeria), LINX (London), DECIX (Frankfurt/Lisbon), and Cote d'Ivoire Internet Exchange (CIVIX), as well as the West Africa Internet Exchange (WAF-IX).

Ericsson enables LTE power-saving

ERICSSON'S MICRO SLEEP Tx software feature, when activated on a network, saves power during short periods when there is no traffic.

With mobile networks being deployed to meet expected peak traffic demands for the next three to five years, more capacity than needed will be provided for most hours of the day. Variations in traffic load are inherent in mobile networks, such as day and night differences, or short variations down to the millisecond level.

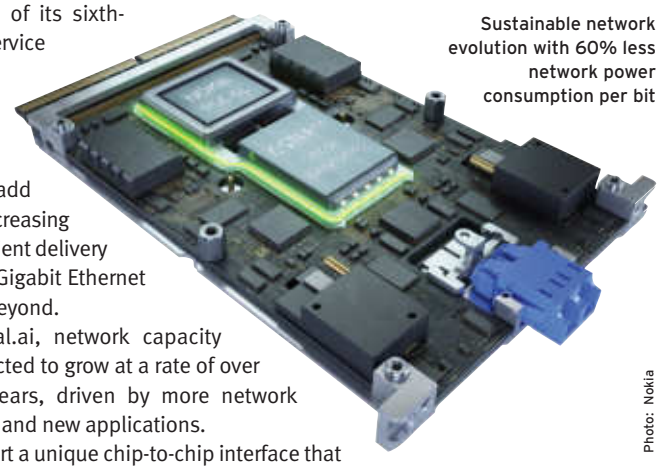
Ericsson Micro Sleep Tx, a key software feature for LTE, automatically enables and disables the radio's main power amplifier and other hardware blocks during fixed idle periods, reducing power consumption. Micro Sleep TX also ensures that the power amplifier is ready to be switched on when needed.

A radio access network (RAN) provides nationwide coverage and service capacity. As the coverage and capacity offered by a single radio is finite, this is achieved by deploying thousands of radio sites, in some instances 10,000 or more, from which signals can be transmitted and received. This high number of radios can represent more than 75% of a service provider's network power consumption.

Modernising existing equipment and activating power-saving software helps reduce power consumption. Power-saving features can be deployed for 4G and 5G RAN technologies and enable large savings in the networks.

Nokia's next gen coherent optics reduce network power consumption

NOKIA HAS ANNOUNCED the launch of its sixth-generation super-coherent photonic service engine, the PSE-6s, which is capable of reducing network power consumption by 60 %.



Sustainable network evolution with 60% less network power consumption per bit

Photo: Nokia

In addition to improving energy efficiency, network operators need to add massive capacity in response to ever-increasing demand. The PSE-6s supports the efficient delivery of high-speed services including 800 Gigabit Ethernet (GE), over distances of 2,000km and beyond.

According to research firm Cignal.ai, network capacity deployed over coherent optics is expected to grow at a rate of over 40% per year over the next four years, driven by more network connections, faster bandwidth speeds and new applications.

Nokia PSE-6s optical engines support a unique chip-to-chip interface that enables them to be deployed in pairs to power the industry's first 2.4Tb/s coherent transport solution. This allows network operators to efficiently transport any combination of high-speed client services including 400 and 800GE. With a three-fold increase in performance, PSE-6s-enabled platforms support transport of 800GE services in metro and data centre interconnect (DCI) applications and, with reach of 2,000km and beyond, across long-haul networks and trans-oceanic cables.

Optical networking equipment containing the new PSE-6s is expected to be available for customer network trials in the second half of 2023.

Satellite IoT solution proposed for remote farming

ASTROCAST, A LEADING global nanosatellite IoT network operator, and Digitanimal, a leading smart solutions developer in livestock tracking devices and solutions, have announced a strategic partnership to develop a satellite IoT (SatIoT) solution. Both companies are collaborating to commercialise a tracking device that connects to Astrocast's global satellite network. The SatIoT-based collar will enable farmers to track livestock remotely. This will allow them to adopt Agriculture 4.0 farming practices as they manage their herds.

"Within remote farming environments there is often little or no terrestrial network connectivity. To solve this problem, some farms try and install antennas and base stations to deploy ground networks and access cloud technologies. But it is challenging for many farmers to deploy a reliable and financially viable infrastructure, especially if they do not have a high volume of animals to monitor," said Carlos Callejero, CEO, Digitanimal.

"Our goal is to change this situation for these remote farmers, as we incorporate Astrocast's low-power, cost-effective SatIoT into our livestock tracking solutions. This technology – and the access to data that it provides – will enable farmers to accurately establish the location of their herds anytime and anywhere, allowing them to better manage livestock. For example, they can track movement patterns and create geo-fences to detect when livestock has drifted into areas they should not be."

Farmers needing this kind of satellite connectivity solution can be found globally. A number of countries in Africa and Asia have large, extensive herds in vast regions with no reliable cellular network access.

Through this partnership, it will be possible for any farmer across the world to connect their animals to the cloud and track them. The service will be cost-effective and affordable to farmers, as it has been developed with the latest satellite technology.

Payment partnership targets African remittance market

INTRA-AFRICAN, CROSS-BORDER REMITTANCES and digital wallet company EziPay has partnered with MFS Africa, the continent's leading digital payments gateway, to bring last-mile connectivity for remittances and collections to and from mobile money wallets and bank accounts in Africa.

The partnership comes at a time when mobile money is burgeoning at increasing rates on the continent, with businesses and individuals alike requiring solutions that allow them to transact across regions.

"Partnering with EziPay, an organisation that is known for providing digital wallets for inward and outward remittance to MSMEs, SMEs and individuals across continents, made complete sense to further enable the interoperability we aim to achieve through our acquisitions and partnerships," said Dare Okoudjou, founder and CEO at MFS Africa.

EziPay, which has a presence in 14 African countries, currently has a global user base of over 300, 000, including Africans in the diaspora as well as those in the local expat community who utilise EziPay's digital wallets for inward and outward remittances.

Amit Gaur, co-founder and CEO at EziPay, says, "With EziPay and MFS Africa joining hands to solve cross-continent remittances to Africa from Asia, Europe, the UK and the USA, remittances for goods, services, school fees, medical transfers, business transfers, family maintenance allowances, and P2P transfers will be enabled. I firmly believe that with the MFS Africa partnership, our customers will have instant remittances to bank accounts and wallets across Africa for our ever-growing customer base."

Eutelsat makes progress on digital divide promise

EUTELSAT HAS REACHED a notable milestone in its quest to bring affordable connectivity to underserved people in Africa.

In June, the company joined the International Telecommunication Union (ITU) Partner2Connect Digital Coalition, a multi-stakeholder platform mobilising resources, partnerships and commitments to foster meaningful connectivity and digital transformation in hard-to-connect communities.

Within this framework, Eutelsat pledged to connect one million underserved people in sub-Saharan Africa by 2027. Half a year into this commitment, Eutelsat has now reached the 200,000-user mark for its Konnect Wi-Fi hotspots. This significant milestone has been acknowledged by the 2022 Partner2Connect Annual Report.

Operating in Africa, Konnect is Eutelsat's satellite broadband initiative, powered by the new-generation EUTELSAT KONNECT satellite. Delivering instant broadband internet access to rural areas beyond reach of terrestrial networks across the continent, the service provided is unrivalled in its reliability. With speeds and bandwidths on a par with those of fibre or 4G (from 5 to 100 megabits per second), and at ultra-competitive prices, individuals, businesses, schools, and medical centres can seize the power of innovative satellite technology. Konnect is changing the way people live, learn, work and do business in the remotest areas, empowering entire communities on the continent.

Eva Berneke, Eutelsat CEO, commented, "This major 200,000-user milestone shows that we are effectively deploying the means to honour our pledge by 2027. Above all, this commitment is an integral part of the corporate social responsibility missions Eutelsat undertakes globally."

Airgain partners Deutsche Telekom for borderless IoT

AIRGAIN, A LEADING provider of wireless connectivity solutions has announced a partnership with Deutsche Telekom IoT to connect its asset tracking devices with Europe's leading IoT network coverage for a best-in-class solution.

The agreement will allow Airgain to bundle connectivity from Deutsche Telekom IoT with its asset tracking customers across Europe, the Middle East and Africa (EMEA) as well as within the US and beyond.

Airgain's cellular-based asset tracking solution allows for tracking throughout an asset's entire journey, whether inside, outside, or in transit. These devices boast industry-leading battery performance of up to 14 years, the latest in cellular technologies including LTE-M and NarrowBand IoT (NB-IoT), and the ability to integrate seamlessly with any enterprise software stack. In addition to location tracking through cellular, GPS, and Wi-Fi triangulation, Airgain's asset trackers can monitor motion, temperature, humidity, light, and more.

Morad Sbahi, chief revenue officer at Airgain, commented, "Adding Deutsche Telekom IoT as a connectivity partner gives Airgain additional global reach. They are a world-class partner with broad capabilities and a world-class signal. At Airgain, we are excited to partner with one of Europe's top IoT innovators."

'T-IoT' is Deutsche Telekom's new global IoT offering. Together, Deutsche Telekom and T-Mobile US enable global IoT networking with the appropriate mobile technologies, from NB-IoT and LTE-M to LTE and 5G. T-IoT customers thus have a single point of contact and contract for their global IoT projects. Among other things, this simplifies customer care and support and allows simple, transparent pricing.

Bolstering cybersecurity to support Africa's digital economy

AFR-IX TELECOM, A leading internet service provider in Africa, has highlighted the need to reduce the cyber security gap that is prevalent on the continent.

The digital economy of Africa is predicted to add US$180bn to the continent's overall economy by 2025, increasing to US$712bn by 2050. As part of this, African governments and their stakeholders are developing new strategies to connect approximately 700 million people to the internet and tackle speed and affordability concerns for those who already have access.

Africa's cybersecuity challenges differ significantly from those faced by other regions.

Photo: Adobe Stock

The cyber challenge

However, at the same time, cybercrimes are rapidly increasing, threatening both economies and individual safety, according to AFR-IX. Africa's cyber security challenges differ significantly from those faced by other regions and there are many factors that make the continent more vulnerable.

While technical cybersecurity attacks are on the increase, there are three main issues maintaining sub-Saharan Africa's (SSA) exposure to cyberthreats:

- A lack of awareness and limited technical training to implement effective security measures
- Insufficient certified cybersecurity specialists
- The majority of governments not keeping up with the fast evolution of cybercrime.

Nevertheless, against this, regional partnerships are collaborating to strengthen their cybersecurity capabilities by establishing strategic cybersecurity policy frameworks; improving the members' level of national mechanisms for cybersecurity; increasing coordination between all stakeholders; and developing confidence in the surety of information and communication technologies.

Creating a safe environment

In light of these developments, many countries are moving in the right direction – and yet there is still more work to be done to create secure environments for users. According to AFR-IX, governments should prioritise cybersecurity and take the necessary steps to strengthen their digital defences to address the online threats.

Actionable policies include investing more money into global strategic engagements, enhanced infrastructure and awareness-raising efforts; dealing with the concerns and misgivings raised by nations that have ratified international agreements on digital policy; giving priority to boosting cybersecurity capacity; and continuing to work together to share best practices while facilitating peer learning with credible stakeholders.

In this space AFR-IX offers its services for secure, reliable connectivity solutions to help African users get online, safely.

Support for digital transformation in West Africa

GLOBAL ANALYTICS SOFTWARE provider FICO has announced a partnership with FPG Technologies & Solutions LTD, a member of FlexiP Group, to bring advanced decision management and analytics tools to companies across West Africa.

FPG will sell, implement and support FICO Blaze Advisor decision rules management system and FICO Xpress Optimisation, leading tools that businesses use to automate high-volume decisions, rapidly change strategies and leverage advanced analytics to improve performance.

"West African companies are engaged in digital transformation initiatives that have gotten extra momentum from the pandemic," said Rex Mafiana, CEO of FlexiP Group, a leading enterprise IT solutions provider and systems integrator, with specialties in financial services, telecommunication, energy, oil & gas, and healthcare. "Across all industries, it's critical to be able to automate more decisions, to change strategies faster, and to increase efficiency. FICO has world-class tools that can help our customers be more competitive, and also help our own development team develop new products."

"Rules management and mathematical optimisation are the core technologies for better decisions," said Mark Farmer, who manages partner relationships for FICO in EMEA. "FPG has deep domain expertise in multiple industries in West Africa and can help businesses there use these technologies to transform their performance."

As FICO's flagship rules authoring solution, FICO Blaze Advisor decision rules management system maximises control over high-volume operational decisions. Blaze Advisor provides businesses across multiple industries with a scalable solution that delivers unprecedented agility and actionability for smarter, transparent, and better business decisions.

FICO Xpress Optimisation allows businesses to easily build, deploy and use optimisation solutions that crunch through millions of potential scenarios to find the ideal solution. Standard capabilities include scalable high-performance solvers and algorithms, flexible modelling environments, rapid application development, comparative scenario analysis and reporting capabilities, for on-premises and cloud installations.

Workonline Communications establishes new PoP in Nigeria

WORKONLINE COMMUNICATIONS, ONE of the largest IP network providers in Africa, has launched its first point of presence (PoP) in Nigeria, further enhancing the group's West African presence.

The new megaPoP went live late last year, ready to provide 10 Gbps and 100 Gbps services at Rack Centre in Lagos, West Africa's best-connected data centre. This adds to the growing list of African markets in which the company manages megaPoPs, including Ghana, Kenya and South Africa.

Workonline's presence will allow content distribution networks and internet service providers with stringent quality needs to deploy in Nigeria and will help those already in-country to keep African traffic in Africa.

Workonline, founded in 2006, is one of the fastest-growing IP transit networks in Africa. The company specialises in providing wholesale IP transit (IPT), remote peering, and Layer 2 Ethernet virtual private line (EVPL) services.

Jasper Lankhorst, Group CEO of Rack Centre, has welcomed Workonline to its carrier- and cloud-neutral data centre which has earned several ISO certificates including ISO 27001, the global information security quality standard. Since its inception in 2013, Rack Centre has maintained a 100% uptime and offers its customers 100% neutral access and uncapped interconnect capacities.

In early 2019, Workonline Communications became the first African wholesale IP transit provider to deploy resource public key infrastructure (RPKI) origin validation (OV) to improve the security of internet routing. Workonline is also an active member of the Mutually Agreed Norms for Routing Security (MANRS) operator community, and was the first African network to implement all four of the MANRS routing manifesto actions. These MANRS routing manifesto actions are a commitment by a network to provide the highest feasible levels of security, stability and performance for interconnectivity with other network operators.

Vertiv introduces prefabricated modular data centre solution

VERTIV, A GLOBAL provider of critical digital infrastructure and continuity solutions, has introduced the Vertiv MegaMod and Vertiv MegaMod Plus, a turnkey prefabricated modular (PFM) data centre solution, deployable in expandable units of 0.5 or 1 megawatts for IT loads up to 2 megawatts or more.

The high-quality prefabricated modules are integrated and tested with industry-leading Vertiv power management systems, thermal management solutions, remote monitoring, and IT equipment racks to deliver exceptional performance and help companies reduce deployment time by up to 40% compared to a traditional data centre build. The solutions are now available across Europe, the Middle East and Africa (EMEA).

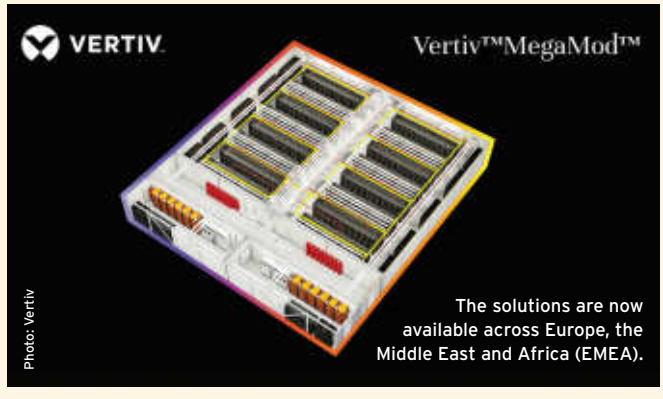


Photo: Vertiv

The solutions are now available across Europe, the Middle East and Africa (EMEA).

Companies are racing to deploy processing power in new locations to meet demand for digital business products and services. The MegaMod, and the MegaMod Plus, which offers up to 25% more rack and cooling capacity, enable customers to expand core-to-edge data centre networks and to rapidly deploy new compute capacity with lower upfront costs, greater predictability, and less risk than traditional data centre builds, thanks to proven industrial processes and high standards of quality control. Both solutions provide options to grow horizontally or vertically, with MegaMod providing cooling capacity in the IT hall area, while MegaMod Plus is configured with cooling modules that support the IT hall space expansions.

The flexible solution capacity is ideal for medium-sized data centres and can be easily deployed and expanded as business needs grow. Vertiv also provides end-to-end services for a straightforward start-up and smooth operations, including deployment, commissioning, ongoing maintenance, remote monitoring, and training.

New data centre for Nairobi

AFRICA DATA CENTRES, a business of Cassava Technologies, a pan-African technology group, has officially broken ground on an additional data centre facility in Nairobi. The new build will see the existing facility on the adjacent piece of land expanded up to an extra 15MW of IT load. ADC's expansion at the new site will be completed in the first half of 2024 and will bring five times more capacity than is currently installed.

"We believe that data centres will play a significant role in digital transformation and economic growth on our continent. Without them, the push towards a digital economy in Africa will be missing a key pillar. Our decision to increase our investment in our data centres in Kenya is in recognition of the position the country now occupies as a leader in the adoption of digital technologies in Africa" said Hardy Pemhiwa, group president & CEO of Cassava Technologies.

During the ground-breaking ceremony, Tesh Durvasula, CEO of Africa Data Centres, said, "The expansion will enable Africa Data Centre clients to grow and scale depending on their requirements. They can start small, increase to a medium capacity, and even benefit from a hyperscale type of deployment in a few years if they choose to. This will enable customers to operate multiple deployments across our sites with a single operations team, campus, and infrastructure they are familiar with".

The new data facility will begin with 5MW of IT load and will be built in Africa Data Centres' leading-edge modular design – an innovative approach that sees the entire facility, including all critical plant rooms, prefabricated off-site. This ensures the highest possible quality, whilst local contractors will still benefit from contracts to lay foundations, assemble, and complete the build.

Green telecom tower launched

TELECOM EGYPT, IN cooperation with Huawei Technologies, has announced the implementation of the first environmentally friendly tower made of Fibre Reinforced Polymer (FRP), with wireless availability.

Through this cooperation, Telecom Egypt will become the first operator in Egypt and Africa to install this green tower which will serve as the optimum alternative to steel, which causes high emissions of carbon dioxide. The tower is approximately 18m high, with a special camouflage fence made of environmentally friendly materials, supported by integrated wireless access solutions and a green solar energy system. It is characterised by its high resistance in severe environmental conditions, such as corrosion due to the exposure to chemicals and high temperatures.

The managing director and CEO of Telecom Egypt, Adel Hamed, said that the implementation of this type of mobile site in Egypt is unprecedented. He added that Telecom Egypt's green external sites also depend on modern technologies for wireless access devices, such as the technology of antennas integrated with signal amplifiers, which contribute to reducing the energy consumption of one site by about 40%, if compared to traditional sites. According to Hamed, these modern technologies also contribute to improving the signal quality by about 20%, when compared to regular antennas, which will further result in reducing the number of stations to be installed.

Jim Liu, CEO of Huawei Egypt, pointed out that FRP poles produce 43% less carbon dioxide emissions, compared to steel, and reduce E2E energy consumption by nearly half for manufacturers and related transportation.

SC Ventures and Yabx aim to address Africa's credit needs

AFRICA HAS OVER 700 million mobile wallets, and about 450 million bank accounts but access to formal credit remain severely constrained due to poor credit infrastructure and the slowly evolving risk appetite of financial services players, especially traditional banks. The Covid-19 pandemic has accelerated digitisation in the financial sector and created a fertile environment for new and disruptive products to be taken to the market.

A partnership between investment group SC Ventures and fintech Yabx is leveraging on this to create unique, Africa-specific products that will increase access of credit to the underbanked across Africa.

Nimble future-ready technology and data analytics combined with a deep understanding of banking will reduce the cost of delivery of innovative credit products, thereby widening inclusion across underserved segments in Africa where it is needed most. Given the scale and the complexity of the opportunity, SC Ventures and Yabx have taken a collaborative approach to jointly address the challenge. Loans will be provided to customers for specific purposes like education and skill development using an innovative data-driven scoring and analytics engine that has been built with rich experience from African markets. These loan products will be initially launched in Uganda and then subsequently expanded to other countries in Africa.

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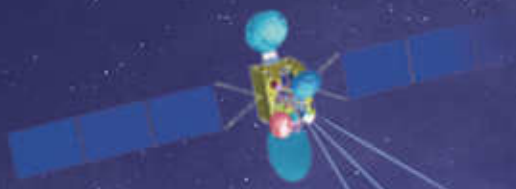

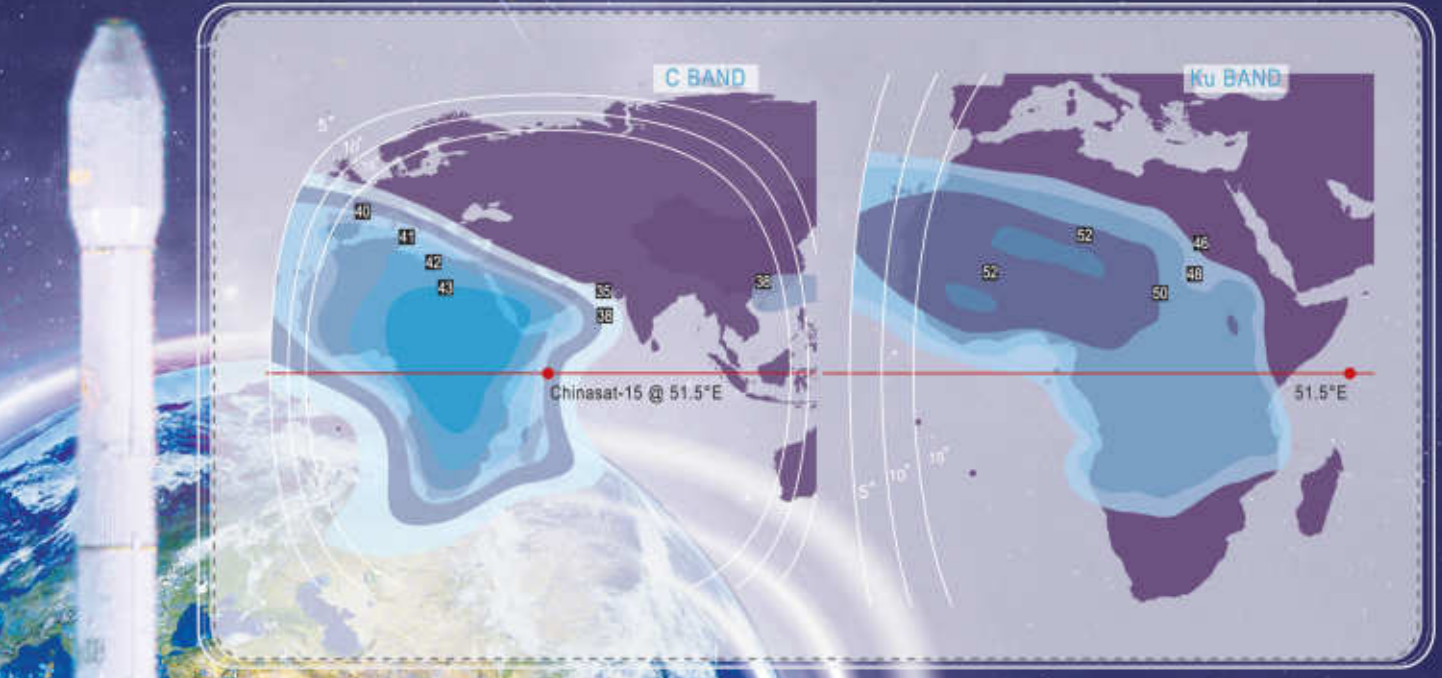

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