

- FWA: bridging the digital divide and monetisation
- Making money with the right partner
- How CPaaS vendors add new capabilities for telcos

Nicholas Van Slyck Senior Director, Africa and Asia at SBA Communications



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# SOUTHERN AFRICAN WIRELESS COMMUNICATIONS

#### SOUTHERN AFRICAN WIRELESS



JULY/AUGUST 2022 Volume 27 Number 1

SBA Communications Corporation is a leading independent owner and operator of wireless communications infrastructure including towers, buildings, rooftops, distributed antenna systems (DAS) and small cells. With a portfolio of more than 36,000 communications sites in sixteen markets throughout the Americas, Africa and the Philippines, SBA is listed on NASDAQ under the symbol SBAC. Our organization is part of the S&P 500 and is one of the top Real Estate Investment Trusts (REITs) by market capitalization.

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Meet Nicholas Van Slyck, Senior Director, Africa and Asia along with the SBA Communications team at TowerXchange Meetup Africa in Johannesburg, South Africa, which takes place October 11 to October 12, 2022.

Visit <u>www.sbasite.com</u> to find out more













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# Rain to submit merger proposal to Telkom 'in due course'

South Africa's data-only network provider Rain will submit a formal non-binding proposal to bigger rival Telkom, a week after retracting a media statement on its merger proposal.

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On Thursday August 11, the country's Takeover Regulation Panel (TRP), a regulatory body, rebuked Rain for issuing a press release detailing its proposed merger with Telkom, saying the announcement was issued without prior approval as required by regulations. The panel requested a retraction from Rain.

"Furthermore, the announcement was issued notwithstanding the TRP's instructions to Rain that no such announcement should be made without the prior approval of the TRP," the body said.

After seeking legal advice and engaging with the panel, Rain withdrew the press release. Telkom, which is currently in discussions with the country's second biggest mobile operator MTN about a possible merger, said if an offer or formal proposal is received from Rain, its board would consider it in accordance with its legal obligations.

Rain's largest shareholders include investment vehicles owned by billionaire Patrice Motsepe and former banking executive Michael Jordaan.

The operator, which launched in February 2019, began providing data only services using 3000 of its own cell towers and leasing infrastructure from Vodacom and MTN.

In June 2020, Rain announced the addition of 1500 5G standalone towers to be launched in 2021.



# Visa opens office in DRC

Electronic payment solutions provider Visa has opened an office in the Democratic Republic of Congo (DRC), to enable the company to build partnerships and expand the general public's access to the digital economy.

The US firm will introduce new payment credentials and solutions to further help businesses use digital payments. In addition, Visa's chief executive officer (CEO) Alfred Kelly, said

"the opening of an office in the DRC was more than necessary, as "it is one of the most dynamic countries in Africa, and we are pleased to establish a local presence. By working closely with public and private sector partners, we have a common goal of expanding access to digital commerce and supporting the goals of the DRC economy".

Visa's presence in the DRC will enable the company to build partnerships and expand the general public's access to the digital economy, introducing new payment credentials, and solutions to further help businesses use digital payments. "Visa's goal is to encourage everyone, everywhere, by being the best way to pay and get paid," added Alfred Kelly.

During one of his visits to the country, the Visa CEO had signed partnerships with several companies such as the Central Bank of the DRC, financial institutions, fintechs, merchants and mobile operators. In the coming months, Visa plans to introduce payment credentials for more than 150,000 M-PESA customers in the DRC, but also work with fintech Infoset for its financial inclusion.

This is Visa's eighth African office, after Côte d'Ivoire, South Africa, Egypt, Morocco, Rwanda, Kenya and Nigeria. In 2016, when it arrived in Abidjan, the American company had mentioned its desire to expand in French-speaking Africa, because of its great growth potential.



# Seychelles NGO goes high-tech with Huawei

Huawei Technologies is supporting a local environmental nonprofit organisation to improve conservation through use of novel technology in Seychelles.

Non-governmental organisation (NGO), Nature Seychelles, has received a grant of US\$200,000 from the tech giant that will go toward a new project that has been dubbed

"Next-Gen Conservation: Applying and sharing lessons in the use of technology and digital based solutions for island and coastal conservation management."

Through the project, the team at Nature Seychelles seeks to improve digital connectivity on Cousin Island Special Reserve. Nature Seychelles has been managing the reserve since 1998, and is currently undertaking various conservation projects on the island.

The funding provided will also be used to develop and roll out specific tech-driven activities to scale up conservation of sea turtles, coral reefs, and endemic bird monitoring.

In a recent press release from the NGO, its chief executive, Nirmal Shah, said that he and his team are already working with local companies to develop such nextgeneration technology solutions.

"Through this project we want to scale up the energy and capacity of tech people locally to develop



new products and services for conservation," said Shah. "We are therefore also building a new community of practice."

Working towards the eventual certification of the reserve under the IUCN Green List, an international standard that certifies and recognises effectively managed protected area sites, is another aim of the management team of the reserve.

The project is part of a global initiative by Huawei called Tech4Nature, aimed at scaling up nature conservation success using digital technology innovations. It was created by IUCN and Huawei and seeks to allow over 300 protected areas across the globe to evaluate their conservation success through the IUCN Green List Standard by 2023.

Shah said that Nature Seychelles was invited to become part of this global programe after he wrote an article in May 2020 soon after the start of the Covid-19 pandemic.

He said that the article - 'Next-Gen Conservation: Biodiversity Conservation needs a radical make-over to get over Covid-19' - "was far more influential" than he had expected.

"People at IUCN worked hard to include us in this global initiative despite Huawei not having a country office or official presence in Seychelles," added Shah. "This once again shows that having consistent world-class achievements under one's belt are a key to building and consolidating important international partnerships."

# Nokia radio tech to enable AST SpaceMobile's direct-to-cell phone connectivity from space

Nokia has signed a five-year deal with AST SpaceMobile as it looks to provide 4G and 5G via LEO satellites to connect "under-served communities around the world".

The latter said it is building a 'space-based cellular broadband network accessible directly by standard 4G or 5G mobile devices', while Finnish kit vendor will provide the RAN hardware.

Global testing with various mobile network operators across the world will begin after the BlueWalker 3 LEO test satellite launches in early to mid-September from Cape Canaveral, Florida.

AST SpaceMobile says it has a "mission to eliminate the connectivity gaps faced by over five billion mobile subscribers worldwide and to bring cellular broadband to approximately half of the world's population who remain unconnected".

Paratus Group said it is close to

establishing a highly sophisticated

network hub in Angola, which is an

expansion of fibre and microwave

is the result of several years of

telecommunications infrastructure

investments in several African

countries and the expansion of fibre

and microwave coverage across

The company said the centre

coverage across Angola.

Angola's 18 provinces.

connectivity specialist

Satellite

The idea is that subscribers in some location remote enough that it is outside the reach of cellular coverage can roam from land networks to space networks. It currently has agreements with a roster of unnamed operators which apparently collectively service over 1.8 billion customers.

Nokia will use some AirScale Single RAN equipment, including base stations powered by ReefShark System-on-Chip chipsets, modular baseband plug-in cards and its NetAct solution for network management, optimisation and technical support services.

"Connectivity should be considered an essential service like water, electricity, or gas," said Tommi Uitto, president of mobile networks at Nokia. "Everyone should be able to have access to universal broadband services that will ensure that no one is left behind. Nokia has a long history

provider

Angola

designed to provide access to

additional resources and seamless

transcontinental network in Africa.

essential not only for the southern

African region but for the continent

at large," said Francisco Pinto Leite,

across

transformation

recently officially rebranded

Internet

Paratus'

was

as

is

is

(ITA)

repositioning

Paratus unveils plans for Angola

services

Technologies

Paratus Angola.

integration

"Digital

The brand



of delivering connectivity solutions that have had a major and positive impact on society."

Scott Wisniewski, chief strategy officer at AST SpaceMobile added: "With the integration of Nokia's AirScale system, AST SpaceMobile and Nokia are taking an important step toward closing connectivity gaps all over the world. Nokia is supporting us with dozens of engineers and development professionals, including leading architecture research experts at Bell Labs, the world-renowned industrial research arm of Nokia."

AST SpaceMobile is aiming to deploy around 100 satellites in total.

continually expanding our networks,

we hope to positively impact the lives

of millions of our people through the

potential that increased connectivity

brings with it, especially in health,

established fibre connections to the

Democratic Republic of Congo (DRC)

and worked on a number of new

submarine cables such as the Google

Equiano Cable, for which Paratus

was the landing partner when the

The Paratus Group recently

education, and job creation."

# Zambian telcos create a group to defend interests

Zambian telecom operators MTN Zambia, Airtel Networks Zambia and Zamtel have formed a group called The Global System for Mobile Association of Zambia (GSMAZ), one of the objectives of the new body being to defend their interests and accelerate the development of the sector.

The GSMAZ will work with the Zambia Information and Communication Technology Authority (ZICTA), local government and other stakeholders to promote policies that encourage the growth of the digital economy, according to local reports.

One of GSMAZ's first actions will be to shed light on the viability of one of its members, Zamtel. It is understood president Hakainde Hichilema appointed a task force in June to determine the future of the financially troubled state-owned operator. The newly formed group will have to investigate and suggest appropriate actions to save it.

Apoorva Mehrotra, CEO of Airtel Zambia said a siloed and competitive approach among operators is giving way to a more collaborative approach to address industry concerns and raise the profile of mobile telecommunications in Zambia.

The latest figures from the regulator show MTN Zambia Ltd and Airtel Zambia Ltd dominating the national market with 45.3% and 35.5% market share respectively. Zamtel, meanwhile, has the lowest share, with 19.2% of total subscriptions.



# Togo-Gabon roaming deal

Roaming between Togo and Gabon will incur no additional charges after a memorandum of understanding (MoU) was signed between the two countries.

The agreement, signed in Libreville, Gabon, sees the abolition of roaming charges and a major reduction in prices for voice, data and SMS services while roaming. The rationale behind the decision is to promote the mobility of citizens of the two non-neighbouring countries. "It will now be possible to use a Togolese SIM card in Gabon and vice versa without paying roaming charges," regulators of the two countries told west African media. "In addition the two authorities said that "receiving calls will now be free and calls made in the country visited will be billed at local rates excluding packages, i.e. up to 10 times cheaper than currently".

This protocol is understood to be part of the creation of a single

African market within the Smart Africa Alliance, a partnership among 32 African countries aiming to accelerate sustainable socio-economic development on the African continent through usage of ICTs and through better access to broadband services.

After agreeing to do so in 2020, the Central African Economic and Monetary Community (CEMAC), of which Gabon is a part, abolished roaming charges among its members late last year.

# SqwidNet owner launches Sigfox South Africa

European internet of things (IOT) wireless network operator Sigfox has officially launched in South African, a year after the previous network operator in the country was wound down.

The company is the result of the extensive restructuring of Community Investment Ventures Holdings (CIVH)owned IOT unit SqwidNet, which was closed after it failed to make profit for its owners – six years after it was launched in November 2016.

The South African unit is is backed by a consortium of investors comprising CIVH, Discovery Insure, Fidelity ADT, Macrocomm and Buffet Investments.

A French global network operator founded in 2010, Sigfox builds wireless networks to allow billions of devices to connect to the internet, in a straightforward way, while consuming as little energy as possible.

The wireless network operator is the initiator of the Sigfox OG network, which interconnects low bandwidth, battery-powered devices with low bit rates over long ranges.

The Sigfox OG network in South Africa was built over several years through the then IOT network provider SqwidNet, which was the licensed Sigfox operator in South Africa.

Addressing delegates at the launch event in Sandton, CIVH CEO Raymond Ndlovu – who is also nonexecutive director of Sigfox South Africa – pointed out that in mid·2021, SqwidNet's stakeholders agreed the business required fundamental restructuring to adapt to various challenges it encountered over the previous years.

"We've taken past lessons to heart and understood that our customers are loyal and proactive because they appreciate the tangible value massive IOT creates for them and their customers," Ndlovu said. "In the technology sector, you evolve with risks and remain cognisant of relevant, dynamic innovation. This is the ethos of Sigfox South Africa, and we look forward to helping IOT make even more positive impacts for everyone."

Sigfox has operations in over 75 countries.

# Zimbabwe: 400 schools connected to internet

Zimbabwe has connected more than 400 schools to the internet, according to a government official.

Speaking at a post-Cabinet briefing August 10, the country's information minister Monica Mutsvangwa said this was part of government's ongoing project to accelerate the national e-learning strategy.

"Four hundred schools from all the provinces across the country were connected to the internet," she said. "This is part of an ongoing programme to accelerate the implementation of the national e-learning strategy."

The connection of schools to the internet is part of the 1,688 projects that were implemented during the period January to December 2021.

"Out of these, 657 projects were fully completed," Mutsvangwa added. "Implementation of 1, 031 is ongoing."

According to Unesco figures, over 1.2 billion learners around the world missed out on lessons due to Covid-19-induced school closures.

While virtual learning presented

Zimbabwe with the best opportunity for learners to catch up, the high cost of data, poor network connectivity in the rural areas and poverty meant a considerable number had no access to learning materials during the lockdown.

"Cabinet reports that 33,7% of the households are using grid electricity, while 28,3% are using off-grid electricity such as solar, wind and biogas," Mutsvangwa said. She also revealed that less than 40% of the households were using grid electricity.

# Google Wallet launches in South Africa

Google has launched its flagship payments system Google Wallet in South Africa, which means South Africans can now save and access payment cards, loyalty cards and boarding passes through the system.

From launch, cardholders of FirstRand Bank, Discovery Bank, Investec, Standard Bank, ABSA and Nedbank will be able to add their cards to Google Wallet and pay with their Android phones or Wear OS devices where contactless payments are accepted (in-store, in apps or on the web).

"Access to technology is vital for economic prosperity as millions of people use their mobile devices daily to tap and pay at stores, pay for public transportation and to utilise a variety of passes," said Google SA country director, Alistair Mokoena. "By including everyone – a dynamic ecosystem of manufacturers, developers and users – we want to make digital wallets accessible to everyone through fast, secure access to their everyday essentials."

Users who already have a credit or debit card saved to their Google account will have it automatically appear in Google Wallet. All they need to do is set it up for contactless payments by following the steps on the screen.

If users don't have a card saved and would like to add a new card to Wallet, they can select the "Add a card" prompt in the carousel at the top of the wallet app page and they will be prompted to review and accept the Issuer terms and conditions before use.

Once they have accepted and verified their card information, their cards will be tokenised and ready for

use in Google Wallet. They will then be able to use them to tap and pay in stores and pay online wherever the Google Pay or contactless symbol is visible.

"Most importantly, security and privacy are built into every part of Google Wallet, making payments safer and allowing people to transact seamlessly and with confidence throughout the day," added Mokoena. "This will allow users to make transactions using a virtual card number (a token)," added Mokoena. "We are very excited about the launch of Google Wallet in South Africa. We hope that people not only enjoy how easy it is to use but also how secure it is for them to transact their business confidently,"

The US giant said support for additional items will be added over time.



# Liquid Zambia opens first office in Mkushi

Liquid Intelligent Technologies (LIT) is expanding its operations to Central Province by launching its first office in Mkushi.

According to a statement, the the launch will bring high-speed connectivity and a suite of intelligent technologies to the district for the first time.

"Mkushi is an agriculture town well-known for its large commercial farms. We realised that this underserved community is key to ensuring that we take one more step towards creating a digitally connected future that leaves no Zambian behind," said Commenting on the increasing footprint in the country, Mark Townsend, chief executive officer, LIT Zambia. "The proliferation of high-speed connectivity and digital services by Liquid will empower commercial farmers and others in this sector, ultimately increasing the viability for more foreign direct investment to the agriculture sector in Zambia".

"Liquid has over 100 000 km of wholly-owned fibre network across the continent, complemented by our VSAT network, which ensures that we can provide high-speed connectivity to the remotest parts of Zambia and the wider continent," Townsend added.

In May, LIT partnered with PEACE Cable Company to introduce 800Gbps of additional subsea capacity in Mombasa on the highlyanticipated global submarine cable.

This will increase the availability of high-performance and reliable internet connectivity access across Africa, leveraging Liquid's 100,000km of terrestrial fibre across 12 countries, the companies said.

The Zambian government has continued to work closely with Liquid and other public-private partnerships (PPP) as the country pursues its Smart Zambia strategy.

# Towers completed in parts of Gauteng

Two pieces of undeveloped land in Ward 92 in Johannesburg have been identified as locations for proposed cellular masts and the respective base stations.

Forming part of a city-wide project across 32 wards, if constructed the base stations and cell masts will be erected on municipal land in Sunnyrock, according to local media outlets.

Despite the masts being in Sunnyrock, residents of Bedfordview and Edenvale will benefit by having better signals too.

Ward 92 Clr. Kade Guerreiro said the land on which infrastructure will be located will be leased by the City of Ekurhuleni for nine years and 11 months.

"Overall, the project has the potential of generating R1.2bn in revenue for the city," said Guerreiro. "It will also see the municipality generate a total monthly revenue of R1.679m on unused and undeveloped portions of land."

He said the two masts in Sunnyrock would generate over R20,000 in revenue per month for the city.

Guerreiro said the funds generated by the project would be invested by the city back into its departments which would assist its residents in the long run.

The entire project will see 150 permanent and 6,200 temporary jobs being created.

# Madagascar's free internet

Madagascar's Ministry of Digital Development, Digital Transformation, Posts and Telecommunications (MNDPT) has installed hotspots to provide free internet in the district of Betioky Sud, according to local reports. This initiative is part of the government's project to open up rural areas and give internet access to people who usually go without. It has already been implemented in the districts of Ampanihy, Sakaraha and Toliara and should be extended to other regions in due course. The free Internet will allow the population, especially the youth, to do research and master the new information and communication technologies.

# Russia to launch satellite for Angola in October

The communications satellite AngoSat-2, a joint space project of Russia and Angola, will be launched in October this year, meeting its initial deadlines.

According to the corporate newspaper of the satellite's manufacturer, Russia's ISS-Reshetev Company, satellite was delivered to the Baikonur Cosmodrome in Kazakhstan on July 26, 2022. Angolan ambassador to Moscow Augusto da Silva Cunha recently told Sputnik that his government hoped the launch of the satellite would take place by the end of this year.

The diplomat also said the project would contribute to the development of telecommunications, industry, agriculture and other areas as well as strengthen country's national security. In April 2018, Russia and Angola agreed to build AngoSat-2 to replace the AngoSat-1 satellite after it failed to function almost immediately after the launch in 2017. A new communications satellite was to be produced by Russia's RSC Energia but in 2020 it was reported that the project was transferred to ISS-Reshetnev Company at the request of Angola.

# Econet supports government farming projects

Econet Wireless Zimbabwe has partnered with the country's government to drive climate-smart conservation farming in a bid to boost national food and nutritional security in line with global Sustainable Development Goals (SDGs).

In its integrated annual report for the year ended June 30, Econet board chairman, James Myers, said the company is providing inputs and training for small holder farmers on climate smart conservation farming.

"To complement Government efforts, we scaled up our support for climate-smart conservation farming (Pfumvudza/Intwasa) through training, provision of inputs and extension services to our small-scale farmers," he said.

Myers said in the long-term, through sustained efforts, the company wants to assist the government in ensuring food and nutritional security, elimination of stunting and eradication of poverty to end hunger and poverty in line with the sustainable development goals (SDGs).

The Zimbabwean government introduced the Intwasa/ Pfumvudza two-years-ago, as a model conservation farming method aimed at boosting productivity even when there is not enough rain.

As part of its social investment initiative, Econet Wireless said it was also engaged in supporting vulnerable children and communities through funding for education and the health sector.

"The group's social investment initiatives continued to play a catalytic role in education, with a special focus on continuing to support children who are orphaned as well as academically gifted students and vulnerable children, through access to a network of local and international schools and universities," said Myers.

He added that through the telco's implementing partner, Higherlife Foundation, the former continued to support the Ministry of Health and Child Care "by placing large-scale and high-tech critical maternity ward equipment as well as providing Emergency Obstetric and Neonatal Care (EmONC) training to eight maternity wards in Zimbabwe's major referral and provincial hospitals".

Meanwhile, during the period under review, Econet Wireless recorded inflation adjusted revenue of US\$87.3bn – 51% growth compared to US\$57.9bn recorded in 2021.



# New service helps customers with insurance claims

MTN subsidiary and African Insurtech, aYo Holdings, has launched a WhatsApp channel with Clickatell to let customers in its African markets easily submit documents as part of the claims process.

Users can also access content like FAQs, videos, voice notes, and brochures, all within WhatsApp.

For customers, this means being able to quickly and easily access as many services as possible, in their own time, and via a preferred channel, the companies said.

For insurers like aYo, automated customer engagement via WhatsApp is boosting revenue with cost savings five times that of call centres, and 25 times that of branch engagements, while minimising premium defaults more details below.

"At present it will cost the average insurer R20 to R25 rand to service a client or broker via their call centre," said Werner Lindemann, Clickatell's commercial senior vice president for Middle East and Southern Africa.

"While this is substantially better than a branch engagement which can reach up to one hundred rand, using chat to optimise and automate the engagement can drop this cost to around 4 Rand per engagement. That means insurers can deliver successful customer engagement over channels like WhatsApp five times cheaper than a call centre and twenty five times cheaper than if a client walks into a store or branch."

Lindemann added that these substantial cost-takeout benefits have quickly captured the attention of C-level executives in the insurance industry.

The privacy of the chat channel is also particularly useful as more and more consumers miss, or are late in making premium payments," he said.



# 'Smartphone shipments in Africa dip 7.9% in Q2' – IDC report

Shipments of feature phones rose 10.6% quarter-on-quarter (QoQ), with their cheaper prices offering a viable alternative for cash-strapped consumers, according to the latest report by research house IDC.

The top three smartphone markets in Africa by unit share in Q2 2022 were South Africa (16.6%), Nigeria (13.8%) and Kenya (7.7%); however, all three saw shipments decline QoQ. Transsion brands (Tecno, Itel, and Infinix) led the African smartphone market in Q2 2022 with a unit

share of 48%, maintaining steady shipments into the region. Second-placed Samsung (25.8% share) recorded an 11.3% QoQ decline in shipments.

Elsewhere, t

Xiaomi (6.6%) saw its shipments decline 8.3%.

The average selling price (ASP) of smartphones in Africa dropped 3% QoQ in Q2 2022 due to a sharp 22.3% QoQ fall in shipments of midrange devices (US\$200<US\$450).

11.3% QoQ Meanwhile, Shipments at the lower end of market fell 3.9% in third-placed \$0-\$100 bracket.



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# Equiano cable lands in SA

Google's Equiano undersea internet cable finally landed in South Africa in early August, according to WIOCC, the company that built the landing station for the cable in Melkbosstrand, Cape Town.

Once operational, the new infrastructure should improve the quality of the Internet not only in the rainbow nation, but also in the whole of southern Africa.

Telkom's subsidiary Openserve is expected to complete the deployment of the cable across South Africa as Equiano's official partner, it is understood.

The arrival in South Africa is the latest step in Equiano's deployment,

which began in Portugal in 2019 with several stops along Africa's west coast. This comes about four months after the cable landed in Togo, its first African destination. A month later, Nigeria welcomed the submarine cable. Last July, the cable landed on the coast of Namibia.

According to a study commissioned by Google, Equiano's arrival in South Africa is expected to increase internet connectivity speeds by three times, reduce Internet costs by 16% to 21% and increase Internet penetration in the country by 7% by 2025. In addition, the submarine cable will help create approximately 180,000 jobs in the country.



# Kilimanjaro gets high-speed internet

Tanzania has installed high-speed internet services on the slopes of Mount Kilimanjaro, allowing anyone with a smartphone to tweet, Instagram or WhatsApp their ascent up Africa's highest mountain.

The state-owned Tanzania Telecommunications Corporation set up the broadband network in mid-August at an altitude of 3,720 metres (12,200ft), with the country's information minister, Nape Nnauye, calling the event historic.

"Previously, it was a bit dangerous for visitors and porters who had to operate without internet," he said. "All visitors will get connected ... [up to] this point of the mountain," Nnauye said at Horombo huts, one of the camps en route to the peak.

Nnauye added that the summit of the 5,895-metre mountain would have internet connectivity by the end of 2022.

Alper Turken, SVP Sales, EMEA and APAC at network infrastructure provider CommScope, said the news will be welcomed by both tourists and locals: broadband connectivity plays a crucial role as an enabler of economic growth and prosperity across communities. "Internet access will not only improve safety by making it possible to conduct emergency calls in the event of an accident but also allow climbers to stay connected in their quest for the summit," he added. "Addressing the lack of connectivity in these hard -toreach areas is certainly a promising step forward in facilitating the delivery of a wide range of services and applications. As global connectivity improves, we must ensure that certain areas are not left behind and have the necessary fibre and wireless infrastructure. And as we move into a world where 5G underpins how we use the internet, access to speedy and reliable wireless connectivity will only become more important."

Kilimanjaro is an important source of tourism revenue in Tanzania and neighbouring Kenya, with about 35,000 people attempting to reach the peak each year.



# Malawi awards third licence

The Malawi Communications Regulatory Authority (MACRA) has awarded the country's third telecom licence to Malcel, with the new operator planning to enter the national telecom market next year.

It will battle against Airtel Malawi and Telecom Network Malawi (TNM) and in addition to mobile telephony, the new company plans to provide mobile financial services with its MCASH platform.

Bonface Ndawala, Malcel's chief executive officer, said the company plans to invest US\$280m in Malawi over the next five years. "We plan to start rolling out our network in Malawi from the fourth quarter of 2022 and we will start formal operations with the first call made on our network in the fourth quarter of 2023," he added.

Malcel is a partnership between two companies. One is Malawian company Bedrock Holdings, made up of local telecom executives and which holds a 30% stake. The other is Danish company Eferio Communications, which holds 60%. The remaining 10% has been reserved for other local and foreign shareholders.

"We want to offer Malawians a real third alternative, so we will fight on the service to subscribers," said Ndawala. "Whoever has the best service, which leads to the best customer experience, will have the advantage in this fight."

# Wyld and Miromico partner to drive satellite IoT market in Africa

Wyld Networks has partnered with the Swiss-based and fellow Internet of Things (IoT) firm, Miromico, to drive the satellite IoT market in Africa.

Miromico will help Wyld with the design, engineering and manufacture of its next generation of low-power, sensor-to-satellite LoRaWAN terminals and modules for IoT applications in agriculture, environmental monitoring, energy, supply chain and utilities, across areas where there is little or no alternative connectivity.

In Africa, Wyld technology is already being used widely for applications from soil moisture monitoring to reduce water usage for irrigation and cut carbon emissions, to recording temperature, humidity and rainfall data to predict crop water demand and monitor metrics such as chill units to help predict flowering in many crops.

"With years of experience in innovative design for integrated circuits, electronic systems and the IoT, Miromico is the ideal partner to help us accelerate our R&D and production activities to meet the growing demand for advanced satellite IoT solutions in regions such as Africa that have large unconnected land masses," said Alastair Williamson, CEO at Wyld Networks.

Wyld is already working on commercial data trials of its sensorto-satellite service with customers and partners including DFM Technologies in Africa along with DEWA, Senet and American Tower.

# ICASA offers more spectrum due to data traffic surge

The South African telecom regulator is set to license more low- and midfrequency spectrum to providers of broadband services amid a surge in data traffic.

A notice published by the Independent Communications Authority of South Africa (ICASA) in the Government Gazette said it was initiating the second phase of the licensing process as continued growth necessitated the demand for more spectrum.

ICASA said it expects to conclude this process by March 2023. It also says it has decided on a phased approach to the licensing of the low- and mid-frequency bands to enhance competition and increase broadband coverage.

Since the outbreak of the Covid-19 pandemic in 2020, data usage has rocketed in the rainbow nation as the majority of services moved online.

Interventions by government on the issue include reducing data costs for and expanding broadband access to low-income households.

"The purpose of this notice is to solicit views from interested stakeholders regarding the International Mobile Telecommunications (IMT) radio frequency bands the authority intends to license during the second phase of the IMT licensing process," said in the Government Gazette.

The planned second phase of spectrum comes six months after ICASA concluded the initial process in March this year.

Cell C, Liquid Intelligent Technologies, MTN, Rain, Telkom and Vodacom responded to the invitation to apply and qualified to participate in the licensing process.

The main auction stage comprised 58 rounds of bidding between the six bidders.



### Talking critical

# The mission critical comms revolution

Private 4G/5G communications offers an exciting opportunity for mission critical users – the move towards high-speed broadband services will enable new, advanced applications and offer significant operational improvements for users. However, there will still be a demand for traditional PMR technologies....so can the industry gain more than just the improvement in data services?

TETRA is still the most advanced digital trunked communications system for mission critical users today and sets the standard for voice and group communications but will never be able to offer the highspeed data services that are essential for today's critical workers. As organisations look towards the next generation mobile communications, there is an opportunity to reflect on how different technologies can continue to be viable for users.

Traditional narrowband PMR technologies will be required well into the future...issues of affordability, spectrum availability, cell coverage and re-use of existing subscriber equipment are all likely to be factors. We believe that a hybrid approach to technologies is the ideal solution to allow users the best choice; and a fully integrated, single network solution will always be a better solution than gateways to separate networks.

The TETRA standard was developed over 20 years ago, and one of the major benefits was the interoperability between subscribers from different manufacturers, however the lack of interoperability at the infrastructure level was (and still is) a frustration for clients. This was not an issue in the consumer 4G market as 3GPP standards allow all LTE eNodeBs to co-exist on the standard LTE Core. As a TETRA vendor, users regularly ask if our base stations can be used to extend an existing system (from a different manufacturer) - sadly the lack of an open networking standard adopted by all manufacturers, meant that full interconnectivity was not possible (apart from using a basic gateway interface)... this proprietary issue created difficulties for users, particularly where security is at stake. The ability to seamlessly select from a range of different vendors, and different technologies on the same core network is an ideal approach.

Recent global emergencies should focus mission critical users on the importance of fast, secure communications and the ability to rapidly deploy the most appropriate technology for any situation

#### Paul Ward, director, ETELM

and in any geographic area is essential. A perfect example is where ETELM working with B-LIFE deployed a system combining both TETRA and 4G for COVID emergencies in Italy.

The B-LIFE project required a rapidly deployable health laboratory to effectively respond to emergency public health issues - this is particularly pertinent to COVID but also for co-ordinating vaccination programmes, and for outbreaks of other viruses such as ebola, where dealing with any isolated outbreak is critical to avoid the spread and save lives. A similar solution is also adapted for emergency services and military applications whereby the user can benefit from secure TETRA voice communications deployed instantly in the field, with advanced mobile applications linked to command centres obtaining important data and making assessments in real-time. This solution is often based on single cell systems, where 4G (and 5G) has limited coverage, so having TETRA for voice communication and a '4G Bubble' for broadband data services, connected to the central monitoring systems gives the benefit of both technologies.

As an industry supplying highly secure, national infrastructure we must collectively work towards a future where our customers are given the option to select the most suitable technology (or combination of technologies) and not left in a position where they are lockedin to a supplier or service, and we have a responsibility to ensure migration paths are more seamless and less complex than they currently are today. The 3GPP model is perfect in this respect.

If one assumes that the demand for PMR technologies will continue (even in the 'next-G' world!), it is essential that vendors look at offering an equivalent fully integrated, single network solution for users. There is no technical reason why several different technologies cannot interoperate on the same core network, this will reduce the costs and increase the options for users, and simplify the architecture by avoiding gateways and separate interfaces. ETELM's 4GLinked is a trailblazer in this regard as its TETRA base station can co-exist with eNodeB's on the LTE core network .... so how can we take this opportunity to revolutionise how vendors of different technologies co-operate in the future?

The technical solution is possible, and lessons can be learnt from the network standards established by 3GPP for the mobile consumer market – the 4G and 5G Core network is internationally standardised and all base stations from different vendors inter-operate on the same network. This gives operators the ability to select suppliers

based on a competitive market, and the ability to switch suppliers quickly should the need arise. This competitive approach has been a major factor in the rapid rate of deployment and technology advances in the consumer communications market.

An opportunity now exists for manufacturers of all standard PMR technologies to adopt the same approach and develop their technology into the 3GPP standards for core networking - LTE Core, 5G NR.... this could create a single eco-system for all mobile communications and allow users to select and mix technologies based on cost, service and user requirements. 4GLinked TETRA base stations adopt this approach as they can connect directly to any LTE Core network in the same way as any LTE eNodeB, by utilising the LTE-S1 connectivity standard. This allows our TETRA system to be deployed over the same, single network core solution alongside 4G and future 5G base stations. The solution has been tested at 3GPP Plug tests and already deployed in many different scenarios for emergency services.

As the 3GPP networking standards for 4G and 5G are open, any vendor can develop the same solution into their base stations meaning that we can all benefit from the advances in core networking and allow inter-system and inter-technology solutions over a single core. The technology is available but commercial issues need to be overcome - this is where users can influence vendors and ensure that they never find themselves locked-in to proprietary networks.

technology Once becomes interoperable the next challenge for large national networks is how to deploy their service - privately owned or operator managed? The choices are available, and certainly operators will have a large part to play since they already have much of the national infrastructure established. However, once again users must ensure that there is a competitive environment there is no point in having open standards in technology, if users are forced into single sourced managed services....so it is important to ensure that options exist with other operators so that services remain competitive - again a challenge for highly secure networks and one that needs to be carefully managed.

NFWS

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# Telecoms 'will be the fastest growing African business sector'

the critical-communications Sepura. supplier purchased by China-based Hytera Communications five-years-ago.

Although the financial terms of the deal were not disclosed, a Sepura press release says Steve Barber will continue as Sepura's CEO, whilst Malcolm Miller- who previously worked with Epiris while serving as chairman of Audiotonix-will become Sepura's nonexecutive chairman.

Sepura was acquired by Hytera Communication in a US\$92m deal that closed in 2017

The sale to Epiris comes as Sepura marks its 20th anniversary, having become market leader in more than 20 countries with more than two million devices deployed worldwide. Its portfolio of TETRA radios and accessories is used globally by public safety users in the police, fire and ambulance services. It has also

# Ericsson names Kandeel head of global customer unit MTN and MTN Africa

Ericsson has appointed Hossam Kandeel as vice president and head of global customer unit MTN and customer unit MTN Africa. He will be charged with leading technologies and services team "that promises to deliver exceptional value towards MTN Ambition 2025 while enabling positive change across society", the Swedish tech firm said.

An internal appointment, Kandeel has been with Ericsson for nearly 20 years in leadership positions across various practices including government and industry relations, strategy and marketing, business solutions, sales and operational excellence.

He served as the key account manager and country manager of Ericsson Angola under customer unit west Africa and Morocco, prior to his new role.

"I am committed to finding new ways that add value to the services and solutions we provide our partners and innovate our client offerings to support the ongoing digital transformation momentum in the region," Kandeel said.

He took up his new position July 21.

UK private equity group Epiris has purchased successfully expanded into the commercial space, supplying transport, mining, oil & gas, and utility companies.

> "Sepura is in a unique position," said Epiris partner Ian Wood. "It combines extensive public safety knowledge with strong intellectual property and an extensive UK-based R&D capability that consistently delivers best-inclass innovative products. The company's ability to develop new applications and devices that embrace emerging technologies and meet customer needs positions it to continue to succeed as a pioneer for many years to come."

> This new acquisition does not include former Sepura-owned assets Teltronic and PowerTrunk.

# **C&W Seychelles** selects Cerillion Unify for quad-play BSS/ **OSS** transformation

Cable & Wireless Seychelles (CWS) has commissioned Cerillion to implement a complete digital BSS/OSS solution, the companies said.

The latter is providing a full turnkey delivery of Cerillion Unify, within a private cloud deployment. in a bid to maximise the benefits of data security, control, and cost of operation.

This product is a packaged SaaS solution for quad-play CSPs who need to manage the full range of service types, payment methods and business models in a single convergent system.

CWS will be able to streamline its business processes using Cerillion Unify's end-to-end process automation, as well as delivering on its digital vision through Cerillion's mobile app and self-service portal.

"Data quality is the key to transformation success," said Shoaib Khan, CTO of CWS. "Cerillion provides not only the BSS/OSS software to facilitate our digital vision, but also private cloud deployment and the proven track record

of integration and data migration that will ensure we can deliver on our wider digital roadmap." George Doffay, chief executive officer (CEO) of CWS, added: "Cable & Wireless plays a big part in the lives of the people of the Seychelles, and this digital transformation programme will deliver significant benefits throughout the communities we serve. We have chosen Cerillion because they provide a SaaS solution with the certainty of outcome we need for this mission-critical project, and we're confident that this investment will provide the BSS/OSS platform for our ongoing success."

# Orange reports solid Africa results

Orange said second-quarter core operating profit rose 0.5% year-on-year, with strong growth from its Africa and Middle East division offsetting falls in sales in its native France and neighbouring Spain.

Earnings before interest, taxes, depreciation and amortisation after leases (EBITDAaL) rose to €3.31bn over the period

Second-quarter sales fell 0.4% on a comparable basis to €10.7bn. Orange also confirmed its full-year targets, including an increase in core

operating profit between 2.5% and 3.0%.

Orange chief financial officer (CFO) Ramon Fernandez told reporters that the group had asked French telecom regulator Arcep the permission to extend its profitable roaming contract with its rival Iliad over 2G and 3G mobile networks. However, he declined to disclose the proceeds from this contract. Christel Heydemann, who took over as chief executive officer (CEO) in early April, will present the group's next mid-term targets and strategy in February 2023, Fernandez added.

# Nokia and Safaricom deploy FWA 5G slicing trial

Nokia successfully piloted 4G and 5G fixed wireless access (FWA) network slicing in Kenya's Western Region with the help of the country's biggest telco, Safaricom.

The Finnish tech firm said this pilot program is the first time that 4G and 5G network slicing has been successfully tested anywhere in Africa.

"The trial utilised a multivendor network environment and included RAN, transport and core as well as software upgrades to a range of Nokia's products and services," said Nokia in a release.

The pilot tested equipment from multiple vendors and took place on Safaricom's live commercial network. Nokia said that it provided base stations, network management software tools and customer-premises equipment (CPE).

Network slicing enables operators to divide their networks into multiple logical slices, each capable of maintaining independent end-to-end levels of service quality, network performance, and security. It is generally seen as the unique province of 5G networks, but Nokia claims primacy as the first company to offer 4G/5G end-to-end slicing.

"Safaricom is now poised to support new types of enterprise network services, including fast lane internet access and application slicing," said Nokia.

James Maitai, Safaricom network director, said that Safaricom was "looking forward to tailoring our service offerings to individual customers and industries, to meet their needs for high-speed connectivity precisely and without unnecessary cost."

# Maroc Telecom to see flat revenues next year

Maroc Telecom has resigned itself to a year of stagnating profits in 2023, with only a 1% increase projected.

The flat revenues would be the direct result of a drop in profits from operations coupled with consolidating profits from global operations, according to a report by Morocco's BMCE Capital Global Research.

At the end of the first half of 2022, Maroc Telecom's revenues dropped by an annual rate of 1.2%, totalling MAD17.5bn (US\$1.6bn), the report says. It also states that the drop in profits is due to the fall in turnover from operations in Morocco.

Maroc Telecom's revenues in Morocco declined by an annual rate of 2.2%, averaging MAD 9.561 billion at the end of June 2022.

Although the company's profits growth rate is trading in the negative in 2022, the decline in profits remains less prominent than the 7.1% drop in profits the company experienced in 2021.

Maroc Telecom's operations in Morocco especially took a nosedive in the Mobile segment where profits declined by 5% as a result of market competition, the report adds.

> The company's profits this year are at an all-time low and since 2019, Maroc Telecom has seen a steady decline in profits, going from around MAD57bn (US\$5.4bn) in the first quarter of 2019 to MAD45bn (US\$4.2bn) at the end of the same period in 2022.

# Ethio Telecom upgrades fraud management system

Ethio Telecom has awarded an upgrade of its fraud management system to Subex an Indian enterprise software company.

The capabilities of the new system will enable the operator to take a proactive approach to detecting and combating cyberattack threats. These include SIM Box, spoofing, SMS fraud, roaming fraud, subscription fraud, device fraud, mobile money risks and credit risk management.

"Subex's Al-driven fraud management system will be critical to protecting our business and our customers," said Tsegaye Emmanuel, IT security manager at Ethio Telecom. "We see this as a forward-looking investment that aligns with our digital services initiatives."

# Uganda to reduce internet tariffs by more than 50% by year end

Ugandan government plans to reduce the cost of Internet in the country by the end of the year, in a bid to promote the use of digital financial services and increase financial inclusion of vulnerable groups. Support the growth of innovations in ICT, digital financial services, communication and e-government services, among others. Several projects to this effect are underway and the most important of them has been completed,

Chris Baryomunsi, the country's minister of ICT and national orientation said the country will more than halve the cost of data it provides through the national backbone fibre from US\$70 per Mbps to US\$30.

"We're talking about a purely governmental internet," he said. "Once we reduce the cost at which the government sells to the service providers, they will automatically reduce the cost that the end user will have to pay and we believe that this will contribute to our efforts to digitize our economy."

The reduction of internet costs will

support the growth of innovations in JCT, digital financial services, communication and e-government services, among others. Several projects to this effect are underway and the most important of them has been completed, according to reports. This is the project on the national backbone infrastructure for data transmission and e-government infrastructure, the cost of which is estimated at US\$75m. It will connect all major cities in the country to a network based on fibre optic cable and connect government ministries and departments to the e-government network.

These projects are part of Uganda's Digital Acceleration Program, which aims to fill gaps in the current infrastructure and accelerate Internet penetration in the country.

# Tanzania's regulator tells telcos to improve service quality in 15 districts

Telecommunications companies operating in Tanzania must improve the quality of their voice, data and SMS offerings, especially in 15 districts where the provision of these services fall below the necessary quality requirements.

The Tanzania Communications Regulatory Authority (TCRA) made this recommendation during a meeting with Vodacom Tanzania, MIC Tanzania (Tigo), Airtel, TTCL and Halotel, among others. They were told to put in place work plans to ensure service improvement in the 15 targeted areas.

"After that, TCRA will do another assessment before the end of the year to see if they have worked in the areas where service quality has been found wanting," said Mwesiga Barongo, TCRA senior telecom engineer. The regulator's initiative follows quality of service (QoS) measurements conducted earlier this year. It is part of the regulator's mission to ensure quality telecommunication services to the Tanzanian people in a context of growing demand. Last May, the government opened 5G for investment and tasked TCRA with allocating spectrum to service providers already ready for ultra-broadband trials.

Operators committed to improving their services as recommended by the TCRA to ensure that consumers receive quality services. "We are committed to ensuring that we comply with all instructions given to us by the authority, and we will ensure that we relentlessly follow all guidelines provided by our regulator," said Andrew Lupembe, Vodacom's network manager.

# MTN Group in talks to buy rival Telkom

MTN Group has entered negotiations to acquire Telkom, in a bid to become the dominant operator in the South African telecommunications market.

The former said the deal will be in shares or a combination of cash and shares, but "discussions are at an early stage and there is no certainty that the transaction will be consummated".

Both companies made the announcement in statements issued via the Johannesburg Stock Exchange (JSE).

The move comes four months after the release of Telkom's 2021 annual financial report, in which the company revealed a 1.1% decline in revenue to R42,756m (US\$2.5m). This decrease

SA broadband connectivity firm secures R5bn loan

South African fibre broadband connectivity provider MetroFibre Networx has secured a R5bn (US\$299.8m) loan from Standard Bank Group, which will enable the company to finance the expansion of its fibre network across the rainbow nation.

Competition has increased in the fibre segment since 2020, so the company is ramping up actions and investments to strengthen its position.

The funds will be used to extend MetroFibre's fibre connectivity offering to homes and businesses in underserved communities across South Africa. It is also expected to help significantly increase MetroFibre's reach.

MetroFibre Networx had already raised

in the company's turnover was slowed down by the growth of the mobile business, which compensated for the decline of the fixed and IT activities.

The company also said that following the acquisition of new frequencies, it is considering launching 5G.

# Vodacom to invest R1bn in KwaZulu-Natal network, keeping 100% of new SA tower subsidiary

Vodacom will invest R1bn in its mobile network in the South African province of KwaZulu-Natal this year, deploying additional sites and upgrading the network to improve access to reliable connectivity and high-speed telecom services.

As part of this investment program, R444m will be invested in radio access network (RAN) projects, while R135m will be invested in regional network capacity and upgrades. R85m will be spent on improving network resiliency, optimisation and operations, while R17.5m will be forked out on core network infrastructure upgrades and related projects. Vodacom is investing heavily in backup power projects to overcome grid disruptions related to load shedding, battery theft and vandalism.

Furthermore, the telco plans to expand 4G capacity to 704 base station sites in the province this fiscal year and plans to add 61 new 5G sites to add to the 200 sites that already exist. Imran Khan, managing director, Vodacom KwaZulu-Natal, said the operator's goal is "to expand the reach of coverage and capacity, so that all sectors of the economy, from agriculture to

small businesses, can make extensive use of new technologies, such as the internet of things, to drive sustainable productivity".

Meanwhile, Vodacom Group will keep full ownership of a new subsidiary that will take over its South African tower business, the telco said, whilst announcing

a 5.2% rise in firstquarter revenue.

Shameel Joosub, chief executive officer (CEO) of the group, said formation of the telecommunications-tower is not yet complete.

company, is not yet complete.

The move follows that of several competitors in the country, with some having either formed tower businesses or sold them to specialist tower companies. It has helped raise cash for fastgrowing services, such as fintech. Other operators have also retained equity in the tower companies.

According to the company's latest annual report, Vodacom's tower company will own more than 9,500 sites, including towers and rooftop.

Vodacom chief financial officer (CFO) Raisibe Morathi said this year the operator would be open to many options once the tower company had been separated, but "we don't have any need to monetise. We're not looking to do this to raise capital."

R1.5bn from private equity fund manager African Infrastructur

African Infrastructure Investment Managers (AIIM) by November 2020. In March 2021, South

African banking group Investec had invested R2.5bn in the company. This latest investment enabled the company to acquire Link Africa's FTTH network and infrastructure in Gauteng and KwaZulu-Natal.

"Internet access is fundamental to bridging the digital divide and empowering people to participate in the globally connected economy," said Nishela Ramgoolam, head of structured capital at Standard Bank Corporate and Investment Banking.

### Inmarsat, Viasat satellite merger faces probes

Viasat's proposed takeover of British rival satellite firm Inmarsat is on ice after UK and EU regulators launched separate investigations into the US\$7.3bn deal.

Both the European Commission (EC) and Competition and Markets Authority (CMA) have initiated probes to see what impact the combination would have on the market.

The parties, which serve large swathes of the African continent, had hoped to complete the takeover by the middle of 2022, but that target was missed.

"Inmarsat notes the statement issued by the UK Competition and Markets Authority (CMA) relating to the company's planned combination with Viasat." said an Inmarsat spokesperson. "The CMA review, with which we will cooperate fully, is taking place against backdrop of satellite industry consolidation as Inmarsat and Viasat seek to create a global innovator that will safeguard UK space industry jobs and technology, while making significant investments to meet customer needs. The regulatory process on the Viasat-Inmarsat transaction remains on track and has secured approval in several key markets, including from the important Committee on Foreign Investment in the United States (CFIUS)."

The two companies announced the "transformative" deal in November 2021, promising to combine expertise across the two companies to boost global connectivity, from the space satellites offered by Inmarsat to home broadband provided by Viasat, as well as everything in between.

Inmarsat currently offers a wide range of connectivity services via its 14-strong satellite fleet, including broadband, IoT connectivity and in-flight Wi-Fi.

The CMA has said it will report back on its initial findings by October this year.

Fellow UK-based satellite firm, OneWeb, is also in the process of merging with France's Eutelsat.

The two companies hope that by combining their Low Earth Orbit (LEO) and Geostationary Orbit (GEO) assets, they will be able to offer converged connectivity to some of the most remote parts of the world, transforming consumer services, in-flight Wi-Fi, and industrial applications.

#### Talking satellite

### Preventing "Kessler", preserving LEO

In my previous column I included some perspectives on the imperatives of bringing environmental law to space. In recent contributions elsewhere I have considered the importance of various issues pertaining to the sustainability of human activity in space, issues that are part of a wider core dialogue concerning preserving the entirety of the terrestrial and nonterrestrial environment surrounding us. As well as better-managing Earth's finite natural resources, preventing yet more environmental degradation, and behaving to preserve the planet's current climate equilibrium, we must protect Earth's vital orbital resources. In brief, space must remain sustainable.

In this connection I recently attended the 4th Summit for Space Sustainability hosted by the <u>Secure World Foundation</u> (SWF) and the United Kingdom Space Agency (UKSA) which took place in London on 22-23 June. The Summit was focused on developing solutions for space sustainability and encompassed a comprehensive crosssection of space sustainability issues: orbital capacity, space debris, space law and policy, lunar governance, national and international space security, and space stations.

Launched at the Summit was the Space Sustainability Rating (SSR). This is an innovative and practical tool to support space actors in designing their missions and managing their operations more sustainably and responsibly. The SSR "aims to recognise, reward, and encourage space actors to design and implement sustainable and responsible space missions to ensure the long-term sustainability of the space environment. It provides a unique rating system enabling space actors to comprehensively and transparently assess their missions' impact on the space environment and other operators, as well as practical guidance on how to improve sustainability performance & practices." (Quoted from a press release issued by the EPFL Space Centre – <u>eSpace Consortium</u>). More information about EPFL and the SSR is available <u>here</u>. It is very important reading for our times and affords us the opportunity not to repeat our Earthly mistakes in space.

Timed for publication during the Summit were important industry and government analyses of sustainability including, from the satellite operator Inmarsat, the <u>Space</u> <u>Sustainability Report: Making the Case for</u> <u>ESG Regulation, International Standards and</u> <u>Safe Practices in Earth Orbit.</u>

Donald J. Kessler's eponymous cascading satellite collisions syndrome goes all the way back to 1978. At that time the occupation of geostationary (GEO) orbital positions by commercial communications satellites was still in its infancy. In the following decades the GEO orbital arc became progressively busier, but was (and is) characterised by our ongoing good husbandry. The principle issue now is that non-GEO orbital space is becoming congested, with a potential 100,000-plus satellites by the end of this decade adding to the debris already orbiting. The space sustainability imperative requires that we tackle the various new critical space management challenges by bringing our historical good husbandry of GEO to Low Earth Orbit (LEO).

LEO congestion does not only relate to, and potentially negatively impact, the future of satellite communications. The LEO environment is where many new Earth Observation satellites operate, the platforms on which we are increasingly

Martin Jarrold, vice president international programme development, GVF

> coming to rely to monitor the physical evidence of planetary climate change and

environmental degradation. It i s this data that will help us better manage our Earth's limited resources, monitor the changing environment, and stave off existential disaster. Therefore, space sustainability management cannot be placed in a silo as a separate challenge. Space management challenges are also an Earth management challenges. Forgive the pun, but watch this space.

On a separate note, the five finalists for GVF Quarter Century of Excellence Award - which celebrates GVF's 25th anniversary year - have been chosen, and on 6 July executives representing Eutelsat, Hughes Network Systems, Inmarsat, Kratos, and SES, all recognised as industry leaders, featured in an online discussion and O&A with co-hosts David Meltzer from GVF and Pacôme Révillon from Euroconsult to present their company's case for being judged the "Best of the Best". Watched by a group of independent jurors who will decide the winner, the result will be announced and the Award presented on 14 September 2022 at Euroconsult's World Satellite Business Week Gala event in Paris which, like GVF, is celebrating its 25th year.

The LEO environment is where many new Earth Observation satellites operate, the platforms on which we are increasingly coming to rely to monitor the physical evidence of planetary climate change and environmental degradation.

Donald J. Kessler's eponymous cascading satellite collisions syndrome goes all the way back to 1978. At that time the occupation of geostationary (GEO) orbital positions by commercial communications satellites was still in its infancy.



# Making money with the right partner

MNOs can successfully monetise their A2P SMS routes by partnering with the right messaging solutions provider, writes Sizo Nkosi, regional operator partnership manager at Infobip

ptimal monetisation of business SMS traffic across their ecosystems has traditionally been a complex issue for many Mobile Network Operators (MNOs), yet, boosting revenue across this platform is becoming increasingly important.

With earnings from person-toperson (P2P) SMS messaging steadily declining due to it now generally being commoditised and with chat apps as preferred messaging channels, applicationto-person (A2P) traffic has become the major revenue spinner across the SMS channel.

Yet, network operators often struggle to fully monetise their A2P pathways, as messaging providers often exploit network vulnerabilities to send business messaging via grey routes, which are essentially low-paying or unbilled pathways. The result is that little or no revenue is generated by this traffic and the scale of this leakage poses a real financial risk to operators.

A report published by Mobile squared found that between 2018-2023 grey routes are expected to cost the mobile network operators almost US\$50bn. Additionally, market education is required with 60% of mobile network operators having not yet sufficiently protected their network from grey-routes and other A2P fraud by investing in fraud prevention solutions such as firewalls.

SMS firewalls are monitoring and filtering solutions that are specifically designed to detect and block unauthorised A2P SMS traffic on a network. They do this by monitoring incoming messages and – based on aspects such as the originating network, number, hashing and message content –

block and filter the ones not sent through a properly billed route.

#### Monetise legitimate traffic

In the case of improperly billed legitimate A2P messages, once these have been blocked by the firewall, attempts can be made to monetise this traffic. After detecting that an aggregator is sending business messaging via an improper route, the firewall administrator or solution providers should contact them to reroute this traffic to a properly billed pathway at the applicable pricing.

However, an SMS firewall is a complex system that is expensive to develop, and which incorporates Machine Learning (ML) to automate the discovery of fraudulent or unauthorised messages based on keywords, text patterns and even spelling. ML has been found to be more efficient than a human-operated monitoring system and can continuously learn and develop new algorithms and build up a database of elements to look out for.

Most network operators simply lack the skills and resources to develop their own SMS firewalls, as it requires a lot of development and advanced engineering. It also requires the human factor in the form of experts who have indepth knowledge of global markets and pricing, as well as the ability to identify and calculate the proper pricing for specific routes, countries and messages.

Some large network operators do have their own firewall solutions but are discovering that it is a better value proposition to outsource SMS firewall provision to a specialised vendor due to its complexity and the need to reduce

costs. A messaging solutions provider can not only develop but also maintain the firewall, which needs to evolve and keep pace with the ever-changing threat landscape.

#### Greater complexity

The complexity of SMS firewall development and implementation is greater for big operators and especially for those that operate in countries with huge subscriber bases, such as in the African region. These MNOs typically handle massive volumes of SMS traffic and need to address a lot of unauthorised messaging on their networks. As a result, they typically receive large amounts of complaints from unhappy customers who are regularly exposed to spam and other potentially harmfully SMSes.

An effective firewall solution services much faster.

will cover all the termination points on an operator's network and the solution provider will implement rules that govern how unauthorised traffic is blocked. Once advanced pricing strategies are implemented, the technology partner should guide the MNO as to how best to monetise traffic on the network.

A specialised vendor can bring broad expertise, agility and global knowledge and coverage to the table, as well as the ability to constantly look for new approaches for better monetisation of A2P SMS routes. MNOs should look for a partner that will understand their needs, which is key for successful technology implementation. However, this partnership should technology, stretch beyond enabling the partners to share business insights and develop new

#### FEATURE: FIXED WIRELESS ACCESS



# FWA: bridging the digital divide and monetisation

Fixed-wireless-access is a critical service that allows millions of Africans to get and stay online as well as bridge the digital divide. So, why is deployment slow and how is it being monetised? Robert Shepherd asks the experts

o be a part of the world's digital economy, we all need reliable, high-speed internet access. Businesses, individuals, schools you'll see the stark reality. and hospitals all need to be online to best serve the people who rely on them.

One of the regions with the lowest access to high-speed internet is sub-Saharan Africa. According to data published by The World Bank, a mere 29% of the entire population uses the internet, never mind gigabit broadband. Compare that to 57% of the world's people and 86% of those in Europe and central Asia and

It's a catch-22 situation: the lack of internet access has a negative economic impact on Africa, yet it makes sense for the most underdeveloped part of the world to not have the widespread, reliable, high-speed connectivity it desperately needs to support economic growth and development. Add a global pandemic to the

mix and it's fair to say the last few years have created challenges.

Nevertheless, FWA is becoming more important than ever as a growing African population looks stay online whenever they go from one place to another.

Paul Colmer, exco member of Wireless Access Provider's Association (WAPA) extols the virtues of FWA. "Two of the major disadvantages of non-fixed wireless services are the cost of data

and the outdated per-gig billing model," he says. "People don't use connectivity per gig, nor are the networks built based on serving X-gigs per subscriber. Networks are built based on available throughput and the number of nodes or connected devices they can sustain. But the world is largely uncapped today, certainly for most people with fixed connectivity."

He says that is increasingly reflected in the emerging billing models that charge for uncapped per day, week, month or whatever period the user chooses. "We trialled a number of these models in our TV White Space project conducted in less affluent rural areas

and this emerged as the clear winner," he says.

Colmer says another significant advantage of fixed wireless networks is the speed and relative ease with which they can be upgraded." Since these tend not to be national networks with integrated cores that require forklift renewals whenever there is a transition to a new technology, they can provide all the benefits of new technologies, much faster." he adds.

Justin Farnell, chief executive officer (CEO) at Johannesburg-based WiFiontheMove says that "correctly architected", FWA allows the service provider to prioritise traffic and guarantee QOS across the network. "In terms of Wi-Fi provision, given its unlicensed band, this is more challenging, but we have developed at FibrePoynt our own patented beam forming solution which optimises the throughput to fixed router and mobile subscribers." he says. "The cell size is smaller and can support far more users than a traditional GSM base station."

So, if FWA really does offer more than its non-fixed relations, why is it not more widely available?

As far as Farnell is concerned, the biggest obstacle to FWA deployment remains the cost of backhaul, because "by virtue of the sheer size of the continent", outside of the metros, fibre backhaul isn't usually available, so the only other alternatives are expensive microwave or satellite links. "However, speaking of the latter, I do anticipate that Elon Musk's Starlink will be a game changer, particularly in the peri urban and rural villages," he adds. "I see Nigeria has already granted the company a licence to start delivering services, albeit I think Elon will have to wait much longer before he's granted access by his home country South Africa."

Satellite has always been a

complementary technology that, although such as Intelsat. "They promise less expensive traditionally comparatively expensive, is reliable, according to Paul Colmer, exco member of Wireless Access Provider's Association (WAPA). "It's actually so dependable that it is the connectivity of choice for banks to connect ATMs in remote areas," he says. "Its reliability makes it the perfect backup for sensitive applications and where dependability is non-negotiable."

However, Colmer argues that burgeoning medium (MEO) and low-Earth orbit (LEO) networks such as Starlink, Kuiper, O3B and more recently 1Web are taking the reins from the established geostationary (GEO) stalwarts,

usage costs even if they are still quite costly to set up," he adds. "Nonetheless, they continue satellite's differentiator: providing connectivity where there is otherwise none. As LEO satellites, they also improve latency and, being based on newer technologies, speeds and throughput, too."

That said, Colmer says "there are several hurdles to fixed wireless access deployments in Africa" and that the service providers are constrained in many cases by spectrum limitations. With limited spectrum service providers must deal with a lot more interference,

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#### FEATURE: FIXED WIRELESS ACCESS



"I see Nigeria has already granted the company a licence to start delivering services, albeit I think Elon will have to wait much longer before he's granted access by his home country South Africa"

which harms the quality of services they can provide.

"Battery theft and equipment damage are two more major challenges," Colmer continues. "They increase the cost to do business, which ends up impacting consumer prices – and they degrade qualities of service." Nonetheless, Colmer cites a recent landmark ruling in which a South African judge gave three men 30-year sentences each for stealing cell tower batteries.

"It sends a clear message from South Africa's judiciary, the intent of which WAPA supports. Telecommunications infrastructure is now essential infrastructure, which means damaging it is an aggravating factor when considering sentencing," he continues. The change is clearly to dissuade theft and vandalism. It isn't limited to cellular towers, but all telecommunications infrastructure, including wireless internet service providers (Wisps), who provide critical and sometimes the sole communications for many communities."

Of course, a number of different ingredients go into the creation and deployment of FWA. So, just how does the combination of other/ different technologies help with the deployment and impact of FWA?

Mpho Sefalafala, CEO at FibrePoynt, explains how his company is deploying its entire network architecture based on solar power.

"The micro base stations don't suffer from downtime, which is a constant challenge with all the load shedding we're experiencing in South Africa," he says. "Furthermore, we are monitoring the equipment's power consumption through our own custom designed IoT controller. With regard to optimising the QoS across the network, FibrePoynt is utilising the Android mobile subscriber app to relay signal strength back to its cloud management platform from the customer's phone."

So, let's just imagine FWA is as fully-deployed as it can be and Africans are reaping the benefits of being connected. It still has to be monetised, otherwise there's barely incentive for companies to invest in the service.

Farnell says "there is no doubt" that newer 5G entrants like Rain in South Africa, have been very successful in winning market share from the established GSM operators, with competitively priced and well packaged service offerings. "However, what about the many millions of consumers who can't afford to spend US\$30 to US\$50 a month?" he adds. "FibrePoynt has identified at least 5 million households across South Africa where the monthly comms budget is between US\$5 and US\$20 and it this underserviced market where we are monetising fixed Wi-Fi access through (Flash) token payments - and Wi-Fi data products that are priced for people's pockets on a daily and weekly basis."

What's more, Farnell says the revenue opportunity is huge because FWA allows operators to reuse their existing mobile networks, improve the quality of services, and provide faster and affordable connectivity.

Colmer adds that in WAPA's census report released in November last year, it found that Wisps play a significant role in South Africa's economy and that their revenues exceed R3bn. "They serve more than 200,000 homes and businesses and employ nearly 3,000 people," he says. "The majority are micro enterprises and 63% have annual revenues in the R2m to R20m brackets. They operate over 5,480 high sites across the country, representing significant critical infrastructure that provides numerous vital services, including the support of emergency and response services."

Now, it's time to explore why FWA is key in bridging the digital divide in Africa.

Farnell says that "from a carrier perspective, it's really a function of the lower cost of deployment" which enables those CAPEX savings to be passed onto the customer. "We're seeing this as we roll out FibrePoynt networks across Gauteng in South Africa," he continues. "Our WiFi mobile data offerings are a fraction of the cost of a typical GSM operator. Likewise the adoption of router based services in underserviced communities is transformative."

Farnell highlights the fact that for many households, it's the younger generation who are showing their elders how to connect and enjoy Wi-Fi (on their smart TV) at home. "Furthermore, by sharing router access on a high speed, uncapped service there is now capacity, besides the huge demand for video streaming and other entertainment services, to do e-learning and remote working," he adds. "It also represents a big financial saving for that household, who have up until now, most probably been individually topping up expensive mobile pre-paid data accounts."

Many Wisps use fibre for their backhaul between towers and into national backbone networks. Colmer believes that's the most advantageous application for fibre at the moment in South Africa because it's far too unreliable for people who need dependable connectivity either from the home or their business. "The challenge is the competitive and relatively unsophisticated nature of the trenching, which results in damaged infrastructure," he says. "That has huge reliability implications that are the biggest threat to fibre's public image."

Colmer says Wisps can run viable businesses charging much lower rates than typical mobile network operators. He shares an example where "we ran a proof of concept as part of our TV White Space project" that investigated the pricing and business model. "It started at R10 per gigabyte and we proved it can work, including different ways to market the service, and a variety of offer packages," he adds. "We honed the model by offering uncapped day, week and month passes. It's profitable and it offers huge benefits to the people who need it most."

What's more, Colmer says Wisps can use a variety of methods, including hotspots, to provide affordable, quality connectivity to highdensity populations in less formal settlements and particularly townships. "Thousands of income-earning daily commuters frequent taxi ranks and major arterial routes to and from commercial centres are all potential customers considering their alternative is much more expensive cellular data, particularly when bought in small data chunk," he continues. "That creates unprecedented opportunity for Wisps providing fixed wireless access (FWA). The greater the number of frequent users they have, the more opportunity they have to add services, including advertising."

Colmer also says that with higher quality networks, they can also commercially position themselves to extend a mobile network operator's newer and more advanced services based on emerging technologies, such as 5G.

That brings us to the impact of the nextgeneration technology. 5G is making slow progress in Africa, with a mere six countries having launched the network so far. But just how important is it to the current use and future of 5G?

"It depends which markets you're addressing," says Farnell. "For the wealthier suburbanites and city dwellers it's really accelerated data consumption and provided a critical communications channel and economic



"It sends a clear message from South Africa's judiciary, the intent of which WAPA supports" stimulant during the Covid lockdowns. The key to driving down the cost of that data is still a function of spectrum availability and additional tower capacity, but the initial resistance to the vast number of small cell 5G base stations required, seems to have fallen away."

5G or no 5G, there are also numerous examples of where FWA is making a difference in Africa. WAPA has over 250 members and every one of them uses FWA in one form or another, says Colmer. "They are the backbone of connectivity throughout South Africa's nonmajor urban centres," he adds. "Without them, hundreds of thousands of South Africans would have little choice but to live in the connectivity wilderness, cut off from the digital economy."

More specifically, Farnell explains how his firm has deployed FWA in different townships across South Africa, from Soschunguve north of Pretoria, to Cosmo City in the west of Johannesburg, to Tongaat on the coast of Kwa Zulu-Natal. "In each case we have licenced and launched a new Wi-Fi Service provider with a local partner from that community, under their own brand," he says. "The uptake and support from those communities has been really encouraging."

Farnell believes that one of the reasons his company's solution is gaining acceptance, besides its affordability, is that the locals can become equipment hosts (where the FibrePoynt antennas and solar panel are mounted) and/ or network sales agents on the ground. "So we are seeing a genuine positive feedback loop of bringing connectivity and stimulating economic activity within that community," he says.

Although there are obvious challenges, Farnell is optimistic about the future.

"There are several reasons why FWA has become a viable technology alternative: deployment is relatively easy, whilst the time to market is shorter, and it can also expand wireless broadband coverage and potentially provide more than 90% accessibility to the population," he says. "4G and 5G FWA services also have the capability to offer a fibre-like experience and enable connectivity service in areas where fibre-based service is impractical or takes a long time to deploy."

Moreover, Farnell says return on investment is less than three years, meaning FWA can also be a more profitable proposition for operators. "With regard to optimising the QoS across the network, FibrePoynt is utilising the Android mobile subscriber app to relay signal strength back to its cloud management platform from the customer's phone" - Mpho Sefalafala, FibrePoynt

"In turn, addressing the last mile connectivity challenge by using unlicensed Wi-Fi spectrum offers new WiSPs a fantastic opportunity to address the mass proliferation of Wi-Fi-enabled devices and the lower cost of deployment."

In late August, Nokia and Safaricom celebrated an African first with their successful trial of 4G/5G FWA network slicing in Kenya's Western Region. It's been lauded as a major step toward launching commercial slicing services as more personalised network experience. Progress indeed.



#### **INDUSTRY VIEW: CPAAS**



# How CPaaS vendors add new capabilities for telecom operators

Telcos should leverage Communications Platform-as-a-Service (CPaaS) to create new revenue streams, protect their key assets, and enhance customer experience and stickiness if they want to stay competitive and relevant, writes Deshbandhu Bansal, chief operating officer, messaging solutions, Comviva



That the future is hyper-digital is passé, the real question now is how soon we can get there. And telecom infrastructure is the road to take. Telecom forms the backbone of the digital economy today, with fibre optic playing a central role in transmitting about 99% of all data, tremendously enhancing day-to-day communication, bridging gaps in business communication, and unlocking massive, new possibilities. Fiber has helped businesses create more productive workplaces, increase output, significantly lowered costly downtimes, reduce latency, and ensure high-quality, disruption-free streaming and conferencing.

It is no surprise that telcos have spent hundreds of billions on bolstering their fibrerich infrastructure and providing access to networks that power the digital economy. Without the power of fibre, it would have been near-impossible for over-the-top (OTT) service providers and digital natives to embrace and adopt disruptive business models and succeed at the scale they have reached. OTT vendors and their investors owe tremendous gratitude to the telcos. And yet, somewhere along the way, telecom players have fallen behind on the opportunity to monetize their own infrastructure.

### CPaaS: a glaring example of telecoms missing out on the revenue pie

The CPaaS industry is booming. Industry research pegs communication-platform-asa-service (CPaaS) sales to touch US\$34bn by 2026. And by 2025, 95% of global enterprises will leverage API-enabled CPaaS offerings to expand their competitive edge. Interestingly, while telecom companies provide the foundational infrastructure for this aggressive growth of CPaaS, they have failed to translate the opportunity into revenues. A Gartner report agrees. "Telecoms only achieve modest wholesale profits in their role in the high-growth CPaaS market, while retail CPaaS vendors accrue enormous success."

Modern, digital-native businesses such as Uber, Zomato, and Airbnb have been using CPaaS services to their benefit for about a decade. OTT players like Netflix and Amazon also have registered significant growth from application and service delivery on the back of telecom infrastructure. Somehow telecoms missed out on the opportunity to monetize their assets while everyone else made a killing. A telecom company's wholesale role in driving CPaaS offers poor margins and little brand visibility. However, this equation is about to change.

Since 2020, several telecom players have been rethinking their CPaaS positioning and looking to increase visibility in retail CPaaS to generate higher margins. By 2023, at least four large telecom companies are set to make significant CPaaS retail commitments, up from zero in 1H21. To sustain and grow, telecoms must invest in developing a retail CPaaS strategy with a keen focus on:

- Improving margins through direct-toenterprise offerings
- Ensuring C-suite buy-in to drive to corporate urgency
- Developing API and software CPaaS core competencies

#### The CPaaS monetisation opportunity for telecoms

Telecom operators worldwide are under pressure posed by constantly evolving technologies and fast-moving challengers, stress placing increased financial on networks. However, they are also sitting on a massive gold mine that could unlock billions of dollars-their assets and infrastructure, which is now being made stronger with 5G. When complemented with a valued enterprise brand, strong business relations, deep sales skills, and the right team, this robust infrastructure can be a significant source of revenue. Telecom leaders must look to building competitive, customized CPaaS business by investing in API tools that allow them to engage and sell directly to enterprises and boost their margins.

The COVID-19 pandemic accelerated the need for digital transformations across

operations and customer and employee experiences leading to rapid growth in CPaaS innovation and flexible APIs. Many enterprises were quick to harness CPaaS capabilities to improve customer engagement and proactively send messages on purchase and appointment confirmations, transactions, and reminders. Also, increasing security with two-factor authentications, ensuring high availability, and enabling advanced analytics and a flexible deployment were additional capabilities that CPaaS provided rapidly.

Telecom providers can rise to the challenge posed by CPaaS players by monetizing established technologies in new ways, increasing market share and margins, and building an ecosystem of digital technology partners. Telcom companies already possess a mega customer base. By connecting with cloud-based platforms and implementing APIs, CSP can proactively vie with OTT and CPaaS providers and maintain their competitive edge. Additionally, given their advantage of being a trusted player in the telecom tech space, they can build collaborations with top CPaaS suppliers to offer best-in-class solutions.

Take CPaaS Video API, for instance. As more and more companies adopt this new capability for increased customer engagement, telecom companies can tap into this high-growth opportunity by adding videos to their product portfolio. CSPs must "evaluate video API development solutions in education, healthcare, banking, gaming and entertainment, servicing, and contact center solutions." The report adds that this capability will be especially critical as video APIs are expected to emerge as foundational communication offerings among 60% of CPaaS by 2024.

### Why telecoms have been slow in harnessing the CPaaS opportunity

According to the Gartner report, 4 Key Pillars to Telco Success in the CPaaS Market, telecom players are not leveraging the CPaaS opportunity to its fullest potential, a market experiencing about 30% revenue CAGR with high growth ahead. This is primarily due to the following:

- 1. CSPs have been slow to create a developerfriendly infrastructure with no ecosystem supporting APIs and related resources to adopt a CPaaS business model.
- 2. The current CPaaS market is highly advanced for carriers to build a viable business organically at this stage. CPaaS providers offer cutting-edge functionalities that are easy to consume and have a broad footprint.
- 3. While the telecommunication provider's communications assets—SMS, SIP trunks, DIDs, fiber, and 4G/5G—offer an unprecedented competitive advantage,

they must reposition these assets for today's API economy.

### But how can telecoms quickly move into the CPaaS Market?

The easiest way, of course, is to partner with a CPaaS provider and share risks while simultaneously kickstarting CPaaS innovations for customers. Some other ways carriers can look to monetize established tech and create new revenue streams include:

**API marketplace:** This is the easiest and fastest way to deliver real-time communication capabilities. Telecom players such as KPN and AT&T have already launched an API marketplace to address the challenge posed by CPaaS providers, grow their business, and generate new revenue streams.

**OTT with CPaaS:** Because CSPs limit access and usage of over-the-top solutions to their own subscribers only, they have generally been unable to deliver a holistic and successful OTT solution. That said, by offering value-added managed services and quality of service, telecoms can still turn the tide. Also, operating and selling in countries with a low credit card and banking penetration provides an edge to carriers as they can leverage their existing pre- or post-paid billing mechanism for subscribers to subscribe to an OTT solution.

Selecting the right CPaaS provider: Partnering with the right provider with the appropriate platform to support enterprise needs is principal to success. A carrier should opt for a CPaaS solution provider who has the flexibility to deploy in their private or hybrid cloud environments. Moreover, as many CPaaS players offer either messaging or voice calls, having a full-stack CPaaS solution will streamline customized voice, video, or messaging solution delivery and build an authentic omnichannel experience.

**Telecom white-label CPaaS offerings:** With turn-key, responsive and adaptive CPaaS, explicitly built for MNOs to boost the enterprise product offerings and generate new revenue streams. White label CPaaS offerings developed specifically for MNOs can be a sure path to gaining a first-mover advantage and maximizing market share. Utilizing CPaaS to monetize non-core telecom products and SMS traffic will drive innovation and help develop new use cases. Telecom providers can also look to creating omnichannel solutions by ensuring faster time-to-market for new communications offerings and channels in their portfolio.

As the CPaaS market matures, it is pushing demand for innovative digital communication. Having evolved beyond fundamental APIs for messaging and voice services to now offering more sophisticated services that can be customized for specific markets, CPaaS is fast emerging as the way forward, especially for telecoms. Who is able to maximize this opportunity remains to be seen.

# Is Starlink a threat to WISPs?

With Starlink's LEO satellite services expected to be available in South Africa from late 2023, local and regional internet service sroviders (ISPs) and wireless internet service providers (WISPs) are considering the impact on their markets and assessing to what extent this could potentially erode their current business models. By Dr Dawie de Wet group CEO of Q-KON Africa and chief engineer for Twoobii

Elon Musk publicly stated at the Satellite 2020 Conference in Washington that "Starlink is not some huge threat to telcos," we will not focus in this review on the high-density metro and residential areas serviced by fibre services. Instead, we will consider lower density regional areas. To provide quantitative metrics, we will answer two questions: 1) How much capacity is required to serve a specific target area and 2) How many subscribers can be serviced in such an area?

We will start by summarizing

what is known from the Starlink network using general industry and academic papers and articles.

#### The network

Starlink is the LEO satellite constellation developed by Elon Musk's SpaceX corporation. According to the Federal Communications Commission (FCC) filings, the Starlink constellation will include a total of 11,765 satellites on 340km, 550km and 1110km planes above earth. Starlink satellites will provide hexagonal signal coverage zones on the Earth's surface with an estimated diameter per satellite of 25km and around 400km2 coverage per satellite, with bandwidth capacity of 20Gbps.

The satellite fabric will not be uniformly distributed, as there will be different satellite densities closer to the poles than in equatorial regions. Since South Africa is neither at the poles nor the tropics, we will assume a uniform distribution of satellites to calculate a first order capacity model.

#### How many subscribers?

The theoretical maximum bandwidth per satellite is 20Gbps,



which means that each satellite will then be able to service 2,000 subscribers at a speed of 10Mbps, with an average demand of 200GB per subscriber per month. At these metrics, the first order prediction is that Starlink will be able to service





some 564,706 subscribers, evenly spaced throughout South Africa.

Considering this possible half-million subscribers, it can reasonably be expected that Starlink will certainly impact the revenue of the smaller ISPs and WISP's, while it probably will not heavily impact telco's and mobile operators, as suggested by Musk's Satellite 2020 statement.

#### Subscriber density

While network capacity provides us with an estimate of subscriber quantities, it does miss a critical point i.e., subscriber density. Since Starlink, and all other LEO satellite networks, will deploy cellular-type network architecture, it will exhibit similar network behaviour to mobile networks and therefore be affected by cell-loading and cell-congestion.

The estimate of 564,706 possible subscribers is based on an evenly distributed loading and does not take into effect the potential "loss" of service due to some cell areas being congested while others are underpopulated.

During a recent presentation in India, a Starlink representative provided some insight into the recommended subscriber roll-out density by defining the 100-in-300 rule of thumb, meaning 100 subscribers in a 300km2 area. Interestingly, if we apply this rule to our previous prediction, then the 564,706 subscribers would be spread over an area of some 1.6million km2. Given that the area of South Africa is around 1.2million km2, this would certainly appear feasible.

broadband access services.

If we rephrase the question as, will Starlink jeopardise and undermine the business of WISPs



If we bring this back to population density in South Africa, then the 100-over-300 Starlink rule equates to a population density of less than 1/km2. According to the 2018 CSIR population density map of South Africa, the average density is 49/ km2. However, significant areas of the country do have a population density of around 1/km2. These will be the addressable target market areas for Starlink according to the 100-over-300 rule. See diagram for reference.

# Conclusion – will Starlink effect WISPs?

In a word, yes – Starlink will certainly affect not only WISP's, but also all other service providers due to the introduction of a completely new perspective on, and expectations for,

and regional ISPs, then the answer becomes more nuanced. As Starlink will probably be guided in its rollout by the 100-in-300 rule-of-thumb, the company will necessarily have to target lower density areas. These areas are probably not currently serviced by regional fixed wireless network or fibre networks. From this perspective, Starlink will actually develop a market sector that is currently underserved and will therefore add to the overall revenue pool rather than diminishing it.

It can be reasonably anticipated that Starlink will make significant investments in marketing and advertising ahead of and beyond their entry into South Africa. This will raise awareness of the potential of satellite connectivity solutions in general, so there may be some tangential benefits to existing players, although these will be difficult to quantify.

Considering future business strategies and options in a "Starlinkalso" marketplace, WISPs, Regional Service Providers and ICT providers will do well to align with specialist satellite service providers so that they can move closer to the technology and be better informed of upcoming opportunities and threats.

Q-KON Africa operates the Twoobii Smart Satellite Service platform which provides broadband services, plus the additional valueadded services required to ensure customer satisfaction and revenue retention. Considered as a prelude to the services and technologies which are being developed, Twoobii's Smart Satellite Service provides a powerful business case for building a competitive capability, another arrow in a "quiver" of connectivity services, for the coming New Space industry. Twoobii is focused on the business broadband sector and is fully capable of both co-existing in, and seamlessly enabling, any future satellite industry landscape that includes Starlink.



# The Pharaoh from Antenova

Antenova manufacturer of antennas and RF antenna modules for M2M and the IoT, says it has halved the footprint of its 4G cellular antennas with its latest offering.

Designed for small PCBs, Antenova's Pharaoh antenna (P/N SR4L073) covers all 4G frequencies: 698 – 824 MHz, 824·960 MHz, 1710-2170 MHz, 2300·2400 MHz and 2500·2690 MHz.

The company reckons the Pharaoh's small ground requirement

"offers designers a huge advantage in designs on a small circuit board", such as miniature pet trackers, wearables or OBD-II designs.

This antenna was tested with evaluation boards of  $50 \times 40$  mm and  $60 \times 40$  mm and its performance-to-footprint ratio outranked competing 4G antennas for small circuit boards. They typically require a minimum  $60 \times 40$  mm of space, utilise large and costly band switching networks and display

lower levels of efficiency.

Critically, the Pharaoh's performance on small PCBs is above the level required to pass PTCRB tests for cellular networks.

"The performance of an antenna is directly related to the length of its ground plane," Michael Castle, product marketing manager, Antenova, explains. "At the lowest 4G frequency, 698 MHz, the wavelength  $\lambda$  for electromagnetic radiation is 42.95 cm. Most

antennas require a ground plane of a quarter wavelength, which means they need a space of 107 mm to operate effectively. Our Pharaoh antenna smashes this rule and uses about half of this area." antenova.com



# Siklu expands series with point-to-point and node solutions

Siklu, the millimeter wave (mmWave) solutions specialist, brings to market two new connectivity options to its MultiHaul TG product family – the MultiHaul TG MPL-260 and the MultiHaul TG N265. Siklu has a large selection of Terragraphcertified products for fixed 5G wireless access, Wi-Fi hotspot and small cell backhaul, smart city connectivity and other applications.

The MultiHaul TG MPL-260 is a plug-and-play solution for the

rapid deployment of Gigabit-speed point-to-point (PtP) connectivity. A Terragraph-certified first, the MultiHaul TG MPL-260 features two pre-paired radio units, with Auto-Aligned patent-pending scanning antennas. Customers can simply install the units and point them towards each other to deliver 1Gbps over up to 300m (984ft.), across interference free 60GHz licenceexempt spectrum.

According to Siklu, the MultiHaul

TG N265 enhances the MultiHaul TG series of nodes with flexibility in radio coverage for those situations calling for a significant down-tilt of the antenna to connect adjacent structures from a large tall roof in a dense urban setting or when one needs 90° coverage or less, for example, to backhaul a few cameras or Wi-Fi APs in a parking lot to a corner pole. This unit is designed for an easy single-person installation and also features the patent-pending scanning antenna capability to align pencil-thin beams with other nodes or terminal units automatically. *siklu.com* 



# Hiber expands data-gathering capabilities of remote well-monitoring solution

Hiber, the IoT-as-a-Service provider, has added new capabilities to its HiberHilo satellite-powered remote well-monitoring solution for the oil and gas sector, enabling connection over LoRaWAN to a wide range of specialised in-field sensors. By integrating ATEX-certified, wiredto-wireless (W2W) connectivity into the HiberHilo sensor portfolio, Hiber now provides over-the-air access to a broad array of in-field data parameters and metrics, equipping oil and gas operators with new ways to monitor and optimise production.

The latest HiberHilo sensors, equipped with W2W hardware, can, the company says, convert the analogue signal from any wired sensor (4-20mA or 0-5V output) into a LoRaWAN signal. This significantly expands the range of operating parameters that can now be monitored remotely, adding flow, methane detection, variable speed drive (VSD) readings, torque, voltage (for example, to ensure cathodic protection is intact), and more. The new HiberHilo W2W hardware can be connected to any existing or new sensor installed in the field, negating the need to purchase additional devices.

"Monitoring remote wells or keeping track of and optimising production of wells scattered across a wide area is difficult, expensive and complex without satelliteenabled IoT monitoring," says Hiber chief executive officer (CEO) Roel



Jensen. "The combination of the enhanced sensor options, and our expertise in IoT and connectivity, means we can now support a wider range of use cases for the oil and gas industry by providing a solution that is affordable, effective, and easy to install." *hiber.com* 

# Samsung and Airbus partner to launch new critical comms kit

Samsung just released a new XCover6 Pro smartphone that helps users of critical communications with new and improved features – the new smartphone, together with the Airbus Tactilon Agnet MCX solution, "enables mission and business critical communication to be successful even in demanding conditions".

Airbus has developed and tested Tactilon Agnet solution together with Samsung, and the just released XCover6 Pro smartphone brings new solutions for service deployment and MCX services for demanding users. Samsung Knox products complete Tactilon Agnet deployment easily with firmware management, license server for offline activation, out of the box enrollment and many other features that are valuable for critical communications users. With Samsung Knox Security, security management and quality can be implemented even more efficiently. "This announcement shows that a global and leading technology enterprise is ready to meet mission critical user requirements terminals." says Samuel for Gustafsson, head of European sales. Airbus. "The Tactilon Agnet service on the new XCover6 Pro will be able to serve the users with new features without compromising on efficiency and security, which are increasingly important aspects of critical communications."

Neil Barclay, head of B2G. Samsung Europe, adds: "Security and usability are top priorities for government organizations when choosing mobile technology. Leveraging our enterprise grade security and tools. staging we've collaborated with Airbus to create a unique and easy-todeploy platform that manages and protects the most sensitive and confidential information on a bestin-class PTT device."

The new Samsung XCover6 Pro itself has numerous features that makes it functional for field use such as protection for demanding conditions, programmable hardware keys, high capacity battery with fast charging, and loud mono speaker for clear voice communication. Also, the Samsung XCover6 Pro has a chipset with support for LTE and 5G, which will enhance the quality of video streaming and video conferencing by end-users. *samsung.com* 



## O Look out for...

### Ericsson, Qualcomm and Thales to take 5G out of this world

Ericsson, French aerospace company Thales and wireless technology specialist Qualcomm Technologies are planning to take 5G into space across a network of Earth-orbiting satellites.

After having each conducted detailed research, which included multiple studies and simulations, the parties plan to enter smartphoneuse-case-focused testing and validation of 5G non-terrestrial networks (5G NTN).

The result could effectively mean that a future 5G smartphone could use 5G connectivity anywhere on Earth and provide complete global coverage for wideband data services, including places normally only covered by legacy satellite phone systems with limited data connectivity capabilities.

The benefits of 5G connectivity via low Earth Orbit (LEO) satellites are expected to include coverage in extreme geographies or remote areas across seas, oceans and other locations where terrestrial coverage is absent.

Such widespread connectivity would boost 5G smartphone subscriber roaming service capabilities, as well as enabling global connectivity for transportation, energy and health sector 5G use cases.

The space-based network could also be used as back-up support to terrestrial networks in the event of major network outages or disasters.

Erik Ekudden, senior vice president and chief technology officer, Ericsson, reckons this testing and validation cooperation between Ericsson, Thales and Qualcomm Technologies will be a major milestone in the history of communications. "The ultimate result could effectively mean that no matter where you are on Earth – in the middle of an ocean or the remotest forest – high-end, secure and cost-effective connectivity will be available through collaborative 5G satellite and terrestrial connectivity," he says.

# Pure glass from Nippon

Nippon Electric Glass has developed a transparent antenna, which is made of a glass substrate and a repeater, using radio wave lenses and does not require power supply, for 5G millimeter-wave wireless communication technology.

The newly developed transparent antenna, the company says, has a special antenna pattern on a glass substrate, whose dielectric constant (4.0) and loss tangent (0.002) are the smallest in the world. This is a highly efficient transparent antenna. The size of glass substrates can be increased, making it possible to manufacture multiple products from a single substrate. This contributes to improving the antenna productivity and enables formation of antennas for multiple bands on a single substrate. By making the antenna transparent, the antenna functionality can be added without spoiling the design and landscape of an installation location. The antenna can be installed in various locations, such as windows, walls, displays, and vehicles.

The repeater, which is the other newly developed product, consists of two radio wave lenses and a waveguide. It receives and retransmits radio waves and changes the direction of radio waves without power supply even under circumstances where radio waves are blocked by walls and window glass. By changing the



shape of the lens, radio waves can be transmitted in a certain direction or over a wide range. The lens is not subject to deterioration caused by ultraviolet rays because it is made of glass. It can be used stably over a long period in various places, both indoors and outdoors. *neg.co.jp* 

# The Huawei WiFi Mesh 7

Huawei introduces the WiFi Mesh 7, further expanding its mesh router product portfolio. Available in two packs, the new Huawei smart mesh routers – the company boasts – "provide blazing fast Wi-Fi 6 Plus connection speeds for up to 250 devices within 6,000 square feet".

Supporting AX6600 Tri-Band, the solution features eight streams for extreme speeds up to 6,600Mbps, which makes smooth streaming of 8K media a possibility. The new smart mesh router also supports HarmonyOS Mesh+, which includes a wide range of networking solutions to ensure top Wi-Fi 6 Plus mesh performance for all users. Setup is simple, requiring only a few easy steps to establish the home network, and with One-Touch Connect, users can connect their smartphones to the mesh network securely with a single tap. *huawei.com* 



# Meetup Africa

# 11 - 12 October 2022 Johannesburg, South Africa

# The meeting place for the African tower industry

# **TowerXchange Meetup Africa returns!**

In the last three years since we last all convened in South Africa the African telecom tower industry has seen significant changes. The four big African publicly listed towercos now control 37% of Africa's 176,751 towers. Three new major private towercos have been formed to challenge the established order. The once nascent rural specialist towerco market are now building 1,000s of towers between them. And Mobile operators like Axian Telecom and Vodacom are looking to launch their own towercos.



https://meetup.towerxchange.com/africa

#### **WORLD NEWS**



# Isle of Man connectivity future-proofed thanks to subsea fibre optic cable

A new multi-million-pound fibre optic cable running under the sea has further strengthened the Isle of Man's connectivity to Ireland and the UK, with onward connections to continental Europe and the US.

The high-tech cable built with the latest high speed technology will enhance the Island's existing infrastructure now and into the future, benefitting businesses and residents alike.

Irish-headquartered Connectivity Services provider Aqua Comms has worked closely with the Isle of Man Government to install the new Celtix-Connect 2 cable, as part of its wider strategy to develop the North Atlantic Loop. This installation is now complete, with 47 miles (75km) of fibre optic cable laid in Manx waters and connected to two landing points on the Isle of Man, in Port Erin and Port Grenaugh.

This multi-million-pound direct investment by Aqua Comms will improve the Isle of Man's access to global data networks, ultimately delivering faster internet speeds and ensuring more resilient and reliable off-island connectivity.

Following the Isle of Man's successful connection to the Celtix-Connect-2 subsea cable system, there are now a total of seven undersea cables connecting the Island to global data networks. The cables have enough capacity to future proof the Island's connectivity. As 99% of global data travels in undersea cables it's essential that the Island has access to multiple cables to ensure continued connectivity should a cable be damaged.

"Our connection to the Celtix-Connect 2 subsea cable is critically important for the Island's communications in the decades ahead," said Richard Oliphant, head of digital infrastructure and telecomms for Digital Isle of Man, also: "From people using the internet, to someone swiping their credit card in a shop, to businesses of all shapes and sizes, this subsea infrastructure plays a vital role in delivering that connectivity."

The cable provides open access connectivity and flexible capacity, enabling multiple service mobile providers and operators to lise This the network. will ensure that the Island's businesses and operators have access to international networks at competitive

prices, further strengthening the Island's reputation as an attractive and competitive destination to do business.



# Airtel awards first 5G contract in India to Ericsson

Bharti Airtel (Airtel), India's premier communications solutions provider, has awarded its first 5G contract in the country to Ericsson, with deployment already underway as of August.

The Swedish tech firm is Airtel's long-standing connectivity partner and pan-India managed services provider, with a partnership spanning more than 25 years and covering every generation of mobile communications. This latest 5G partnership follows the close of 5G spectrum auctions in India.

"As our trusted, long-term technology partner, we are delighted to award our first 5G contract to Ericsson for 5G deployment in India," said Gopal Vittal, managing director and chief executive officer (CEO), Airtel. "5G presents a gamechanging opportunity to drive the digital transformation of industries, enterprises and the socio-economic development of India. With our 5G network, we aim to deliver the full benefits of 5G connectivity, fuel India's journey towards a digital economy and strengthen the country's position on the world stage."

Airtel will deploy power-efficient 5G Radio Access Network (RAN) products and solutions from the Ericsson Radio System and Ericsson microwave mobile transport solutions. Ericsson will provide 5G connectivity in 12 circles (geographical regions in India) for Bharti Airtel.

In addition to an enhanced user experience for Airtel customers – spanning ultra-high-speeds, low latency and large data handling capabilities – Ericsson 5G network products and solutions will also enable Bharti Airtel to pursue new, innovative use cases with its enterprise and industry customers, both companies said.

Börje Ekholm, president and CEO, Ericsson, added: "We look forward to supporting Bharti Airtel with its deployment of 5G in India. 5G will enable India to realise its Digital India vision and foster inclusive development of the country."

# Spain introduces new telecom law

A new telecommunications law has come into force in Spain, implementing one of the key measures set out in the country's agenda for digital transformation, Spain Digital 2025.

It implements the requirement for the European Union Electronic Communications Code to be adopted into national law, a requirement that suffered delay – with Spain being one of a number of countries referred to the European Court of Justice as a result – but finally came into force June 30.

One of the key objectives of the new law promotes investment, public and private, in very high-capacity networks, including 5G and fibre optic networks. This and supporting government programs and initiatives will help expand and improve network roll-out, so operators can take advantage of the opportunities offered to further invest and grow.

The new provisions include a requirement for the CNMC to have to take into account investment risk of the operators when considering matters in their remit. This potentially allows the bigger market operators to proactively offer the CNMC commitments related to access or co-investment conditions, including co-investment commitments in the development, deployment and faster roll-out of very high-capacity networks.

# Phase3 Telecom, YahClick, offer high-speed, low-latency satellite broadband services in Nigeria

Phase3 Telecom, one of Africa's leading independent aerial fibre optic network infrastructure telecommunications service and providers, has partnered with YahClick offer high-speed, low-latency to satellite broadband services In Nigeria. As a result of this partnership. satellite broadband services will be available throughout Nigeria, focusing on the unserved and underserved communities.

"Our satellite broadband services will provide tangible benefits in accessibility, service, cost and socio-economic development to the unserved and underserved homes and businesses in the area, unlocking all the opportunities that reliable, costeffective satellite broadband products afford," said Muhammed Bashir, vice president, digital transformation and innovation of P3Tech, a division of Phase 3 Telecom.

The partnership between Phase3 and YahClick (powered by Hughes), represents a strategic collaboration to make internet connectivity available to residential and business users throughout Nigeria, bypassing the infrastructure deployment challenges reaching even the most and remote regions.

"By providing a truly extensive satellite coverage service with a range of product options, P3Tech will provide all unserved and underserved communities in Nigeria with the opportunity to connect and take part in the global digital economy, further transforming the Nigerian telecommunications space, accelerating national growth and positively contribute to the Federal Government broadband access target," added Stanley Jegede, executive chairman, Phase3.

# Sk Telecom sets up 5G network for air taxis Sk Telecom (SkT) is to build run Korea Aerospace Research Institute. Sk Telecom (SkT) is to build Sk Telecom (SkT) is to build allow other wants to commercialise players to use its air network.

a dedicated communication network for air taxi services.

The operator successfully finished its trial run on the fifth-generation network for unmanned aerial mobility services at the Goheung Flight Test Aerodrome, about 250 miles south of the capital, Seoul.

It is understood the results will help SKT to build a 5G network dedicated for air taxis along a designated area in Goheung in partnership with the state-

UAM services before 2025, enabling unmanned electric vehicles to take off and land vertically, as well as fly safely.

"To introduce stable UAM services, we are required to build a high-quality 5G network for air traffic communication," SKT senior official Ha Min-yong said. "We aim to be at the lead in the 6G or the sixth-generation mobility era, where telecom services can accommodate both ground and air traffic "

SKT said it would allow other UAM

Meanwhile, the telco reported profit of US\$201.6m in its second guarter and revenue of \$3.41bn in the period.

"As we enter into the next chapter in our corporate history, we are generating tangible results by achieving even growth in our key five business groups," said Kim Jin-won, chief Financial Officer of SKT."We will do our utmost so that our sustained growth and innovations will lead to the enhancement of shareholder value."







#### for African wireless communications, as it happens

9.5 per cent to KES252.35h (OSD2.475h) in the twelve months to Jun 018, according to the country's Communications Authority (CA).

# www.africanwirelesscomms.com



www.africanwirelesscomms.com

# Bangladesh urges smartphone adoption, introduces 3G device ban

Bangladesh will implement a ban on manufacturing and importing 3G devices in a bid to drive smartphone adoption, the country's telecom watchdog said.

A report in The Dhaka Tribune said a ban introduced by the Bangladesh Telecommunication Regulatory Commission (BTRC) will come into force from January 1, 2023, as the regulator believes that use of 3G-only devices is slowing the spread of 4G networks in the country.

BTRC data indicated that just a few thousand 3G devices were manufactured in Bangladesh this year, but some importers are still shipping them into the country.

However, local firms are also reducing their production of smartphones while increasing their manufacture of feature phones despite the push towards 4G and 5G.

The Tribune said of all the handsets manufactured 30.40% Bangladesh, in are smartphones while 69.60% are feature phones. In June this year, this translated respectively to 880.000 4G/5G devices and 2.15 million 2G feature phones.

According to latest figures GSMA Intelligence, Bangladesh's total mobile users stood at 182 million at end-June 2022, of which almost half were feature phone users. The country has slightly more 2G connections than 4G connections – 75 million compared to 73.5 million. Meanwhile, 3G connections were circa 33.5 million at the end of Q2 2022.

# Stonepeak acquires 2,180 towers from Globe

Stonepeak, an alternative investment firm specialising in infrastructure and real assets, said some of its associated investment vehicles have signed agreements to acquire 2,180 telecom towers and related passive infrastructure from Globe Telecom of the Philippines for US\$472.2m.

The fomer Stonepeak is entering into the transaction through Miescor Infrastructure Development Corporation (MIDC), a joint venture between Meralco Industrial Engineering Services Corporation (MIESCOR) and Stonepeak. MIESCOR is a subsidiary of Manila Electric Company (Meralco), the largest private sector electric distribution utility company in the Philippines.

Under the terms of the deal, MIDC and Globe executed a Master

Lease Agreement, under which Globe will be the anchor tenant of the telecom towers for an initial period of 15 years.

In addition, Globe has commissioned MIDC to construct 750 additional build-to-suit towers over the next four years on which Globe will be the anchor tenant.

"We are delighted to partner with MIESCOR and the MIDC team on this exciting opportunity with Globe,"said Hajir Naghdy, Stonepeak Senior Managing Director and Head of Asia and the Middle East. This transaction is a great fit for our Asia Infrastructure strategy, which targets investments across energy transition, transportation and logistics, and communications and digital infrastructure, and represents a significant milestone for our growing Asia Pacific business."

Darren Keogh, senior managing director at Stonepeak, said that as his company continues to expand its presence in the Asia Pacific region, it remains "deeply committed to sourcing attractive digital infrastructure investment" opportunities for its limited partners. "We believe the growth prospects in the Philippines mobile tower industry are robust and as such are excited to acquire this substantial portfolio of tower assets with Globe as a long-term anchor tenant and the opportunity to build additional towers over the next four vears." he added.

Stonepeak has a growing presence in Asia Pacific with 44 professionals located across Singapore, Hong Kong, Taipei, Seoul, Tokyo and Sydney.

# CEO of Altice's French arm leaves

The chief executive officer (CEO) of Altice Europe's French business has left with immediate effect, according to reports. A leaked internal memo to staff from the cable group's billionaire owner Patrick Drahi was published by Reuters.

"After 13 years in the group, and through a mutual accord with its owner, (current SFR and Altice France chief executive) Gregory Rabuel is leaving his functions ... as of today", said the memo,

French business daily Les Echos, which first reported the change, cited a union source as saying the group's top management had lately grown dissatisfied with the French arm's financial performance.

Rabuel will be replaced as CEO by the company's current French media head, Arthur Dreyfuss, the report said. Elsewhere, Mathieu Cocq has taken over as managing director of French telecoms arm SFR.

Meanwhile, BT has said the UK government will not use its new national security powers to block or unwind Altice's stake in the British firm. The UK government this year examined the security implications of the 18% holding by Altice. The latter had increased its BT stake from 12% in December 2021.

Altice, the Amsterdam-based holding company bundling the assets of Franco-Israeli cable magnate Drahi, also owns BFM TV in France, the country's main news television channel.

# Ericsson readying Russia exit

Swedish tech giant Ericsson will finalise its Russia exit and cut staff this year Kommersant business daily reported.

The company's headquarters in Stockholm informed its Russian unit that it will shut down and employees will be relieved of their duties by the end of 2022.

Ericsson employs 565 people in the world's largest country by area and vowed financial and social support to outgoing staff. The firm expects to complete the phaseout in the coming months "as it fulfils its obligations to customers," a

giant source told Kommersant.

Russian mobile operators, MTS and Tele2, had major contracts with Ericsson prior to Russia's invasion of Ukraine. This means the country's telcos now face shortages of equipment for Ericsson's base stations, which are no longer available under warranty, and the discontinuation of tech support for Ericsson software, the report added.

It is understood that Ericsson could either create a separate legal entity for tech support, or Russian mobile operators could hire its outgoing staff to maintain equipment and services running smoothly.

Ericsson suspended Russian business and put employees on paid leave in April over Russia's invasion of Ukraine. Its share of the Russian telecom equipment market is estimated at about 20%. Finnish rival Nokia pulled out of the Russian market the same month, while Chinese telecom giant Huawei temporarily suspended new orders and furloughed Russian staff in fear of secondary sanctions.

The three companies account for nearly three-quarters of the global base station market.



# New boss of Eutelsat America

Eutelsat Communications has named Richard Mortellaro as its new president and chief executive officer (CEO) of Eutelsat America Corp. (EAC), succeeding David Bair who is retiring.

Mortellaro joins after an extensive career spanning 30 years in the satellite industry, leading global sales, marketing and business development activities of companies; first as a broadcast sales director at Intelsat and subsequently within Loral Skynet Group, which merged with Telesat in 2007, in the positions of global sales VP and latterly international sales VP.

Prior to joining Eutelsat, Mortellaro was senior vice president of sales, marketing and fixed satellite services business development activities at EchoStar Satellite Services, LLC. "We are delighted to welcome Richard to Eutelsat America Corp. and are confident that his extensive skill-set and experience will be a great asset to us as we strengthen Eutelsat's development in the Americas region," said Sidney E. Fuchs, board chair at EAC.

Mortellaro added: "I look forward to leading EAC during this exciting time in our industry as we execute Eutelsat's vision and strategy."

# Solomon Islands secures US\$100m China loan to build Huawei mobile towers

Solomon Islands has secured a US\$100m Ioan from China to build 161 mobile communication towers, to be erected and supplied by Chinese tech giant Huawei.

The move was celebrated by the Pacific nation's government as "a historical financial partnership" between the two countries that would "work closely to ensure the successful implementation ... of the project".

The loan, the island nation's first from Beijing since it switched diplomatic allegiance from Taiwan to China in 2019, will come from the Exim Bank of China, with a 1% interest rate.

Huawei has become something of a global pariah amid security concerns over its links to the ruling Chinese communist government. In 2019, the US issued a ban on sharing technology with Huawei. In 2020, the British government issued an order that telecoms providers would have to stop installing Huawei equipment in the country's 5G network.

The Solomon Islands government has announced it hopes to install 48% of the infrastructure by November 2023 when it is scheduled to host the Pacific Games, a flagship policy for the government led by prime minister Manasseh Sogavare.

"This will help people in rural areas to enjoy the Games, even if they don't come to Honiara," said McKinnie Dentana, permanent secretary of the ministry of finance.

According to the Solomon Islands, the 161 Huawei towers will be owned by another company on behalf of the government and that it is in discussions with STCL, which it said will be a key operating partner in this undertaking. It hopes to repay the loan within 11 years, despite the concessional loan repayment being for 20 years.

"The independent review of the [Solomon Islands National Broadband Infrastructure Project] showed that the project would generate sufficient revenues for the government to fully repay both the principal loan amount and interest costs within the loan period," the government said in a statement.

# Dhiraagu highspeed fibre broadband heads to Veyvah

Telecommunications giant Dhiraagu has officially launched Dhiraagu high speed fibre services in Veyvah island of Meemu atoll in the Maldives.

This initiative comes under the program to develop and broaden the digital services provided by the operator, according to local press.

Customers who apply for Dhiraagu fibre packages will receive installation services for free as well as a free router or ONT for the fibre network.

The company has described this "as a golden opportunity" for customers to choose the variety of packages including the biggest data allowances and swift speed.

Dhiraagu fibre broadband service remains the fastest provider in the Maldives, providing speeds of up to 100mbps. Its biggest allowance is a package of 1tb while fibre broadband is the latest technology used to provide broadband services across the country.

The telco is continuing to establish its fibre broadband services across the archipelagic nation at a swift speed.

It said it aims to broaden services across Maldives with the use of innovation and modern technology.

The service was launched by the company alongside Veyvah residents during a special ceremony, to unveil the Maldives' fastest internet with speeds of up to 1Gbps, with special offers.

# US firm to connect 5G mobile phones to satellite network

US global communications provider Omnispace wants to be the first company to deliver a global 5G non-terrestrial network with connectivity directly to mobile devices from its low-earth orbit (LEO) satellites.

The move comes after the company completed the launch of two satellites through its Omnispace Spark program earlier this year. It believes the future of communications is hybrid — where satellites extend and augment terrestrial mobile networks.

Fellow US firm AST SpaceMobile

is currently building a space-based cellular network designed to be accessible directly by standard mobile phones. It launched its first satellite in March 2019 and it has taken its second satellite, BlueWalker 3, to Cape Canaveral in Florida with launch plans for the end of the summer.

However, Omnispace's chief commercial officer Brian Pemberton said that what differentiates Omnispace is that from the beginning it has taken a standards-based approach. The company has been working with the 3GPP to operate its future satellite constellation in accordance with non-terrestrial network (NTN) specifications as defined by the 3GPP in its Release 17 for 5G.

"We've instrumental been Apple, along with Oualcomm. Ericsson and others in Nokia, developing the standards that we will be building into our satellite communications," Pemberton said. In contrast AST SpaceMobile is developing proprietary and patented technology for its mobile satellite network, he added.



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### THE LAST WORD

# Q&A



valuable advice by so many great people over the years, some of which I have accepted but other advice that I have ignored to my detriment. It is difficult to pick one piece, but I would have to go back to my

father who told me when I was 18, I should leave Kenya and head back to the UK to further my education. At the time in Kenya we did O and A levels but few students went on to university. He gave me a passport and packed me off. It was daunting but with that encouragement and the help of my mentor Klaus Krone, it was the start of an exciting and rewarding career – and I am still reaping the benefits.

### What's the best technological advancement in your lifetime?

There are so many technological breakthroughs that have shaped our lives that it is difficult to pick just one but if pushed I would have to say mobile communications and the Internet. The idea that you can speak to someone in rural Uganda from Wiltshire on Facebook or WhatsApp is simply phenomenal and life changing. When I was studying in the UK, the only way to contact my parents was through an arranged call from a phone box or by writing. The only downside from mobile communications and social media is that the art of writing a letter is disappearing.

# If you could dine with any famous person, past or present, who would you choose?

It has to again be Lord Ian Botham or Nelson Mandela, depending on the sort of evening I wanted. But having them both would make for fascinating dinner conversation. While both very different, they also have a lot in common, not least the single-minded commitment to getting the job done. lan's epic eight-day charity walk across South Africa passed through Soweto, where Nelson Mandela grew up and Mandela was a great fan of cricket, from watching visiting sides from enclosures in the ground reserved for the non-Europeans in his youth to greeting visiting international cricket teams as president of South Africa.

### Which law would you most like to change?

While not strictly speaking a law in itself, I would have no hesitation in changing the rules on income tax. I

strongly believe that taxing people on their earnings is immoral. A better and more just approach is to shift the burden of raising necessary income to taxing expenditure. While you can't do away with income tax completely, it's time to change the balance. If you look at countries such as Singapore that adopt this approach with low-income tax, they have successful economies and arguably and fairer society.

# What's the one product you couldn't live without?

My first thought was my smartphone, but then I lived quite happily without one for the first 30 years of my life. But I'm still drawn back to communication devices, whether it is a landline phone, mobile or smartphone. So, I guess it comes back today to a smartphone as the product I would struggle most to live without. I suspect that this applies to most people. But there is another product I would struggle to live without – a very British cup of tea!

## Which historical event do you wish you had experienced in the flesh?

I was in Berlin when the wall came down in 1989, which marked the end of the Soviet Union, the end of the Cold War. Sadly, with the current backdrop of the Russian invasion of Ukraine, the world has gone back to a very dark time. I was also in Hong Kong when the sovereignty of Hong Kong was transferred from the UK to China - that's also not worked out in the way it was envisioned. But my thoughts on a historical event I wish I had seen in the flesh in my lifetime would have been the release of Nelson Mandela from 27 years in prison, marking the end of apartheid in South Africa - no one can deny that event was a positive move for mankind.

## What's the one thing you would want do before it's too late?

I read a book when I was a child about a father and son who travelled from Cairo to Cape Town on motorbikes. The adventure has stayed with me for years and I still think about it. A friend of mine did the trip from UK to Cape Town on a bike a few years ago. My father is no longer with us - but maybe I could convince one or all of my children to take up the challenge with me and explore the continent, experience the different cultures and escape the daily rat race for a few months.

#### Alastair Williamson CEO Wyld Networks

### Who was your hero when you were growing up?

If it is OK, I would like to have two heroes. The first is the England all-round cricketer and legend, Lord Botham (Ian Botham). My family was a cricketing family and we all played, even my mum and siblings, so we spent a lot of time watching county and international cricket. In Test cricket, he scored 14 centuries, took five wickets in an innings 27 times, and 10 wickets in a match four times.

Ian Botham was and still is an inspiration with his energy, enthusiasm and commitment. But these qualities were not only displayed on the cricket pitch but were also reflected in lan's charity work – having undertaken 12 long distance charity walks and raised £12million.

My second hero is Nelson Mandela. I grew up in Uganda and Kenya and my father was a great champion of anti-apartheid, which was instilled in us as children. As I grew up and became more politically aware, I realised the enormous influence Nelson Mandela had in leading the transition from apartheid to a multiracial democracy in South Africa. While he has sadly passed away, he will always remain a major influence in my life.

#### What was your big career break?

When I was 18 and living in Kenya, I met Klaus Krone, a young German entrepreneur and industrialist who was running the family electrical switchgear business set up by his father. It was Klaus who gave me my first job at Krone but also paid for me to go to university back in the UK. In those days in Kenya, students would do O and A levels, but few would go to university. I worked for Krone for some 15 years and Klaus dispatched me to countries across the world to set up sales organisations and set up offices, including Nigeria, Hong Kong and Singapore as well as working in Germany and the UK. That opportunity changed the direction of my life.

#### If you had to work in a different industry, which one would you choose?

Twenty years ago I would not have an answer but today it would definitely be agriculture. I grew up on a coffee plantation and it transpires that farming is in my blood. But that's not all. More recently I have become more aware of the growing challenges the world faces in feeding itself. According to Action Against Hunger, globally, one in nine people are hungry or undernourished. This is an appalling statistic and I genuinely believe that our work at Wyld - providing IoT sensor-to-satellite connectivity across the globe - will play a small part in how technology can help famers to increase yields, reduce waste grow more sustainably. With an incredible 30% of global water wastage due to agriculture - mainly due to over irrigation - using soil moisture sensors to manage irrigation, for example, can drastically reduce this figure.

#### What would you do with US\$1m?

It is a question I have never had to consider but aside from supporting my family, I would love to help nurture and invest in innovative aggrotech start-ups looking to help find solutions to food poverty and increase sustainability. Technology has saved us more than once and by harnessing the vision and skills of young entrepreneurs, scientists and engineers, we can hopefully find a way through feeding the world.

### Where would you live if money was no object?

I have lived all over the world in Africa, SE Asia, South America, mainland Europe, but my home now is in Wiltshire in the UK, 'God's own county'. While it has been a privilege to experience the people, culture and geography of so many places, for me now, home is where the family is, so I have no plans to go elsewhere, even if money was no object.

## What's the best piece of advice you've been given?

I have been given so much good and

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