

For communications professionals in southern Africa

SOUTHERN AFRICAN WIRELESS COMMUNICATIONS

MARCH/APRIL 2024

Volume 28 Number 5

- Exemplifying resilient communications
- Advancing critical national services
- Connectivity upgrades for Africa Mercy

“It’s a good time to be active in Africa’s bustling data centre market”

Sibongile Thobakgale
Project Sales Manager (Data Centre)
for Southern Africa at Aggreko



aggreko



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EDITORIAL:

Editor: Amy Saunders
Designer: Ian Curtis
Deputy editor: Gerry Moynihan
Contributors: Mladen Vratonjić, Daniel Batty, Reza Rasoulilian, Gur Geva

ADVERTISEMENT SALES:

Sales: Kathy Moynihan
kathym@kadiumpublishing.com
+44 (0) 1932 481731

Production & circulation: Karen Bailey
karenb@kadiumpublishing.com
Tel: +44 (0) 1932 481728

Publishing director: Kathy Moynihan
kathym@kadiumpublishing.com
+44 (0) 1932 481730

Editorial enquiries:

amys@kadiumpublishing.com
Tel: +44 (0) 1932 481729

Paratus Botswana completes last leg of BKF route

Paratus Botswana has completed the last leg of its fibre route to create the new Botswana Kalahari Fiber (BKF) route.

A total of 840km of fibre was laid between the Namibian border and Lobatse and was activated at the end of March 2024. This new fibre route represents an investment of approximately BWP70 million in Botswana and is the largest significant investment in its own infrastructure by Paratus Botswana to date.

The BKF completes the last leg of the Paratus built Trans Kalahari Fiber (TKF) route which runs from

Johannesburg to Swakopmund in Namibia. The new route creates the lowest latency primary transit path through Botswana and Namibia to Europe. The new BKF will connect Botswana and neighbouring countries to various international subsea cables, and to the rest of the world.

Paratus Botswana and Paratus Namibia have worked closely together in the bid to connect South Africa to the Equiano cable in Swakopmund. By connecting to Equiano in Namibia, the BKF route will assist in enabling more product options and will help stimulate economic growth.

Equiano is forecast to more than double internet speeds and increase internet penetration by 7.5% in the next three years alone, while acting as a catalyst for considerable growth, job creation and sustainability in Namibia, Botswana and South Africa.

“The Botswana Kalahari Fiber Route is part of our ongoing investment in our network infrastructure to meet the growing demand for telecommunications services in the country. The Paratus quality network services offering is now even more compelling, particularly for the financial services and banking sectors or indeed

any industry sector that needs to have an independent, reliable, and fully resilient connection all the time,” said country MD of Paratus Botswana, Shawn Bruwer.

This section of the Botswana Kalahari Fiber route has taken around 18 months to complete, and involved building infrastructure that includes 15,000 gum poles and 10,368 splices on 216 termination joints. It was built entirely by local Botswana contractors and, indirectly, created around 100 jobs. The new route runs from Lobatse and Tlokweng borders, via Gaborone, Molepolole and Letlhakeng, and then from Kang through to Charles Hill and the border into Namibia. This will connect Botswana to the 144 Terabit Equiano subsea cable, for which the Paratus Group built the landing station in 2022, and which will provide even faster, reliable connections and more diverse routes and redundancy across the region.

“The completion of this fibre route is yet another integral intervention in the Paratus Group’s overall vision to transform Africa through exceptional digital infrastructure and customer service. It also reflects our commitment - and the Paratus Group’s commitment - to Botswana and the entire region in providing the highest quality network services,” said Bruwer.



Africa’s data centre capacity to grow 50% by 2026

Africa’s data centre market is expected to grow significantly, with a 50% capacity increase by 2026 according to research from Oxford Business Group (OBG) and the Africa Data Centres Association (ADCA).

Despite technical and regulatory constraints, the continent offers significant opportunities amid a thriving digital economy and increasing internet adoption.

The Data Centres in Africa report emphasises the significance of closing the ICT skills gap and incorporating sustainability into data centre operations.

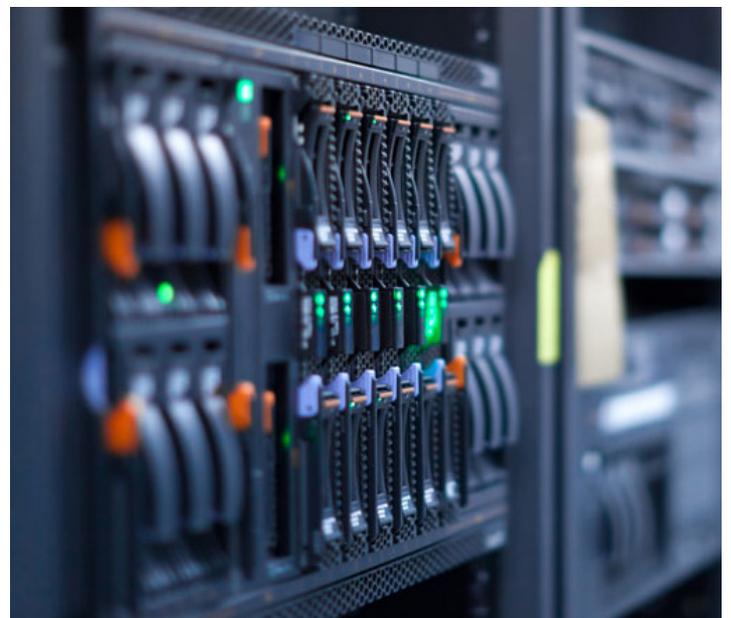
Ayotunde Coker, chairman of ADCA, underlined the critical need for joint measures, such as setting up special economic zones and renewable energy subsidies, to

unlock Africa’s digital potential and drive its growth.

“As Africa leads this transformative wave, data centres emerge as the linchpin driving regional growth, powered by high-speed fibre-optic links and strategic investments,” said Coker.

The report says key markets such as Nigeria, Kenya, Egypt, and Morocco are already leveraging their competitive advantages to attract investment and expedite digital infrastructure development.

“As Africa leads the digital revolution, our latest focus report sheds light on the essential role of digital infrastructure in shaping the continent’s economic landscape,” said Karine Loehman, OBG’s managing director for Africa.



Africa needs \$86 billion to fully connect

The World Bank estimates that Africa needs an investment of \$86 billion to have the entire continent connected to the internet to reap digital dividends. However, the absence of services that could stimulate increased use of the internet is an additional hurdle in the path towards development of Africa's digital economy.

A collaboration between the World Bank and the African Union (AU) on the Digital Economy for Africa (DE4A) initiative, meant to digitally empower all individuals, businesses, and governments in Africa by 2030 could change the region's digital landscape. This partnership has already enhanced Africa's digital landscape, increasing broadband access from 26% to 36% and boosting the average broadband download speed from 2.68Mbps to 8.18Mbps. Moreover, the cost of 1GB of data has halved, falling from 10.5% to 5% of the monthly Gross National Income (GNI) per capita.

Isabel Neto, digital development practice manager for Eastern and Southern Africa at the World Bank, however, warns that the slow pace of connectivity across the continent, despite numerous ongoing initiatives, is of concern. While the DE4A initiative has made significant strides, she believes that the pace of progress needs to be accelerated. The World Bank has identified 22 indicators and prioritized six programs to track the progress of this initiative.

Neto said that the substantial investment required for this initiative cannot be shouldered solely by African governments, emphasising the necessity of public-private partnerships for the success of this ambitious project.

"It will require \$86 billion for the whole of Africa to be connected. 80% of the funding will come from the private sector. This collaborative approach will ensure the mobilisation of resources and expertise from various sectors, thereby accelerating the pace of digital connectivity across the continent," said Neto.

Vodacom Mozambique invests \$25 million in new Matola data centre

Vodacom Mozambique is investing \$25 million in the construction of its data centre in Matola.

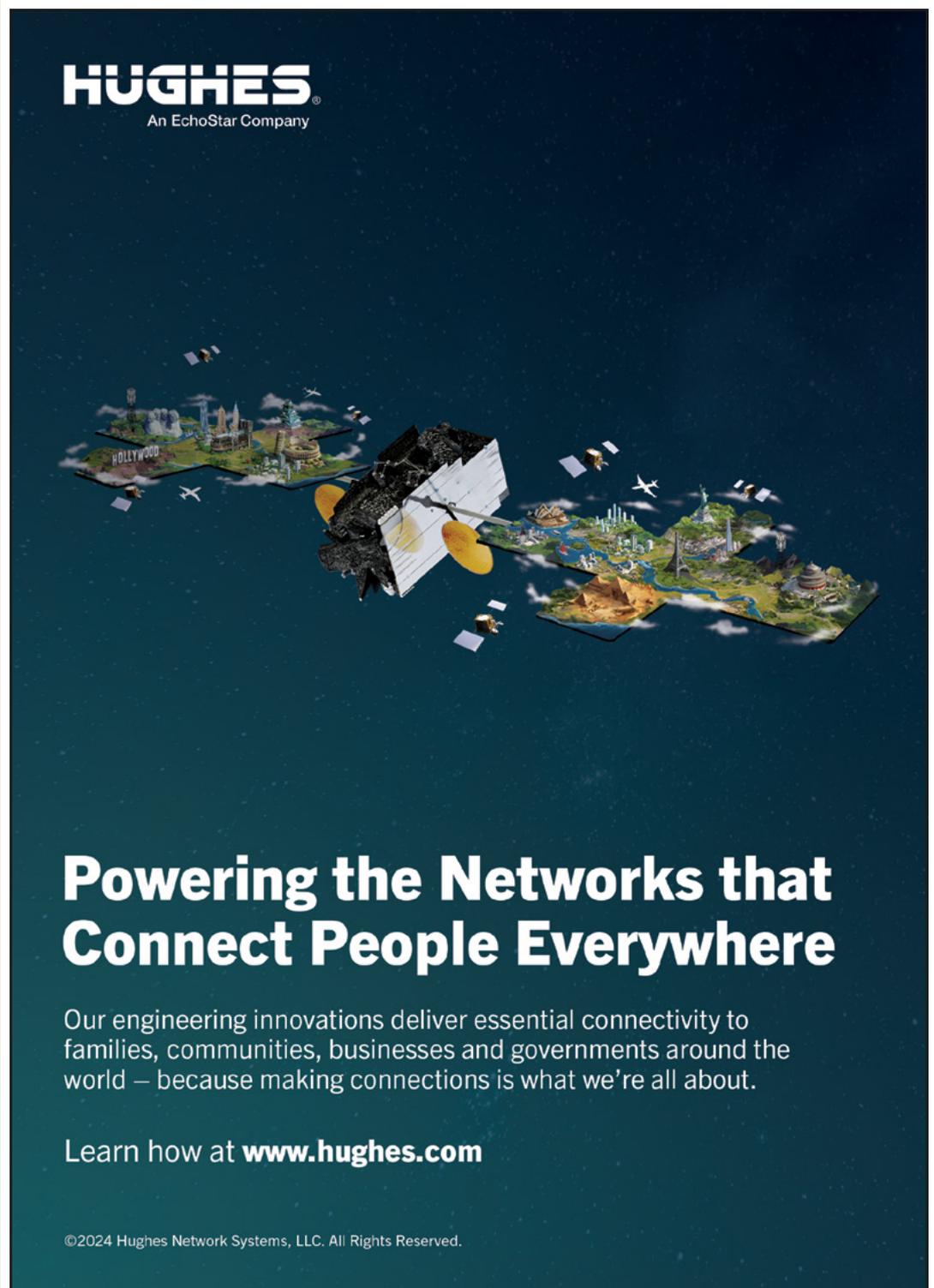
Construction of the Tier 3 vendor neutral facility commenced in 2023. The first of three phases of infrastructure construction is scheduled to be completed in July 2024.

"This infrastructure will

incorporate the highest security features available in the industry to protect existing assets, and strict access control measures will be implemented to protect critical data and applications, ensuring maximum security for users," said Lucas Chachine, managing director of Vodacom Mozambique.

This initiative should enable

Vodacom Mozambique to improve the quality of its services and the experience of its customers. The data centre should also allow Vodacom Mozambique to diversify its activities, as well as its sources of income. The neutrality of the infrastructure allows corporate clients to connect to the MNO of their choice.



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MSTelecom and GGPEN sign broadband MoU for Angola

MSTelecom and the Angola National Space Programme Management Office (GGPEN) have signed a significant Memorandum of Understanding (MoU) to collaborate on delivering high-speed broadband connectivity across Angola.

The partnership aims to leverage MSTelecom's extensive terrestrial network infrastructure and GGPEN's communication satellite capabilities to provide reliable and affordable broadband internet services, even in the country's most remote areas.

MSTelecom will integrate its advanced fibre optic and microwave transmission networks with GGPEN's satellite platform, creating a robust and redundant system for seamless broadband delivery. This synergy will enable high-speed internet access to households, businesses, government institutions, and other sectors that have been underserved or lack connectivity altogether.

The collaboration is expected to bridge Angola's digital divide, foster economic growth, improve access to education and healthcare services, and enable digital transformation across various sectors. The companies are committed to delivering reliable, high-quality broadband connectivity to empower Angolan citizens and businesses and contribute to the country's development goals.



Congo prioritises high-speed connectivity for universities

The Congolese government is launching a project to provide high-speed internet connectivity in the public universities Marien Ngouabi and Denis Sassou N'Guesso.

WiFi access points will be installed on the campuses of these establishments to allow students, teachers, and administration to connect for free.

The program is component 2 of the Digital Transformation Acceleration Project (PATN) which

aims to increase underserved populations' access to high-speed internet and improve capacity of government to provide adapted public services using digital technology. It is supported by the World Bank, which finances it to the tune of \$100 million.

Providing free internet in public universities will help develop e-learning by facilitating access to information and educational resources online.



Partners to launch US\$20 4G phones for DRC

KaiOS Technologies, Motema, and the Congolese Agency for Digital Development have entered into a partnership to launch a telephone assembly unit to create devices at US\$20 each.

The factory, whose announced production capacity exceeds one million units, will provide the Congolese with 4G mobile phones at lower cost, with access to Google and social networks.

"Through these cost-effective

phones, users will be able to explore the digital world, opening the door to new educational, business, and social opportunities. It is a revolution in technological accessibility, promising the Congolese to connect to the digital age and broaden their horizons," said the DNA in a release.

The agreement is part of the National Digital Plan Horizon 2025 (PNN) which evokes the development of electronic commerce in the Democratic Republic of Congo.

14 PNN projects have already been finalized according to the authorities. The agreement also fits with Motema's objectives, which aims to provide every Congolese with an affordable digital device.

In addition to creating local jobs, the project is expected to help strengthen the skills of the Congolese workforce in the sector, through technology transfer. It will also boost e-commerce and combat the digital divide.

TRL Space Rwanda targets country's first satellite and equatorial constellation hub

TRL Space Rwanda is spearheading an initiative to establish Africa's first satellite and equatorial constellation hub.

This effort has garnered significant acclaim, with the President of the Czech Republic, Petr Pavel, commending the initiative during his recent visit to the TRL Space office in Kigali, Rwanda.

TRL Space's visionary plan in Rwanda is to cultivate indigenous capabilities for developing nano-satellites and equatorial constellations, laying the foundation for a thriving space ecosystem on the African continent.

The first milestone will be the development of a 6U Cubesat at the Rwandan branch in the coming months. This endeavour will be supported by the Czech-based space company TRL Space in collaboration with the Rwandan Space Agency (RSA). This groundbreaking initiative marks a significant stride for Rwanda, as TRL Space aims to establish a centre for building small satellites that will serve the entire African continent.

TRL Space is committed to bringing its expertise, development, and production capabilities to Rwanda in cooperation with the government, universities, and research organisations. The company plans to invest more than US\$2 million, underscoring its dedication to fostering a sustainable space ecosystem in Africa.

The first phase of the satellite mission, which will be exclusively dedicated to supporting Rwandan agriculture, has already commenced.

TRL Space envisions creating a complete constellation of satellites that will ensure regular and sufficient imaging of the entire African continent. While the first satellite will be built by engineers from Europe and Africa working together, future satellites will primarily be developed by TRL Space engineers based in Rwanda.

"Our intention is not just to deliver these technologies to Rwanda. We bring added value to the region. Our goal is to introduce new space technologies that increase the economic and living standards of the entire region," said TRL Space's CEO, Petr Kapoun.



Councillor Mothibi Ramusi sworn in to ICASA

The Independent Communications Authority of South Africa (ICASA) has announced that councillor Mothibi Ramusi has been sworn-in as the 6th Chairperson of ICASA.

The ceremony was presided over by the Honourable Professor JCW van Rooyen SC, formerly Acting Judge of the High Court of South Africa. During the ceremony, the newly appointed Chairperson pledged to act with integrity, to

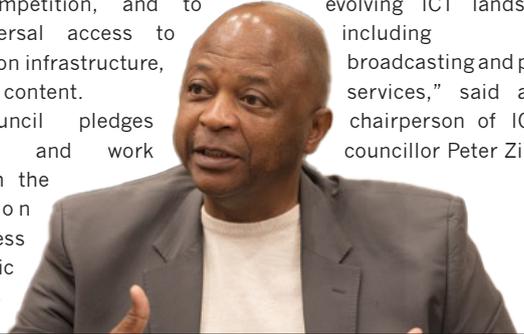
uphold the public interest, and to serve the people of South Africa in the provision of electronic communications, broadcasting, and postal services, in line with the Constitution and the ICASA Act.

Ramusi has more than three decades of experience in the ICT sector. He will play a crucial role in advancing ICASA's mandate to regulate the telecommunications, broadcasting, and postal

sectors in the public interest, to promote competition, and to ensure universal access to communication infrastructure, services, and content.

"The Council pledges to support and work together with the Chairperson to address the dynamic challenges

and opportunities in the rapidly evolving ICT landscape, including both broadcasting and postal services," said acting chairperson of ICASA, councillor Peter Zimri.



MTN Group and Huawei launch Technology Innovation Lab in South Africa

MTN Group and Huawei have officially launched the Technology Innovation Lab in South Africa.

The partnership aims to reduce the time it takes for MTN's products and services to reach the market. It also aims to improve rural network coverage, increase energy efficiency, and make it more affordable.

The innovation lab will conduct research and development in areas such as 5G and 5G-A technologies, AI, big data analytics, cloud computing, FTTH, automation, and digital finance.

The Technology Innovation Lab is expected to foster cross-regional collaboration, stimulating the African digital ecosystem, and encouraging increased development, deployment, and adoption of innovative solutions. It will also serve as a hub for experimentation, demonstration, and skill development.

The lab is critical to MTN's transition from a traditional telecommunications operator to one that provides 'comprehensive' technology services.

"It is about solutions born in Africa, for Africa," said Ralph Mupita, president and CEO of MTN Group.

Cao Ming, President of Huawei's Wireless Solution, said that Huawei will collaborate with MTN to create leading products and solutions for the African market, and jointly explore new business models to lead the industry forward.

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Tangible Africa and AWS teach kids to code

Funded and supported by Amazon Web Services (AWS), Tangible Africa has found a way to equip children with coding skills through innovative gaming platforms.

Since its inception, the organisation has impacted thousands of children and teachers alike across countries like Ghana, South Africa, Kenya and even Ireland.

Tangible Africa's flagship initiative, the RANGERS smartphone app, gamifies coding education, making it accessible even in regions lacking computers, internet access, or electricity. The app operates offline, allowing learners from

underserved communities to learn coding fundamentals all while having fun. RANGERS leverages Android, the predominant mobile operating system in Africa, to deliver coding education to thousands of students.

In a 2023 World Bank report, only 50% of countries in Africa have computer skills as part of their school curriculum, compared to 85% of countries globally.

"While many children in Africa are growing into a tech-driven future through initiatives like Tangible Africa, the impact should extend to teachers as well. After all, these are the heroes responsible for sparking to life a passion for tech at a grassroots

level," said Professor Greyling.

Although more countries are adopting a coding curriculum, according to Greyling, it is not enough for the millions of adults already out of school – especially the educators responsible for sharing this new knowledge with learners.

"If teachers lack the necessary knowledge to teach effectively, then how can we ever succeed? Through gamified tech learning platforms, we're not only helping them inspire their students, but we must remember that we're also unlocking a world of technology for teachers to explore in their own journeys to success," said Greyling.

"We're so proud to be associated with initiatives like Tangible Africa. This is so much more than just a funding, it is about driving a shared mission elevate the continent by opening the door to a future driven and dominated by digital growth," said education equity lead at AWS, Aanya Niaz. "Our aim is always to improve the livelihoods of local communities and use the power of the cloud to propel them into a digital future. Through this, we partner with nonprofits and community organisations like Tangible Africa, and use our resources, people, and passion for innovation to make a sustainable and lasting impact."

Blue Label Telecoms authorised to take over Cell C, subject to conditions

The Competition Commission of South Africa (CCSA) has authorised Blue Label Telecoms to take control of Cell C, subject to certain conditions.

"The Commission recommended to the Competition Court to approve the transaction subject to conditions aimed at mitigating problems linked to the exchange of information and conditions

guaranteeing the continued use of certain communication channels, distribution of prepaid airtime for a certain period, after the transaction," said CCSA in a release.

Cell C applied to transfer its network operating licenses and radio frequency spectrum to TPC, a subsidiary of Blue Label, in December 2023.



Raxio Group to commission Kinshasa DC in July 2024

Raxio Group will commission its data centre under construction in Kinshasa in the Democratic Republic of Congo (DRC) in July, reported Dominique Migisha, coordinator of the Digital Development Agency (AND).

"The DRC aspires to the digital economy. To achieve this, we need data storage infrastructures that meet international standards. This will be a historic turning point. We are a large country, we generate a lot of data, which is the oil of tomorrow, and we are delighted to have this private partner who, ultimately, will allow the DRC to move towards digitalization in a sovereign manner," said Migisha.

The neutral Tier 3 data center in Kinshasa is part of the company's 2019 commitment to build 10-12 data centres across Africa to meet the growing demand for data connectivity, storage and processing.

According to Oxford Business Group's 'Data Centers in Africa,' the entire continent needs 700 installations and 1,000MW of IT capacity to fill the deficit.

South Africa to connect 5.5 million rural homes

The South African government plans to connect 5.5 million households in rural areas and townships to the internet via WiFi hotspots over the next three to four years, reported Mondli Gungubele, minister of communications and digital technologies.

"We are committed to bridging the digital divide by providing WiFi access to communities and ensuring universal access to the internet," said Gungubele. The government service costs 5 rand per day for one gigabyte, and from 250 rand per month for an unlimited plan.

This initiative is part of the second phase of SA Connect, the national broadband policy launched in 2013. Phase 2 was launched in November 2023. It aims to provide

80% of public administrations, communities, and homes broadband access in three years. Phase 1 of the project, which served

as an experimentation module, focused on providing 10Mbps Internet connectivity to nearly 970 essential public administrations.



Netstar establishes world-class IoT vehicle telematics hub in SA

Netstar has established a Global Fleet Bureau in South Africa, which the company says is Africa's largest and 'most technologically' advanced vehicle telematics hub.

According to Netstar, the Global Fleet Bureau will provide services to the company's increasing commercial fleet customer base, as well as an emergency contact centre and vehicle recovery operation. In addition, it will facilitate and manage live monitoring via known and geofenced hotspots, real-time fleet management notifications, and live video monitoring via its AI on-board cameras. The Global Fleet Bureau integrates telematics with recently acquired AI and machine learning (ML) technologies to ensure a proactive approach to defending the safety of commercial fleet drivers and vehicles.

Netstar monitors more than 2 million connected devices, analyses over 181 billion data points, and downloads over 170,000 hours of video every month. It presently tracks over 100 million kilometres per day, which is expected to rise dramatically with the Global Fleet

Bureau's scale and capabilities.

"It will enhance driver and vehicle safety through, for example, a detailed event occurrence book to fleet managers facilitating preventative and immediate remedial action, including live video monitoring of incidents from dispatch to door," said Netstar's Group managing director Grant Fraser. "The 52-seater centre, constructed in late 2023 is expected to improve Netstar's industry vehicle recovery rate, improve responsiveness by 90%, reduce

false positive alerts by 50%, and enable quicker dispatch responses. Our facilities will continue to evolve with our data, AI, and machine learning technologies."

The Global Fleet Bureau is equipped to support global fleets and already offers monitoring and optimal routing services to customers in Sydney. By leveraging its technology and hardware-agnostic IoT platform, the company is able to provide world-class managed services to fleet managers worldwide.



Congo's mobile internet subs up 61% in just five years

The number of mobile internet subscriptions in Congo has increased by 61% in five years, from 2.1 million in 2019 to 3.4 million in 2023, according to the Post and Electronic Communications Regulatory Agency (ARPCE).

The growth in the number of subscriptions to mobile internet services over 2019-2023 resulted in a 337% increase in traffic over the same period, from 15.9 billion megabytes to 69.4 billion megabytes.

The Congolese government aims to promote equitable access to digital services for all citizens by 2025 in accordance with the national digital transformation strategy 'Congo Digital 2025' launched in August 2019. The country is increasing investments in strengthening the national telecoms infrastructure with the construction of data centres, the connection of the country to a second submarine fibre optic cable, and interconnection by fibre optic to neighbouring countries.

MSTelecom opts for Angosat-2 to enhance broadband

MSTelecom will utilise the Angosat-2 telecoms satellite to improve broadband connectivity services in Angola.

The company signed a memorandum of understanding with the Angolan National Space Program Management Office (GGPEN). Under the terms of the agreement, MSTelecom will integrate its fibre optic and

microwave transmission networks into the GGPE satellite platform. This will accelerate the ISP's network coverage to reach more people.

The Angolan government aims to use satellite technology to accelerate the country's development by improving the quality and coverage of telecoms services. Several connectivity projects have been launched since January 2023.



Namibia commits N\$131.5 million in ICT upgrades

The Namibian government has committed to investing N\$131.5 million to accelerate the development of information and communications technologies (ICT), revealed Emma Theofelus, minister of ICT.

N\$110 million will be spent on the construction of 30 communication towers over the next three years to improve access to telecom services.

N\$20 million will be dedicated to the establishment of the National Cybersecurity Incident Response Team (Nam-CSIRT). N\$1.5 million has been allocated for the implementation of the national 5G strategy.

This initiative is part of the

Namibian government's digital transformation ambition. Accordingly, the government is increasing initiatives for the deployment and adoption of broadband connectivity services in Namibia. The country is currently considering

the use of satellites to improve communications services, and work is underway for the launch of commercial 5G in the country.

"Faster internet, reliable services and more affordable ICT devices are just some of the expectations when striving to facilitate organisational operations and drive progress in the sector," said Theofelus.



SEACOM debuts LEO satellite services for enterprise

SEACOM has debuted an all-new low-Earth orbit (LEO) satellite service for enterprise clients which represents an evolutionary shift in connectivity in South Africa, complementing existing terrestrial broadband infrastructure and technologies.

The launch follows a two-year process of engagement with industry partners. SEACOM installed its LEO satellite equipment in South Africa and has completed all essential trials.

“Our clients have watched closely and have been very responsive. They’re interested in the capabilities and overall potential of LEO connectivity technology and are attracted by the element of innovation and the stability it could bring to parts of their business,” said Clayton Codd, GM: sales at SEACOM South Africa.

Clients will be able to integrate LEO satellite access into their network infrastructure and business continuity plans. The launch also involves SEACOM partnering with one of South Africa’s premier financial service providers, which will employ LEO to enhance the company’s network access capabilities and assure reliable product and service delivery.

“The end goal is to make the LEO

service an essential value offering for organisations of all shapes and sizes. Connectivity is on track to become a wholesale service made up of different technologies that work together to meet clients’ needs and deliver the uptime and performance that’s expected from market leaders. By holistically improving enterprises’ operational capabilities and providing always-on connectivity, we are enabling them

and ushering in a new wave of digital transformation,” said Alpheus Mangale, Group CEO, SEACOM. “There are so many opportunities that can be explored with the power of partnership. By getting major industry players together and uniting them with the common thread of broadband connectivity, we can make significant changes and transform the lives of all South Africans.”

Telecom Namibia loses 43% of subscribers

Telecom Namibia had deactivated 191,598 unidentified SIM cards by 1 April, when the regulatory deadline set by the Communications Regulatory Authority of Namibia (CRAN) expired. This accounted for 43.3% of its subscriber base of 442,410 customers.

Subscribers whose SIM cards have been deactivated have until June to register and recover them before they are put back on the market.

The campaign to identify Namibian telecom subscribers was launched on 1 January 2023 and is expected to end on 31 December 2023. As of 27 December 2023, however, just 62.5% of SIM cards were registered. The government therefore pushed back the deadline to allow people to comply. Initiatives have also been put in place to facilitate the process for citizens. Despite this, the registration rate was 70.6% as of 29 February.

With the campaign, the government seeks to combat cybercrime and improve regulation of the national technology landscape. The initiative is also expected to affect the revenues of telecom operators and banking institutions.

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Going further in critical communications

Zimbabwe may bump up prices

Zimbabwean telecoms companies have not ruled out the possibility of increasing the prices of their services again.

Under the Association of Zimbabwean Telecom Operators (TOAZ), TelOne, Econet, NetOne and Telecel have challenged the regulator and consumers on the difficulties they have in maintaining their prices for a long time to the detriment of their profitability.

“Like all other sectors in Zimbabwe, the telecoms industry also faces challenges such as shortage of foreign exchange, increasing operating costs, frequent power cuts and significant debt levels. It is essential to quickly address these challenges to maintain the viability and sustainability of

the local telecoms sector, allowing it to adapt to technological innovations and have a positive impact on economic growth,” said TOAZ in a release. Zimbabwe’s

telecoms operators have regularly revised their prices upwards since 2019, but these adjustments have proven ineffective due to the economic crisis reigning in the country.

A further increase in services should enable the operators to increase their revenues and make their activities profitable. This should also allow them to invest in the extension and modernization of their networks to guarantee quality services to customers.

“Investments in ICT infrastructure are essential to expand geographic coverage and transition to new, faster and more efficient technologies, such as 5G. These investments are largely made in foreign currencies. For example, 5G technology makes it possible to achieve speeds higher than the general needs of users, whether individuals or businesses,” said TOAZ.



Talking critical

Enhancing and advancing critical communications for the benefit of all

In today’s time, full of security challenges and unexpected situations, both those caused by man and those where nature plays the main role and which affect everyday life and business, it has been proven time and time again, all around the world, that having robust and reliable communications systems is essential when managing major events, whether planned or unplanned. TCCA’s Critical Communications World (CCW), the most significant world event dedicated exclusively to critical communications, is coming this year to the region, to Dubai. CCW aims to bring closer and showcase the best in critical communications, from products and services to case studies and future technologies across narrowband and broadband networks, for visitors around the world, and especially from the Middle East and Africa.

The theme for CCW 2024 is ‘Securing society and industry - connection is the lifeline.’ Every innovation, every new product and service, every insight at Critical Communications World – all are based on the need for resilient, robust connectivity. As our world becomes increasingly reliant on connected communications – whether for the consumer, the business, or the critical user – the availability and quality of communications is relevant to, and important for, everyone.

We chose this region for CCW 2024 as the Middle East and North Africa (MENA) have long been recognised as digital leaders in critical communications. When it comes to digitalisation, there are regional differences in global migration - Asia and Oceania have a large analogue installed base that is falling moderately; Europe and the Americas have a faster transition to digital technologies; but in MENA the transition is even more rapid. Critical communications analyst house Omdia expects that this year, MENA will become one of the most digitised regions in the world with more than

95% of LMR users converted to digital. The increasing economic diversification of the Middle East and Africa, the accelerated development of the strategic industries of transportation, energy, utilities, mining and the requirements for public safety and security (PSS) provide strong market drivers for robust communication infrastructure. The largest adopter of LMR technology in the MENA region is the PSS sector, which accounted for almost two thirds of all users at the end of 2023. The region followed a very positive trend last year across technologies and applications, and Omdia forecasts digital LMR technologies as having overall growth, illustrating the development of critical communication networks in the region. The mission critical communication market in the Middle East & Africa is estimated to grow at a CAGR of 8.1% from 2022 to 2028 (Business Market Insights, 2022).

Historically, MENA has been divided between countries rich in natural resources and relatively poorer countries in parts of Africa. The wealthier nations have opted for TETRA and P25 solutions, whereas the economic efficiency of cost-optimised digital has appealed to the more cost-sensitive governments. Replacement terminal shipments have recently dominated this market, accounting for more than 75% of deployments. There are notable examples in Middle East countries where new TETRA networks have been deployed to address the needs of sports as well as tourism-related contracts in Bahrain, UAE, and Saudi Arabia, including for the F1 Grand Prix in Abu Dhabi and Bahrain as well as mission-critical solutions for the Hajj pilgrimage in Saudi Arabia.

MENA has been an early adopter of LTE, with several private LTE networks for public safety in the region. However, TETRA is a tried and tested, established technology for public safety users, and Omdia projects that this region will continue to adopt TETRA well into the second half of the decade.

This dynamism and growth is reflected across the conference and exhibition of Critical Communications World. With a wealth of conference content including presentations

Mladen Vratonjić, Board chair, TCCA



covering critical communications for vertical sectors: smart cities, airports and utilities; how to increase efficiency and security for critical communications users; the use of AI, early warning systems and more. Topics around networks – whether narrowband, 4G, 5G or looking forward to 6G, the conference looks at how the critical communications sector is moving forward.

Within the conference, and within their own dedicated area of CCW, governments from around the world will be bringing their perspectives to share in CCW’s unique Government Authorities Global Village. This provides a forum for government operators of critical networks to meet with their counterparts from other nations, to discuss progress and compare experiences. Critical communications networks around the globe are in various stages – from established TETRA networks that are being enhanced and contracts extended, to early-stage hybrid networks where critical broadband is being introduced, to fully fledged critical broadband networks already serving thousands of critical users. The Global Village is representative of all.

There are many, many elements that need to come together to ensure truly mission-critical networks and services, and CCW’s Focus Forums take a more in-depth look at key areas. With concentrated sessions providing knowledge sharing and comprehensive updates in each topic area, and led by our TCCA Working Group chairs, the 2024 Focus Forums will cover critical broadband roadmaps, legal and regulatory issues, interworking, testing and certification and TETRA.

CCW’s Focus Forums, the three-day conference, and the extensive exhibition, all are free to attend. It is an unrivalled gathering of those who are setting the agenda for the future, enhancing and advancing critical communications for the benefit of global society.

Critical Communications World takes place from 14-16 May in Dubai. Full details and how to register at www.critical-communications-world.com

All statistics quoted courtesy of Omdia unless otherwise stated.

AMN employs Starlink's constellation to boost rural coverage in Nigeria

Africa Mobile Networks (AMN) is utilising Starlink's low Earth orbit (LEO) satellite constellation to boost its internet capabilities in rural Nigeria.

"By using Starlink terminals to provide a low latency satellite link, we are able to deliver the full capacity of AMN's single multi-operator radio access node with 3G and 4G as well as 2G,

with ever-increasing amounts of bandwidth and data volumes demanded by subscribers while remaining economically viable. The LEO backhaul also paves the way for AMN to provide 5G services, expected before the end of 2024," said AMN.

The project is part of a larger agreement signed by AMN and Starlink in July 2023 to strengthen the capabilities of its telecoms sites in Africa.

Morocco cuts time limit on phone number portability

The National Telecommunications Regulatory Authority of Morocco (ANRT) has reduced the time limit for portability of telephone numbers (fixed and mobile) from two days to one.

The measure makes it possible to introduce more fluidity into this process, which offers subscribers the possibility of leaving one of these telecom operators for its competitor while retaining their original number.

In the 2023 edition of its Number Portability Observatory in Morocco, ANRT announced the upcoming launch of the operator identity statement (RIO) to reduce unsuccessful requests which represented 22% of the total number of requests in 2023.

It was in January 2020 that the ANRT increased the regulatory duration for processing network change requests to two days compared to three previously. To achieve this, the regulator had to set up the centralized number portability database (BDCPN), in coordination with the three telecom operators.

According to ANRT, the flow of portability of fixed numbers increased from 81,692 in 2022 to 98,920 in 2023. For mobile, the flow increased from 1.4 million to 1.7 million over the same period.

Accelerating the process of telephone number portability should make it possible to strengthen competition in the telecoms market by giving more power to the consumer.

Bank of Mozambique limits electronic money transactions

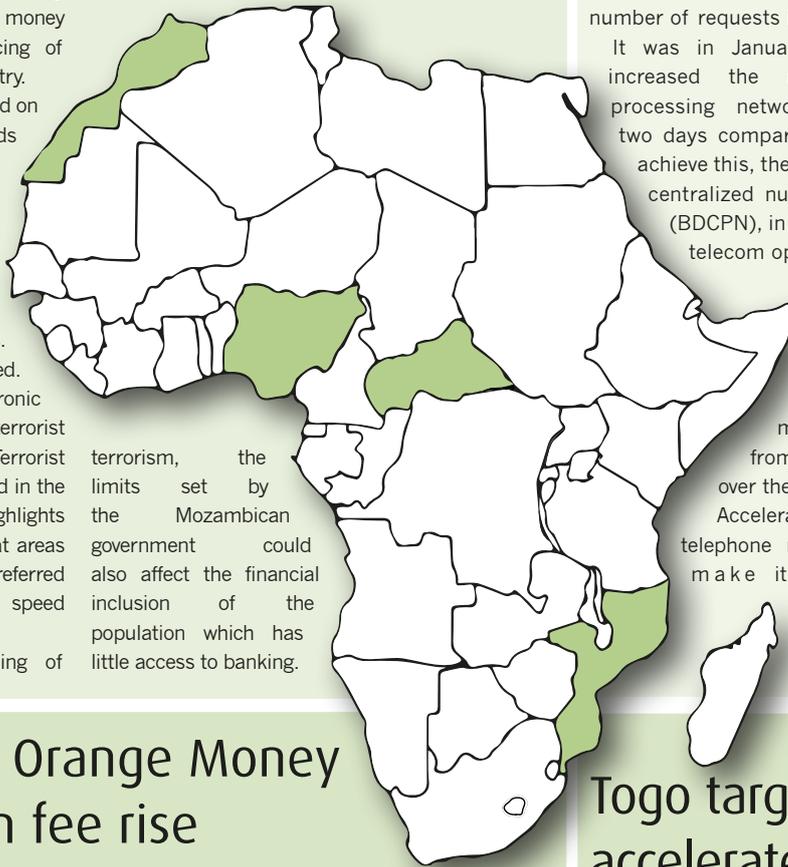
The Bank of Mozambique has opted to apply limits for transactions through electronic money institutions (EMI), to combat the financing of terrorism and money laundering in the country.

Clients are classified into three levels based on the risks they represent. Level 1 corresponds to 'clients subject to simplified identification, verification and due diligence measures, based on their low risk.' Level 2 will be assigned to clients 'for whom standard or enhanced identification, verification and due diligence measures are adopted.' Level 3 corresponds to micro and small businesses. Medium and large businesses are not affected.

The government found that the electronic money sector poses a high level of threat to terrorist financing in Mozambique. The National Terrorist Financing Risk Assessment Report published in the Official Journal of 29 December 2023 highlights a significant flow of funds to terrorist threat areas via electronic money establishments, preferred over banks for their ease of usage and speed of transactions.

Beyond the fight against the financing of

terrorism, the limits set by the Mozambican government could also affect the financial inclusion of the population which has little access to banking.



Government asks Orange Money to halt transaction fee rise

The Central African government has asked Orange to reverse a recent increase in transaction fees on its Orange Money platform.

Justin Gourna Zacko, minister of the digital economy, posts and telecommunications, criticised the operator for having increased its prices unilaterally. The increase in transaction fees follows the government's announcement of a 1% tax on financial transactions by electronic means, mobile money and all other similar operations. The measure is provided for by the 2024 Finance Law.

"This 1% tax is added to that of 7% on telecommunications costs decided unilaterally

by the executive through the Telecommunications and Postal Regulatory Authority (ARCEP), without taking into consideration the weak power of purchase of Central Africans," said the Platform of Actors for the Protection of Digital Rights in Central Africa (PAPDNC).

An increase in mobile money transaction fees could impact the use of these services, which constitute an alternative for the financial inclusion of a Central African population which is poorly banked. The Central Bank of Central African States identified 153,331 bank accounts and 97,211 microfinance accounts in its Report on payment services in CEMAC in 2022.

Togo targets accelerated public service digitisation

The Togo Digital Agency (Agence Togo Digital or ATD) is reportedly working on a plan to speed up the digitisation of Togo's public services.

The plan aims to modernise the public administration through innovative tech tools that will enable it to allow both individuals and businesses to fill in online forms, submit documents, pay fees and schedule meetings for on-site formalities. Spearheaded by the Ministry of Digital Economy and Digital Transformation, the initiative will make access to public services easier for the general public.

Cameroon marches towards digital consular services

Cameroon has commenced building an ICT facility as part of a government initiative to standardise and safeguard the country's consular services, including an electronic visa (eVisa) system that was implemented in 2023.

Impact Palmarès R&D SAS will build the Ministry of External Relations' Digital Transformation Centre (CTDM-MINREX) in the next 12 months. The eco-friendly, high-tech four-story building Yaounde will include an ICT laboratory, a management unit for the supply, storage, and distribution of consular service equipment, consumables, and printed materials, a training room, a 24-hour call centre,

and a data storage unit.

Cameroon's minister of external relations, Lejeune Mbella Mbella, said that CTDM-MINREX's functions will allow the country to improve the quality of its consular services to international standards. The centre will streamline consular procedures and expedite work processes, allowing applicants to receive eVisas to Cameroon in 24-48 hours.

The facility will also serve to ensure the country's sovereignty over the data created by the eVisa system, safeguard consular data, and modernise internal operations. Cameroon welcomed 157,668

visitors of all categories through the country's two main international airports of Douala and Yaounde between 30 April 2023 and 30 March 2024, one year after the new eVisa system was deployed.

"Since the launch of the eVisa platform, we have experienced an impressive rise in the number of persons visiting Cameroon. With the coming of this centre, we expect that number to increase and several other positive changes," said Mbella Mbella.

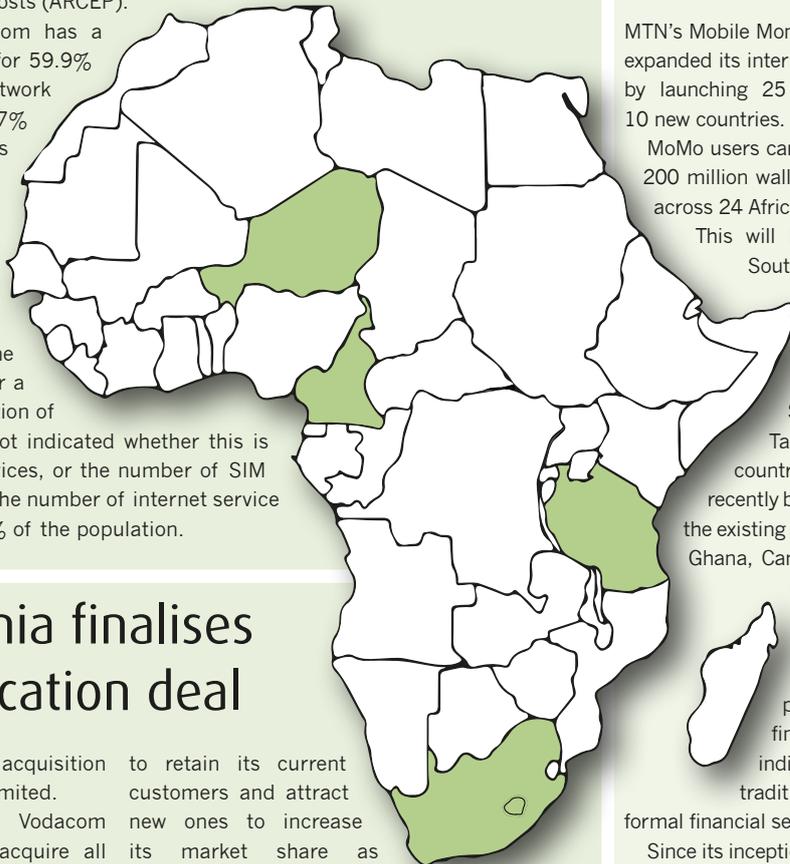
In addition to a data centre to manage and process consular information, the agreement includes the creation of biometric consular cards and other diplomatic documents.

Mobile services cover 78% of Niger

In Niger, the geographic coverage rate of mobile telephone services is 38.2% as of 31 December 2023 and 78% of the population is covered by mobile services, according to the Regulatory Authority for Electronic Communications and Posts (ARCEP).

According to ARCEP, Niger Telecom has a geographic coverage rate of 51.8% for 59.9% of the population. The Moov Africa network covers 29.1% of the territory and 57% of the population. Zamani reaches 86.8% of the Nigerien population while its network only covers 29% of the national territory. Airtel covers 43% of the territory and 84% of the population.

With this coverage rate, Niger had 17.2 million mobile phone subscriptions at the end of 2023, for a penetration rate of 65% on a population of 26.2 million. However, ARCEP has not indicated whether this is the number of people using the services, or the number of SIM cards having access to the services. The number of internet service subscriptions was 8.2 million, or 32% of the population.



MTN MoMo expands remittance services

MTN's Mobile Money (MoMo) app has significantly expanded its international remittances capabilities by launching 25 additional wallet corridors in 10 new countries.

MoMo users can now send money to more than 200 million wallets, maintained by 39 partners, across 24 African countries.

This will benefit migrant populations in South Africa who send money home to Mozambique, Malawi, and the Democratic Republic of Congo (DRC). Ethiopia, Gabon, Kenya, Madagascar, Senegal, Sierra Leone, and Tanzania are among the other countries where passageways have recently been opened. This is in addition to the existing corridors, which include Zambia, Ghana, Cameroon, Rwanda, Uganda, Ivory Coast, Liberia, Congo Brazzaville, Benin, Guinea Conakry, and Guinea Bissau.

The news aligns with the platform's mission to promote financial inclusion and empower individuals, including those without traditional bank accounts, to access formal financial services.

Since its inception in 2019, MoMo has continued to evolve, and offers a wide range of services, including payments, e-commerce, personal insurance, lending, and more.

"With the addition of these new wallet corridors, we are furthering our commitment to facilitating seamless cross-border money transfers at a launch fee of 4%, which is lower than most competitors," said Kagiso Mothibi, MTN SA's general manager for Fintech Products and Services. "By expanding our services to new markets and corridors, we are not only enabling individuals to support their families across borders but also driving economic empowerment and fostering greater financial resilience within communities."

Vodacom Tanzania finalises Smile Communication deal

Vodacom Tanzania has finalized the acquisition of Smile Communication Tanzania Limited.

The Tanzanian subsidiary of Vodacom Group indicated that its offer to acquire all 284,984,314,284 ordinary shares of its competitor has been validated by regulatory authorities. The value of the transaction is estimated at 68.8 billion Tanzanian shillings.

Vodacom Tanzania made an offer to buy Smile in July 2023. The resources inherited from this transaction are expected to enable Vodacom to strengthen its capabilities to better meet growing consumer demand for high-speed connectivity (4G and 5G). As of October 2022, the company had already acquired frequencies in the 700MHz, 2300MHz and 2600MHz bands for \$63.2 million.

These investments should enable Vodacom

to retain its current customers and attract new ones to increase its market share as competition increases in the Tanzanian telecoms market.



Ethiopia sets price caps on termination rates

The Ethiopian Communications Authority (ECA) has set price caps on mobile and fixed termination rates for the next five years in a bid to foster better competition in the country's telecoms sector.

The move is rooted in a 2022 interconnection agreement between state-owned incumbent telco Ethio Telecom and Safaricom Ethiopia, which was mediated by ECA. Under that agreement, the ECA set mobile and fixed termination rates at ETB 0.31 per minute, with the understanding that it would revise the rates after it completed a cost study to set the rates based on actual cost of termination.

The ECA has now completed the cost study, using data contributed by Ethio Telecom and Safaricom, and has reset the terminations rates

at ETB 0.23 per minute for mobile, ETB 0.15 for fixed-line and ETB 0.05 per SMS. The rates took effect on 1 May and will gradually decline over the next five years to 2029 to ETB 0.19, ETB 0.12 and ETB 0.04, respectively.

The ECA emphasised that the new termination rates are a price cap, therefore, all mobile and fixed telecommunications operators have the freedom to negotiate interconnection rates that are lower. The ECA has implemented a top-down fully allocated cost (TD-FAC) model to calculate the rates, as this relies primarily on financial and accounting information that should be readily available.

The move to set termination rates was justified by a separate market review by ECA to examine competition dynamics in the telecoms sector

and propose pro-competitive remedies where necessary. That study concluded that Ethio Telecom has significant market power (SMP) in various wholesale markets, prompting the proposal of remedies such as price controls, mandatory agreements filing, and non-discrimination obligations.

The objective of implementing cost-based termination rates is to establish a level playing field for telecoms players.

“By ensuring that rates are set based on the costs of providing services... the intention is to promote competition among operators, prevent anti-competitive behaviour, and encourage a market structure that benefits consumers by offering them a variety of choices and competitive prices,” said ECA in the report.

Nigeria considers criminalising fibre damage

In Nigeria, the Ministry of Public Works is considering regulations that criminalise damage caused to the fibre optic infrastructures of telecom operators, according to Bloomberg. The new regulation provides for tougher penalties for offenders and focuses on monitoring the activities of construction companies.

This initiative comes after repeated complaints from MTN Nigeria and other telecommunications companies deploring financial losses due to cable cuts. The Nigerian Communications Commission (NCC) has recorded more than 35,000 cases of optical fibre cuts in 2022 and more than 24,000 in 2023. An investment of 14 billion naira has been made to repair this damage.

The attack on telecoms infrastructure has

been a concern for several years now. In 2022, Airtel had already asked the authorities to consider it a criminal offense. As early as 2014, the government proposed a bill on critical national infrastructure.

Zegtel to invest 30 billion in Nigeria's value added services

Zegtel plans to invest 30 billion naira over the next five years to expand mobile connectivity coverage in the country.

“In other developed markets, subscribers benefit from a wide range of value-added services on their mobile networks. Unfortunately, in Nigeria, subscribers only have access to the basic voice and data offering. Zegtel is set to be a game changer with its product offerings,” said Victor Izegbu, executive chairman of the MVNO.

Zegtel is among 25 MVNOs awarded operating licenses by the Nigerian Communications Commission (NCC) in June 2023. The company acquired a license in the Tier 3 category for N130 million.

Zegtel seeks to bridge the digital divide in the country and provide affordable connectivity to millions of Nigerians who previously lacked access to telecommunications services. The company will still have to compete with mobile network operators, ISPs and other MVNOs.

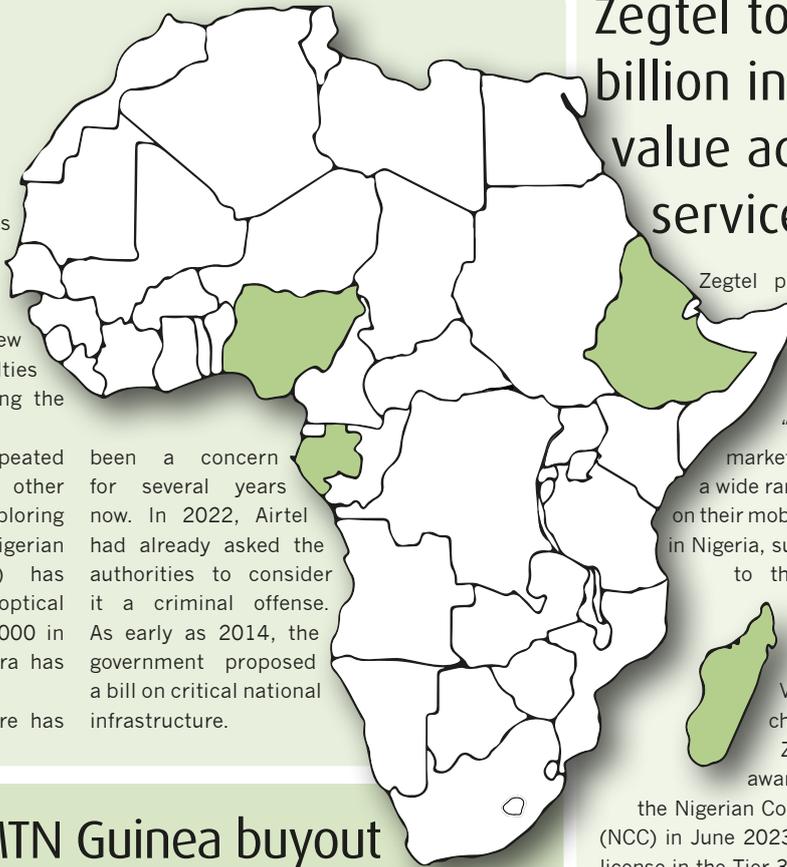
Telecel discusses MTN Guinea buyout to improve customer experience

Rose Pola Pricemou, Guinean minister of posts, telecommunications, and digital economy, recently received a delegation from Telecel Group accompanied by Didier Nzuzi Sala-Diakanda, managing director of MTN Guinea. The discussions focused on the acquisition of the Guinean subsidiary of MTN Group by Telecel.

“The goal is to build trust and concretely improve the customer experience. The ministry remains committed to supervising and

supporting all initiatives aimed at promoting the accessibility and quality of telecom communications in Guinea,” said the Ministry of Posts, Telecommunications and the Digital Economy in a publication on its Facebook page.

MTN Group is seeking approval from Guinean authorities for a deal that includes the sale of the 75% stake it holds in its Guinean subsidiary to Telecel. MTN Guinea holds a 24.2% share of the 14.1 million mobile telephone subscribers in Guinea as of the end of December 2023.



Starlink obtains rights to operate in Madagascar

Starlink has obtained the agreement of the Malagasy government to launch its commercial services in Madagascar.

Tahina Razafindramalo, minister of digital development, posts and telecommunications, said that the company is finalizing its local installation and the regularization of its administrative situation to obtain a satellite operator license.

The Malagasy government has been implementing a policy of liberalisation of the ICT sector since April. In November 2023, the Communication Technologies Regulatory Authority (ARTEC) launched an international call for tenders for the establishment and operation of public satellite communications networks in Madagascar. The initiative aims to stimulate investment, strengthen competition, and reduce consumer prices.



Tigo expands fibre connectivity in Tanzania

Tigo has announced the launch of fibre optic Internet services for individuals and businesses with a new service called Tigo Fiber, which is initially available in certain areas of the capital Dar es Salaam. It will then be extended to other regions of the country.

The initiative is being undertaken to meet the growing demand for broadband connectivity in Tanzania. The company rolled out 5G in February 2023 with technological support from Ericsson.

The initiative should enable Tigo to improve its revenues and strengthen its position in the national telecoms market.



Talking satellite

Daniel Batty, space & policy analyst, Access Partnership



Earth observation's unique role in Africa

It is trite to state that we live in the age of data. Advancements in computing have augmented every sector of society and the economy, with these effects set to increase drastically with the introduction and adoption of artificial intelligence in different sectors. However, this is dependent on access to high-quality data, which is the lifeblood of computing and decision-making. An increase in the quantity and quality of data is directly proportional to an increase in service offerings and insights.

One of the most influential and important data streams impacting development initiatives in Africa is geospatial data generated by Earth observation satellites. These satellites may be fitted with a number of different camera lenses and sensors, enabling the satellite to capture a wide range of different data. This may include standard optical images, thermal imagery to monitor heat levels and outputs, and synthetic aperture radar to monitor changes in soil, urbanisation, and deforestation. The data captured by these lenses and sensors form the basis for important government and private sector decision-making on town planning, agriculture investment, mining and mineral extraction, ocean conservation, and fisheries, etc.

Earth observation in Africa

Africa undergoing a rapid industrial and digital transformation. While it has many unique development challenges, the continent is compelled to simultaneously address global challenges such as climate change.

The rate of development in the continent is increasing, propelled by access to new technologies and investment opportunities that catalyse further development. Crucially, heightened access to data enables sustainable, well-informed development pathways

for Africa's advancement. Earth observation has firmly claimed its place as one such catalysing technology. The African Space Policy and Strategy acknowledges Earth observation as a strategic thematic focus and highlights the need to study the private sector and academia's involvement in the Earth observation sector.

At the national level, the South African National Space Agency (SANSA) has invested heavily in Earth observation, with a division dedicated to the practice. SANSA provides data services that promote socioeconomic benefit, including resource management and disaster response. In 2022, SANSA launched the 'Digital Earth South Africa Earth observation data cubes platform,' which houses over 30 years of archived geospatial data covering 1.2 million square kilometres of South Africa and its neighbours. The platform facilitates in-depth analysis of this data and allows actionable insights. One such example of actionable insight was the use of Earth observation data to map infrastructure damage following severe flooding in the Eastern Cape province in 2023. This enabled the disaster recovery operations to be coordinated and prioritised addressing the most urgent needs first.

Meanwhile, the Rwandan Space Agency is working to establish a Geospatial Data Hub in partnership with the French Development Agency. The Hub will serve as a centralised infrastructure project where data can be processed to improve evidence-based development, planning, monitoring, and evaluation.

Challenges for increased adoption

Earth observation is a highly specialised sector in all aspects, from satellite design and manufacturing to operations and data collection to data processing and analysis. To achieve the benefits of increased geospatial data, governments must commit resources towards upskilling citizens and developing the skills required to advance and effectively leverage this data. Investment into human capital and local startups is needed to develop local African

Earth observation products and services which can be used by governments for enhanced policy decision-making but can also generate revenue when sold to the private sector to enhance mineral extraction, commercial agriculture, and resource management.

Alongside the need for investing in and increasing human capital in Earth observation, there is also need for increasing digital infrastructure. Access to stable electricity, internet, and telecommunications infrastructure is vital for the development and use of domestic Earth observation products and services. Geospatial datasets can be very large, requiring advanced digital infrastructure to transfer and process the information into usable analysis.

Lastly, raising awareness of the impact and importance of Earth observation and geospatial data is necessary. Policy initiatives should be developed and earmark how Earth observation can contribute to the local needs of a country and outline targeted investment and development initiatives. A lack of dedicated national strategies or policy initiatives will leave Earth observation development directionless and slow progress towards development and adoption.

Conclusion

As a region undergoing industrialisation whilst still having to be cognisant of modern global policy concerns, Africa faces unique development challenges. As such, the region is forced to be specific and targeted in its development initiatives. Maximising the possible gain while ensuring growth remains sustainable and reducing wasted cost and effort is of great importance. Geospatial data and the broader Earth observation sector directly contribute to ensuring administrations make informed policy decisions. From mapping oceans and fish stock, water and soil quality, deforestation, mineral wealth, city and town development, and temperature increases, geospatial data ensures that development is informed and sustainable.

Tackling Africa's data centre market

Africa's data centre segment is booming as demand explodes across the continent. Sibongile Thobakgale, Project Sales Manager (Data Centre) for Southern Africa at Aggreko, outlines what's hot and what's not.

Africa is growing in the data centre space. In one of the meetings I attended, it was discussed that the big data centre players want it to be a 1GW industry.

However, data centres are power hungry; it takes a lot of energy to keep the equipment cool, especially in Africa. It is public knowledge that reliable power is a challenge in most African countries. In South Africa, for example, Eskom is experiencing infrastructure challenges causing loadshedding or load curtailment. Challenges like these are going to hinder the growth in the African data centre market, especially with the booming population growth.

Today, much of Africa's data is stored in Europe, but now the continent's data regulators are reassessing regulations, especially when it comes to storing sensitive information. This is going to be another challenge for the industry.

In terms of opportunities, though, it is projected that there will be 525 million people accessing the internet from Africa. It's a fast-growing market, and with everything being done online nowadays, this is a great opportunity as demand for digital infrastructure continues to grow.

Supporting Africa's data centres

Some of the keys where Aggreko can add value for Africa's data centre space are:

1. Grid, bridging and commissioning power generation with battery storage solutions – 80% of sites were dismissed due to no mains

power being available or significant delays in getting it.

2. Construction phases – supply of temporary greener power reducing CO2 emissions, heating, cooling, and dehumidification packages to enable or speed up the construction process.
3. Commissioning and IST – loadbank and heat-load solutions for testing the mechanical and electrical infrastructure before the data halls go live.
4. Upgrades and pre-planned maintenance – temporary UPS, transformers, switchgear, generators, and chillers whilst upgrades or maintenance are carried out on existing systems.
5. Emergencies and contingency planning – quick deployment of power and cooling solutions should a failure occur with the building infrastructure.

For some of our hyperscaler customers, when they go into maintenance, they require us to rent them a generator for the duration, because as we know, data centres need power. In case of emergency, say if a piece of equipment fails and there are no immediately available spares, we can rapidly build a small power plant for whatever the client's MW requirements are.

Shaping the market

Across the continent, we are seeing increased adoption of high fibre. The compact cable construction plays a different role in Africa, and communication services providers

are rethinking their fibre packages.

Then, of course, there is the focus on ESG – everybody's going green. We know that renewable energy is challenging in Africa, and in many other geographies, but despite this, utilities such as Eskom are investing to build renewables.

Regionally speaking, there are five countries in Africa that are going to be vibrant for the next two years. South Africa will lead the pack, particularly as the only country that has established distinct two cloud regions – Johannesburg and Cape Town. This will be followed by Nigeria, which has the highest population in Africa, which of course comes with high data demands – the country has recently installed a lot of edge data centres. In Kenya, there are a lot of activities happening right now – the same is true for Egypt and Morocco.

When we look at the growth trends in South Africa, there is 408MW of capacity, but just 106MW of live capacity. Some are under construction, and some are new builds that are envisioned in the next two years. That's a 41% variation. Similarly, Nigeria, has 100MW of total capacity, but only 21MW of live capacity.

In one of the Data Centre Platforms, I attended the following research showed the growth trends between South Africa and Nigeria. South Africa has an estimated 408MW

of data centre capacity, with just 106MW being live capacity. Some are under construction, and some are new builds envisioned in the next two years. That's a 41% variation. Similarly, Nigeria has approximately 100MW of total data centre capacity, but only 21MW of live capacity.

South Africa has shown a lot of growth with new projects in the pipeline. The likes of Teraco's JB5, Vantage JNB2, NTT Dimension Data, MTN and Open Access Data Centre. There are other expansion projects from Hyperscalers as well. It is a good time to be in Africa's bustling data centre market. ■



Sibongile Thobakgale, Project Sales Manager (Data Centre) for Southern Africa at Aggreko

Hybrid satellite solutions to help airlines meet passenger demand for in-flight connectivity



Reza Rasoulian, vice president, Hughes

Commercial aircraft serving the cities of Asia, Africa, and the Middle East fly some of the longest non-stop flights in the world. Passengers traveling from Singapore to New York spend over 18 hours in an airplane cabin. From Dubai to Auckland and from Johannesburg to Atlanta are both around 17 hours in the air. What would you do on a trip that long? Chances are, you'd want to get online for some, if not most, of the time in the air.

One survey found that 97% of airline passengers use their personal devices while in the air for everything from work and social media to entertainment. The bottom line is that passengers today expect in-flight entertainment and connectivity when they fly. On-board WiFi is a necessity for many passengers and, therefore, a competitive differentiator for airlines, too. However, the challenge for airlines is that aircraft WiFi networks depend on fixed-bandwidth satellite connections, and as more passengers sign on – some connecting with multiple devices – the networks become slower and slower for all users, to the point that many applications won't even work. This is frustrating for passengers, especially those who have paid extra for in-flight WiFi.

The geostationary vs. low Earth orbit satellite landscape

In efforts to satisfy the growing demand for in-flight connectivity, global satellite operators launch new, more powerful spacecraft to provide additional broadband. To

date, most in-flight connectivity has relied upon satellites in the geosynchronous orbit (GEO) around the Earth. These spacecraft orbit at more than 22,000 miles (36,000km) from Earth. A new generation of satellites operate in low Earth orbit (LEO), between 600 and 1,000 miles (960 and 1,600km) above the planet. Because the LEO satellites are closer, their signal can be picked up with a smaller antenna than a GEO signal. The shorter distance means there is less lag time, or latency, in a connection, an important factor in applications such as streaming and video conferencing.

The two types of satellite connectivity – GEO and LEO – both deliver high-speed bandwidth from space. GEO satellites bring capacity density over busy airport hubs and routes. LEOs bring worldwide coverage – even over oceans and the polar region. And, of course, there's a difference in the service latency, which is meaningful for some applications, such as when using a VPN. But airlines don't have to choose which type of satellite connectivity to use in meeting passenger expectations for in-flight WiFi. They can use both.

Meeting in-flight WiFi demand with a hybrid satellite solution

Demand for in-flight connectivity is only going to grow, and a recent report by NSR predicted that it will grow more quickly in Africa, the Middle East and Asia than in any other parts of the world. NSR projects that these three regions will account for nearly half of the revenue

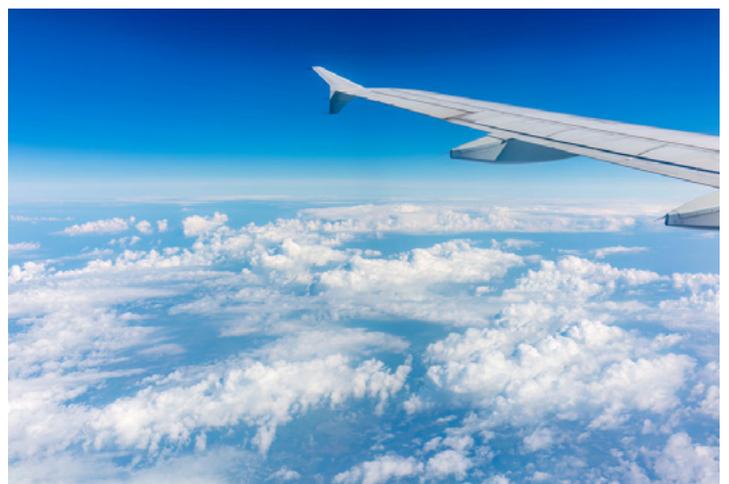
growth for in-flight connectivity over the next decade, primarily because the huge populations that are still underserved with airline flights and because there is currently less leisure travel among the populations than in Europe and the Americas.

The challenge for airlines is being able to tap this growing revenue opportunity by providing reliable in-flight WiFi to the passengers who are willing to pay for it. With both a GEO and a LEO connection, plus the necessary intelligent networking software, an airline can deploy a 'hybrid' network solution. A dual connection offers more bandwidth for passengers connecting to the internet and improves reliability of those connections for email and other business and entertainment applications. In short, with a GEO and LEO satellite solution, airlines will be able to offer passengers better and more reliable in-flight WiFi than what is currently possible with GEO-only or LEO-only connections.

What's particularly exciting about a hybrid in-flight connectivity service

is that airlines can preserve the considerable investments they've already made in GEO solutions. The prospect of 'ripping and replacing' GEO antennas and equipment from commercial aircraft is a daunting – and expensive – one. Especially for an airline that has outfitted its fleet with a GEO satellite solution. Instead, airline executives with existing GEO-only receivers on their aircraft can look at hybrid options using LEO to preserve their GEO investments while enhancing their passenger experience at the same time.

NSR predicts that the number of satellite receivers on commercial and private aircraft will increase from 71,000 currently to over 145,000 units by 2032, a growth rate of more than 7% each year. Fed by passenger demand, the aviation industry needs to connect airplanes to satellites that are more technically advanced and more powerful. Airlines need to look for the best solutions, ones that take advantage of all the satellite industry has to offer. ■



Exemplifying resilient communications systems

The March subsea cable outage was huge news across the globe – but how big an impact did it have on consumers, and what lessons were learned by operators?

On 14 March, four subsea cable systems – WACS, MainOne, SAT-3, and ACE – suffered significant damage from a major subsea landslide off Abidjan, Côte d’Ivoire, significantly impacting upon communications across the African continent. Countries including Liberia, Benin, Ghana, Burkina Faso, the Gambia, Guinea, Ivory Coast, Niger, Namibia, South Africa, and Lesotho, were all affected.

The March incident shortly followed another in the Red Sea in February, wherein three cables were damaged by an anchor drag, highlighting the vulnerabilities inherent in the subsea cable sector.

“This is, unfortunately, not the first time that damages to undersea cables have caused internet disruptions. In 2020, damages caused internet disruptions in West Africa, while in 2018, 10 West African countries were completely offline for 48 hours, due to damages to the ACE submarine cable,” explains Rhys Morgan, general manager – vice president, media & networks, EMEA, Intelsat.

Subsea cables are indeed vulnerable to accidental damage from fishing trawlers and ship anchors; natural disasters like earthquakes and underwater landslides; and deliberate sabotage or vandalism.

“The recent incident off the coast of Côte d’Ivoire highlights the vulnerability of multiple cables to a single geological event, underscoring the importance of cable route diversity and redundancy in mitigating the impact of such occurrences. Having redundancy through multiple cable systems is important for network resilience,” says Rolf Mendelsohn, Paratus Group CTO. “In addition to the most recent incident off Côte d’Ivoire, there have been two recent incidents off Muanda, DRC which were the result of undersea landslides, with both landslides having been presumably precipitated by seismic activity in the Mid Atlantic Ocean.”

Feeling the impact

The impact of the cable outage was significant enough to make headlines in major national newspapers across the globe – perhaps a telling indication of our reliance on connectivity.

“The damage to these critical undersea cables has led to widespread internet and online service disruptions, affecting millions of

people across Africa over the past month,” says Mendelsohn. “This has far-reaching consequences for commercial operations, personal communications, healthcare, and education sectors that rely on stable internet connectivity.”

Morgan agrees that the damage caused immediate widespread connectivity challenges across the African continent and beyond, with banking payments not processed and office workers left without access to emails and cloud services, amongst others.

“Whilst traffic was rerouted, the reliance on the internet for daily operations across various sectors highlights the devastating impact that a total outage can have on the continent’s economy, although some countries are better connected than others,” opines Morgan. “For example, South Africa is connected by nine submarine cables, whilst countries such as Sierra Leone and Liberia only have one fibre optic cable actually coming into the country. Any breakage is felt heavily across these countries.”

The Nigerian economy reportedly suffered a major setback due to network disruptions experienced by MTN and Airtel from the cable outage, raising concerns about its impact on the country’s stability. The economy has been particularly hard hit by the disruption since reliable network services are crucial for online transactions, and the disruption has led to a decline in sales for online retailers, with customers facing difficulties in accessing e-commerce platforms.

“The network disruption has, to a large extent, affected the financial sector, hindering online banking services and mobile payment platforms,” reports Temidayo Adefioye, CEO, Switchcon. “Also, access to banking services has been impeded, leading to delayed transactions, limited access to funds, and difficulties in conducting business operations. This has affected individuals as well as corporate entities, including payment processors and financial institutions, with implications for financial inclusion and the efficiency of payment systems.”

Accordingly, Nigeria now wants West African countries to join forces to protect shared telecommunications infrastructure and diversify connectivity to ensure uninterrupted connections.

Aminu Maida, executive vice chairman of the Nigerian Communications Commission, says that the cable outages have raised the urgent need for the subregion to establish a mechanism to protect itself from damage to submarine infrastructure and its impact.

“Securing telecom infrastructure is paramount for fostering Foreign Direct Investment (FDI) and enhancing investor confidence in the West African subregion. The reliability and resilience of telecommunications networks are crucial factors that investors consider when evaluating regional opportunities,” says Maida.

The vice chairman believes that the recent cable cuts have highlighted the need for a coordinated, multilateral approach to protecting shared infrastructure across member nations. As such, he proposes a framework for joint monitoring, risk mitigation, and emergency response procedures for the submarine cables that pass through the subregion. Maida adds that, in addition to strengthening its subregional infrastructure resilience, the region needs to promote the diversification of its connectivity, conduct regular capacity assessments, and facilitate the designation of telecoms infrastructure as critical national infrastructure in member countries.

Crisis response

Following reports of the outage, the response from the cable operators was swift and decisive; however, repairing complex subsea cable infrastructure – hundreds of metres below sea level – is no mean feat.

Nevertheless, according to the National Communications Authority of Ghana and landing service providers for the submarine cables involved, complete repair of the ACE, MainOne, SAT-3 and WACS submarine could take up to five weeks – so any time now.

“The repair process involves specialised cable ships locating the damaged sections, retrieving the cables from the seabed, and splicing in new segments. Each ship needs the exact cable spec to be loaded in port prior to departure so it is a logistically and practically time-consuming exercise,” says Mendelsohn. “In addition, the repair vessels have to wait for suitable marine weather (small swells) in order to be able to

effect repairs. The costs are typically borne by the consortium of telecom companies that own the affected cable systems.”

Following the outage, the cable companies involved scrambled to redirect traffic via alternative routes while the repairs were ongoing, with Liquid Intelligent Technologies, Angola Cables, Seacom, WIOCC and Paratus Group all having redundancies in place prior to the incident.

“Our priority is to ensure minimal disruption and maximum resilience for our clients,” reported Ryan Sher, group chief operating officer at WIOCC. “We have invested heavily in deploying diverse, highly-scalable national and international connectivity to support the uptime requirements of our wholesale client base. Investing at scale means that we consistently carry extra capacity, ensuring we are able to rapidly turn up or re-route capacity to address unexpected network disruptions. It also enables us to deploy short-term restoration solutions for other operators on a case-by-case basis.”

Connecting a continent

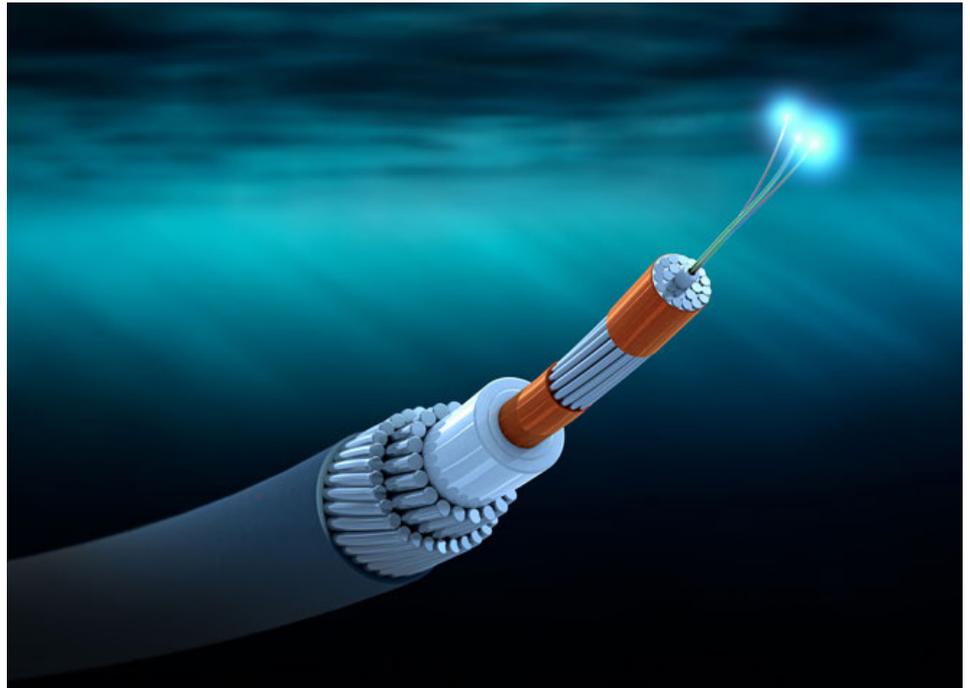
Swinging into its element, satellite has proven key to reconnecting Africa amid the cable outage disaster. With ubiquitous coverage, satellite is the only way to bring connectivity to countries around the continent, quickly, easily and cost effectively.

“Traffic that would usually be carried on the impacted cables was rerouted, but this highlighted how critical a stable and resilient internet infrastructure is for the economic growth and functioning of modern societies,” says Morgan. “A hybrid solution that includes terrestrial/maritime cables, wireless technology and satellites is needed to build that resilience into networks. A multi-layered approach with these highly complementary technologies will deliver the resiliency and security that MNOs expect for their networks.”

Indeed, CMC Networks – which utilises a combination of technologies to connect Africa, including the WACS, SAT-3 and ACE subsea cables – reports that it has now added low Earth orbit (LEO), medium Earth orbit (MEO) and geostationary orbit (GEO) satellite connectivity to its portfolio of solutions.

“The recent damage to subsea cables and the subsequent disruption to businesses across South Africa has highlighted the need for a wide variety of connectivity options and digital infrastructure that has the resiliency to ensure business continuity during unforeseen events. Our satellite solutions enable service providers and enterprises to manage risk and maximise uptime,” says Marisa Trisolino, CEO at CMC Networks.

Mendelsohn asserts that the emergence of LEO satellite constellations has made satellite connectivity a more viable option for reconnecting a continent during undersea cable outages: “in addition to leveraging redundant undersea cable capacity, CSPs like Paratus Group are also utilising satellite solutions (GEO and LEO) to ensure connectivity during cable outages. Paratus Zambia and Mozambique, for example,



has successfully integrated Starlink into its suite of solutions, providing reliable high-bandwidth connectivity to businesses in remote areas. CSPs have also secured additional capacity on operational undersea cables to restore services. For example, some providers have turned to the recently launched Equiano cable, to mitigate the impact of the outages caused by the damaged cables.”

The specific advantages offered by LEO – high-speed, low-latency connectivity comparable to fibre; the ability to reach remote and underserved areas; rapid deployment and setup; and affordable and user-friendly equipment – has made it a valuable tool for cable companies.

“CSPs like Paratus Group are successfully using LEO solutions as a backup solution alongside their direct internet services, improving overall network resilience,” shares Mendelsohn. “However, it’s important to note that satellite solutions are still best suited as a complementary technology to undersea fibre optic cables rather than a complete replacement. Fibre optics still offer higher data capacities and lower costs per bit for high-traffic routes. An integrated approach combining undersea cables, terrestrial fibre networks, and LEO satellite solutions can provide the most comprehensive and resilient connectivity for the continent.”

A resilient Africa

All reports suggest that, at the very least, the continent’s subsea cable operators were reasonably well-prepared for March’s cable outage, with each having multiple redundancies in place. Questions remain about whether these preparations were adequate, given the responses out of Nigeria.

“In this instance, various operators, whether satellite or terrestrial, came together to help restore connectivity and limit the impact,” says Morgan. “However, with governments

increasingly requiring a stable and resilient internet infrastructure for the economic growth, as well as ensure access to health and education services, anticipation is critical to help cover all eventualities and avoid any disruptions that could have some long-term impacts. Satellites are a crucial part of a necessary technology mix to ensure a much-needed resilient connectivity.”

Mendelsohn, meanwhile, believes that going forward, the integration of satellite solutions can help mitigate the long-term negative impacts of undersea cable outages on various sectors. By providing a reliable backup connectivity option, businesses can maintain operations and minimise lost productivity and revenue; schools and universities can continue online learning programs; healthcare providers can maintain access to telemedicine and digital health platforms; and government services and financial systems remain operational.

Moreover, “the availability of satellite solutions has been particularly beneficial for industries such as logistics, manufacturing, hospitality, mining, and education in remote areas. By ensuring reliable connectivity, satellite solutions can support the digital transformation of these sectors and contribute to overall economic resilience,” adds Mendelsohn.

Given the scale of the outage, it’s likely that going forwards, we’ll see a greater focus around resiliency by design, and increased partnerships with wireless and satellite providers to further bolster the continent’s networks.

“As CSPs continue to integrate satellite and terrestrial networks, the long-term impacts of connectivity disruptions on African economies and social sectors can be minimised. The incident underscores the critical importance of investing in diverse and resilient subsea cable infrastructure to minimise the impact of such events on African economies and societies in the long term,” concludes Mendelsohn. ■

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Advancing critical national services

Africa's utilities providers are going smart with wireless technologies, enhancing reliability and cutting costs with a combination of terrestrial and satellite connectivity...

When we talk about connecting Africa, we're usually focusing on consumers – enhancing internet adoption, enabling new services like OTT, mobile money, telemedicine, mobile retail, and so on. However, enterprises, too, stand to gain hugely through the provision of wireless connectivity, from e-governance projects through to one of Africa's most challenging critical services – utilities.

In support of utilities

Wireless communications have proven instrumental in supporting the provision of utilities across Africa, and, of course, the world at large.

“On average, electricity utilities in the continent lose 23% of all energy consumed due to operational inefficiencies, at a cost of almost US\$3.3 billion per year, compared to a 10% global average,” reports Nabil Ben Soussia, group CCO, IEC Telecom. “Africa is struggling with huge operational inefficiencies estimated to be costing more than US\$3 billion annually. This contributes to the region suffering the world's highest energy prices, with most of its electricity providers barely breaking even, which limits their scope for reinvestment.”

“Over the past few years, African utilities – especially of the electric variety – are making impressive strides to both modernise their grids and expand services to more underserved areas than ever before,” adds Dori Erann, VP, private networks marketing, Ceragon Networks.

Indeed, smart grid systems are becoming huge on the continent, helping enhance the reliability and efficiency of electricity distribution. These smart grids utilise sensors, meters, and communication networks to gather data on energy consumption patterns, identify areas of high demand, and manage power distribution more effectively, enabling reduced energy losses, lower operational costs, and improved service quality – particularly important goals for a region blighted by significant power outages.

“Receiving real-time data on the grid's status and operations can help drive further provisioning of services,” outlines Erann. “With the right data at their fingertips, utilities can go beyond day-to-day monitoring and management, and use data and artificial intelligence (AI) for predictive analytics as well as preventive and corrective maintenance.”

Remote monitoring and control of essential utilities infrastructure – power grids, water

systems, oil pipelines, etc. – makes a significant positive contribution to optimising scant resources. Moreover, with this remote monitoring, utilities operators can properly monitor their operations no matter how remote or rural the site, without having to send a human engineer for monitoring and maintenance – a task which may take days, lack accuracy, and be price-prohibitive.

“With this fast-paced growth and modernisation, planning, deploying, and running a resilient, reliable, and high-speed communications network backbone is vital. The right network enables key applications that can significantly advance and improve a utility's business operations and overall efficiencies,” says Erann. “Whether it is connecting remote field personnel, adding video surveillance to secure people and assets, or incorporating next-generation technology such as smart sensors, IoT devices, distribution automation, or AI, having sufficient and ubiquitous connectivity is the key to a utility's growth in the modern world.”

Modernising the network

There is no one magical technology for utilities when it comes to an expansive continent like

Africa - the best communications solutions usually include a combination of many.

Microwave backhaul, for instance, can bridge long distance gaps, while WiFi offers hotspots for IoT, field personnel, and fleet vehicles. Wireless smart utility network (WI-SUN) and RF-mesh can connect smart meters, while LoRaWAN and Zigbee can connect IoT sensors and devices. Private LTE/5G has an increasingly important (and increasingly profitable for providers) role to play in connecting multiple locations with high-speed, secure connectivity.

“The ideal utility network is quite complex and varies from one geography to another. Much of utilities’ existing infrastructure is becoming obsolete, and they need to begin considering upgrading, introducing a larger challenge - to develop a modernisation plan as early as possible,” says Erann. “This digital transformation journey should consider all technologies, trends, applications, and future needs to ensure that the investments made today are being applied in the most practical and effective manner.”

For remote and rural regions, home to many utility services, terrestrial infrastructure is limited at best, thus satellite is a necessary enabling technology, providing access to critical data, communication, and remote monitoring capabilities, supporting operations in challenging environments.

“Connectivity enables the utility sector to easily shift from reactive response to preventive management,” says Soussia. “Satcom data inputs feed into the comprehensive web platform, which is equipped with a pre-set alert mechanism to identify potential threats. As a result, a serious breakdown can be avoided with timely maintenance.”

Meanwhile, with 90% of fresh water in Africa found within 63 international river basin catchments crossing multiple borders, water resource management on the continent must be an inherently international and cooperative endeavour. This is a challenging task considering the technological gaps between African countries, as well as geopolitical tensions within the continent.

“Projects such as Cooperation in International Waters in Africa (CIWA) aim to resolve this utility challenge by harnessing the power of remotely sensed (RS) satellite data,” reveals Soussia. “RS data is used as input for a range of analytical tools, such as flood forecasting, monitoring of surface water quality, tracking water diversion and allocation, and quantifying water storage in reservoirs. Satellite-derived data offers undeniable technical advantages by standardising instrumentation requirements, effectively bridging the technological disparities across Africa. Moreover, its politically neutral nature fosters transparency in data sharing across borders.”

Satcoms are also proving invaluable in supporting a remote workforce since, “while RS data offers the visibility necessary to run industry assessments and raise the red flags to be addressed, we still require humans to manage,

maintain and expand utility networks. Satcom is vital for remote workers to keep in touch and call for help if needed,” explains Soussia. “By empowering remote workers with reliable connectivity, utility organisations can improve the coordination of maintenance operations in far-away areas. Using tools like smart goggles and real-time communication, remote workers can leverage the expertise of technical staff based in HQ, which can enable them to resolve problems and accomplish more tasks over one visit.”

Soussia highlights an interesting story wherein a team of researchers from the International Institute of Applied Systems Analysis (IIASA) and the Future Energy Program at the Fondazione Eni Enrico Mattei (FEEM) in Italy analysed the precision with which satellite images showing nighttime lights could be converted into spatially detailed maps of electricity access in sub-Saharan Africa.

“The research validates a growing recognition of the potential gains of using satellite data to assess the availability of electricity across a large geographical area,” asserts Soussia.

Digital twins, too, have a significant role to play when it comes to modernising utility networks globally. A digital replica of the utility’s physical assets and systems can be used strategically to monitor, control, and optimise every corner of the utility, in real time.

“From strategic planning, modelling, testing, performance monitoring, to automated equipment upgrade notifications and a single source of truth for employees alike - implementing a network digital twin can pay out enormous dividends in the long run,” says Erann.

By combining the right technologies for each specific application, challenges related to critical infrastructure can be overcome to improve the reliability and efficiency of utility services and accelerate progress towards achieving universal access to essential utilities.

Moreover, “with the right equipment, tools, and know-how baked into their plan, utilities can avoid pitfalls such as trying to manage multiple, disparate networks which tend to result in bottlenecks, network vulnerabilities, and typically require additional inhouse personnel and expertise,” asserts Erann.

A wireless future

No technology is without its shortcomings, of course; while wireless communications offer numerous benefits to the utilities sector, they also come with challenges compared to their wired counterparts, namely reliability, bandwidth limitations, security concerns, coverage, interference, and congestion.

However, industry marches on, and advances like 5G, IoT and satcoms, and ongoing improvements to all aspects of their application, continue to offer extremely attractive benefits for utility operators. Moreover, while fibre plays an important role in connectivity everywhere, it too has its limitations.

“Many African countries face large geographical expanses and long distances where digging and laying fibre is both time consuming and cost prohibitive. In addition to long distances, obstructions such as waterways, mountains, and other topologies can create serious issues for fibre deployment,” says Erann. “By utilising wireless connectivity, utilities can get their entire grid - people, assets, and places - connected in a fraction of the time and costs associated with all-fibre deployments. While wireless has its own challenges - licensed vs unlicensed operations, attaining enough spectrum, regulatory issues, etc. - these problems are often easier and more affordable to solve than those posed by deploying ubiquitous connectivity with fibre.”

Wireless communications, therefore, are likely to continue to play a pivotal role in driving innovation, improving efficiency, and expanding access to essential utility services across Africa. Looking ahead, we can expect to see further investment in smart grids, IoT solutions, and satcoms integration, as well as a heightened focus on cybersecurity, sustainability, collaboration, and public-private partnerships.

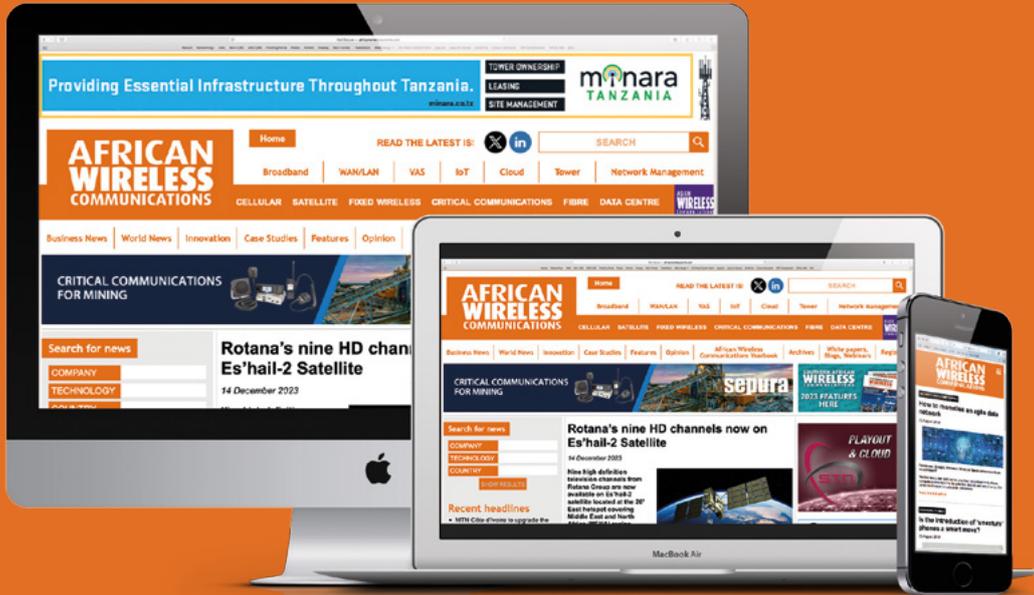
Soussia reports that the use of satellite technologies within the utilities sector is also growing and set to bring even greater benefits in terms of operational efficiencies.

“With the introduction of the low Earth orbit (LEO) satellite constellations with their low latency, large bandwidth, and high-speed connectivity the opportunities are expanding. With the development of specialist software and applications it is now possible to conduct activities such as real-time surveillance, video conferencing, and data management in even the most remote areas. And watch this space - the satcom industry is developing at such a rapid pace that within only a few years what is possible will be transformed,” announces Soussia.

Wireless communications in Africa’s utilities sector are poised to undergo significant transformation, driven by technological advancements, changing consumer expectations, and evolving regulatory frameworks.

“There are billions of dollars to be invested over the next decade in advancing and expanding utility services - especially in the sub-Saharan region,” asserts Erann. “By leveraging wireless technologies, utilities can overcome geographical barriers and serve remote or underserved areas with essential services such as electricity, water, and telecommunications. The flexibility and scalability of wireless communications enable utilities to extend their reach to a broader customer base, thereby contributing to an improvement of life and socio-economic development across the continent. An advanced communications network enables utilities to optimize resource management, detect and address issues promptly, and improve overall service quality. This, in turn, fosters sustainable development, ensures equitable access to essential services, and supports the growth of infrastructure in previously underserved regions of Africa.” ■

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Defending against the devastating effect of SIM swap fraud

Gur Geva, founder and CEO, iiIDENTIFIi

Mobile networks must not be complacent about SIM swap fraud; they must prioritise the protection of customers.

Although the South African Banking Risk Information Centre (SABRIC) has noted a slight decline in reported SIM swap fraud in its latest report, mobile service providers still need to tighten up their data security to protect against fraudsters using false identities and SIM swap scams.

This is particularly relevant as telecommunications and banking industries become increasingly intertwined. Banks now offer mobile services, while mobile network operators provide financial services, and so there is a convergence between the regulatory requirements of FICA and RICA. This shift has led to heightened identity theft risks, requiring mobile operators to adopt stringent identity verification practices inspired by the financial sector's standards.

Operators need to define practical, robust security solutions that adhere to and surpass current telco legislation. To combat SIM swap and identity fraud, networks should focus on the provision of simple, scalable and safe digital identity. This has a far-reaching impact, not only on safer mobile use and the protection of consumers from fraud, but also on the ability of consumers to access mobile, financial, and governmental services through their phones.

The current state of SIM swap fraud

SABRIC's 2022 crime report notes that mobile banking fraud saw a 9% reduction in reported incidents in 2022, and that SIM swap incidents declined from 87% in 2021 to 76% (7,657) in 2022. While this reduction is positive, there are still thousands of SIM swap fraud incidents reported each year.

Cyber-crime will continue to evolve, and networks need to be prepared for increasingly sophisticated SIM swap attacks. Their strongest line of defence is in securing the identity of a person's identity to each SIM. The effectiveness of this approach has been demonstrated in nations such as Kenya, Namibia, Pakistan and Russia, which have all been enforcing varying levels of biometric SIM registration to deter fraudsters.

Increasing legislation to prevent attacks

The nature of these SIM-related crimes goes beyond financial crimes and SIM swap fraud.

"For the cost of a few unregistered SIM cards at R5 each from a roadside vendor, planning a murder becomes untraceable by police through RICA, and thus virtually risk-free," said Natasha Mazzone, the DA's shadow minister of communications and digital technologies in an article on RICA legislation.

In 2022, ICASA published draft regulations that would require mobile network operators to collect subscriber biometric data. ICASA said that these regulations would reduce instances of mobile number hijacking via fraudulent SIM swaps and number porting. However, this was met by hesitance from consumers and organisations such as Communications Risk Information Centre (COMRIC). Consumers feared that the collection of biometric data would compromise their privacy, while COMRIC felt that biometrics as a single solution was too limited in its scope and challenging to implement at scale.

What networks can do

Mobile networks (as owners of the SIM and the technology behind it) should consider implementing clear strategies and leading technologies to mitigate SIM swap fraud and protect their customers. And while SIM swaps constitute one problem, identity fraud is far more problematic.

When it comes to securing a person's identity, we believe that face biometrics offer the most secure solution.

In South Africa, face biometrics would be able to verify whether the person registering a SIM is live and doing it in the present moment, as well as binding the SIM card to that applicant's identity and facial image.

It can validate barcoded identification documents presented, RICA or FICA details and a facial image back to the Department of Home Affairs. This prevents identity fraud and proves that the individual applying for services online is a 'live' person and not a deepfake. SIM swaps become a moot point, as all

SIM cards are then data bound to a legitimate individual with accurate RICA requirements.

The question of surveillance

Biometrics are deeply personal, but opt-in biometrics do not open consumers up to surveillance.

Because biometric technology only started making its way into the mainstream relatively recently, consumers are still unsure of what the technology entails and how it may be used. This, naturally, leads to some misconceptions and fears. The reality is that opt-in biometrics are the most secure way to identify someone – and keep their information and identity safe from misuse – and these differ a great deal from biometrics used for surveillance.

Remote biometric onboarding links a person's biometric data, whether their face or fingerprint, to their account so that they, and only they, can access the account safely and securely. This protects them from fraud.

The question of implementation

In terms of successfully rolling out biometric identity for mobile phones in Africa to protect consumers and companies from SIM-related crime, two key criteria need to be met: scalability and accessibility.

I urge network providers in Africa to invest in enterprise-grade identity platforms that are robust, scalable and built to handle growing subscribers and fraud-prevention demands. For example, most of South Africa's leading banks have relied on our own enterprise-grade platform at iiIDENTIFI to roll out fast and effective mobile banking verification initiatives at scale. This has proven that, with a simple, fast, and friction-free tool, consumers are willing to pass through an extra layer of digital protection.

SIM swaps are still a major problem, and networks still have a way to go in protecting consumers. By securing identity for all SIM at the moment of registration, it is possible to make great leaps in providing protection against SIM-related crimes. ■



Seamless connectivity upgrades for Africa Mercy

Mercy Ships is a non-governmental organisation (NGO) that operates the largest non-governmental hospital fleet of vessels in the world. The charity delivers free and life-saving healthcare to people in regions where resources and medical care are scarce.

Each year, Mercy Ships aims to provide more than 5,800 surgical procedures, 18,000 dental procedures and trains 3,400 professionals in their area of expertise on its vessels. Connectivity is critical for these vital medical procedures and training, as it enables Mercy Ships to transfer data to and from the ships, connect with doctors, surgeons, and nurses for consultations, and facilitate their applications.

Connectivity at sea

Reliable satellite connectivity sits at the heart of Mercy Ships' operations - through connectivity, remotely located healthcare professionals working at Mercy Ships can treat patients more effectively.

SES has been working with Mercy Ships since 2021, enabling daily medical operations, training, and remote diagnostics for the charity to provide free and essential healthcare to people in need via the Global Mercy and the Africa Mercy vessels. Moreover, the connectivity has provided vastly improved diagnostics and treatment onboard for its patients; specialist pathologists sitting miles away can help diagnose complex, life-threatening, or deadly conditions onboard the vessel through remote viewing for a compact digital scope and with a CT scanner.

Connectivity is also essential to ensure other tasks run smoothly, like operating the vessel, running diagnostics, executing administrative tasks, managing supply and operations, and keeping 900 crew members connected with their families and loved ones to boost team morale and allow them to stay on board for extended periods.

Upgrading operations

Recently, the Africa Mercy docked in Durban to undergo extensive repairs and maintenance to prolong its service life.

"We believe every life deserves access to quality healthcare, regardless of geographical location. The 'Africa Mercy refit project' is a testament to our unwavering commitment to extending the reach of our medical services and positively impacting the lives of thousands. Through this project, we are not only upgrading a ship; we are opening doors to hope, healing, and a brighter future for those in need," said Brenda van Straten, director, Mercy Ships, South Africa. "The upgrade will also allow us to continue our program delivery, improving the working and living conditions of our dedicated volunteers, and optimize the ship's operational efficiency and future maintenance costs. Durban was selected as the location for the ship's infrastructure upgrade due to our



successful collaboration with the DORMAC shipyard in the past. The quality of their work, especially in the ship's interior, a vital aspect of this project, has greatly impressed us. Additionally, Durban's proximity to our next destination, Madagascar, played a pivotal role in our decision-making process."

The project included modernising the galley, upgrading the elevator system, and remodelling several cabin spaces to enhance safety and functionality, creating an environment that fosters community and healing. A key highlight of the refurbishment was the IT upgrade, which will notably enhance the ship's functionality and performance.

To ensure the success of the upgrade, Mercy Ships assembled a team of renowned contractors and vendors from around the world, including South African companies such as DORMAC, Bradgary, MLQ, MAN Energy Solutions, AEGIR-Marine, and Loewe-Marine.

Completed as of the start of 2024, the new platform enables seamless communication and coordination between the Africa Mercy and the Global Mercy, while also supporting the provision of essential training for local doctors, fostering the development of in-country healthcare professionals.

"The Africa Mercy upgrades, resulting from meticulous planning by Mercy Ships' technical teams in collaboration with DORMAC, MLQ, and Bradgary, involved several ship visits to ensure detailed designs were completed. The one-month drydocking, complying with Classification Society rules, saw numerous upgrades," said Chris Sparg, managing director, DORMAC Marine & Engineering. "Working with Mercy Ships' experienced technical professionals was a pleasure as they deeply understand the ship and organizational needs. Our teams are proud to support Mercy Ships, positively affecting lives in Africa."

Waveguide Communications Inc. (WGC) completely overhauled the CAT6 cabling, replacing it with CAT7 cabling throughout vessel for the Africa Mercy's WiFi, CCTV, phones, main data centre, and backup data

centre. Meanwhile, South Africa's Brandfin Trade spearheaded the installation of 116 CCTV cameras throughout vessel.

The phone system, however, faced a notably impressive upgrade, effectively resolving the connectivity and communication issues previously endured by the ship's crew. Prior to the project, the Africa Mercy had Toshiba phones, of which only about 24 were VoIP capable (the remainder being digital). Today, the new Cisco Phone system - a total of 404 VoIP phones - will dramatically improve overall communication on the ship, enabling the swift and efficient exchange of important information and messaging. Indeed, the transition to a VoIP capable phone system includes flexibility for future-use/ integration capability/compatibility, advanced features, improved connectivity, remote management, and environmental sustainability. The AFM phone upgrade solution caters to all departments' communication needs of modern maritime operations, ensuring efficiency and reliability.

The Africa Mercy refit project was part of a broader five-year initiative. Upon completion of the refit, the Africa Mercy and the Global Mercy will significantly expand Mercy Ships' capacity to provide life-changing surgeries. By utilizing these two ships, Mercy Ships aims to more than double its current reach and effectiveness in improving healthcare worldwide.

Interestingly, during the refit, with many core and critical services offline due to upgrades, satellite connectivity from SES enabled the crew to maintain critical communications and prepare for follow-on field service in Madagascar.

"It makes me incredibly proud that this partnership reflects the positive impact SES's services have on the delivery of healthcare in regions of the world where medical services are not easily accessible nor affordable," said Carlos Chang, sales manager, cruise, SES. "I am humbled to have played a role in supporting Mercy Ships over the past three years and in helping save and improve the lives of thousands of people yearly." ■



Greenfield wireless networks for Côte d'Ivoire Terminal

Côte d'Ivoire Terminal (CIT), Abidjan's second container terminal, is a project jointly developed by two leading global terminal operators, Bolloré and APM Terminals.

A recent build, the Euro400 million project in terminal and equipment began in 2020 and was completed in November 2022. Located adjacent to the existing Abidjan Terminal, the new zero-emissions terminal is expected to enhance the competitiveness of the Port Autonome d'Abidjan and add an additional 1.5 million TEU in annual throughput capacity.

With high expectation on the terminal to offer greater capacity to the port of Abidjan and improve the flow of the country's imports and exports, the terminal operators were determined to equip CIT with the best possible infrastructure.

Staying ship shape

As for most other busy shipping ports across the globe, the challenges for CIT included an ever-changing environment; many mobile devices; and limited sites for installation.

CIT selected Altai's flagship A8n WiFi base station for deployment at the terminal. To enable wireless connectivity and improve operational efficiency, the advanced 802.11 a/b/g/n/ac WiFi solution with 8x8 MIMO and smart antenna technology is designed for broadest coverage range and best non-line-of-sight (NLOS) performance. Operating concurrently in both 2.4GHz and 5GHz bands, the Super WiFi A8n series base station provides CIT access connectivity in both bands, up to 30km,

backhauling via the 5GHz band.

The eight antenna ports for four dual-slant sector antennas provide flexible 90-360° coverage and deliver as much as three times the range and ten times the area of coverage as standard access points – a significant benefit for a busy shipping port. With throughput of up to 300Mbps (access) plus 300Mbps (access/backhaul) capacity per base station, as well as Altai's AirFi technology for higher capacity and efficiency per WiFi channel, CIT has gained a truly efficient wireless communications system, fitting for a modern-day port.

Fast and efficient to install and manage, today, Altai's Super WiFi A8n series base station is supporting CIT's daily terminal operations – keeping things ship shape. ■

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New WiFi 7 test platform emulates real-world conditions

Keysight Technologies, Inc. has launched the E7515W UXM Wireless Connectivity Test Platform for WiFi, a network emulation solution delivering signaling radio frequency (RF) and throughput testing for devices using WiFi 7, including 4x4 MIMO 320MHz bandwidth.

WiFi 7 is the next generation of WiFi wireless communications technology, promising significant performance advancements and improvements over the previous WiFi 6E and WiFi 6 standards. As with any new wireless technology, device makers must perform extensive signaling RF and throughput on clients and access points (AP) to ensure WiFi 7 devices work as intended when deployed. However, existing solutions require extremely complicated test setups with large

number of WiFi devices and network channels to emulate real-world operating conditions.

The newest Keysight UXM Wireless Connectivity Test Solution addresses this challenge by giving RF engineers a turnkey solution that simplifies WiFi 7 testing and provides unique physical (PHY) layer and media access control (MAC) layer insights.

The E7515W UXM Wireless Connectivity Test solution emulates hundreds of clients at once – three-times more than existing solutions in the market – with traffic simulation without the need for additional equipment. It supports Wi-Fi 7 4x4 MIMO 320MHz bandwidth and performs WiFi 7 signaling RF and throughput testing on clients and APs, including

the latest 802.11 variants. It also uses analysis software to provide PHY / MAC-level information such as rate versus range, enhanced Rx sensitivity, radio unit (RU) sweep analysis, and full-rate throughput to generate relevant WiFi signaling and RF throughput results. The solution tests more complex devices with 5G and LTE capabilities WiFi/cellular interworking validation as well as integrated fixed wireless access (FWA) testing for the fast-growing customer premises equipment (CPE) market; and offers inherent synchronisation, better repeatability, reduced time spent on cabling and test setup, higher automation, and faster debugging and reporting.

“With the introduction of the E7515W solution, Keysight is expanding the market leading UXM

5G Network Emulation Solutions to simulate WiFi devices and traffic to cover new use cases from the latest IEEE 802.11be standards,” said Mosaab Abughalib, senior R&D director and general manager for Keysight’s wireless test group. “The E7515W solution enables faster test setups with less complexity and delivers better load and bandwidth performance to help WiFi 7 device makers accelerate time to market.”



HPE: Simplifying multi-vendor multi-generation telco operations

The new HPE Telco Core Automation offering has been designed to help service providers simplify multi-vendor, multi-generation operations with a new packaged offering built on its leading OSS technology.

The solution can help service providers automate their end-to-end processes with pre-built orchestration and assurance to make rolling out and managing network functions easier. It marries intent-based automation and AI-based assurance, which were previously separate silos, to simplify, optimise, and standardise the lifecycle management of core network functions.

As part of the solution, service providers can drive efficiencies across the NF lifecycle, resource management, automatic remediation, and capacity planning to remove integration risks, decrease operational costs, and speed up time to market for new services.

HPE Telco Core Automation streamlines multi-vendor, multi-generation management and automation for any core network. The cloud-native packaged offering offers closed-loop management extensible to any core, including the 4G/5G core from Athonet, a Hewlett Packard Enterprise acquisition.



First GNSS/INS smart antenna with ultra-rugged enclosure hits global market

Septentrio, has launched AntaRx-Si3, the first GNSS/INS (Inertial Navigation System) Smart Antenna on the market in an ultra-rugged enclosure, designed for easy installation on machines such as agriculture robots.

AntaRx-Si3 leverages FUSE+, which is designed to answer the need for position availability in tough industrial environments where GNSS signal reception may be temporarily compromised, such as under foliage. The IMU sensor in FUSE+ also improves positioning integrity and reliability, which is critical for autonomous systems.

“With AntaRx-Si3 you get a receiver delivering positioning information with a high level of availability and integrity, that you can install with minimal effort,” said Danilo Sabbatini, product manager of GNSS/INS at Septentrio. “This is especially beneficial for after-market upgrades. It also allows removal of this valuable component at the end of the day to protect against theft or vandalism.”

The AntaRx-Si3 smart antenna is designed to be mounted outside on a machine for operation in harsh environments. Enclosed in

an impact resistant polycarbonate IP69K housing, it can handle high levels of shocks and vibrations. This multi-frequency receiver delivers Septentrio’s field proven high-accuracy RTK positioning down to the centimetre level. AntaRx-Si3 has a built-in 4G cell modem, so there is no need for additional modem integration to acquire high-accuracy corrections.

AntaRx-Si3 leverages Septentrio’s GNSS+ algorithms with advanced multipath mitigation, which allows uninterrupted operation in environments where satellite signals could be reflected off nearby machinery or high structures such as silos. It delivers positioning at a high update rate and low latency, which are critical for control loops in autonomous movement or rotation.



BSS Magic streamlines telco operations

Totogi has launched BSS Magic, a groundbreaking platform that revolutionizes the telecom sector with the first fully AI-generated custom Business Support System (BSS), eliminating the time and prohibitive costs typically associated with traditional BSS implementations.

Facilitated by an intuitive conversational AI interface, BSS Magic simplifies the BSS construction process by leveraging five types of Generative AI (GenAI) technologies.

BSS Magic offers a streamlined and cost-effective approach tailored for modern telcos. Leveraging the simplicity of natural voice commands, BSS Magic can automatically generate the necessary software code to produce the precise BSS needed - without requiring engineering expertise. This advanced AI platform integrates several types of GenAI, including Natural Language Processing (NLP) and Generation (NLG),

computer vision, code generation, and advanced avatar rendering. It functions as an Integrated Development Environment (IDE) powered by AI, removing the dependence on skilled programmers and making BSS development accessible, customizable, and cost-efficient for everyone.

The telco-trained advanced AI model utilizes a Retrieval Augmented Generation (RAG) model that draws on extensive telecom knowledge to understand and generate the needed BSS components through natural voice commands. This AI acts as a foundation for creating and coding BSS logic and interfaces, simplifying complex software development into conversational interactions. Meanwhile, AI code generation significantly reduces development time from months to minutes, delivering bug-free, fully customized BSS code swiftly and automatically.

The conversational AI interface

makes creating a BSS as simple as having a conversation, accessible to all business users, regardless of technical skill, while seamless extensions enable easy integration of additional components, such as payments and customer support, enhancing the BSS stack with minimal effort. BSS Magic also facilitates smooth data transitions from legacy systems, overcoming common implementation challenges.

“BSS Magic is not just an advancement in BSS technology; it’s a paradigm shift in how MNOs and MVNOs manage their customer-facing applications,” said Danielle Rios Royston, acting CEO. “Totogi democratizes BSS app creation, putting the power in the hands of business users and allowing CSPs to focus on what matters most: monetization and customer service. Totogi leverages a comprehensive suite of GenAI technologies to redefine what’s possible in telecom software.”

Look out for...

If we can connect the moon – why not Africa?

Nokia Bell Labs has recently been selected to participate in the 10-Year Lunar Architecture (Luna-10) program, a U.S. Defense Advanced Research Projects Agency’s (DARPA) initiative that will design an integrated multi-service architecture to support a thriving economy on the Moon in the next decade and beyond. Luna-10 will design the essential infrastructure framework capable of supporting industrial activities, as well as scientific discovery.

Nokia will collaborate with the 13 other companies specialising in areas critical to establishing an integrated commercial economy on the Moon. Nokia Bell Labs will be responsible for recommending a reliable, high-performance communications infrastructure, and will work closely with other Luna-10 companies to ensure that infrastructure may be efficiently transported and built on the lunar surface and that it would have reliable power sources once installed.

At the program’s mid 2024 conclusion, Luna-10 will deliver a comprehensive blueprint for establishing the infrastructure necessary to support commercial operations on and around the lunar surface by 2035. Communications will be critical as virtually all use cases and applications require or benefit from high throughput, low latency, ultra-reliable and scalable communication capabilities. Networks would allow astronauts to freely communicate directly and with mission control on Earth. Networks would transmit video and telemetry data from cameras and sensors spread across the Moon and integrated into spacesuits, vehicles, structures, and scientific experiments. Networks would supply the connectivity necessary to control robots and automate dangerous tasks on the lunar surface. Exciting stuff indeed. But given that some 24% of Africa’s population remains without access to even 3G connectivity, one has to question whether we should be focusing on connecting Earth before the Moon?

Xtend Solutions combines WiFi satellite tech to deliver content to schools

Forsway and Cloudpoint have established Xtend Solutions, a new provider of low-cost content streaming solutions aimed at offering robust internet connectivity to serve vast geographies with unreliable or no service.

Xtend Solutions’ new offering harnesses Forsway’s agile satellite technology and ground equipment and Cloudpoint’s expertise in delivering solutions and executing on a wide scale.

The offering from Xtend Solutions will cater to unserved and underserved locations, using WiFi satellite technology to distribute content, and bypassing the need for a traditional internet connection. Cloudpoint will promote and deploy the new offering with technical support from Forsway.

The primary markets the new venture will focus on are India, Africa, and Southeast Asia, within the education, digital outdoor advertising, and OTT services verticals.

Current estimates suggest that

over 100,000 schools in India have fragmented or no internet service. The first roll-out of the new service is planned for remote school use cases in Asia in the first quarter of this year.

Xtend Solutions will set up the hardware for transmitting

educational content to schools, with WiFi hotspots in each school. Content will be downloadable via a WiFi hotspot; it can be viewed offline on mobile phones. Apps and other processes can be customised to bespoke requirements to deliver a tailor-made solution.



SES to buy Intelsat in 2025

 SES S.A. and Intelsat S.A. have announced an agreement for SES to acquire Intelsat through the purchase of 100% of the equity of Intelsat Holdings S.a.r.l. for a cash consideration of \$3.1 billion and certain contingent value rights.

The combination will create a stronger multi-orbit operator with greater coverage, improved resiliency, expanded suite of solutions, enhanced resources to profitably invest in innovation, and benefit from the collective talent, expertise, and track record of both companies. The combination will deliver greater value for customers and partners, as well as providing a compelling alternative in the new era of growth, innovation, and competition for the satellite communications industry.

The transaction, which is subject to relevant regulatory clearances/filings and customary provisions concerning cooperation and measures in seeking such regulatory clearances, which are expected to be received during the second half of 2025, is fully supportive of SES's

financial policy and is underpinned by expected total synergies equivalent to 85% of the total equity value of the transaction. The transaction has been unanimously approved by the Board of Directors of both companies and Intelsat shareholders holding approximately 73% of the common shares have entered into customary support agreements requiring them to vote in favour of the transaction.

“This important, transformational agreement strengthens our business, enhances our ability to deliver world-class customer solutions, and generates significant value for our shareholders in a value accretive acquisition which is underpinned by sizeable and readily executable synergies,” said Adel Al-Saleh, CEO of SES. “In a fast-moving and competitive satellite communication industry, this transaction expands our multi-orbit space network, spectrum portfolio, ground infrastructure around the world, go-to-market capabilities, managed service solutions, and financial profile. I am excited by the opportunity to bring together our

two companies and augment SES's own knowledge base with the added experience, expertise, and customer focus of the Intelsat colleagues.”

“Over the past two years, the Intelsat team has executed a remarkable strategic reset. We have reversed a 10-year negative trend to return to growth, established a new and game-changing technology roadmap, and focused on productivity and execution to deliver competitive capabilities. The team today is providing our customers with network performance at five 9s and is more dedicated than ever to customer engagement and delivering on our commitments. This strategic pivot sets the foundation for Intelsat's next chapter,” said David Wajsgas, CEO of Intelsat. “By combining our financial strength and world-class team with that of SES, we create a more competitive, growth-oriented solutions provider in an industry going through disruptive change. The combined company will be positioned to meet customers' needs around the world and exceed their expectations.”

Swisscom to transform to smart networking with Ericsson

 Swisscom is aiming to transform its network into a smart network by extending its partnership with Ericsson for another three years.

Ericsson will continue to supply the hardware and software for Swisscom, enabling it to enhance its customer experience and further develop the mobile network with a focus on sustainability. The network is already fully powered by renewable energy.

“We are now taking the next step in this long-standing strategic partnership as we endeavour to turn Switzerland's best network into its smartest one. This will enable us to not only offer our customers the best customer experience but also to place an even greater focus on sustainability and innovation,” said Swisscom in a statement.

The network will be modernised through automation, the use of artificial intelligence (AI), and increased innovation. The agreement, with a special focus on innovation, performance, and energy efficiency, will see the introduction of Ericsson's Dual-band Radio 4490 as well as RAN processor designed to serve all technologies from a single box and support real-time AI processing.

Swisscom further aims to equip many sites with Massive MIMO Radios in the next three years as part of the continued effort to expand mid-band TDD coverage further. With continuous spectrum refarming to New Radio (NR), the telco is preparing its network for 5G Standalone (SA) with the possibility of launching new services, the official release said.

The agreement also will bring network improvements from the introduction of Ericsson's Cloud Native Infrastructure Solution (CNIS) to support telecom applications across the business, enabling software upgrades during operation.

Proximus to buy 20MHz of 5G spectrum from NRB, BIPT approves of deal

 Proximus has signed an agreement with NRB to acquire an additional 20MHz of 5G spectrum in the 3600MHz band. NRB is selling its 5G license to refocus on its core business while maintaining its commitment to offer 5G services.

When the spectrum was auctioned in the summer of 2022, it planned to invest Euro600 million over a period of 20 years. At the same

time, NRB obtained a portion of the 5G spectrum with plans to serve various sectors.

Now, two years later, NRB has decided to sell its spectrum and 5G license. It reportedly no longer wishes to roll out its own mobile network but aims to continue offering 5G services to its customers as a mobile virtual network operator through a possible partnership with Proximus. Negotiations for a partnership with Proximus are ongoing.

For Proximus, the acquisition of additional 5G spectrum will further enhance the mobile experience it offers its customers. Acquiring an additional 20MHz in the 3600MHz band, giving Proximus a total of 120MHz, will enable Proximus to add more capacity when needed.

The federal telecommunications regulator BIPT has approved the agreement subject to the effective transfer of rights taking place after the publication of a new call for

applications for the 3410-3430MHz band in the Belgian Official Journal. The call for applications will be accompanied by an increase in the spectrum cap from 100MHz to 120MHz, a necessary condition for Proximus to acquire NRB's 20MHz, given that Proximus already has 100MHz in this band.

“The agreement with Proximus is in line with NRB's strategy of agile development to contend with a constantly changing market. For us, this decision opens up new prospects for sustainable growth as it allows us to free ourselves from the constraints imposed on 5G operators, enabling us to refocus on our core business as a value-added service integrator,” said NRB. “As part of the redefinition of our positioning on the 5G market in Belgium, we have decided to sell our license to Proximus. We will continue offering mobile 5G services to our customers and are on track to reach an agreement with Proximus.”



Philippines starts first phase of national fibre plan for 28 nodes and 600Gbps

 The Philippine government has launched the first phase of its National Fibre Backbone (NFB) project, which it says will boost the country's economy as well as its digital ambitions.

The Department of Information and Communications Technology (DICT) reports that NFB Phase 1 comprises a 1,245km cable network from Laoag, Ilocos Norte to Roces, Quezon City. It connects 14 provinces across Northern and Central Luzon, Metro Manila, four Bases Conversion Development Authority (BCDA) eco-zones, and two national government data centres. Phase 1 of the government-owned backbone includes 28 nodes and delivers an initial capacity of 600Gbps.

Philippine president Ferdinand Marcos, Jr said that the NFB "serves as the economic spine that props

up our growth, and supports our development. More importantly, we understand that in order for Filipinos to reach their full potential, we must invest in a fast and reliable internet."

NFB Phase 1 will help more than 340 national and local government offices connected to GovNet boost their overall operational efficiency and generate more than PHP145 million in potential annual savings.

"Additionally, it will extend a digital lifeline to more than 3,000 Filipinos and different Free WiFi Sites, enabling direct internet access for approximately 750,000 beneficiaries in Regions I, III, and here in Metro Manila," said Marcos.

DICT will leverage the high-speed connectivity provided by the NFB to power last-mile initiatives like the National Government Portal (NGP) and the Broadband

ng Masa Program.

The remaining five phases of the NFB are scheduled to be completed in 2026, at which point it will span 28,000km. Phases 2 and 3 could be completed as soon as the end of this year. The completed NFB will help increase the Philippines' internet penetration rate from 33% to 65% and reach 70 million Filipinos. It also said the initiative would also lower the price of internet connectivity to as much as US\$5.00 per Mbps.



Orange Moldova to test 5G

 Orange Moldova has announced plans to test 5G technology in cooperation with equipment suppliers and Orange Group experts and has applied for a technical license to use the required frequencies.

For Orange Moldova, 5G technology represents an innovative and advanced solution for mobile connectivity at very high speeds and with low latency. This will contribute to a significantly superior internet experience.

Orange claims to run the number one mobile network in Moldova with the best voice and data services in the country. Orange provides services to over 2.6 million customers and offers various services, including voice and mobile internet, television, and fixed internet through fibre optic technology with speeds up to 1Gbps.

Moratelindo opts for Remote Peering to connect customers

 EpsilonTelecommunications has been chosen by Moratelindo to connect customers to a global ecosystem of Internet Exchanges (IXs) via Remote Peering.

This partnership enables Moratelindo's enterprise customers, carriers, and service providers to extend their network reach and improve content and application performance in the US, Europe, Hong Kong, Japan, and rest of the world, without the need for additional infrastructure investment and physical presence in-country.

Epsilon's Remote Peering solution is available via Network as a Service (NaaS) platform Infiny, providing Moratelindo and its customers with on-demand access to internet exchange points such as Any2Exchange in the U.S, AMS-IX in Europe, HK-IX in Hong Kong and JP-IX in Japan. Epsilon has established a 100G network-to-network interface (NNI) with Moratelindo, further enabling its customers to access a broader network via Epsilon's backbone infrastructure. This also eliminates the need for costly

international private leased circuit (IPLC) connections.

"The cloud market in Indonesia is booming, and remote peering is really changing the game for businesses looking to expand and improve the performance of their services across the globe," said Warren Aw, CCO at Epsilon Telecommunications. "It has never been easier to offer services quickly in new markets with minimal upfront investments and bring content closer to end users with reduced latency. It's great to work with Moratelindo to make truly global connectivity a reality for more Indonesian businesses, and accelerate digital transformation across the region."

The partnership is enhancing Moratelindo's Network Interconnect and Content Autonomous (MoNICA) neutral Internet Exchange, which can now provide connectivity to a wider pool of international IXs for domestic and international telecommunications operators, Internet service providers, content and games providers. Leveraging Epsilon's Infiny platform, which offers access to 140+ on-ramp

locations and 18+ IX partners, Moratelindo can seamlessly integrate additional IX partners into MoNICA via a single interconnection port. This enables customers to easily extend their reach into new markets and rapidly scale bandwidth according to demands.

"This partnership with Epsilon is helping to take our MoNICA IX to the next level and enhance the Indonesian telecommunications industry with efficient traffic exchange," said Michael McPhail, CTO at Moratelindo. "Establishing presence at multiple global IXs would have been a challenge for us due to the complexities of managing various IX memberships and onboarding, as well as legal matters, billing and more. Epsilon's extensive industry experience proved invaluable, as they removed these challenges by enabling us to utilise their existing relationships and connections through a single port and contract. We're driving the market forward and enabling Indonesia's digital future, making it simple to interconnect globally and improve the performance of services for end users."

Sepura scores Ambulance Radio Programme extension

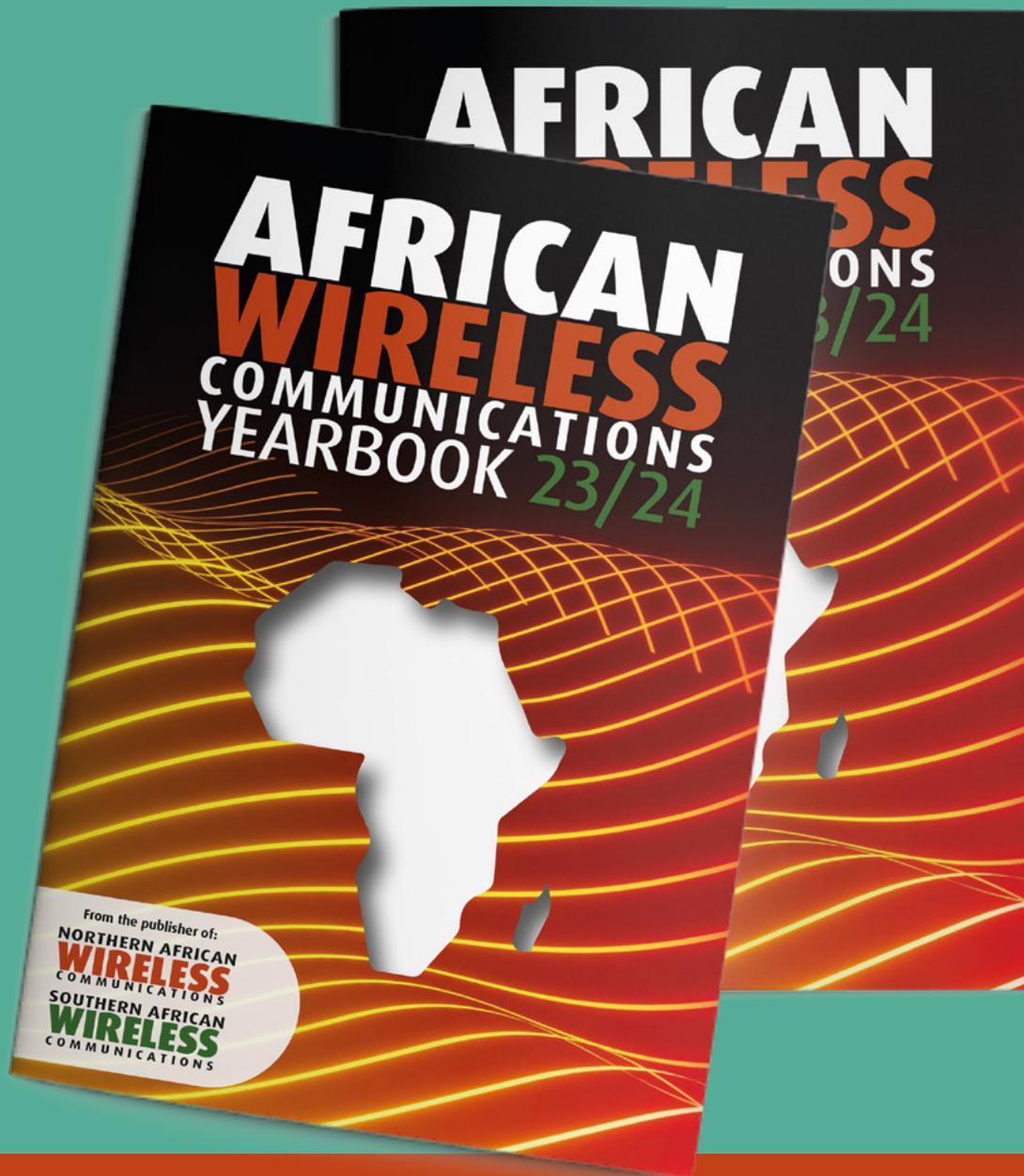
 As part of the Department of Health and Social Care (DHSC)'s commitment to delivering a first-class medical emergency service, the Ambulance Radio Programme (ARP) has extended its modernisation plans by awarding the contract to Sepura to deliver the next generation of handheld mission critical communications devices for front line paramedics.

The contract covers the supply of the new SCL3 broadband hand-portable device to Ambulance Services across England. The SCL3 hand-portable device will maintain communications on the existing Airwave TETRA network as well as encompassing the benefits of broadband data and a migration path to ESN.

Designed for mission-critical use, the SCL3 addresses the need for optimum performance even in the harshest of environments and working practices of ambulance staff.

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