For communications professionals in north, west, east & central Africa

NORTHERN AFRICAN WIRELESS COMMUNICATIONS

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EDITORIAL:
Editor: **Amy Saunders**
Designer: **Ian Curtis**
Deputy editor: **Gerry Moynihan**
Editorial director: **Kathy Moynihan**
Contributors: **Jason Johur, Maulik Shah, David Evans, Simon Gatty Saunt**

Editorial enquiries:
amys@kadiumpublishing.com
Kathym@kadumpublishing.com
Tel: +44 (0) 1932 481729

ADVERTISEMENT SALES:
Sales: **Karen Bailey**
karenb@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

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KADIUM

NIGCOMSAT joins LEO race with Eutelsat

NIGCOMSAT has signed a partnership agreement with Eutelsat to deploy low Earth orbit (LEO) satellite services in Nigeria. The initiative is expected to enhance NIGCOMSAT's capacity, which can improve coverage of rural areas, one of the state-owned company's flagship projects.

"This partnership marks a major milestone for NIGCOMSAT, enabling us to bridge the digital divide in Nigeria through OneWeb's advanced LEO satellite technology. Together, we will deliver scalable and reliable connectivity solutions to drive growth for utilities, businesses and communities across the country," said Jane Egerton-Idehen, the state-owned company's chief executive officer.

In June 2024, NIGCOMSAT signed a partnership agreement with Hotspot to connect rural and remote areas that traditionally do not have access to the internet. The company also signed a similar agreement with Infratel Africa. It is also one of the government's key elements in accelerating coverage across the country. The executive aims to connect 80% of the rural population by 2027.

Ethiopia's Amhara region to develop 'Smart Court'

The Supreme Court of Ethiopia's Amhara region has signed a partnership agreement with Ethio Telecom to digitize the operation of the region's courts.

Dubbed 'Smart Court,' the initiative could facilitate people's access to judicial services.

Users will be able to access fast and efficient judicial services, either in person or through electronic court (e-court) platforms. This will not only help reduce the time and costs associated with court proceedings, but also simplify their daily lives.

Ethio Telecom will be responsible for developing a modern network infrastructure, deploying cloud services, creating a modular information centre, installing a network operations management system and integrating advanced digital technologies. This will facilitate the secure digital exchange of information between courts, while ensuring a high level of security. It will also introduce technology that will improve the efficiency of court services and enable better delivery of justice services.

This initiative is part of the digital transformation ambitions of the Amhara region. In October 2024, Ethio Telecom signed a memorandum of understanding with the city hall of Bahadar, the capital of the region, to launch a smart city project.

Trans-Saharan Fiber Optic Backbone nears completion

The work on the Trans-Saharan Fiber Optic Backbone (DTS) in Niger has reached an execution rate of 97%, according to the Minister of Communication, Posts and Digital Economy, Sidi Mohamed Raliou. This made it possible to assess the progress made and plan the next steps, particularly the finalization of the national data centre.

"This project will be a real opportunity for digital transformation for our country and fits perfectly with the vision of the highest authorities of the country, first and foremost the Head of State, Brigadier General Abdourahamane Tiani, will provide Niger with a high-speed fibre optic infrastructure and a national Tier 3 data centre to resolve the thorny problem of hosting local data," said Mohamed Raliou.

The project is expected to be delivered next September. Launched in October 2017 for a period of four years, it benefits from financing of 30.8 billion FCFA from the African Development Bank (AfDB), intended to cover the costs of its implementation. The main objective is the deployment of 1,031km of optical fibre, covering several axes and sections of the country, and promoting interconnection with neighbouring nations.

Morocco to launch 5G internet ahead of 2025 AFCON and 2030 FIFA World Cup

Morocco's Amal El Fallah Seghrouchni, Minister Delegate for Digital Transition and Administrative Reform, has announced that the country will soon launch a 5G internet service as part of preparations to host the 2025 Africa Cup of Nations (AFCON) football tournament and the 2030 FIFA World Cup.

Seghrouchni outlined plans to extend 5G coverage to 25% of the population by 2026, with a target of reaching 70% by 2030. Cities selected to host World Cup matches will receive comprehensive 5G coverage, ensuring high-speed connectivity for both residents and visitors during the tournament.

In addition to the 5G rollout, Seghrouchni announced that the government is working to connect 6,300 public administrative sites to fibre-optic internet by 2026. By 2030, the initiative will extend to 5.6 million homes, further expanding access to high-quality digital services.

5G imminent in Tunisia

Tunisia has announced the imminent launch of 5G mobile services, as reported by Minister of Communication Technologies, Sofiene Hemissi.

These services will be operational within 5-10 days and offered at competitive rates, allowing a large part of the population to benefit from the advantages of this cutting-edge technology.

"The prices of 5G services will be subject to the competition law and will not be too expensive compared to the prices currently applied. They will be set according to the offers of the three telecommunications operators Ooredoo Tunisia, Orange Tunisia and Tunisie Telecom," said Hemissi.

The announcement follows the official award of 5G licenses to operators, signed on 30 November 2024, and published in the Official Journal of the Tunisian Republic on 23 January.

With this deployment, Tunisia aims to improve connectivity nationwide while opening up new opportunities in key sectors such as the digital economy, health, and education. As of February 2024, the country had approximately 16.26 million mobile subscribers, representing a penetration rate of 136.5%, and 11.58 million mobile internet subscribers, representing a penetration rate of 97.2%, according to the National Telecommunications Authority. These figures illustrate the strategic importance of the launch of 5G to meet a constantly increasing demand and support the modernization of Tunisia's digital infrastructure.

Cameroon to launch e-governance training scheme

Cameroon plans to start building four digital centres across the country from June 2025, at a total cost of $6 million, to train civil servants in e-governance and increase digital awareness.

Joseph Le, minister of public service and administrative reforms, said that the project aims to promote e-governance and build the capacity of public officials, while also establishing the conditions for the modernisation of the public sector. The project committee is committed to assisting public institutions in the digital age by transforming the public sector into a more proactive, responsive, accessible, and efficient player.

"In an ever-changing world, where digital technologies are redefining the way we live and work every day, the public sector cannot stand still," said Le.

According to Minister Joseph Le, most processes in Cameroon's government agencies have previously been lengthy and complex, necessitating physical travel, manual contact, and paperwork - an approach that no longer fulfils the criteria for speed and simplicity demanded by today's public service customers.

"This project represents much more than a simple technological development. It will be a genuine revolution in the way we interact with the public, an opportunity to improve public services, strengthen democracy and respond to the challenges of our time," added Le.

The digitisation project is primarily supported by the Korean International Cooperation Agency, which is providing 85% of the entire cost of the project.

Senegal's ARTP calls for subscriber IDs

The Telecommunications and Postal Regulatory Authority (ARTP) of Senegal is calling on telecom operators to take the necessary measures to ensure that subscribers are identified at the time of subscription to services, as required by law.

The regulator is stepping up its efforts to ensure that all SIM cards are identified. In November 2016, it had already deactivated more than 5 million SIM cards following an identification campaign launched in May. Similar initiatives in 2007, 2013 and 2015, however, failed to achieve the expected results. In October 2023, the regulator announced the deactivation of six million unidentified SIM cards.

These efforts are part of a context of accelerated digital transformation marked not only by the rapid and growing adoption of electronic communications services, but also by the resurgence of cases of fraud using these services.

The ARTP has not yet specified the coercive measures it plans to take against operators in the event of non-compliance with the legal provisions relating to the identification of subscribers. Although the deactivation of SIM cards in an irregular situation is a possibility, the law provides for various sanctions against defaulting operators: formal notice with a period of 30 days to comply, penalty of up to 3% of turnover, fine doubled in the event of a repeat offence, partial or total suspension of the license, reduction of its duration, or even permanent withdrawal.

Algeria to digitise education system

Algeria is continuing the digital transformation of its education system with plans to launch the sector's 'Version 2025 of the information system' in March.

Corrective measures could be taken to address the dysfunctions in the current digital management, particularly with regard to school registrations and transfers. The authorities have, among other things, planned to create specialized teams and strengthen decentralization to give more autonomy to schools.

There will also be the creation of digital spaces for administrative executives, the development of practical guides to facilitate online management, as well as the assignment of an IT specialist to each institution. In addition, centralized supervision is planned to ensure the transparency and efficiency of operations.

This project is part of 'Algeria Digital 2030,' the national digital transformation strategy being developed by the High Commission for Digitization. Training is one of its five main axes, and one of the objectives is to make the Algerian school a model of modernization and innovation thanks to digital tools.

The process was initiated in 2023 with the digitization of school documents for the 2023-2024 school year.

NCC to create national network coverage map

The Nigerian Communications Commission (NCC) plans to launch a national network coverage map by the end of 2025 to improve consumer experience.

The initiative, announced recently by NCC Executive Vice Chairman and Managing Director Aminu Maida, aims to provide real-time visibility into the quality and availability of telecommunications services across Nigeria. With this map, consumers will be able to make informed choices about their operators and services based on the network coverage available in their area.

"So this will not be simulation data, but real performance data, which will show you which is the best network in your area. So you will no longer need to ask the man or woman next to you for a recommendation on the best network, you will be able to see the data directly on the NCC website," said Maida.

The map will provide an overview of the country's telecommunications infrastructure. It should allow consumers to access detailed information on signal quality, expected connection speeds and operator-specific coverage areas.

Chad to install 1,200km of fibre to expand connectivity

The Chadian government plans to install 1,200km of optical fibre across the country as part of the Electronic Communications Infrastructure Modernization Project.

This initiative could help strengthen the coverage of telecom services in the country by connecting areas that were previously deprived of access. However, according to the 'Diagnostic of the Digital Economy of Chad' published in June 2023 by the World Bank, the national fibre optic backbone remains insufficient for a country of this size, despite the progress made in recent years. The Bretton Woods institution stresses the need to develop more links, particularly to Libya in the North and the Central African Republic in the South, to enable Chad to achieve universal connectivity.

The timeline for the project implementation remains unknown.

Paix announces new Dakar data centre

PAIX Data Centres is building a new data centre in Dakar, Senegal, representing a major strategic milestone as it expands its network in West Africa to fulfil the growing need for high-quality digital infrastructure.

The company said that four submarine cables are already connected to Dakar (ACE, MainOne, SAT3, SHARE) and more cables are currently being installed (2Africa), making the data centre a key access point for customers looking to serve the region's emerging markets.

"Businesses will benefit from access to reliable connectivity and high-quality colocation services, helping to strengthen their competitiveness and resilience," said Paix in a statement.

PAIX said the goal is a modern facility offering approximately 918m² of usable space and critical power of up to 1.2MW. The first phase of the project is scheduled to be operational in 2026.

"PAIX Data Centres investment in the Dakar data centre positions it at the crossroads of connectivity between West Africa, Europe and South America. The strong network hub created by the aggregation of multiple submarine cable landing points connecting to terrestrial cables makes Dakar a very attractive gateway," said Wouter van Hulten, CEO of PAIX Data Centres.

Senegal to modernise e-health

Senegal is getting ready to take a new step in the modernization of its health system with a bill aimed at regulating e-health, according to Ibrahima Khaliloulah Dia, coordinator of the Digital Health Unit at the Ministry of Health and Social Action.

"Digital health has become a strong priority in Senegal. We have the new authorities who have decided on the digital transformation of the administration, including health. We have started to deploy services for the populations because we have a software called DPUP (Shared Single Patient File), a hospital information system that we have deployed at the Abass Ndao hospital in Dakar and at the Kaffrine hospital. We are still testing the system," said Khaliloulah Dia.

This initiative is part of the National Program for the Digitalization of the Health System (PDSS). Supported to the tune of 27.6 billion FCFA by the World Bank, it aims to improve the quality and access to health care, as well as health governance through digitalization.

Telecom Egypt connects to 2Africa cable

Telecom Egypt has established a Mediterranean submarine connection on the 2Africa cable with the technical support of Cisco. The operator is thus strengthening its digital infrastructure to better meet the growing demand for capacities for new services.

"The exponential growth of capacity-intensive applications, such as cloud services and artificial intelligence (AI) in the region, is fuelling the demand for increased capacity in submarine networks. This requires consistent and high-performance transmission systems. This project allows Telecom Egypt to maximize the potential of its submarine assets on the 2Africa cable," said Telecom Egypt in a statement.

Operators in Africa are diversifying their activities to ensure their growth for the years to come. According to Statista, the size of the Egyptian AI market is expected to reach $1.16 billion in 2025 and show a compound annual growth rate of 27.85%, representing a market volume of $3.97 billion by 2030. The platform also indicates that the revenue of the public cloud market is expected to amount to $929.40 million in 2025, before growing at a compound annual rate of 25.47%, reaching $2.3 billion by 2029.

New MoU signed for ORAN development

Telkom Kenya, Rakuten Symphony, and Airspan have signed a Memorandum of Understanding committing to working together to share knowledge and test Open Radio Access Network (ORAN) technology.

The collaboration will include knowledge transfer, development, and testing of 4G and 5G technologies in Kenya.

Rakuten Symphony will provide the centralised and distributed unit infrastructure, as well as its OSS platform, and Airspan will deliver the 4G and 5G radio units and mobile core. Telkom Kenya will supply the necessary local resources and facilities.

We are proud to be investing in the development of our people through the collaborative testing capabilities that we will be building within this consortium to explore the possible benefits of Open RAN in our mobile network," said Telkom Kenya's CEO, Mugo Kibati.

"Telkom Kenya's collaboration with this consortium to explore the latest telecommunication advancements reflects bold innovation to place Kenya at the heart of Africa's technological leadership within the region," said Glenn Laxdal, president and CEO, Airspan.

Morocco targets fixed network QoS

Morocco's National Telecommunications Regulatory Agency (ANRT) plans to launch campaigns in 2025 to measure the quality of service (QoS) offered to fixed network customers (ADSL and fiber).

The initiative should help guarantee good quality services to the 2.57 million fixed Internet subscribers registered with operators Maroc Telecom, Orange and Inwi.

In accordance with the protocol defined by the ANRT, the quality of fixed Internet service will be measured using equipment installed at a panel of subscribers. These devices will allow a continuous evaluation, over a predetermined period, of the quality of service perceived daily by end users. The main indicators analyzed will include latency, throughput, web browsing and video streaming.

Burkina Faso prepares spectrum for 5G

The Burkinabe government has decided to allocate the 3600-3800 MHz frequency band to the mobile service under the National Frequency Band Allocation Plan (PNAF) updated by decree in the Council of Ministers.

According to the Electronic Communications and Postal Regulatory Authority (ARCEP), this paves the way for 5G and next-generation services.

The 3600-3800 MHz band is part of the 3.5 GHz band (3300 MHz to 4200 MHz) which is the preferred option for 5G deployments worldwide according to the Global Association of Telephone Operators (GSMA).

"Its ability to provide both coverage and capacity, combined with good spectrum availability, makes it an ideal band for 5G. The prioritization of a particular band is also resulting in a rapidly developing ecosystem, with the launch of increasingly affordable devices," said the GSMA.

The deployment of 5G could support the Burkinabe government's digital transformation ambitions.

Lagos' students to receive more training through Digital Learning Network

The National Association of Proprietors of Private Schools (NAPPS) in Lagos State has announced a $1 billion agreement with Digital Learning Network Inc. (DLN), to transform digital education in Nigeria.

The project, which is fully funded by DLN, aims to improve educational quality and promote social inclusion across the country by using technology.

NAPPS Lagos president and high chief Alaka Yusuf Lukman praised the deal as a "game-changer" for Nigeria's educational environment: "this partnership serves as a medium to bridge the gap between traditional learning and 21st-century education, fostering creativity, critical thinking, and global competitiveness among our students."

The agreement revolves around the creation of an artificial intelligence-powered digital learning platform adapted to the local curriculum. The partnership's other goals include distributing laptop computers, providing high-speed internet access to all students, and providing substantial training for both educators and learners.

"If we do not act now, Africa will be left behind," said DLN CEO and President, Thomas Larmena, emphasising the significance of this effort for Nigerian students. He added that the project's potential to generate over 2,400 high-paying jobs in Lagos, including 1,400 posts for educators.

DLN plans to use SpaceX's Starlink to ensure internet connectivity in participating schools and is considering local laptop assembly facilities to make it more affordable for Nigeria's 40 million students.

"Lagos State is the initial launchpad for this transformative project. We are in negotiations with several states about expanding our programs statewide," said Larmena.

Mali targets digital transformation

The Malian government wants to strengthen national telecoms infrastructure in 2025 with a $35 million national digital health strategic plan.

The country will begin with the construction of a Tier 3 data centre and the extension of the national fibre optic network, which should accelerate national network coverage, which could help improve people's access to the digital services deployed by the government as part of its digital transformation.

The plan pays particular focus on the modernization of the administration. This year, the extension of the Administration's intranet network to 15 new administrative regions, the development and deployment of business applications, and the launch of the digital literacy platform are planned.

"Continued investment in telecommunications infrastructure should not only improve the quality and coverage of services, but also stimulate economic growth by facilitating access to information and digital services," said the ministry.

By 2024, 53% of the Malian population was covered by the 4G mobile network, according to the International Telecommunication Union (ITU)4. In terms of adoption, the same source estimates the internet penetration rate at 33.1%, compared to 67.3% for mobile telephony.

Burkina Faso and Niger to gain from Emergency Telecommunications Cluster project

The Luxembourg government, through the Emergency Telecommunications Cluster (ETC) project, is tackling the information and technology gap in Africa's Sahel region by providing critical digital services, training opportunities, and resources to over 3,650 users, with a focus on host communities, refugees, and youth aged 18-34.

Burkina Faso and Niger are the first to benefit from the ETC project.

ETC is a global network of organisations that work together to provide shared communications services in humanitarian emergencies. The network, with the support of Luxembourg, will work to close the information and technology gaps faced by communities in the region by providing tailored ICT services that will allow them to gain access to lifesaving information, connect to the world, and develop their digital skills.

According to research, in the Central Sahel region, where more than 40% of the population lives below the poverty line, there are significant disparities in access to essential social services, including information and communications technology services.

"Within a broader context of increasing climate change vulnerability, chronic food insecurity, and intensifying violence, not being able to access information and connect to the rest of the world is leaving communities in the Sahel vulnerable and trapped in a perpetual cycle of poverty," said the ETC in a statement.

Niger bans Camusat-Niger SARL and Aktivco-Niger from operating

The Nigerien government has announced the ban on the activities of Camusat-Niger SARL and its subsidiary Aktivco-Niger throughout the national territory.

The Minister of Communication, Posts and Digital Economy, Sidi Mohamed Raliou, said that "no individual or company in Niger is authorized to collaborate with them or use their services."

The ban comes two months after South African investment fund Vantage Capital invested $71.6 million in Camusat to support its expansion in Africa and meet growing needs for telecoms infrastructure to improve access to digital technologies.

The government's decision with immediate effect could have major repercussions on ongoing projects, including the electrification of telecom towers, where Camusat and Aktivco were heavily involved. The economic and social impact of this decision, in terms of jobs and continuity of services, remains to be observed in the coming weeks.

Internet blockages caused US$1.56 billion loss

In 2024, internet blockades by authorities caused a total loss of US$1.56 billion for sub-Saharan African economies, according to Top10Vpn – down by 10.34% compared to 2023, when it stood at US$1.74 billion.

The economic costs of shutdowns are calculated using the Netblocks Cost of Shutdown Tool, based on the Brookings Institution methodology with a specialized model used for sub-Saharan Africa. Losses are estimated based on each region's digital GDP, the duration of the outages, and the number of internet users affected. Data comes from reliable sources such as the World Bank and governments. Social platform restrictions, while specific, are assessed based on the total number of internet users in a region, as they disrupt access for everyone, regardless of active use of the blocked platforms.

Internet outages in sub-Saharan Africa totalled 32,938 hours, affecting 111.2 million internet users. Asia and sub-Saharan Africa experienced about 10 times more hours or internet outages than the other most affected regions.

Sudan, which has been at war for several years, is the most affected country with losses estimated at US$1.12 billion, or about 72% of the region's total losses in 2024. The country has accumulated 12,707 hours of internet outages, affecting 23.4 million internet users. It appears in third place in the world on this list, behind Pakistan (US$1.62 billion) and Burma (US$1.58 billion).

Ethiopia (US$211.2 million) and Kenya (US$75 million) are second and third in sub-Saharan Africa. They cut the internet for 4,680 hours affecting 3.3 million Internet users, and 511 hours affecting 22.7 million internet users, respectively. They are followed by Guinea (US$60.9 million), Mauritania (US$45.1 million), Senegal (US$15.4 million), Mozambique (US$14.6 million), Chad (US$3.8 million), Mauritius (US$2.1 million), Tanzania (US$1.4 million), Equatorial Guinea (US$500,000) and Comoros (US$200,000).

Talking critical

Jason Johur, TCCA Board Director and Vice-Chair, Broadband Industry Group

Managing mission critical video on a massive scale

For first responders and emergency services workers around the world, applications and services that can enhance their work and contribute to greater safety and better outcomes are welcomed. Video is one of the most promising and versatile technologies for improving operational efficiency and effectiveness. With the increasing use of bodycams and drones, video is now widely considered as a significant capability to improve safety, coordination, collaboration, and quality decision-making, particularly during high stakes, end-user operational scenarios.

However, to ensure the effective use of video, public safety agencies and operators need to consider how to successfully deploy the service to support mission-critical operations, especially where the scale of its usage is considered 'massive'. This means situations where the amount of video could potentially saturate network resources, if not appropriately managed.

To address this, TCCA has formed a task force focused on massive mission critical video deployments, and specifically identifying the key considerations when planning its implementation and use. One of the first outputs of the task force is the white paper 'Guidance for the successful usage of Massive Mission Critical Video'.

Within the paper, key use cases representing different categories of operations are documented, i.e. day-to-day (routine) operations, pre-planned events, and major incidents. When analysing these use cases, identifying video producers and consumers is fundamental to understanding the overall problem domain, and those identified include actors such as first responders, officers, dispatchers, operators, government agencies, and other stakeholders.

From the outset, in creating the white paper, an emphasis was placed on identifying the key questions and challenges posed by mass use of video. This involved, amongst other things, polling representatives from government agencies and the critical communications industry. The results of the poll showed that the most frequent key challenges related to:

(i) Being able to set priorities and maintain control over the video flows
(ii) Ensuring seamless communications across different systems
(iii) Avoiding network congestion due to excessive video traffic

It is clear from the paper that using video effectively requires some forward planning and appropriate design of the network platforms to be used, especially in cases involving massive use of video. Properly dimensioning the network in terms of topology, spectrum and capacity is obviously a pre-requisite, as are the prioritisation of resources such as Quality of Service, Priority and Pre-emption (QPP) mechanisms. To manage the video streams, both application and operational perspectives need to be considered: 3GPP Mission Critical Video standards should be implemented, as well as the utilisation of video applications that react to the availability of network resources in a dynamic way in order to provide contextual data to the control room.

The main conclusions from this analysis - assuming no prioritisation of video streams or quality had occurred, and taking the use cases and a particular model of a typical commercial mobile network operator (MNO) network as a basis - show that how the warning phase of an incident is likely to be supported depends on the criticality of the incidents. A single dedicated radio network offers enough capacity for minor incidents; for major incidents a single commercial network is sufficient, whereas a combination of a dedicated radio network and a commercial network is recommended for critical incidents in rural areas.

Critical incidents are often characterised by very high traffic levels, not only from first responders but also consumers using commercial networks, which if not managed could generate congestion impacting all. Implementing QPP including access and application priority mechanisms and optimising the radio network will serve to manage these high load situations. Most situations would benefit from implementing greater video compression techniques and prioritisation of video streams wherever possible.

A key outcome from this study was the identification of the principal challenges linked to the massive operational use of video, particularly in each identified scenario, incident phase and locality (urban, suburban and rural). All user organisations interviewed had concerns about video being very bandwidth-hungry and therefore considered video flow management – i.e. avoiding and handling congestion situations due to excessive video traffic – as an important aspect of their operations. The organisations identified the need to set priorities between video streams and maintain control of the priorities during operations. Interoperability and seamless communications across different systems and agencies must also be ensured.

Among the solutions to address these challenges is the implementation of an appropriate network capability with sufficient capacity. This can involve a dedicated radio network (or network layer), access to the Radio Access Network (RAN) of a commercial MNO, as well as being able to deploy additional and significant capacity and coverage on site through rapidly deployable networks. Access to spectrum, whether dedicated or shared, is therefore also key for video. This is true whether the wide area coverage is provided via dedicated or commercial network(s).

The white paper identifies several network and video application capabilities relevant for managing massive use of video, but it is essential that operations are also taken into perspective to maximise the benefit of using video, as well as adopting standards-compliant solutions.

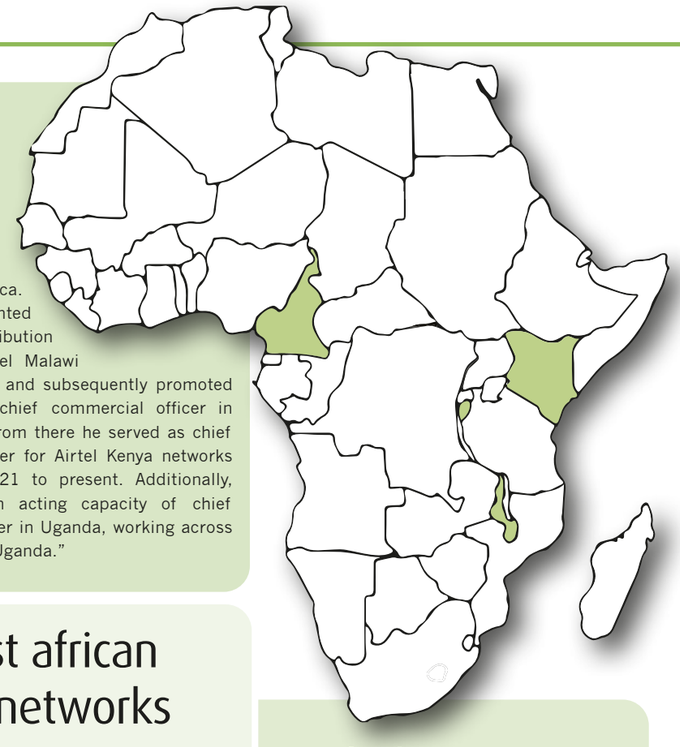
Advances in intelligent video applications and network capabilities will improve the usability of video in mission critical situations over time. The overall objective is to ensure that first responders and public safety agencies (and by implication other critical communication sectors) can use video effectively and for operational benefit.

Aashish Dutt named Airtel Malawi's managing director from February

Airtel Malawi has appointed Aashish Dutt as the company's managing director, beginning 1 February 2025.

Dutt succeeds Abdul Khayyum Shaik, who has served as the acting managing director since November 2024.

According to Kayisi Sadala, interim chairperson of the board, Dutt has over 28 years of telecom expertise, 14 of which have been in senior management: "he has a strong commercial background in telecommunications and FMCG across multiple geographies across India and Africa. He was appointed sales and distribution director for Airtel Malawi in January 2017 and subsequently promoted to the role of chief commercial officer in January 2021. From there he served as chief commercial officer for Airtel Kenya networks from August 2021 to present. Additionally, he has been in acting capacity of chief commercial officer in Uganda, working across both Kenya and Uganda."



Burundi's Senate adopts East african Community Protocol on ICT networks

Burundi's Senate, the upper house of Parliament, has unanimously adopted a bill ratifying the East African Community (EAC) protocol on information and communication technology (ICT) networks.

As such, the country is now open to cooperation with countries in the sub-region to accelerate the development of its ICT sector.

"The adoption of this bill will enable the promotion and facilitation of cross-border interconnection, network interoperability, harmonization of ICT policies and the development of ICT skills," said the Senate in a statement.

The Burundian government is stepping up efforts to make up for the country's ICT gap. Before the Senate, Léocadie Ndacayisaba, Minister of Communications, Information Technology and Media, highlighted the slow pace of implementing the legislative and regulatory framework for the sector.

Burundi is ranked 46th out of 47 African countries according to the International Telecommunication Union (ITU) ICT Development Index 2024 with a score of 24.4 out of 100. The institution estimates the internet penetration rate in the country at 19%, compared to 25.6% for mobile telephony. In addition, only 50.6% of the population is covered by 3G, compared to 32.2% for 4G. In terms of e-government, the United Nations ranks the country 183rd out of 193 in the world with a score of 0.2481 out of 1, below the averages in East Africa (0.3903), Africa (0.4247) and the world (0.6382).

The ratification of the East African Community protocol on ICTs can accelerate the ambition of the Burundian authorities to provide the country with a real technological leap likely to improve its economic growth by allowing the development of activities in a secure legal framework, using ICTs.

Camtel's 2025 budget announced at $5.2 million, targets growth

The Camtel board has adopted a $5.2 million budget for 2025 as well as a short-term (2025-2027) strategy plan, with the goal of placing the company on a stable growth path.

"This budget reflects Camtel's ambition to modernise its infrastructure, improve the quality of its service, and consolidate its position in the market," said Mohamadou Saoudi, chairman of the board.

The company's performance plan for the next three years is based on a few key areas, such as diversifying services and optimising management, while ensuring openness and good governance.

The board also commended the telco's management for measures taken to secure essential facilities and combat vandalism. With an emphasis on thorough monitoring of the network, Camtel is sure that the expected results will meet the company's goals of modernising its infrastructure and consolidating its market position.

Starlink gaining ground in Kenya

Starlink has experienced considerable growth in Kenya, increasing its market share in the three months leading up to September 2024, as per the latest sector statistics report provided by Kenya's Communications Authority (CA).

The report notes that Starlink's market share increased from 0.5% in June to 1.1% in September.

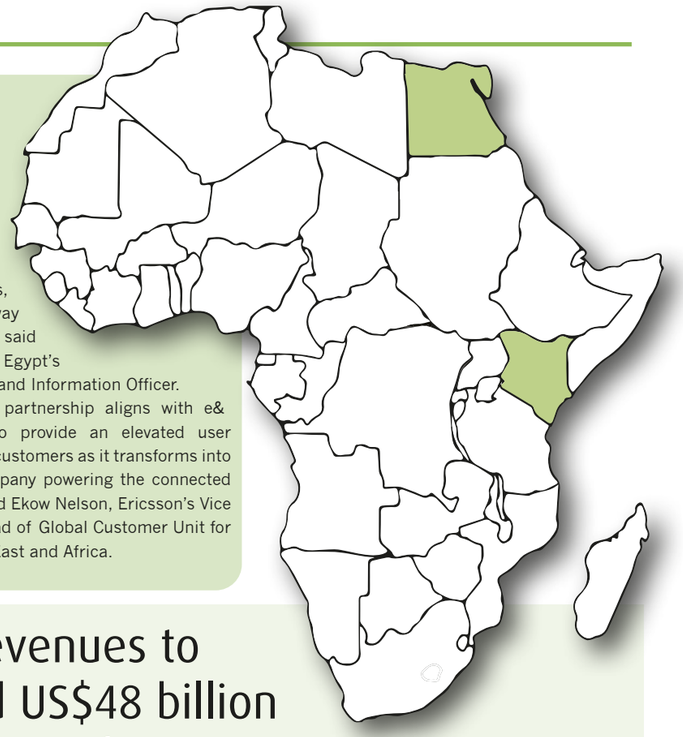
This growth not only demonstrates increased acceptance of Starlink's services in the country, but it also propels the satellite internet provider ahead of Liquid, which maintained a 1% market share during the same period.

Starlink began operations in Kenya in July 2023, since when the number of satellite internet subscriptions has increased significantly in the country. Indeed, according to CA, satellite internet subscriptions increased by 104.7% during the period, owing to a customer acquisition effort undertaken by Starlink Internet Services Kenya, which introduced the option to rent satellite equipment at a lower rate.

Meanwhile, Starlink has this month inaugurated its second African ground station point of presence (PoP) in Nairobi to improve its network capacity. Previously, the only Starlink PoP presence on the continent was in Nigeria, limiting the network's ability to cover the whole continent.

Jimmy Grewal, general director of Elcome, a Starlink authorised reseller, stated that the newly activated Starlink PoP in Kenya has reduced average latency for their global Starlink customer base from 57ms to 44ms. This is almost half of what it was at the beginning of 2024.

Ericsson extends e& Egypt contract for five years



Ericsson has extended its managed services and customer support contract with e& Egypt for another five years, pledging to enhance the operator's AI integration and operational efficiency as part of the renewed agreement.

Ericsson will continue to oversee e& Egypt's network operations and customer support, aiming to boost service quality and improve user experiences through the implementation of advanced technologies such as AI.

"This partnership highlights a shared vision to leverage AI-driven network technologies for next-generation advancements in telecommunications. We seek to build on Ericsson's expertise to integrate AI into network operations, enhance service quality and user experience for our subscribers, while paving the way for future growth," said Amr Fathy, e& Egypt's Chief Technology and Information Officer.

"Our extended partnership aligns with e& Egypt's efforts to provide an elevated user experience for its customers as it transforms into a technology company powering the connected digital future," said Ekow Nelson, Ericsson's Vice President and Head of Global Customer Unit for e& in the Middle East and Africa.

Communications Authority of Kenya's new rules could impact distributors and ISPs

Proposed new licensing rules and fees from the Communications Authority of Kenya (CA) could financially impact distributors of terminal electronic devices and complex network equipment as well as satellite internet service providers (ISPs).

Plans for a new licence, 'the Telecom Equipment Distributor (TED) licence,' is aimed at limiting counterfeit electronics, and will mean that distributors of terminal electronic devices and complex network equipment will need to apply for a licence by paying KSh5,000. There will also be a licence fee set at KSh250,000, renewable after 15 years, and an annual operating fee charged at 0.4% of turnover or a minimum of KSh120,000.

The CA has already introduced a web-based platform that enables Kenyans to ascertain the validity of their device brands. An attempt to require individuals to declare the International Mobile Equipment Identity (IMEI) numbers of their devices was suspended after data privacy concerns were expressed.

The CA has also introduced a proposal to significantly increase the 15-year licensing fees for satellite ISPs from $12,302 to $115,331. The proposed new rules also include an annual levy of 0.4% of gross turnover.

The proposal includes progressive elements, such as allowing satellite ISPs to engage in terrestrial cable operations, telemetry and space research.

FWA revenues to exceed US$48 billion in the next five years

Revenues from fixed wireless access (FWA) equipment are set to exceed US$48 billion over the next five years, driven by growing adoption across enterprise and residential markets in North America and India, according to a report from Dell'Oro Group.

The analyst stated that total FWA revenue including RAN equipment , residential CPE, and enterprise router and gateway revenue are on track to increase 7% in 2024. The group had reported that FWA revenue in 2023 surged 23% with total spend expected to hit US$6.6 billion globally.

Long term subscriber growth is expected to occur in emerging markets in Southeast Asia and the Middle-East and Africa due to upgrades to existing 3G and LTE networks, as well as a desire to connect subscribers economically. The exact numbers were not detailed but FWA equipment revenue increased by 17% between 2023 to 2027.

"Initially viewed as a way to monetize under-utilised spectrum, FWA has grown to become a major tool for connecting homes and businesses with broadband," said Jeff Heynen, Vice President with the Dell'Oro Group. "What started in the US is now expanding to India, Southeast Asia, Europe, and the Middle East, as mobile operators continue to expand their 5G-based FWA offerings to both residential and enterprise customers."

Smartphone penetration encourages 4G/5G uptake in Kenya

According to Kenya's Communications Authority (CA), smartphone penetration is increasing, which is encouraging the adoption of 4G and 5G technologies.

The CA's First Quarter Sector Statistics Report for the financial year 2024/2025, shows there was a slight decline in 3G broadband subscriptions and data consumption, but an increase in 4G and 5G technology adoptions from July to September 2024.

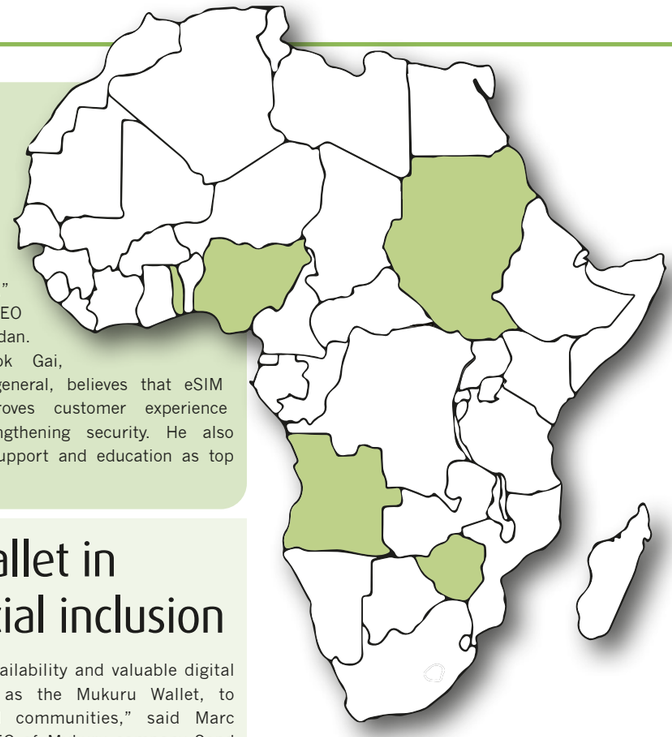
"The adoption of 4G and 5G technologies has continued to grow, mainly driven by the growing demand for high-speed Internet for activities such as streaming, online learning, remote work, and e-commerce," said the CA.

The authority reports that the telecoms sector witnessed substantial growth in the first quarter of the financial year 2024/2025, with an increase in internet subscriptions, mobile SIM, smartphone use, and mobile money.

The total number of mobile phone devices connected to mobile networks was 68.1 million, with a penetration rate of 131.5%. Smartphones take the lead with 37.4 million devices, representing a 72.6% penetration rate, while 30.7 million feature phones accounted for 59.6% penetration.

WIRELESS BUSINESS

MTN South Sudan launches country's first eSIM



MTN South Sudan and the National Communications Authority (NCA) have officially launched electronic SIM (eSIM) technology in the local market.

The NCA is willing to assist MTN and other mobile operators in innovating and making eSIM-enabled smartphones available.

"Today marks another milestone in South Sudan's telecommunications journey. As MTN, we are proud to be the first operator in the country to launch eSIM technology. This is not just about innovation; it's about simplifying connectivity and delivering convenience to our customers," said Ali Monzer, CEO of MTN South Sudan.

Napoleon Adok Gai, NCA's director general, believes that eSIM technology improves customer experience while also strengthening security. He also sees customer support and education as top responsibilities.

Mukuru launches mobile wallet in Zimbabwe, enhances financial inclusion

Mukuru has launched a mobile wallet in Zimbabwe called Mukuru Wallet, following its award of a Deposit-Taking Microfinance Institution (DTMFI) licence in the country by the Reserve Bank of Zimbabwe.

The wallet has several benefits, including two pockets that allow users to send and receive money locally and internationally from mobile phones, and safe storage of funds, as well as a free cashout on international transfers.

"To avoid disappointing people who travel long distances to receive their remittances which they use for food, school fees and other essential services, we now have 250 of our own service points. With a network stretching across urban and rural areas, we can reach more people than ever, providing constant cash availability and valuable digital solutions, such as the Mukuru Wallet, to the underserved communities," said Marc Carrie-Wilson, CEO of Mukuru company Send Money Home Zimbabwe.

"The wallet environment enables us to start providing additional value, such as allowing more affordable domestic money transfers, supporting safety by eliminating the need for customers to walk around with large sums of money, and providing convenience and cost savings, such as paying for electricity, buying airtime, settling DSTV bills and paying for insurance from their couch. Our use of multiple channels also ensures accessibility for our customers," said Mukuru Zimbabwe Financial Services CEO, Doug Tait-Knight.

Togo cuts dark optical fibre rental costs

The ceiling price for monthly rental of dark optical fibre in Togo has been reduced by 60%, from 75 FCFA to 30 FCFA per linear meter.

This significant reduction, announced by the Regulatory Authority for Electronic Communications and Posts (ARCEP Togo) in its decision No. 003/ARCEP/DG/25, aims to regulate wholesale services between operators and Internet access providers to make connectivity more affordable.

"Affordable and fairly priced access for all operators and Internet access providers to national and international transmission infrastructures has become crucial to accelerate the deployment of fixed and mobile broadband in the interior of the country and ensure better availability of fixed and mobile services. In addition, this will promote the effectiveness of competition and consequently lead to lower prices on the retail market ," said ARCEP in a statement.

This decision is based on a cost audit of the main telecom operators Togocom and Moov Africa. It is also part of a broader regulatory framework, in particular Order No. 007/MENTD/CAB of 2022 on the sharing of passive infrastructure. These reforms aim to promote an open and competitive wholesale market while supporting the Togolese government's ambitious digital projects, such as improving broadband connectivity.

This drop in wholesale costs should also allow internet service providers to offer more competitive offers, making connectivity more accessible to a majority of the population. Rural and isolated localities, often penalized by insufficient infrastructure, should benefit from more extensive coverage of broadband services. In addition, start-ups and SMEs will have access to more affordable digital services, promoting innovation and economic development at the local level.

Nigerian people call out 50% tariff rises

Consumer associations and trade unions have spoken up to contest the 50% increase in telecom tariffs approved on 20 January by the Nigerian Communications Commission (NCC).

They believe that this measure is insensitive and unwelcome since workers and the population are facing economic difficulties.

According to Joe Ajaero, president of the Nigerian Trade Union Congress (NLC), "an average Nigerian worker already spends about 10% of his salary on telecommunications costs. For a worker earning the current minimum wage of 70,000 naira, this means an increase from 7,000 to 10,500 naira per month, or 15% of his salary. An unsustainable cost."

The protest comes as telecom operators have also complained about rising operational costs, due to the depreciation of the naira against international currencies and the surge in the price of hydrocarbons, particularly diesel used to power telecom towers. The operators had asked for a 100% increase to continue providing quality services.

"The increase in operational costs has had a significant impact on our results. This adjustment is crucial for us to continue to invest in network expansion, improve service quality and drive innovation in the sector," said Karl Teniola, CEO of MTN Nigeria.

Trade unions and consumer associations are calling on the Nigerian government and the NCC to suspend the increase and engage in dialogue to find a fairer solution.

3 million Nigerian homes to come online with WIOCC

Bosun Tijani, Nigeria's Minister of Communications, Innovation and Digital Economy, has announced the signing of a Memorandum of Understanding (MoU) for a US$10 million partnership with WIOCC to expand home internet access across the country. The project targets three million homes in its first phase.

"We are encouraging investment in the various parts of the value chain that connect people, and one of the areas that Nigerians are yet to take full advantage of is fibre to the home. We rely mostly on mobile connectivity on the move. However, there is a huge opportunity to also stay connected at home," said Tijani.

WIOCC will set up a large-scale, open-access digital platform with state-of-the-art fibre optic and colocation facilities. Internet Service Providers (ISPs) will be able to use this infrastructure to provide high-speed fixed internet to homes and businesses. The project has already started in a few states, including Lagos.

Angola to sell Unitel shares

The Angolan government plans to sell its shares in the troubled state-owned operator Unitel as part of broader efforts to privatise the country's economy.

According to Minister of State for Economic Coordination, José de Lima Massano, the country is privatising Unitel in the coming months, with part of the sale set to be conducted through the stock exchange, reported Bloomberg.

Unitel is one of the 200 largest state-owned companies and assets identified for privatisation. More than half of these companies have already been sold to the private sector since the programme began in 2019.

Talking satellite

Simon Gatty Saunt, Vice President Sales, Global Service Providers, SES

Enabling humanitarian assistance from MEO

Over recent months, SES has been partnering with the European Space Agency (ESA)'s Business Applications and Space Solutions (BASS) programme, supported by the Luxembourg Space Agency (LSA), to enable humanitarian efforts in Burkina Faso.

The co-funded SENO pilot project (Satellite in Response to the Needs of Humanitarian Organisations) provided essential connectivity to the Red Cross and other humanitarian organisations operating in the remote Niger-bordered municipality of Dori, some 265km from the capital Ouagadougou.

Addressing the demand for reliable high-speed connectivity

For several years now, Burkina Faso has been grappling with significant instability, marked by escalating extremist violence, political upheaval and humanitarian crises that have resulted in connectivity challenges. The landlocked country, and the broader Sahel region, have frequently seen terrestrial networks become destroyed or congested. These hurdles have made it difficult for humanitarian organisations to carry out missions, limiting their capacity to support the social and economic well-being of displaced and local communities.

To help address critical connectivity issues, SES and Red Cross Burkina Faso (French version) have launched the SENO project under the ESA BASS framework 'Space in Response to Humanitarian Crises.' This partnership provided a reliable, independent and low-latency communication channel for multiple humanitarian organisations in Dori.

IP-based services were used to support displaced individuals and the local community, facilitate the collection and transmission of data using digital applications, online training and collaboration. The medium Earth orbit (MEO)-enabled service allowed significant improvements in daily operations.

"The VSAT connection has a very good throughput, we no longer have any difficulties in transmitting our reports and data collection. Software like Microsoft365, Outlook, TEAMS, OneDrive, requires a good connection," says one project ECHO/APP CRBF user. "I had always heard about online meetings, and it was a great experience for me to finally benefit from these while in Dori – connecting with colleagues in Kongoussi, Fada and Ouagadougou."

Helping those most in need

Building on SES's and Luxembourg's previous experience in deploying the ICT infrastructure in five locations of Burkina Faso, this collaboration with ESA BASS was a logical step in responding to the evolving needs of the communities and humanitarian workers.

SES's MEO with its Internet Gateway in Europe, served as the key enabler of the high-performance connectivity solution. End users could enjoy guaranteed 72Mbps download and 33Mbps upload speeds across 11 sites. The initiative was backed by the Luxembourg Space Agency (LSA) and the local Burkinabe authority responsible for ICT, ANPTIC, who provided access to the telecom infrastructure previously installed in partnership with LuxDev.

The SENO pilot took place over several months and benefitted nearly 900 users, including 217 humanitarian workers, through applications usage such as videoconferencing, emails and more, totalling around 29,000 hours. It also helped humanitarians identify more than 4,400 individuals that needed help and enabled more than 50 displaced people make contact with their families.

"Reliable high-speed connectivity is a critical capability that enables the humanitarian community to provide help on the ground," says Philippe Glaesener, Senior Vice President, Space & Defence at SES. "MEO satellite services are a key building block in addressing this connectivity need, especially where access to fibre is limited. It was an honour for us to join efforts with the European Space Agency (ESA), the Luxembourg Space Agency (LSA) and the Red Cross in supporting this meaningful initiative, and leverage our expertise in deploying services for institutions and organisations in remote locations."

Revolutionizing business communication: the rise of softphones in Africa's wireless ecosystem

Maulik Shah, Co-Founder, Tragofone

The wireless ecosystem across Africa has grown exponentially in the last few years. The continent is ready to leverage the power of digital communication and the opportunities this revolution brings to both small and large businesses. There's a rise in mobile adoption and investments in infrastructure. Here are some stats that present a better picture of growing infrastructure and mobile penetration:

- Tower installations across Africa are projected to grow from 199,092 in 2023 to 249,652 by 2028
- Mobile data consumption across Africa is predicted to quadruple by 2028
- 5G adoption is projected to reach 17% of the total mobile connections by 2030
- Morocco, in collaboration with Thales Alenia Space, is investing in a high-throughput satellite (VHTS) system
- Angola's AngoSat-2 satellite connected hundreds of thousands of people through satellite broadband

Businesses are employing Voice over Internet Protocol (VoIP) alternatives like softphones over traditional phone lines. The progressive shift is bringing a new wave of seamless and smoother communication in Africa. In this growing wireless ecosystem, softphones are set to remodel the fundamental framework of business communication in the continent.

Softphones and the African business landscape

Softphones are software-based wireless communication solutions that convert any internet-connected device into a practical phone system, enabling high-quality voice and video calls over the Internet. Africa's wireless ecosystem is still growing and faces communication challenges like connectivity inconsistency and varying infrastructure development. Softphones present a solution to tackle these challenges through reliable connectivity.

Communication hurdles

Despite the progress in wireless communication in Africa, there are still certain regions that struggle with quality and reliability issues. Some popular communication solutions in the continent have noticed rising complaints about dropped calls, jitter, and latency. Integration in local environments is another challenge that leads to missed business opportunities. Coupled with the high cost, these challenges become a barrier to the widespread adoption of digital services. Several users of a few acclaimed communication solutions have recently started showing interest in alternative platforms.

Softphone applications commit to tackling and resolving these pain points in Africa, offering seamless browser-to-browser communication, and features like push notifications which uphold call quality and seamless connection. Auto-provisioning is another feature that enables quick and hassle-free deployments, ensuring that critical business meetings aren't cut short by technical glitches.

Empowering ISPs and PBX-based businesses

Across the African continent, Internet Service Providers (ISPs) who have their own PBX infrastructure are increasingly seeking tools that enhance their existing systems rather than replace them. Traditional PBX solutions are deeply ingrained in the telecommunications environment, and these ISPs are hot leads for advanced softphone platforms because they desire solutions that work with their current investments.

When ISPs leverage a softphone app that integrates effortlessly with PBX infrastructure, they can deliver a unified, consistent user experience — enabling their clients to use a single application for voice, video, messaging, and conferencing.

The rise of eSIM and the softphone opportunity

The demand for eSIM technology has been rising. eSIMs allow for remote provisioning of mobile network operator profiles without the need for physical SIM cards. This innovation prioritizes flexibility, mobility, and seamless user experiences.

With eSIM, users can switch providers or plans on the fly, and when combined with a softphone's ability to operate on any internet-connected device, it creates a powerful synergy. Softphones can essentially run in tandem with these new mobile frameworks, enabling effortless global communication. By the time 5G connections and broader satellite coverage roll out across Africa — as hinted by various government and private sector initiatives — softphones will be well-positioned to capitalize on ultra-low latency and high bandwidth networks.

Driving digital transformation

Digital transformation initiatives across the continent are not solely focused on improved connectivity; they also emphasize training, skills development, and building the digital workforce of the future. Initiatives like Google.org's grants for AI and cybersecurity skills training in sub-Saharan Africa are preparing the ground for a more tech-savvy generation of entrepreneurs, administrators, and knowledge workers.

Softphones, with their user-friendly interfaces and minimal hardware requirements, align perfectly with these new competencies. They enable a hybrid workforce, allowing employees and partners across Africa — whether in bustling urban centres or remote rural areas — to connect without friction. The continent's mobile penetration rates continue to climb, and data centre capacity is projected to increase dramatically by 2030. This robust digital foundation supports a future where business communication tools are more vital than ever.

Future-proofing enterprises

As African economies diversify and integrate into global value chains, the communication demands placed on businesses will only intensify. Softphones stand at the nexus of several converging trends: the expansion of wireless infrastructure, the adoption of cloud-based services, the growth in remote and hybrid work, and the diversification of telecom technologies like 5G and satellite.

Moreover, softphones' ability to evolve with the market is essential. Such solutions are built with modular, scalable architectures, enabling them to integrate emerging technologies – be it advanced AI-driven call analytics, virtual assistants, or tighter integrations with IoT and smart city solutions. In this way, businesses aren't simply purchasing a one-time solution; they are engaging in a long-term strategy that flexes with market shifts.

The softphone advantage

In a continent where wireless communications are playing a pivotal role in economic growth and digital inclusion, softphones offer a cutting-edge, cost-effective, and reliable alternative to traditional telephony systems. By addressing concerns over call quality, reliability, and integration – and by empowering ISPs and PBX-reliant businesses to better serve their customers, softphones represent a critical step forward.

The rise of eSIM, the push towards AI-driven training, and the burgeoning opportunities presented by satellite and 5G networks all point to a future where seamless, high-quality communication is the norm. As African businesses navigate this complex, rapidly evolving environment, investing in advanced softphone technology stands out as a strategic move — one that ensures they remain connected, competitive, and ready to face the wireless world of tomorrow. ■

Filling the technology gaps in Africa's tower industry

Which technology gaps still exist in Africa's tower sector, and how are industry players responding to meet the new demands amidst seemingly unstoppable digitisation?

The Africa tower sector faces several technology gaps; however, almost all industry experts agree that power is the biggest divider.

"The biggest challenge faced by infrastructure providers in this continent lies in energy efficiency and power reliability," asserts Ramesh Khanna, CEO, Tarantula. "Many towers still depend on expensive and polluting diesel generators because of unreliable electricity grids. Limited digitalisation also makes it harder to maintain towers efficiently."

"4G and 5G equipment requires more power than 2G and 3G, this has further widened the technology gap as there is limited availability of reliable power supply, which hinders the efficient operation of tower infrastructure," adds Andrew Edmondson, CEO, Insite Towers.

Anoj Singh, Vice President of Global MNO Business, Vanu, highlights that the deployment of scalable energy solutions is a particular concern.

"The sector is heavily reliant on diesel generators for powering telecom towers, which poses challenges related to fuel costs, environmental impact, and operational sustainability," says Singh. "The gap in adopting greener and more sustainable energy alternatives, such as solar and hybrid power systems, significantly hampers the sector's growth and efficiency."

"If we look at power, tower companies will certainly benefit from adopting the latest power solution technologies including hybrid solutions with solar and wind for instance," agrees Al Mahdi Chakri, Head of Portfolio Development for Mobile Networks MEA at Nokia. "These innovations can improve reliability and reduce dependence on traditional power sources."

Of course, the power situation varies significantly from country to country and region to region across the continent.

"Countries with a large number of towers such as Nigeria and South Africa have made large strides in adopting renewable energy and optimising power consumption," explains Khanna. "Conversely, countries with disparate and rural geographies struggle to deploy towers and continue to grapple with frequent grid outages. To address these gaps, solutions like hybrid power systems and IoT-based predictive analytics can play a vital role in creating more sustainable and reliable operations."

Conversely, Singh believes that "challenges are more or less the same across all the regions if we consider remote and rural regions. They still face significant gaps in energy infrastructure. Renewable energy deployment is slow due to limited infrastructure, investment, logistic challenges."

Towers-as-a-service

On the road to bridging the technological and geographical coverage gaps in Africa's tower sector, Network-as-a-Service (NaaS) companies are playing a crucial and expanding role. By leveraging NaaS models, telecom providers and tower operators can

address several of the challenges associated with rural deployment and operation and significantly improve the economics of tower operations.

"NaaS is still in a relatively infant stage but is showing great promise," says Christopher Greaves, researcher, Middle East & Africa, TowerXchange. "Rural TowerCos such as AMN, NuRAN and Vanu have all been successfully raising capital from DFIs, impact funds and even gaging early-stage interest from private equity. TowerXchange estimates that there are over 10,000 rural towers in the deployment pipeline from just these three companies alone. NaaS is proving to be an effective solution for MNOs to meet coverage obligations and reach new untapped markets in the 2G and 3G bands, while reducing capex burdens to near-zero."

"NaaS providers deploy and manage telecom infrastructure as bundled Active (GSM and LTE RAN) and Passive (tower and solar power solution) allowing mobile operators to focus on the core business of providing services to end subscriber i.e. mobile voice and data," explains Singh. "NaaS companies present a compelling solution for rural connectivity challenges, particularly in Africa. By lowering costs, leveraging shared infrastructure, and focusing on sustainable energy solutions, they make rural sites financially viable for MNOs. While challenges remain, the NaaS model holds significant potential to bridge the rural connectivity gap and drive economic growth in underserved regions. Collaboration between NaaS providers, MNOs, and governments will be key to unlocking its full potential."

Khanna believes that, especially for rural connectivity, NaaS companies are pivotal: "by enabling shared infrastructure (both active and passive) and leveraging solar power and lightweight towers, NaaS providers can deliver connectivity in rural areas in a cost-effective manner. Companies such as AMN and the Orange/Vodacom JVs are using this approach to achieve economies of scale across the rural areas in Africa."

Justin Head, co-founder and executive vice-chairman, PowerX, however, believes that while they have a role to play, NaaS companies are not an effective standalone solution.

"The operation of NaaS involves significant capital investment, as these companies need to establish and maintain the infrastructure necessary to support their services. This requirement means that the speed of deployment can be relatively slow, as NaaS providers often face the continuous challenge of raising capital for expansion. While NaaS can facilitate more efficient provisioning of tower services and potentially lower overall costs, the financial realities of securing funding can hinder rapid rollout in rural areas where immediate connectivity is most needed," opines Head. "It must be integrated with other strategies and models to ensure timely and effective delivery of tower services. A multifaceted approach, combining NaaS with public-private partnerships, innovative financing solutions, and local community engagement, will likely yield the most effective results in expanding access to telecommunications in these hard-to-reach areas."

And Greaves notes that NaaS puts significant risk on the infrastructure provider, who can only rely on a small proportion of fixed-lease income: "this has limited NaaS partnerships to large, lower-risk operators such as Orange, MTN and Airtel who are more likely to guarantee the ability to generate revenues long-term."

Tapping into adjacent verticals

While African TowerCos have predominantly focused on core macro tower infrastructure in the past, today's market evolution is likely to include increasing uptake of integrated adjacent verticals such as Distributed Antenna Systems (DAS), small cells, and smart city connectivity into business models.

"Diversification of digital infrastructure is inevitable in Africa. However, the demand for DAS, small cells, and IoT infrastructure will be driven by urban densification in large cities and upcoming smart city projects," opines Khanna. "For instance, smart city projects in South Africa and Kenya are driving the need for IoT support, while small cells will cater to growing 5G adoption. TowerCos integrating these verticals will unlock new revenue streams and bolster competitiveness."

"As urbanisation increases and the IoT expands, the need for diverse connectivity solutions becomes more critical. Integrating adjacent verticals allows tower companies to provide comprehensive services that meet the varied needs of modern users and urban environments," says Head. "Ultimately, as the industry evolves, we are likely to see tower companies in Africa adapting to the new connectivity landscape by integrating adjacent verticals into their business models, supported by the power of data science to inform and optimise these expansions."

Prompted by growing demand for more, better connectivity both indoors and out, increased capacity, coverage expansion, and the drive for digitisation, Africa's TowerCos would be remiss not to diversify revenue streams, improve network quality, and support next-gen technologies.

"TowerCos are well-positioned to invest in these technologies as MNOs seek cost-effective ways to meet rising data demands. As we know, mobile broadband usage is growing in African cities and networks are experiencing higher network congestion, so solutions like DAS and small cells are critical to enhancing indoor coverage and boosting network capacity in dense urban areas," shares Singh. "Several African governments are launching smart city projects to improve urban infrastructure, transportation and public services. Tower can surely play a vital role by providing the infrastructure backbone for IoT sensors, surveillance systems, and public Wi-Fi networks in smart cities."

Additionally, there is significant potential for African TowerCos to grow from basic physical tower sharing to progressively more active equipment sharing and neutral hosting.

"This will present several opportunities for TowerCos. In fact, this integration evolution is already happening in other regions of the world where some TowerCos are de-facto neutral host providers offering inbuilding infrastructure with DAS and small cell for residential buildings, venues, airports and others," notes Chakri. "This integration is needed at different levels: bridging the digital divide with rural connectivity through connectivity-as-a-service model. It is needed to efficiently address government smart city initiatives and the urbanisation requirements of many areas in Africa for improved indoor and in building coverage."

"While macro towers will remain the stable of African TowerCos, we are seeing an increasing need to diversity service offerings and provide more bespoke solutions to fit the needs of customers," agrees Greaves. "For example, Helios Towers has seen an increase in demand for outdoor DAS systems for high-density white spots, supporting capacity of the macro layer. As Africa urbanises and sees smart city technology adoption, demand for inbuilding and small cell infrastructure will also increase. ATC Uganda has been working with the Kigali City Municipality to deploy urban street monopoles as part of the city's smart city strategy, for example."

"As the African TowerCo market continues to evolve, we can expect to see a gradual shift towards a more integrated and diversified business model," confirms Edmondson. "Our strategy has been to embrace the evolution in the TowerCo role, and we have already begun investing in Optic Fibre and Wi-Fi networks."

Tower tech in 2025

So, what's in store in tower tech terms for 2025?

"Tower technology in Africa is poised for significant growth and innovation in 2025," asserts Edmondson. "My expectations are centred around: increased adoption of renewable energy; expansion of fiberisation; rise of edge computing: growing focus on sustainability; and increased investment in digital infrastructure."

Head, meanwhile, expects to see significant advancements in tower technology driven largely by the increased use of data science. Tower companies are likely to adopt more sophisticated analytics and ML algorithms to optimise operations, enhance network performance, and improve overall service delivery.

"I would like to see tower companies embracing data science as a core component of their strategy, enabling them to derive actionable insights and adapt quickly to the rapidly changing telecommunications landscape. This transformation could also result in the development of new revenue streams through value-added services, including remote monitoring, analytics solutions, and partnership opportunities with other sectors, such as transportation and energy," notes Head.

On the power side of things, Singh expects TowerCos to continue to invest in solar, wind, and hybrid power systems to reduce reliance on diesel generators, in line with growing pressure from governments and investors to adopt sustainable practices.

Khanna, too, expects greater reliance on renewable energy, with solar and hybrid systems becoming the norm, as well as "large-scale digitalisation of tower management through comprehensive tools; AI-driven predictive maintenance to reduce downtime; and wider deployment of hybrid macro and small-cell towers with small footprints and quick deployment to bridge connectivity gaps."

Similarly, "we expect to see TowerCos progressively evolving from their initial offering cantered around physical site and power sharing to more active sharing," asserts Chakri. "We also expect to see a progressive integration toward adjacent areas including neutral hosting for in-building coverage and rural connectivity with as-a-service business models. We would also like to see TowerCos in Africa further investigating in opportunities for edge data centres, enhanced network monitoring and innovative digital services powered by AI from a technology standpoint and a stronger contribution towards bridging the digital divide in rural areas, while also facilitating the introduction of 5G."

Also focusing on Africa's unstable power supplies, Greaves expects to see technology adopted fastest in the energy component of tower operations: "this is where most of the pain points are. AI is becoming increasingly better understood and operations/technology executives are paying more attention to how AI can be utilised to drive operational and technical efficiencies. Most TowerCos in Africa have adopted some form of power-as-a-service or in-house energy generation, and AI is proving to be a critical tool in helping balance run-time of complex hybrid energy systems utilising a combination of renewable, battery, grid, and back-up generator power. Digital twin technology has also been around for a few years now, and seen some early adoption, but has not quite seen widespread take-up due to cost and questions of practicality. But as TowerCos shift their strategic focus away from M&A towards lease-up and increasing colocation, the use-case of digital twins may strengthen to help TowerCos manage increasingly complex sites."

Singh, too, expects an expansion of small cell and DAS deployments to address urban network congestion and support 4G/5G expansion; for telecom regulator and respective government agencies to continue incentivising rural connectivity; and for TowerCos to explore more NaaS and infrastructure sharing models to further optimise the deployment costs.

"I would like to see affordable and reliable rural connectivity – by deploying cost effective and low power consumption radio access network solutions based on 2G and 4G technologies powered over off-grid solutions and ensuring universal coverage in rural areas," adds Singh. "Committed collaboration between NaaS, government, regulators, and non-profits are needed to fund and scale these rural connectivity projects and minimise the digital divide."

Meanwhile, Edmondson hopes to see the standardisation of tower designs, equipment, and operations to facilitate easier maintenance, upgrades, and sharing of infrastructure; more initiatives to develop local talent and skills in tower maintenance, installation, and management to reduce reliance on international expertise; and improved security measures to protect tower infrastructure from vandalism, theft, and damage, ensuring reliable network operations.

"Greater collaboration among operators, tower companies, and governments to share infrastructure, reduce costs, and improve efficiency, is also needed," notes Edmondson. "By focusing on these areas, Africa's tower tech industry can continue to grow, improve, and support the continent's rapidly evolving digital landscape." ■

Connecting Africa from orbit

Amidst a global digital revolution, Africa's connectivity levels lag behind the world. Will satellite prove instrumental in connecting the continent?

Ideas around connectivity are changing. Internet access is no longer considered a luxury, but an absolute necessity required for digital inclusion.

"I believe that connectivity is the right of every human being," asserts Sulaiman Al Ali, CEO of Thuraya, the satellite mobility arm of Yahsat Space Services, Space42. "Having access to internet, education, technology, and information is a basic right."

Africa is experiencing a digital transformation that is accelerating the continent's development and improving human well-being.

"However, according to the ITU's 'Facts and Figures 2023' report, only 37% of Africa's population had internet access in 2023," says Rhys Morgan, VP and General Manager EMEA, Media and Networks, Intelsat. "Despite the presence of 25 submarine cables and 1.2 million km of terrestrial fibre, Africa's optical fibre footprint remains inadequate, especially in rural areas, as highlighted by recent outages that hindered reliable connectivity across the continent. A stable and resilient internet infrastructure is essential for economic growth and the functioning of modern societies."

From expanding connectivity, either as standalone satcoms packages or as backhaul support for mobile networks, through to empowering education, healthcare, e-governance and disaster recovery, satellite connectivity solutions are fostering economic growth and improving quality of life.

"Satellite connectivity solutions have proven to make a significant difference for many landlocked countries in Africa, where the connectivity via fibre can be patchy due to geographically challenged terrains," reports Simon Gatty-Saunt, VP, Sales, Enterprise & Cloud, Europe and Africa at SES.

"Satellite connectivity will play a crucial role if there is to be a digital revolution across Africa, as large geographical segments represented by rural areas – and even many underserved suburban areas and medium sized towns – are still reliant on pre-4G technology," adds Ismail Patel, Senior Analyst - Enterprise Mobility, Cloud, EMEA, GlobalData Technology.

Meeting demand

High Throughput Satellites (HTS) were big news back in the 2010s, with wild promises of universal connectivity claimed by some providers.

"HTS, which can operate in both GEO and MEO providing up to multi-Gbps, have been designed to reliably improve signal quality and capacity, especially in areas with high demand for network services and data applications," says Gatty-Saunt. "For example, we've been working with Kamoa Copper in the Democratic Republic of Congo for more than five years to support their mining operations' digital shift with seamless connectivity in remote sites."

"Since their launch a decade ago, high-throughput satellites (HTS) have delivered more data at lower cost per megabit than previous spacecraft, opening up a range of services and capabilities that were not possible before, and helping respond to some of Africa's challenges," notes Morgan. "Back then, many telecom companies were looking carefully at the cost of operating their networks, while expanding mobile networks was often impacted by the slow pace of traditional infrastructure deployment methods. With HTS offering 3-5 times the efficiency of earlier platforms, these companies have seen the cost of ownership go down and have been thus able to expand their networks into new areas where demand for bandwidth has not been met."

However, "it's always been a challenge for satellite operators to define where they want to install capacity, and to make sure that that capacity is adequate," says Vaibhav Magow, Vice President International Division, Hughes Network Systems. "There are a lot of HTS over Africa already, but the demand is such that it fills up quickly."

With the first of its kind launched in 2005, HTS offer much higher bandwidth than traditional geostationary (GEO) satellites, enabling more people and businesses to access internet services. They have proven instrumental in connecting remote areas, especially where terrestrial infrastructure is unavailable or impractical. HTS boast a significantly lower cost-per-bit than traditional geostationary satellites, making services more affordable for businesses, schools, and governments; and facilitating backhaul for mobile networks.

However, while HTS have made significant strides in expanding connectivity across Africa, they have not yet delivered universal connectivity. Despite lower operational costs, HTS-based internet services remain expensive for individual users and small businesses in low-income regions, and equipment costs and subscription fees can be prohibitive. Additionally, while HTS improve connectivity, they still depend on complementary infrastructure, such as local Wi-Fi networks or mobile towers, which are often absent in remote areas – where power supply issues also remain a challenge.

"HTS are simply higher throughput than the previous generation of geostationary satellites - the latencies are still the same, typically in the region of 600ms," notes Rolf Mendelsohn, CTO at Paratus. "That means that the user experience is slow, the quality of experience is completely different compared with fibre optic or wireless networks, or low Earth orbit (LEO) satellites."

LEO satellites, on the other hand, are poised to address many of the challenges faced by HTS in Africa, offering potential solutions to some of the key barriers to connectivity.

"LEO will address far more use cases, or different kinds of use cases," notes Magow. "I think one of the biggest benefits that customers would see with LEO is the ease of VSAT installation. For certain attributes, LEO satellites can provide better use cases than GEO."

"The rise of LEO satellites has created a potential solution to the problem of connectivity in underserved and unserved areas," adds Patel. "The expectation of the industry is that the launch of further LEOs will drive down the per-MB price of satellite connectivity further, which will help ultra-rural communities with first-time broadband-grade connectivity, and businesses and non-urban dwellers with back-up connectivity."

For one, LEO satellites operate much closer to Earth (500-2,000km altitude) compared to geostationary HTS (36,000km), resulting in lower latency (10-20ms compared to 600ms for HTS), enabling smoother real-time applications like video conferencing, online gaming, and telemedicine. Then there's the improved coverage - LEO constellations can provide seamless coverage by forming a network of interconnected satellites, which makes them particularly suitable for reaching remote and underserved regions where HTS or terrestrial networks have limited reach. Easily scalable with the addition of new satellites into the constellation, and with mass production reducing costs over time, LEO satellites can provide reliable, affordable backhaul connectivity to rural mobile networks, enhancing the performance of 4G and 5G in remote areas.

"LEO is a real game changer. SpaceX has a massive constellation of satellites providing an inordinate amount of capacity to the African continent at high speeds and at low latencies," confirms Mendelsohn. "The experience for a user anywhere on the continent - or anywhere in the world for that matter - is comparable to the experience which is provided on a wireless or a fibre optic network."

"We've seen government applications from firefighting trucks requiring internet communications for firefighters, through to connecting first responders and supplying citizen services," says Magow. "Installing a GEO antenna on these vehicles is extremely expensive and not particularly practical, but LEO antennas are much more cost effective and lightweight. For many of these customers who don't require the service all the time – only for emergencies – the service cost is not a huge issue, but the equipment cost certainly is."

LEO systems are not without their own limitations, though, and their success depends on overcoming significant technical, economic, and logistical hurdles – just like their geostationary counterparts. However, if LEO operators can lower the cost of terminals and offer flexible pricing models, they may succeed in reaching underserved populations.

Hurdles to adoption

Connecting all of Africa from orbit requires several key hurdles spanning technical, economic, regulatory, and social domains, to be addressed. This necessitates a coordinated approach that combines innovative technologies, strategic policies, and collaborative efforts between stakeholders.

Whether we look at the user equipment or subscription fees, satellite services remain expensive for many in Africa, and the low-income populations - often those who most need connectivity - cannot afford these services without subsidies.

"It remains somewhat unaffordable in a number of markets," admits Mendelsohn. "If you look at these satellite packages, the minimum cost that they're going in at is about $50 a month for broadband. That's expensive for a lot of Africans, especially in comparison with mobile networks, which still provide good speeds, but for about US$5 per month."

"I think we all agree that after COVID-19, everybody deserves to be connected," notes Magow. "If you look at other parts of the world, even in Asia Pacific, telecommunication companies tend to cover 85-90% of the geographical area – they cannot reach 100%. As such, there's always a need to deliver broadband via satellite that is affordable for the average African. We've made great strides in affordable connectivity in recent years, but it's not yet enough."

Magow recalls a previous project from India, wherein Hughes planned to connect rural regions via satellite. Although the company was able to deliver and install VSATs in the required regions, and at a low price point, the end users lacked the devices to connect to the internet.

However, "today, so many Africans have mobile phones capable of connecting to the internet through community WiFi projects that we see great uptake of these services. All over, rural populations are using VSAT connectivity, at an affordable price, for 20 minutes a day, for example. Satellite has really made a difference in bringing connectivity to remote and rural communities."

While affordability remains a pressing concern, hope is on the horizon. With the new wave of LEO constellations, prices are falling; combined with flexible Pay-As-You-Go models tailored to African markets, this can make services more accessible. As Magow highlighted, community WiFi hubs can help share the costs, which can be further supported through subsidies for services, devices and equipment.

"On the ground, we need to see more collaborations between the private and the public segments," concurs Al Ali. "If we can see more collaboration between the public and private segments, I think the obstacles will be eased."

One example is Space42's projects in Zimbabwe, where the company connected several public libraries via satellite. These libraries now have access to materials from remote locations, thanks to a collaboration with the government.

"In some countries, there are a huge amount of taxes or fees due for installing satellite connectivity, and the end user is the one who ends up paying. In Africa, where affordability is still a real challenge, the easier you make it for the public sector to provide an affordable service, the more connected people you will have," adds Al Ali.

Some consider the regulatory environment in Africa's satellite industry as another hurdle to overcome for the effective delivery of satcoms. Evolving rapidly, driven by technological advancements, increased demand for connectivity, and global trends in space governance, regulations

are shaping the deployment, operation, and growth of satellite services across the continent.

The satellite industry in Africa is experiencing exciting growth and transformation, aligning with the vision of 'Agenda 2063: the Africa We Want,' reports Morgan: "many African governments are actively reviewing and updating their regulatory framework to foster innovation (and reflect advancements in space technology), and ensure security and align with international standards. These changes are paving the way for a more competitive and dynamic satellite market across the continent."

However, Mendelsohn highlights that "the main hurdle that a number of the LEO operators are facing are regulatory. A number of countries have already accepted the LEO satellite systems and are open to these international players, while others are still working through the process."

Today, African countries are revising their policies on spectrum allocation to accommodate the growing demand for satellite connectivity, especially for high-demand frequency bands like Ku, Ka, and C-bands. This improved spectrum management can reduce interference between satellite and terrestrial networks, and simplify licensing for satellite operators, encouraging investment.

However, "the biggest assistance that regulatory environments provide us is the ability to provide services at a better price point," says Magow. "The focus needs to change from spectrum allocations to how they can help reduce the fees, to make it more affordable. Delivering satcoms services requires a lot of licences and takes a lot of time due to the level of bureaucracy in many countries. If the regulators were to focus on that, have more conversations with the people involved, that would improve things."

To 2025 – and beyond

Africa's dynamic satellite market continues to evolve, grow and expand – and the horizon looks promising.

"I think in 2025, we'll see faster speeds achieved via satellite. In certain areas, we're seeing the maturity of the market coming through, and services are becoming more affordable. Telcos are moving into rural regions, and we want to help enable that," says Magow. "The number one priority that we have when it comes to internet connectivity is to serve more communities and with better speeds."

"One major trend that we see on the African continent is what I call the internet moving south," adds Mendelsohn. "In the past, we relied on connectivity from Europe and the Americas. Today, we've got more content in several major tier one data centre locations in Africa, so there is less data being served out of Europe, saving costs. And now we have LEO satellites to augment these services. It's a very exciting time for Africa."

Looking to the near future, Al Ali expects significant market consolidation: "this is the result of the pressure coming from increasing ground segment requirements as well as on-orbit competition. I think 2025-2026 will be a tipping point for the whole satellite industry - a lot of projects are due for delivery in 2026, everything from new constellations through to NTNs. This will be huge."

"I would most like to see more of the countries pass regulations that allow LEO systems to operate – only around one third have to date. Whereas, if you look at South America, almost all countries have granted licensing for LEO systems," shares Mendelsohn. "To get ahead, we need to be more flexible in terms of regulations to allow these constellations to operate, even if it's on a trial basis – despite local competition concerns. All those things can be navigated, but there needs to be a willingness to allow them to operate." ■

Reduce, reuse, recycle: greening telecommunications

David Evans, Head of Global Asset Recovery and Services, TXO

Reduce, reuse, recycle: these are words to live by. Reduce talks about cutting down on what you manufacture for use, thereby reducing the carbon footprint. Reusing assets that have already been manufactured is another way to minimise carbon emissions, reducing the need for more base materials or residual metals to be extracted from the Earth. And, if there is no reuse option for an asset that was built for that specific purpose, there's recycling - taking the materials back to be reused in manufacturing, to produce another asset.

Our founder saw a gap in the market 21 years ago; he bought lots of spare telecommunications parts from vendors like Ericsson and stored them in his garage. In 2005, of course, Hurricane Katrina hit, and communications infrastructure took huge amounts of damage. He sold all this equipment to the US market, made a small fortune, and founded TXO on the principle of equipment reuse.

The COVID-19 pandemic has had a massive influence on the green market in recent years. During that time, operators bought surplus stock, and manufacturing slowed to a standstill in some regions. In 2024, some of that pre-ordered and paid for stock is now finally being delivered. But it's of no use to the operators, it's been written off. That surplus provides us with an opportunity to repurpose the parts, to ship them to other parts of the world like Africa where they're very much needed – a much better solution than leaving it to sit and gather dust.

The green economy

Africa's fibre networks are their legacy networks and are typically not supported by original equipment manufacturers (OEMs). There comes a time when every network reaches end of life support, and then the operator must choose what to do next. Typically, this results in the decision to upgrade – whether it's needed (or affordable) or not. When the network is upgraded, or indeed when a big merger takes place, a huge amount of equipment – that works perfectly well – becomes available. Those networks are becoming one of our largest sources of equipment, particularly for the European market, where operators are working to maintain the types of networks that Africa is instead choosing to upgrade.

The drive for sustainability today in Africa is not on par with that of Europe. There's less focus on carbon emissions and other environmental challenges. However, the market is evolving, and in time, we believe Africa will shift from these rapid upgrade projects to network extension and maintenance projects instead. Some of the larger operators are already making commitments for reuse; Orange recently committed to 15% equipment reuse for their networks going forwards to demonstrate the importance of sustainability.

In fact, around 20% of Africa's operators are reusing equipment now. They stand to benefit from around 80% savings on costs compared with buying new, as well as taking back control of duty costs – a win for operators and for the environment.

However, there are two aspects of the circular economy to consider: you either feed it, or you consume from it. For example, there's a large Central European operator that is very pro circular economy, who speaks about generating revenue, being sustainable, and enabling operators, etc. When we asked what spares they need to maintain their network, they said that they would not utilise used equipment due to trust issues; customers believed that used equipment would result in a lower quality network. This isn't true at all thanks to stringent quality control practices and warranties, but it's a challenging mindset to change.

The greater good

Our core business model is that we will resell what you don't need to generate the revenue for the parts you do need. That cost model in Africa is fantastic, but – as evidenced by our Central European colleagues - it's important to ensure that the parts are what they should be, and to maintain stringent standards for quality control with extensive testing.

It's a sad fact that, even in 2024, many of Africa's schools, healthcare providers, educational institutions, etc. cannot take part in the digital economy, and do not benefit from the internet, because the state-of-the-art equipment required for connectivity is too expensive.

Thus, the potential for local businesses, schools, and hospitals, for example, to use secondary equipment to provide services in remote and rural locations is huge. If the savings generated by reusing equipment are actually passed on – and that's a big if in some cases – it could significantly reduce the digital divide and provide greater opportunities for the digitally disadvantaged.

The future is circular

We strongly believe in the local recycling of components and materials - we call that urban mining. One of our German businesses is actively taking apart a copper installation that has been de-powered. We're on our 200th ton of copper cable recovered from the site, and we will use that copper locally. By doing that, we double the carbon emission saving compared with reusing elsewhere.

Repair is really important to both the global and African markets: especially given that OEM support will disappear soon amidst the exciting new 5G developments. We're expecting as a result that we'll be receiving many requests to help maintain the networks.

New technologies will prove a boon for facility maintenance. One of the key advancements for telecommunications tower structures is the use of AI for predictive maintenance. Before this, engineers were replacing all the parts in a particular unit due to a single part fault – an unsustainable waste! Now, AI will provide a broader picture of what fails, when, and why. With it, engineers are now removing and replacing individual parts, preventing costly network failure. However, we're finding that some of these parts have another year or two of lifespan, so this is inducing a huge new cost for operators. For the circular economy, it's a bit of a double-edged sword – but one that keeps the networks up, and at least reduces the number of parts going to waste. ■

Connectivity Gold for the world's mega events

During the Birmingham 2022 Commonwealth Games, I saw the essential role antenna infrastructure and technology played in providing reliable connectivity and access for visitors as well as underpinning critical communications. Just as in Africa, the requirement for connectivity in the UK was a challenge that had to be achieved between venues and while users were on the move.

The 2022 Commonwealth Games was attended by 1.3 million people, the overwhelming majority of whom wanted to connect their portable devices to the internet. This is a major challenge to all mega events, where people now expect to have access to fast, reliable communications and transmission capability. How this is achieved often must depend on what systems are already available at a venue and its environs. Options can include Wi-Fi 6 as an enhanced version of the 2.4/5GHz spectrum - 2.4GHz provides the most coverage at slower transmission speed, while 5GHz gives less coverage but higher data transmission speed - to allow multi-user connectivity. Meanwhile, LTE and 5G provide good communications with the capability for expansion via temporary cell sites. There are also Distributed Antenna Systems (DAS), widely used in stadia, which facilitate multiple-user, high speed connectivity. The network used is often determined by what is already available and the resources available to pay for access to a network.

Whether we're looking at the Commonwealth Games or the Africa Cup of Nations, critical comms are, as it says on the tin, critical. Police, security, emergency and transportation services rely for data transmission and communications on network accessibility and reliability. Here, signal connection is important, as is the security of the network provided by the network operator. However, the most secure network is useless if users can't connect to it or if signals don't get through. Antenna and system design are critical for ensuring communications from, for instance, first responders being received from all locations at an event. Thus, there is a need for robust systems; and if resources permit a degree of redundancy and appropriate back-up systems.

One success of the 2022 games was transport logistics, with columns of buses efficiently and economically moving a million competitors, fans, officials and volunteers between events. Underpinning this was reliable, wide area communications between vehicles and the control centre. The games used bus providers from all over the UK to provide a free transport service.

I used these buses both as a volunteer and spectator and found the communications worked well, particularly given that the different bus operators had different communication, tracking and location systems. GPS/GNSS location solutions with LTE cellular systems for information communication with the control room were used to provide passengers with real time information at smart bus shelters. The buses were also equipped with Wi-Fi for passenger use. Some operators had incorporated Mobile Mark's LTM946 antenna, offering 4x4 MIMO for 5G cellular along with 6 Wi-Fi 6e elements for data distribution, collection and a GNSS element for location or timing.

Modern buses come with an array of technology, electronic ticket validation, passenger counting, CCTV, VHF and UHF communication links. This is true the world over, Africa included. The hardware being concealed within bus ceilings and side panels utilising high performance antennas inside and outside. Data exchange from bus

to control room and back requires appropriate on-board equipment to give both operator and customer what they need. The challenges are cost and installing multi-band high performance, durable antenna systems to deal with film and video streaming by customers and control room communications. High demand for connectivity and network pressure peaks, such as half-time breaks or opening/closing ceremonies, requires robust solutions with deployment of temporary cell sites, or the use of DAS being available options for organisers.

Looking at the critical comms aspect of the Games, it was a complex operation between police, military, first responders and in house security that was underpinned by cellular and TETRA two-way radio that proved successful in maintaining communications with all involved in making the games safe, secure and enjoyable.

Looking forward from Birmingham 2022 and at challenges for antenna solutions for super-fast communications at mega events, the number of elements required for future lightning-fast data transmission rates, alongside increasing frequency ranges, are going to be challenging. This is as true in the UK as it is in Europe, Asia, and Africa. 5G mmWave running at high frequency and extremely high data rates pose a challenge as radio waves at such frequencies act more like directed light from a bulb, rather than receive anywhere radio waves. These characteristics require both the send and receive antennas to be pointed at each other.

Consequently, a new technology named 'Smart Antennas' is emerging. This uses automated beam steering, which electronically aims the antenna at users' devices to achieve maximum data rates. The system uses Massive MIMO arrays, which have dozens or even hundreds of individual radiating elements which can be switched and aimed as required.

With the growth of Smart Cities and the prevalence of IoT, the demand for appropriate antennas is a design challenge, as with 5G using MIMO technology requiring multiple data channels for transmitting data concurrently. In the antenna industry we are working to satisfy the needs of users and the technology for connectivity. Be that at an event, on a bus, in a smart building or cheering the winners at the finishing line - innovative developments will remain an essential part of these solutions, in the UK, the USA, Africa and beyond! ■

Linda Clark, MD, Mobile Mark Europe

MyCiTi Integrated Rapid Transport goes digital with Trapeze

The MyCiTi Integrated Rapid Transit (IRT) Service of the City of Cape Town has been under development since 2010 as a rapid bus service targeting many regions of the Cape Metropole. Tens of thousands of customers utilise the system each day, taking advantage of the cashless smart card payment system myconnect.

The service aims to provide quicker transport to Cape Town's citizens on main routes like the airport link or the table view trunk route. Fast articulated buses provide priority transport offering facilities such as electronic contactless ticketing for quicker boarding times, traffic light pre-emption at main junctions, and real-time passenger information in vehicles, at stops and via the internet.

Advanced public transport management

Today, the MyCiTi system involves a total of up to 350 vehicles on two trunk routes with stations, and currently five feeder routes. However, the number of routes and stops will continuously increase to five trunk routes, 24 feeder and area routes and a several hundred bus stops. The infrastructure for these additional stages is currently under construction.

The MyCiTi project continues to advance both physically and technologically speaking. To provide even faster and more encompassing services to Cape Town's many residents and visitors, Trapeze set up an Advanced Public Transport Management System (APTMS). The system also integrates thin film transistor (TFT) passenger information signs at bus stations; and terminals and improves passenger safety by virtue of video monitoring and emergency (panic) buttons in the buses.

> "Data supply is supported via LIO-Data, while the transfer of video data from CCTV cameras and uploading software and data into vehicles occurs via Wi-Fi."

Functionalities of the project include a LiDAR Inertial Odometry (LIO) automatic vehicle location and fleet management system; IBISplus on-board computers; GPS-based location; voice and data communication via GSM/GPRS. For passenger information, a Web Display Feed featuring real-time communication with signs at the bus stops was installed, and real-time passenger information for all bus stops via internet enquiry were enabled. Data supply is supported via LIO-Data, while the transfer of video data from CCTV cameras and uploading software and data into vehicles occurs via Wi-Fi.

Effective automatic vehicle control

The project has seen wide improvements implemented across the MyCiTi system.

Now, the control centre features five dispatcher workplaces with VoIP voice communication in the Cape Town Traffic Management Centre (TMC); a 16-screen video wall; GIS-map for bus monitoring; data supply via LIO-Data; Depot Data Management (DDM); and Business Intelligence (BI) reporting workplaces. The new radio system relies on GPRS data and GSM voice communication services.

Three bus depots and one staging area have benefited from DDM front end and Wi-Fi infrastructure, while 200 TFT stop signs with Trapeze Web Display Feed providing real-time passenger information and onboard video transmission. Software interfaces include a planning and scheduling program for route and timetables; the Trapeze SOAP route path interface for ticket validation and distance-based fare and ticketing; support for the on-board CCTV system; and a mobile phone timetable enquiry system.

The results? Effective automatic vehicle location and control; real-time passenger information; video monitoring, and emergency buttons, according to Trapeze. ■

Connecting cross-border coaches

WiFiontheMove has experienced a significant surge in several key markets since the end of the COVID-19 lockdowns. One such area is the long-haul segment, facilitated by the 60-seater luxury coach manufacturer Irizar.

Its busiest market is the cross-border route from South Africa to Zimbabwe. WiFiontheMove now manages four operators on this route: Swiss Express, Mzansi Express, and latterly, Imperial Lane and Nitol Transport, operating from Johannesburg to Bulawayo and Harare.

For the majority of the African diaspora living and working in South Africa, the only affordable long-distance mode of transport is the coach, and offering onboard WiFi connectivity on the move has gone from a 'nice-to-have' to a 'must-have,' placing additional pressures on transport providers, as well as the opportunity to differentiate between operators.

A cloud-managed high availability solution

To ensure the coaches stay online, WiFiontheMove constantly monitors the router, coach location, passenger WiFi connectivity and manages the Vodacom mobile data within South Africa. The need has now arisen to start offering WiFiontheMove on both sides of the border on the same trip.

At the heart of the WiFiontheMove solution for Southern Africa's coaches are the Teltonika Industrial RUT956 Cellular Router and the Poynting PUCK-5 high-gain 2×2 Mimo WiFi & LTE & GPS antenna – proudly provided by Inteto Connect. The router is ignition controlled and mounted discreetly in a secure compartment by the driver to avoid tampering and theft. Installation by qualified Irizar engineers takes around 30 minutes, which is important given coach operators are running on the clock.

Likewise, the ruggedized PUCK-5 antenna low-profile design delivers a stable, high-throughput LTE signal from Vodacom towers along the main motorways across South Africa. Network dropouts do occur, however, so the plan is to 'heat map' the main routes and supplement the primary Vodacom SIM to failover to a second MTN SIM. Network availability rather than speed is a more important consideration than speed for WiFiontheMove. That said, the 4G Teltonika router delivers download speeds of 30+Mbps and supports up to 100 concurrent users.

On a busy 60-seater coach, peak passenger usage is well over 50% so there has to be a tradeoff between speed, data consumption and the cost. WiFiontheMove caps the free daily data per passenger allowance at around 250-300MB. This is subsidized by the coach operator that pays WiFiontheMove a fixed fee for guaranteeing this minimum data rate. In quieter months, or for charters and corporate clients, the data cap can be set much higher or even taken off completely. The model is flexible.

Cross border connectivity

The first customer to go live with cross border WiFi on the same trip is the United Bus Company of Zambia (UBZ). They are the market leader in luxury long haul travel in Zambia, with a fleet of over 20 Irizar coaches.

In December UBZ opened a new depot and passenger ticket office and waiting lounge in Johannesburg. WiFiontheMove has now configured the Teltonika routers on this new cross-country route to 'SIM switch' between Vodacom SA and MTN Zambia. The parameters are set to 'no network' and 'roaming' in order to dynamically affect the network interoperability.

> "The ruggedized PUCK-5 antenna low-profile design delivers a stable, consideration for LTE signal from Vodacom towers along the main motorways across South Africa."

"For passengers travelling across borders on our buses, the WiFi ensures a fast, reliable and uninterrupted connection, making their journey more enjoyable and productive. Whether it's working remotely, streaming content, or staying in touch with loved ones, the service delivers top notch performance," notes Managing Director of UBZ Southern Africa, Cassytha Lawrence. "The WiFi allows us to track our buses in real time, helping us monitor routes, manage schedules, and ensure a smooth, efficient service. This technology also streamlines the checkout process at our depots, improving both efficiency and customer experience."

"Providing coach operators with a cloud-managed WiFi solution that integrates industry leading hardware, software, and mobile data connectivity has set a new standard for long-haul passenger road connectivity," said Justin Farnell, CEO of WiFiontheMove. "WiFi is no longer seen as an optional extra by coach operators, but rather as a core component of their passenger service offering." ■

Amdocs streamlines fibre network deployment

Amdocs's next generation fibre offering introduces a robust framework and advanced automation capabilities to accelerate the planning, design, deployment and operation of fibre networks, yielding more cost-effective deployment for global service providers.

Amdocs has integrated IQGeo's network management software to its offering, enabling service providers to visualize, update, and manage their network assets in real time, and to automate key aspects of the planning and design process; driving faster deployment times and reducing the complexity of managing large-scale fibre projects.

Selected benefits for service providers include 30% faster deployment times for fibre rollouts; reduction of cabling and trenching by 10% or more; significant reduction in network management cost by seamlessly integrating existing systems, replacing manual processes and reducing errors and rework.

Amdocs' fibre offering provides zero-touch automation capabilities that streamline complex fibre deployment processes. Service providers will benefit from a unified, future-ready solution that supports both greenfield and brownfield deployments, allowing them to optimize time to market, reduce operational costs, and improve overall network performance.

"As increasing their share of the growing broadband market with fibre offerings becomes increasingly critical to service providers around the globe, our fibre solutions will help service providers manage fiber deployment from inception to operations," said Anthony Goonetilleke, Group President of Technology and Head of Strategy at Amdocs. "Service providers know that seamless connected experiences matter, and broadband is often critical to creating those experiences. Our enhanced offering, including IQGeo's advanced network management capabilities, will help service providers achieve differentiated experiences for their customers more quickly and efficiently."

mmWave testing made simpler with Anritsu

Anritsu Corporation has released enhanced software functions for its Signal Analyzers MS2830A, MS2840A and MS2850A. These enhancements enable the analyzers to extend the spectrum measurement frequency range to encompass the millimeter-wave band by connecting VDI or Eravant external mixers.

Anritsu's mid-range benchtop MS2830A, MS2840A, and MS2850A signal analyzers provide high-performance capabilities and comprehensive options for wireless signal measurements across diverse applications. These models span the RF to microwave/millimeter-wave frequency bands and accommodate narrow- to wide-band signals.

For spectrum, signal, and phase-noise measurements, the measurement frequency range can be extended by installing Anritsu's External Mixer Connection Function MX284090A. This function supports connection of a recommended external mixer from Eravant or VDI to the signal analyzer's 1st Local Output port.

An image response can occur when measuring with external mixers lacking preselectors to eliminate unwanted signals, causing erroneous reception of signals at different frequencies from the intended signal. Anritsu's signal analyzers offer intermediate frequencies (IF) of 1.875 GHz (MS2830A) and 1.8755 GHz (MS2840A/MS2850A), facilitating conversion of received high-frequency signals to manageable frequencies for processing. This enables suppression of image-response effects up to 7.5 GHz using Anritsu's proprietary PS (Preselector Simulation) function, facilitating measurement of hard-to-distinguish variable signals.

The single coaxial-cable connection between the signal analyzer and recommended external mixers enhances flexibility in positioning the signal analyzer and allows the external mixer to be placed close to the device under test.

Smart Label redefines convenience and accuracy in location tracking

Giesecke+Devrient (G+D) has launched the G+D Smart Label, an innovative tracking solution that transforms any package into an IoT device.

Ultra-thin and only slightly larger than a credit card, the new Smart Label proposition has been jointly developed by G+D in conjunction with Sensos to enable cost-effective, accurate location tracking for a range of applications. These include fleet management and monitoring the movement of luxury goods.

G+D provides an all-in-one solution that includes hardware, an iSIM, IoT connectivity, and an IoT platform that manages the connection and firmware updates. This makes it especially easy to use and simple to deploy. The Smart Label uses smart motion sensors that detect movement and acceleration, underpinned by GPS accuracy which has been tested to ensure sub-10m precision in ideal conditions. Coupled with customizable reporting frequencies and agile cloud-based configurations, the Smart Label can adapt to specific business needs and allow users to manage, monitor, and ensure the integrity of their assets at every stage of their journey, whether stationary or on the move.

Additional features of the G+D Smart Label include an open-close sensor for tamper protection and automated proof of delivery, and a temperature monitor to ensure the integrity of perishable goods, enhancing security and accountability. The label is easy to use, since activation is triggered when it is peeled and applied to an item. It is also reusable and certified for air travel, making it one of the most lightweight, versatile, accurate, and competitively priced tracking solutions on the market.

5G FWA and WiFi access products to meet MNO & MVNO demands

rainx has launched its new 101 range, an advanced ecosystem of fixed wireless 5G and Wi-Fi access products designed to meet the high standards of modern Mobile Network Operators (MNOs), Mobile Virtual Network Operators (MVNOs) and their customers.

This lineup includes the101 and the101 Pro 5G smart routers, the101 Xtender smart mesh Wi-Fi extender, and the101 Loop – a new category of product designed for today's always-connected customer, together, these solutions redefine 5G FWA, enabling operators to enhance network quality, reduce churn, and drive new revenue streams. The routers also offer a collection of 101 skins to suit the users' style, creating devices that are designed to be on show.

As demand for 5G-enabled FWA continues to surge, MNOs face complex challenges in scaling network capacity and quality for fixed locations, while managing the concurrent load on mobile networks. Recognising this challenge, rainx has engineered the Customer Edge approach, an integrated ecosystem of products and services designed to empower operators to manage and optimise the customer experience. This begins with the101 range of 5G smart routers, which double as network probes, feeding real-time insights to theStation, rainx's smart managed services platform.

theStation provides operators with deep network insights, enabling accurate, proactive decisions on coverage and capacity expansion. Operators can access detailed data on network performance in the home, including Wi-Fi clients, usage patterns, speed and latency – providing proactive support and direct customer communication through the101's touch screen. This visibility gives MNOs comprehensive control over the entire FWA ecosystem, anticipates capacity needs, and delivers high-speed connectivity for both residential and commercial customers.

For end-users, the101 range provides an intuitive, self-service interface that empowers customers to manage their network in real-time, minimising support needs and enhancing the overall customer experience.

Key Products in the101 Range include: the101 Pro 5G smart router; the101 5G Smart Router; the101 Xtender Smart Mesh Wi-Fi; and the101 Loop.

"Through smart hardware and services, we're partnering with MNOs and MVNOs to unlock the potential of 5G," said Brandon Leigh, Founder and Director of rainx. "Our ecosystem empowers operators to monetise latent 5G capacity, create new revenue streams, and addresses the shift from spiky mobile traffic to high, steady usage at fixed locations. Our Customer Edge approach provides operators with the deep insights they need to make informed decisions on their networks, manage the customer experience and generate ROI from 5G."

Compact GNSS receiver modules cut SWaP

Septentrio has extended its established mosaic family of compact GNSS receiver modules with the mosaic-G5 receiver range.

These new modules will broaden the field of applications powered by Septentrio technology since they offer a size reduction of 60% and a power consumption reduction of 40% compared to the mosaic-X5 receiver. This substantial reduction of SWaP (size, weight, and power) is offered without compromising the high performance standards that Septentrio receivers are known for.

It opens doors to reliable high-accuracy positioning for a variety of devices that require components with minimal size, weight or power, including commercial UAVs, compact industrial robots, high-performance hand-held devices and other high-volume compact professional equipment.

"The growing world of interconnected devices, robotics and autonomous systems drives the demand for receivers that deliver compact, low-power, yet highly reliable positioning, even in the most challenging environments," said Jan van Hees, Vice President of Business Development at Septentrio. "We are excited about announcing an extension to our mosaic family with the mosaic-G5 receiver range. This introduction emphasizes Septentrio's commitment to continuous innovation and providing high-precision positioning to an ever-expanding array of industrial and professional applications."

The mosaic-G5 series will join the widely adopted mosaic portfolio of module receivers, which offer all-band GNSS technology with long-standing reputation of excellence in accuracy, reliability as well as resilience to GNSS jamming and spoofing.

Look out for...

Need for speed

The demand for continued acceleration of enhancements on mobile networks has never been more evident.

Global mobile data traffic is expected to grow more than fourfold by 2030, reaching over 5,400 exabytes – placing a lot of pressure on mobile networks the world over. With the need for speed, capacity, and reliability heating up, innovative solutions are required.

Accordingly, in recent news, Verizon, Samsung Electronics Co., Ltd., and MediaTek have demonstrated 5G speeds of 5.5Gbps in a 5G lab environment. Using carrier aggregation, which combines multiple channels of FDD and TDD spectrum bands to provide greater efficiency for data sessions transmitting over the wireless network, the companies combined six separate channels of sub-6GHz spectrum to achieve this multi-gigabit speed in the downlink.

This proof of concept was conducted in a lab and aggregated 350MHz of PCS, 850MHz, AWS, CBRS and C-band spectrum. Using Samsung's virtualized RAN (vRAN) solution and MediaTek's next-gen connectivity platform featuring 6CC technology, the trial ran 5G data through Samsung's 5G Standalone core, and demonstrated how the next generation of devices with this evolving technology will enable new use cases and drive innovation in mobility.

Virtualization is essential in next-generation network evolution that delivers higher speeds and lower latency. Using virtualization in the RAN allows Verizon to effectively manage its network and rapidly accommodate customers' varying needs by offering greater flexibility in resource allocation and enabling higher throughput speeds.

As pressures on mobile networks continue to mount – and amidst increasing competition and profitability concerns – making more from existing spectrum is paramount to ensure the reliable delivery of mobile connectivity, with the speeds and capacities required for all types of consumers, from business and government through to the rural consumer.

Ucom opts for pre-integrated BSS/OSS from Cerillion

Cerillion has announced a major new contract with Ucom, one of the leading telecommunications providers in Armenia. Cerillion will implement its pre-integrated BSS/OSS suite as the digital foundation to power-up Ucom's quadruple-play services portfolio and enable the next phase of growth.

Thanks to its 4G+ and 5G mobile networks and state-of-the art fibre network, Ucom provides a convergent portfolio of services to both B2C and B2B customers and is already a major provider of IPTV and broadband. Now, as the company continues to grow, it has become vital for Ucom to unify its services and customer data in one convergent solution that will help it to scale efficiently and deliver a seamless customer experience across all channels.

Following an extensive selection process with Ucom evaluating all major BSS/OSS providers, Cerillion was selected due to its functional breadth, SaaS delivery and pure product model, with all customers using the same core software. This will allow Ucom to personalise its customer experience through configuration not customisation, whilst also keeping control of its day-to-day business operations.

"After the extensive selection process our evaluation team visited three different Cerillion customers, to see their BSS/OSS Suite in action and to speak with real users," said Ralph Yirikian, General Director of Ucom. "These reference visits proved to be invaluable, seeing the software used and talking with the teams validated our own technical assessment, and gave us absolute confidence in the certainty of outcome that Cerillion delivers. Robustness, flexibility and scalability, are all non-negotiable, and we're confident this partnership with Cerillion will provide the digital foundation we need to support our ongoing growth."

"We are thrilled to welcome Ucom as a very important new client and our first in the Caucasus region," said Louis Hall, CEO of Cerillion. "This milestone marks an exciting step in our global journey, and we are honoured that Ucom has chosen Cerillion to support its growth and innovation. We are fully committed to building a long-term partnership that delivers sustained value, and we look forward to working closely together to achieve their strategic goals."

Telstra to bring Satellite-to-Mobile to Australia

Telstra has partnered with Starlink to bring Satellite-to-Mobile (direct-to-handset) text messaging to Australia.

This technology aims to improve coverage, particularly in remote and regional areas where traditional mobile networks don't reach.

Users will not need specialised phones to use this technology, as modern smartphones are already compatible. The technology works by leveraging satellites to send SMS messages, similar to how emergency SOS via satellite works on some devices. While Satellite-to-Mobile will initially support text messaging, future upgrades are expected to expand to voice and low-speed data services.

Currently, Telstra's network covers 99.7% of the Australian population. However, due to Australia's vast landmass, significant areas remain underserved. Telstra indicated that this collaboration with Starlink will initially focus on testing and refining Satellite-to-Mobile technology, which will eventually allow Australians in remote areas to send SMS messages via satellite, even when outside mobile network coverage.

"As satellite technology continues to evolve to support voice, data and IoT we will explore opportunities for the commercial launch of those new services," said Telstra's Group Executive for Global Networks and Technology.

This initiative targets Australians in remote locations and will serve as a 'just-in-case' layer of connectivity for emergencies or simple communication when mobile networks aren't available, according to the executive.

"Satellite-to-Mobile will complement our existing land-based mobile network offering basic connectivity where people have never had it before," said Telstra in a statement.

The service is expected to cover most outdoor areas on mainland Australia and Tasmania where customers have a clear line of sight to the sky, excluding the Australian Radio Quiet Zone in Western Australia and remote offshore territories and islands.

WOM Colombia averts bankruptcy, plans for 5G

WOM Colombia has announced plans to roll out its 5G networks this year, following a recent bailout from new investors that rescued the operator from bankruptcy.

In an interview with Forbes, WOM Colombia CEO Ramiro Lafarga said that the company will commence its 5G deployment in the country's major cities during the second half of the year.

Sur Holdings have acquired a majority stake in Colombia's fourth-largest operator from Novator Partners, which will remain a minority stakeholder. The value of the deal has not been disclosed. Lafarga said that the new shareholder has provided additional resources, enabling WOM to achieve profitability sooner.

The Colombian government supported WOM's survival by granting a three-year grace period on spectrum payments, aiming to preserve the country's four-operator market and prevent a duopoly between Claro and the merging entity of Tigo-Movistar.

4iG to deploy next-gen network with Ericsson

4iG Group has announced a partnership with Ericsson for the deployment of a next generation mobile network in Albania after the recent acquisition of 5G frequencies by One Albania, a subsidiary of 4iG.

One Albania became the first operator in the country to launch commercial 5G services on 25 November 2024. The new frequencies were acquired for EUR5.4 million in a competitive spectrum auction. This development is described as fully in line with the 4iG Group pro-investment strategy in Albania and the Western Balkans region.

The scope of the deal between 4iG Group and Ericsson includes mobile radio access and core network investments for 5G standalone (5G SA) technology. This network investment is valued at over EUR50 million. The rollout process will start by ensuring comprehensive, high-capacity 5G network coverage across key strategic areas, like major ports and airports, industrial zones, critical hospital areas in Tirana, and the most visited coastal hotspots. It will then continue with the provision of high-capacity midband 5G coverage to all cities of Albania by 2028. The aim is to cover 85% of the country's population by the end of 2030.

Indosat to deliver eco-friendly mobility solutions with IoT

Indosat Ooredoo Hutchison has announced a strategic partnership with Xanh SM of Vietnam to advance eco-friendly mobility solutions in Indonesia.

Indosat Ooredoo Hutchison, through Indosat Business, will collaborate with Xanh SM to integrate Information and Communications Technology (ICT), Internet of Things (IoT), and analytics in the quest to foster smart mobility solutions. The partnership aims to enhance operational efficiency and customer experience, while also bolstering the eco-friendly vehicle ecosystem within the country.

To support smart mobility, Indosat will provide a connectivity solution via its Card Management Platform, including the Cisco IoT Control Center. This will allow flexible control and monitoring of SIM cards, aiming to streamline operations and optimise user experiences. Moreover, connectivity solutions including SIM cards for taxi units and specially tailored mobile packages for Xanh SM drivers will be provided. This initiative includes IoT technologies to monitor driving metrics such as speed, acceleration, and behaviour to identify anomalies, ensuring safety and efficiency.

The collaboration will begin with a six-month pilot testing phase to explore and refine solutions, which will be followed by a comprehensive rollout in subsequent stages.

Aligned with Indonesia's sustainability agenda, Indosat has launched a Green Technology Program to curtail carbon emissions, with Xanh SM serving as a partner in implementing green initiatives in automotive and transportation sectors. Xanh SM's electric vehicle fleet is anticipated to significantly reduce environmental impact while offering a comfortable, eco-friendly transportation experience.

"We are proud to partner with Xanh SM to accelerate digital transformation while promoting the adoption of sustainable technologies," said Muhammad Buldansyah, Director and Chief Business Officer of Indosat Ooredoo Hutchison. "This collaboration combines Indosat's expertise in ICT, IoT, and analytics with Xanh SM's eco-friendly technologies. The launch of this electric taxi fleet is a significant step in strengthening our commitment to sustainability and green technology to benefit the people of Indonesia."

Xanh SM aims to deliver a transportation experience that minimises environmental impact. The technology incorporated in its fleet is designed to be energy-efficient, thus aiding in carbon emission reduction.

"Together with Indosat, we are optimistic about accelerating our business transformation sustainably. By leveraging the ICT, IoT, and analytics technology offered by Indosat, we can enhance operational efficiency while delivering services that positively impact both customers and the environment," said Nguyen Van Thanh, Global CEO of Xanh SM.

The partnership is anticipated to not only improve Indosat's customer experience but also inspire the transportation sector to adopt more innovative and environmentally conscious solutions.

Bitel to upgrade 4G with ZTE

ZTE has successfully collaborated with Viettel-backed Peruvian telco Bitel to upgrade its 4G mobile network ahead of the telco's official launch of 5G.

The two companies have executed significant network upgrades to enhance Bitel's 4G coverage and performance using ZTE's next-generation baseband units (BBUs) and AWS/B40 band products.

The new equipment has increased BItel's network capacity, optimized spectrum efficiency, and reduced latency, which in turn enables faster and more reliable mobile internet services. ZTE's FDD massive MIMO products have increased throughput by over 100% in high-traffic areas.

ZTE and Bitel revealed the upgrades at a ceremony to launch Bitel's 5G network on the telco's tenth anniversary. ZTE gave few details on the 5G network itself, although a coverage map on Bitel's website shows considerable 5G coverage across Lima Province.

While the ZTE announcement doesn't focus on 5G, the 4G upgrades do give Bitel a more solid foundation on which to run non-standalone 5G – which is the version of 5G currently being rolled out in Peru, in part because it enables mobile operators to use existing spectrum.

ZTE and Bitel plan to continue their partnership on future projects that will focus on expanding network capabilities and exploring innovative solutions, including large-scale 5G rollouts, next-generation product deployments, and AI-driven telecom enhancements.

Turk Telecom announces new smart agriculture project

Turkish telecoms giant Turk Telekom has announced a new 5G project focusing on smart agriculture in collaboration with ZTE.

The 5G Smart Agriculture Project was recently launched in the central Black Sea province of Çorum. It will enable digital transformation and modernisation in agriculture. Advanced technologies such as drones and smart farming machinery have been integrated into the pilot 5G network established in the region.

With the high-speed and low-latency connectivity features of 5G, tasks such as automated spraying, fertilisation and precision irrigation are being successfully carried out using 5G, underlining the potential of the technology to target efficiency and resource savings in agriculture.

"Thanks to our close cooperation with ZTE in Çorum, we have taken important steps in the digital transformation of agriculture," said Zafer Orhan, Türk Telekom Network deputy general manager. "Through this pioneering project, we not only strengthen our technological capabilities but also take a significant step forward in sustainability, which lies at the heart of our business objectives."

WORLD NEWS

Cathay Pacific expands network bandwidth at 51 global airports

SITA and Cathay Pacific have announced a significant milestone with an agreement supporting substantial increases in network bandwidth at its airports, improving current capacity by up to five times while maintaining cost efficiency.

This initiative aligns with Cathay Pacific's strategic direction of increasing adoption of Cloud applications while ensuring optimal performance for legacy systems.

This new collaboration will provide Cathay Pacific with enhanced network connectivity across 51 global airports through the SITA Connect Go at Airports product, which will combine dual Internet connectivity to provide bandwidth ranging up to 300Mbps. The new contract includes a planned 12-month design, build, test, and implementation period to cover all airports involved in the project.

SITA Connect Go will facilitate a substantial bandwidth increase of up to five times the current capacity. This improvement will ensure enhanced efficiency and connectivity while maintaining cost optimization. Using the new SITA airport infrastructure will allow Cathay Pacific to continue its smooth transition to Cloud applications, enhancing overall operational efficiency and scalability.

Connect Go also includes three Gateways specifically designed to ensure optimal performance for legacy applications, facilitating the continued use of existing systems while achieving improved performance and connectivity globally.

"This agreement with Cathay Pacific is a true testament of how we are able to help airlines maximize their network infrastructures which are key for their ongoing operations. The fact that Cathay Pacific was one of our first clients for SITA Connect and is now one of the first adopters of SITA Connect Go is a clear sign that our technology is delivering valuable results. Airlines and airport networks in APAC are facing challenges with legacy network infrastructure. SITA Connect Go offers a robust, scalable, and secure SD-WAN platform to meet the need for the growing bandwidth demand and helps airlines shift their focus towards their customers," said Sumesh Patel, SITA Asia President Asia Pacific.

SITA Connect Go has an ultrarapid deployment thanks to SITA's pre-connected and resilient APH-V infrastructure. This will allow swift implementation of necessary infrastructure and connectivity across Cathay Pacific's network, reducing downtime and disruption; all this while offering flexible packaging and customizable options, allowing Cathay Pacific to tailor their connectivity requirements based on specific needs, optimizing network services while maintaining cost efficiency.

"Airlines across the world have a clear need for strong and robust airport infrastructure so that we can center our attention on providing the optimal passenger experience," said Rajeev Nair, General Manager – IT Infrastructure and Security at Cathay Pacific. "SITA Connect has been helping us deliver efficient operations at airports for several years and we are confident that this renewed partnership with SITA will allow us to significantly increase the network capacity of our existing network in the most cost-effective way, enabling us to further enhance our operational efficiency and allowing us to continue focusing all our efforts on our customers."

The implementation is expected to be completed early in the second quarter of 2025 and will become fully operational across 51 airports on the same date.

D2D to come to Ukraine in 2025

By the end of 2025, Ukraine is expecting to be one of the first countries to have the Starlink direct-to-cell satellite service up and running, enhancing the resilience of the country's connectivity landscape, thanks to a deal between Starlink and Kyivstar.

Veon has announced that Kyivstar, its digital operator in Ukraine, has signed an agreement with Starlink to introduce direct-to-cell satellite connectivity in Ukraine. Kyivstar anticipates launching Starlink direct-to-cell services with SMS and OTT messaging functionality in the fourth quarter of 2025 for Kyivstar customers. It plans to expand to voice and data in later stages.

"Kyivstar has done a tremendous job in investing in Ukraine's 4G connectivity, expanding coverage to remote areas and increasing the energy resilience of its network. Today's announcement helps us take our commitment to Ukraine's connectivity to the next level, exponentially amplifying the resilience of our services with satellite connectivity," said Kaan Terzioglu, Veon Group CEO. "We are excited to work with Starlink to make Ukraine one of the leading countries in the world to have direct-to-cell services, and we look forward to exploring the opportunities across our markets that are home to 520 million people."

With access to Starlink direct-to-cell technology, Kyivstar customers will benefit from satellite-powered connectivity even when the terrestrial network is unable to service an area. Veon has invested more than US$10 billion in Ukraine since 2013 and has committed US$1 billion to the country's recovery and reconstruction from 2023 through 2027.

BT warns CNI providers to quit copper

BT has urged providers of Critical National Infrastructure (CNI) to move off the outdated copper network as it is becoming increasingly unstable.

BT's own data shows that 60% of CNI customers in the UK currently have no plan to start migrating off the legacy analogue network.

The call is more focused on the looming switch-off of the legacy Public Switched Telephone Network (PSTN) in favour of IP-based digital phone like VoIP services, rather than the much longer-winded withdrawal of physical copper lines themselves that will take many years to complete.

The big switch-off was last year delayed to 31 January 2027 in order to give internet service, phone providers, telecare operators and consumers more time to adapt. The main focus of this delay was the 1.8 million people who use vital home telecare systems in the UK, which aren't always compatible with the replacement VoIP/IP-based digital phone services. For everybody else, the deadline is still technically December 2025.

BT is now pushing for key network and CNI providers to leave the PSTN before the deadline, not least due to its lack of support. This will help to stop the switch-off disrupting critical public systems, such as water monitoring sensors, phone lines for doctors and pharmacies, fire and burglar alarms, lift alarms, emergency phone lines by roads, help points at train stations, and some older card payment machines.

"With the ageing copper landline network becoming increasingly fragile, it's simply too risky to run the UK's essential public services on outdated networks. BT is committed to moving these services onto future-proofed modern connectivity well ahead of the closure of the analogue copper network – but we can't do it alone," said Bas Burger, CEO of Business at BT. "We're urging all Critical National Infrastructure providers to act now to help protect their services and reap the long-term benefits of going digital. Waiting until the analogue switch-off is too late. We're working with customers to review their technology estate, test their critical devices and switch to more reliable connectivity by the end of 2025."

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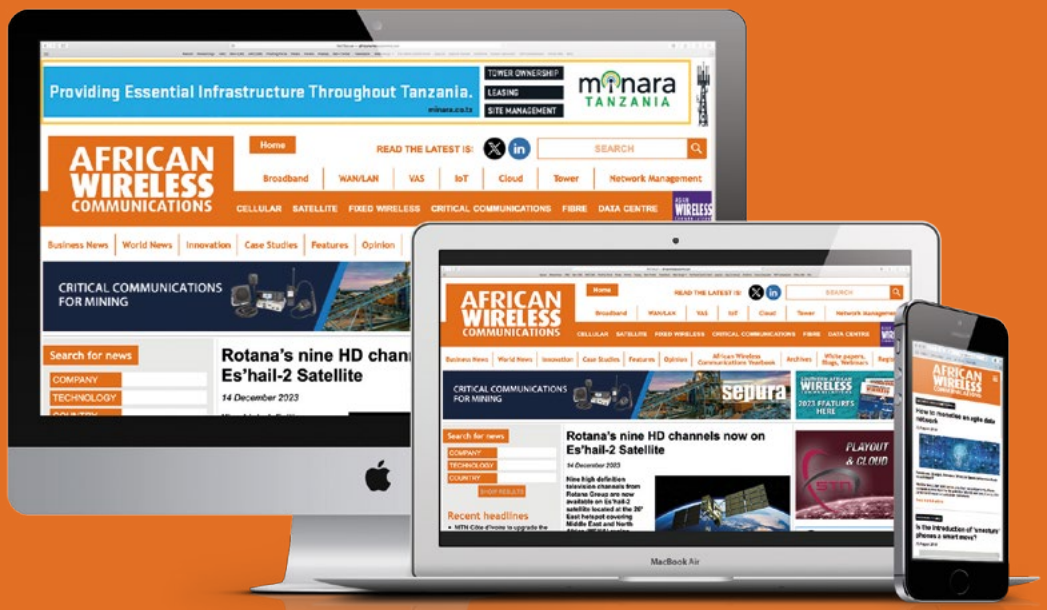

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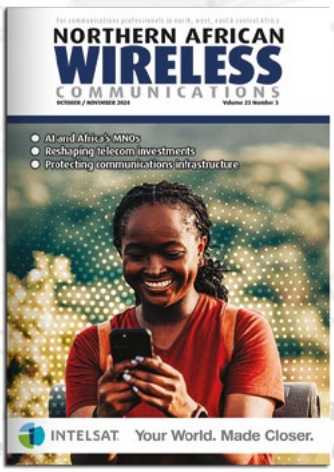

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