

For communications professionals in the southern Asian region

# SOUTHERN ASIAN WIRELESS COMMUNICATIONS

Q1 2025

Volume 17 Number 4

- Transforming business messaging
- P25 for public safety communications
- Convergent charging for monetisation

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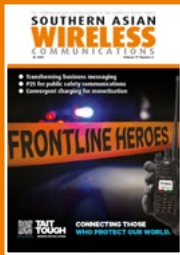
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Q1 2025  
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# Astrum Mobile contracts SWISSto12 for NEASTAR-1 satellite to enhance Asia-Pacific 5G network

Astrum Mobile, an emerging player in the direct-to-device (D2D) satellite space, has announced a significant partnership with SWISSto12 for the construction of its NEASTAR-1 satellite. This satellite is set to deliver 5G non-terrestrial network (NTN) broadcast services across the Asia-Pacific region.

NEASTAR-1 will be built on SWISSto12's compact geostationary HummingSat platform, marking it as the fifth satellite in this product line.

The satellite is slated for placement in the 105° East orbital slot, which is currently occupied by the AsiaStar satellite, originally launched by Worldspace in 2000. Astrum confirmed its ownership of AsiaStar in November 2024.

Equipped with on-board reconfigurable L-band beams, NEASTAR-1 will be capable of adapting to market dynamics and changes over time. Additionally, the satellite is designed to mitigate rain-fade issues, which can impact signal quality during heavy rain. Astrum is committed to providing enhanced service level assurances (SLA) to ensure reliable connectivity.

Astrum Mobile's D2D platform,

branded as satellite-to-device (S2D), will leverage 3GPP NTN standards to offer 5G broadcast services throughout Asia-Pacific. These services will include rich media, datacasting, the Internet of Things (IoT), mass notification, and emergency alert services, all accessible via standard 5G smartphones and smart devices.

The company also plans to collaborate with local partners in each country to develop and deliver tailored services, enhancing local

accessibility and ensuring relevance to regional markets.

"Leveraging the always-available smartphone or smart device is the most compelling value proposition, and the time is right with the recent industry shift to 3GPP 5G NTN features on smartphones and devices," said Michael Do, COO of Astrum Mobile.

Astrum Mobile's website indicates a target for the full launch of commercial 5G NTN services in Asia-Pacific by 2028.



## PhilTower and DITO Telecommunity to boost infrastructure across the Philippines

PhilTower MIDC and DITO Telecommunity Corporation have entered into a strategic agreement aimed at enhancing telecommunications infrastructure throughout the Philippines.

This partnership focuses on colocation management, designed to accelerate network expansion and improve digital accessibility on

a national scale.

Under the terms of the memorandum of understanding (MoU), PhilTower MIDC will provide colocation management services for DITO's telecom infrastructure. This collaboration will streamline maintenance operations and allow third-party operators easier access, promoting a more efficient use of resources across the telecommunications sector.

"Our mission has always been to break barriers and provide Filipinos with world-class connectivity," said Ernesto R. Alberto, CEO of DITO Telecommunity Corporation.

PhilTower MIDC's President and CEO, Devid H. Gubiani, said that the partnership will open an

additional 6,500 towers for sharing among mobile network operators (MNOs), significantly hastening the expansion of connectivity in the Philippines.

The collaboration is anticipated to accelerate digital transformation, particularly in underserved and remote areas, while also facilitating the adoption of emerging technologies. By enhancing network coverage, the partnership is poised to support sustainable development by reducing redundant infrastructure and aligning with the Department of Information and Communications Technology's goals of optimizing resources and minimizing environmental impact through shared infrastructure solutions.



## Indonesia fast-tracks Wi-Fi 6E and Wi-Fi 7

Indonesia has entered a new era of wireless technology with the launch of Wi-Fi 6E and Wi-Fi 7, as part of a government push to fast-track the nation's digital transformation that is expected to unlock \$187.6 billion in economic potential in the next six years.

The Ministry of Communication and Digital Affairs recently added 24 new 20 MHz channels to expand broadband access, reduce Wi-Fi congestion, and enhance connectivity. It will also connect 1.14 million more people to the internet whilst lowering enterprise costs and boosting productivity.

"By adopting Wi-Fi 6E and Wi-Fi 7 on the 6 GHz frequency band, Indonesia is taking a strategic position on the global digital map," said Communication Minister Meutya Hafid. "This is a tangible demonstration of our commitment to driving digital transformation as a national agenda."

The Indonesia Technology Alliance (ITA) estimates almost \$200 billion in economic value between 2022 and 2031 associated with allocating the 1200MHz in the 6GHz band — \$126.4 billion in economic output, \$37.7 billion in producer surplus to Indonesian enterprises, and \$23.4 billion in consumer surplus.

By opening the 6 GHz spectrum, Indonesia can implement faster, low-latency, and more reliable Wi-Fi 6E and Wi-Fi 7, benefiting businesses, the public, and basic services. This technology also allows more devices to connect simultaneously whilst maintaining a stable connection. A key challenge in implementing Wi-Fi 6 and Wi-Fi 7 is the availability of digital infrastructure, particularly fibre optic networks.

The ITA said that the new spectrum aligns with the approach adopted by 81% of countries that have implemented Wi-Fi 6 GHz. The maximum 80 MHz channel width ensures optimal performance for high-density deployments, making it ideal for both residential and enterprise use.

One of the major enhancements is the Very Low Power (VLP) category, which allows indoor and outdoor operations for portable devices in the 5925-6425 MHz range. The initiative supports various applications, including ultra-fast file transfers, seamless video conferencing, and high-quality streaming in 8K.



# CelcomDigi and PayNet to enhance digital security in financial transactions

CelcomDigi has formed a strategic partnership with Payments Network Malaysia (PayNet) aimed at bolstering digital security for financial transactions. This collaboration will utilize CelcomDigi's open network APIs in alignment with the GSMA Open Gateway initiative.

PayNet, which handles over 13 million digital transactions daily, plans to leverage CelcomDigi's API for the secure verification of DuitNow transactions. This will involve implementing SIM-based authentication to link DuitNow user IDs with users' mobile numbers. DuitNow transactions can be initiated using mobile numbers, MyKad, or business registration numbers as user identifiers.

The API-based security approach will enable PayNet to ensure that the mobile number associated with a DuitNow user ID is both active and registered to the intended account holder. CelcomDigi asserted that associating DuitNow IDs with SIM cards adds a substantial layer of security, as SIM cards are unique and securely stored within mobile devices, making them difficult to replicate. This mechanism serves as a more secure alternative to traditional one-time passwords (OTPs).

Both companies emphasized that the partnership aims to proactively combat the increasing threat of online scams and fraud within the digital financial landscape. Scammers often exploit gaps in user security, capitalizing on vulnerabilities in authentication and access protocols.

"As scams and fraud rise — especially in the age of artificial intelligence — this initiative comes at a pivotal moment, reinforcing the need for stronger security against increasingly sophisticated threats," said CelcomDigi CEO Idham Nawawi.

In addition to transaction verification, the partnership will include collaboration with financial institutions and the National Scam Response Centre (NSRC) through PayNet's National Fraud Portal (NFP). This effort aims to enhance the management

of scam reports and facilitate the sharing of real-time fraud intelligence. The NFP, launched by PayNet in 2024, provides valuable reports to CelcomDigi, enabling rapid response capabilities to flag, block, and blacklist phone numbers associated with scams. This mechanism helps prevent

fraudsters from exploiting flagged numbers to create new accounts.

"This partnership builds on the National Fraud Portal by adding real-time account verification through CelcomDigi, providing an extra layer of security for users," said PayNet's Group CEO Farhan Ahmad.

By harnessing open APIs and fostering collaborative innovation, the partnership is promoting a future where financial security and inclusion are mutually reinforcing, empowering both individuals and businesses to conduct transactions with confidence in an increasingly digital economy.

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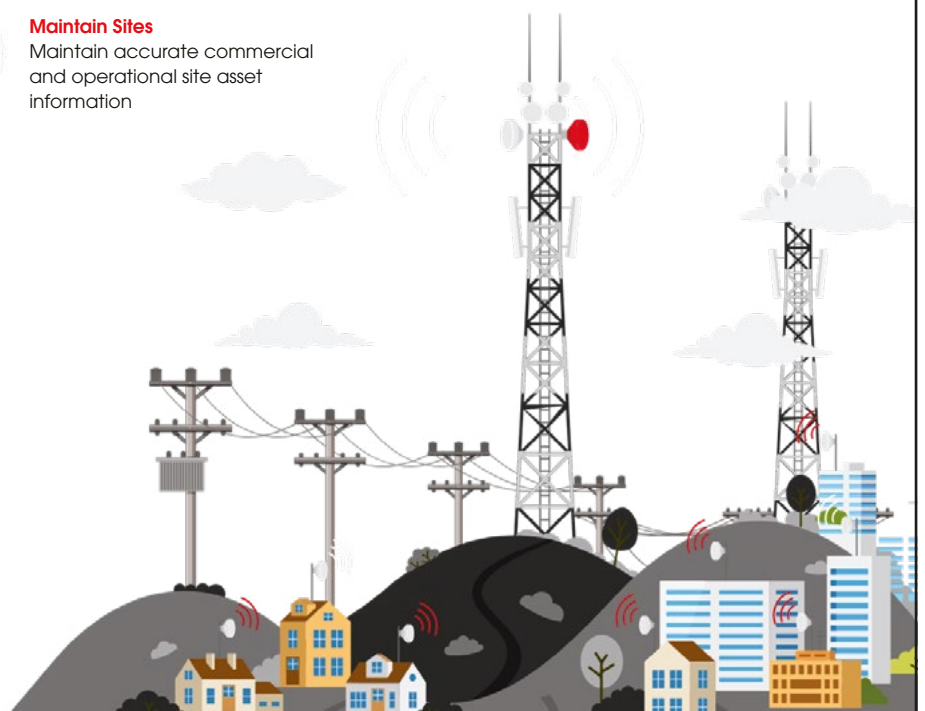
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# India's leading telcos partner with SpaceX for LEO satellite capacity

India's two largest mobile operators, Reliance Jio and Bharti Airtel, have announced partnerships with SpaceX to utilize its low Earth orbit (LEO) satellite constellation, Starlink.

This collaboration aims to leverage Starlink's estimated 7,000 satellites to provide satellite internet services across India, potentially connecting the nearly 600 million people in the country who currently lack internet access. Both operators plan to sell Starlink terminals in their retail stores and offer installation support to customers.

"Ensuring that every Indian, no matter where they live, has access to affordable and high-

speed broadband remains Jio's top priority," said Mathew Oommen, Group CEO of Reliance Jio.

By integrating Starlink into Jio's broadband ecosystem, the company aims to enhance the reliability and reach of high-speed internet services across the country.

Gopal Vittal, managing director of Bharti Airtel, echoed this sentiment, noting that the collaboration would bolster their ability to deliver world-class internet services, even to the most remote areas of India.

These partnerships mark a significant shift for both telecom operators amid previous tensions with SpaceX regarding India's

satellite spectrum policy. SpaceX had previously advocated for spectrum to be directly allocated to service providers by regulators, aligning with practices in many other global markets. Conversely, Airtel and Jio argued that spectrum should be auctioned, similar to traditional mobile spectrum processes. In October of the previous year, the Indian government indicated a preference for direct allocation of spectrum, though the mobile operators continue to contest this approach.

These strategic shifts may be influenced by changes in SpaceX owner Elon Musk's relationship with the US government. Notably, Indian Prime Minister Narendra Modi met with Musk in Washington in February, where they reportedly discussed topics including space policy and technological advancements.

The new partnerships likely signal an imminent acceleration of regulatory approval for Starlink in India, as the company has been navigating a complicated administrative process that has faced delays since 2021.



# Dialog Axiata completes successful AI integration trial with Meta

Sri Lankan telecommunications provider Dialog Axiata has announced the successful completion of a trial with Meta aimed at integrating artificial intelligence (AI) into its network for improved optimization and enhanced quality of experience (QoE) for customers.

Conducted over the past two months, the trial utilized Meta's Llama AI models to analyze and optimize Dialog's network performance. The initiative focused on ensuring better call quality, seamless video delivery, and overall superior user experiences.

According to Dialog Axiata, the application of Meta QoE insights during this trial has led to significant improvements in operational efficiency and customer satisfaction. Ranga Kariyawasam, Chief Technology Officer (CTO) of Dialog, expressed enthusiasm about the trial's outcomes, stating that it marks "a new era of AI-driven network innovation." He highlighted the potential of AI-powered insights to unlock "unprecedented opportunities" for enhancing QoE.

"By partnering with Meta and leveraging advanced AI solutions like Llama, we are optimizing our networks and setting new benchmarks for seamless connectivity," said Kariyawasam.

Following the successful trial, Dialog Axiata announced plans to start deploying the AI-driven solution later this month, aiming to deliver a more responsive and efficient network experience to its customers. This strategic move underscores Dialog's commitment to harnessing innovative technologies to enhance service delivery and meet the evolving demands of its user base.



# M1, Airbus and CitiCall to launch Agnet in Singapore

M1 Limited has announced a significant step forward in communication technology with the signing of a non-binding memorandum of understanding (MoU) with Airbus and CitiCall Communications to introduce Agnet, an innovative communication platform designed for secure and reliable communications within the public safety and enterprise sectors. This collaboration will be bolstered by M1's advanced True 5G network.

"M1 is dedicated to offering state-of-the-art communication solutions that aid in Singapore's digital transformation. Through our collaboration with Airbus and CitiCall to launch Agnet, we are empowering businesses and public safety agencies with a strong, secure, and high-performance communication platform," said Andrew Cheng, Chief of Enterprise Services at M1.

Agnet, built on Airbus's reputable technology, delivers a range of features including secure push-

to-talk (PTT), push-to-video (PTV) communication, real-time messaging, and location services over broadband networks. By utilizing M1's cutting-edge 5G capabilities, Agnet is tailored to meet the stringent requirements of industries that depend on secure communications to enhance operational efficiencies and bolster safety protocols.

CitiCall will serve as the authorized reseller for Agnet in Singapore, reinforcing M1 and Airbus's commitment to ensuring product accessibility and customer support. This partnership is aimed at maximizing the effectiveness of Agnet, allowing businesses to fully leverage its advanced features.

The introduction of Agnet dovetails with M1's initiative to facilitate digital transformation across various industries through its advanced 5G solutions. By integrating Agnet into M1's SMARTsuite Industry solutions, which are powered by 5G standalone

(5G SA) technology, the company is further supporting the digital evolution of industrial sectors with tailored solutions.

"With Singapore's strong digital ecosystem and increasing demand for secure communications, this partnership will enable organizations to operate more effectively and respond swiftly to mission-critical situations," said Alain Ruinet, Airbus Head of APAC, Public Safety, and Security.

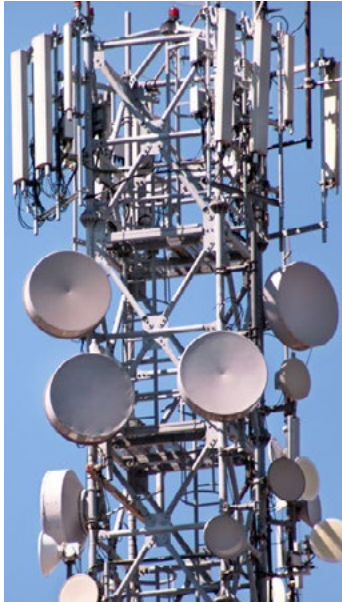
"CitiCall is excited to bring this cutting-edge solution to Singapore, equipping businesses and public safety agencies with a secure and reliable communication platform," said Francis Ng, CEO of CitiCall.

As M1, Airbus, and CitiCall embark on this promising venture, Agnet is poised to redefine mission-critical communication standards in Singapore, providing industries with access to top-tier communication tools essential for effective digitalization and operational excellence.



# Sumka gains first mobile tower

Bharat Sanchar Nigam Limited (BSNL) has successfully installed its first mobile tower in Sukma, Chhattisgarh, enhancing mobile



network connectivity for residents in the area. This development coincided with the festival of Holi, marking a festive and positive moment for the local community.

The newly erected tower is situated inside a Central Reserve Police Force (CRPF) camp in Tekulagudem village. This strategic location not only provides connectivity for the villagers but also facilitates communication for CRPF officers stationed at the camp, enabling them to stay in touch with family and friends.

The installation of the mobile tower plays a crucial role in bridging the communication gap in Sukma, which is situated in a region afflicted by Naxal violence and shares borders with Bijapur, another area significantly impacted by Left Wing Extremism (LWE).

To further support the local

community, BSNL organized a special camp prior to the tower's opening to distribute SIM cards and activate them for the villagers. This initiative reflects BSNL's commitment to expanding its presence in rural areas and incrementally growing its subscriber base.

BSNL has a broader goal of enhancing its infrastructure, having already installed over 80,000 4G towers across India, with approximately 75,000 of these towers currently active. The company aims to reach a milestone of 1 lakh (100,000) 4G sites by June 2025, after which it will pivot towards deploying 5G technology. This strategic expansion is expected to play a crucial role in helping BSNL strengthen its customer base and meet the diverse connectivity needs of the nation.

# Saigon Asset Management plans data centre campus in southern Vietnam

Saigon Asset Management (SAM) has unveiled plans to establish a major data centre campus in southern Vietnam, with a targeted investment of up to US\$1.5 billion. Alongside this ambitious project, SAM announced the launch of a US\$300 million fund aimed at boosting data centre investment in the region.

The proposed SAM DigitalHub is set to span 50 hectares and will have a power capacity of 150MW, designed to scale rapidly in response to the increasing demand from international operators and hyperscalers. Notably, the project will focus on sustainability, with an initial renewable energy capacity of 50MW planned for the campus.

To develop the DigitalHub, SAM will collaborate with Vietnam Singapore Industrial Park (VSIP), a government-to-government (G2G) initiative formed by energy and urban solutions provider Sembcorp and industrial real estate developer Becamex. The first phase of the DigitalHub is on track for completion in 2027.

"The three main challenges have been licensing, land, and power. By partnering with VSIP, we have effectively addressed these issues, paving the way for the launch of our SAM DigitalHub," said Louis Nguyen, CEO of SAM.

Nguyen also noted that Vietnam currently has an estimated 200MW of data centre capacity, which will need to double in the coming years to accommodate the growing demand from foreign technology companies, especially following the 2022 decree by the Vietnamese government mandating local storage of user data.

SAM has also launched a \$300 million Vietnam Data Center Fund, with the first closing expected by the fourth quarter of this year. The initiative aims to support SAM's digital infrastructure projects and attract international investment.

# SoftBank launches E2A Submarine cable project

SoftBank Corp., a leading member of the E2A Consortium, is set to commence the construction of a new advanced submarine cable system known as E2A.

This state-of-the-art infrastructure aims to connect key digital markets across Japan, Taiwan, South Korea, and the United States, significantly enhancing digital connectivity between Asia and North America.

Alcatel Submarine Networks (ASN) has been chosen as the contractor to develop this transpacific fibre optic network, which will stretch approximately 12,500km. The E2A project arises in response to the growing demand for robust infrastructure capable of supporting cloud computing, data processing, and next-generation mobile networks.

The E2A submarine cable system will provide critical connectivity between major digital hubs, with landing points strategically located in Maruyama (Chiba, Japan), Toucheng (Taiwan), Busan (South Korea), and Morro Bay (California, USA). This infrastructure is expected to serve as a foundational backbone for artificial intelligence (AI) applications, data centers, and cloud services, ensuring rapid connectivity across the Pacific

and within Asia.

Key features of the E2A cable include the latest submarine network technology, comprising 12 fibre pairs with a capacity exceeding 192Tbps, an open cable system architecture to allow scalability and support for multiple operators, and 18kV power-feeding technology for improved efficiency. Additionally, optimized latency will facilitate next-generation computing applications and digital services. The E2A submarine cable system is anticipated to be ready for service in the second half of 2028, significantly bolstering digital capabilities across the Pacific.

SoftBank will act as the Japan landing station for the E2A project, utilizing the SoftBank Maruyama Landing Station located in Minamiboso-City, Chiba Prefecture. This station serves as a hub for multiple submarine cables, including the JUPITER and ADC systems. As part of its commitment to advancing global infrastructure for the AI era, SoftBank aims to create stable and efficient platforms that enhance international connectivity between Japan, the United States, and other regions of Asia.

"We are excited to start the project for a new submarine

cable connecting East Asia and the United States. As AI becomes more prevalent, the importance of international submarine cables connecting Japan, the United States, and other parts of Asia as information highways is growing. SoftBank is committed to developing global, stable platforms for the AI era," said Teruyuki Oya, Vice President and Head of the Mobile and Network Division at SoftBank Corp.



# Legacy networks burden network operators

New research from TXO highlights the significant financial and operational strain that the high costs of maintaining legacy networks — such as copper, 2G, and 3G — exert on service providers. Despite the challenges, many operators expect to keep these ageing infrastructures operational for the foreseeable future.

The study found that 79% of operators anticipate their copper networks will remain functional at least until 2028, with 28% of respondents predicting service extension until 2030 or beyond. Additionally, 43% of service providers believe 2G networks will not be fully phased out until 2030, while 19% forecast that decommissioning efforts will extend even further.

A staggering 81% of survey participants stated that these legacy networks impede their ability to roll out new services, thus limiting their competitiveness against more agile

greenfield operators.

“Operators are caught in a challenging cycle where legacy networks are becoming increasingly costly to maintain, yet full decommissioning is still years away,” said John Teasdale, Group Chief Network Officer at TXO. “The continued reliance on copper and legacy mobile networks poses a significant obstacle to new network innovations in 5G and fibre, impacting both competitiveness and sustainability.”

The burden of aging infrastructure is not only financial but operational as well. An alarming 98% of network decision-makers reported that maintaining outdated networks has raised their overall operational costs. Moreover, the research indicated that major outages connected to legacy networks cost businesses an average of £1,073,684 per year due to downtime.

“Outages on legacy infrastructure are becoming more frequent and

disruptive than ever,” said Teasdale. “Older networks were not designed to meet today’s demands, making them susceptible to failure. For many large service providers, maintenance costs have surged by 30-40% over the past year alone. The combination of rising costs, increased downtime, and energy inefficiency strengthens the argument for decommissioning legacy network technologies.”

Despite the mounting challenges associated with legacy networks, telecommunications companies remain hesitant to undertake large-scale decommissioning efforts. Three-quarters of those surveyed indicated that they have postponed phasing out older networks, with 53% attributing delays to labour shortages.

On a positive note, many operators are adopting circular economy initiatives as a potential solution. The study revealed that 85% of respondents

plan to resell copper infrastructure as part of a circular economy strategy, while 80% have similar plans for 2G and 3G equipment. Additionally, earlier TXO research showed that 80% of operators are recycling obsolete equipment, and 63% are purchasing refurbished components to support ongoing operations.

“Decommissioning legacy networks is a complex challenge for telcos, often constrained by labour shortages and operational risks. However, with the right expertise and infrastructure, operators can recapture value from retired equipment while advancing their sustainability goals. By reselling, recycling, and reusing network assets, the industry is making significant strides toward establishing a more circular economy — one that minimizes waste, reduces costs, and fosters a greener, more resilient technology sector,” said Simon Wort, CEO at TXO.

## NTT Data announces MIST subsea cable commission and DC expansion in India

NTT Data has revealed that its highly anticipated Malaysia, India, Singapore Transit (MIST) subsea cable system is set to be commissioned by June this year. The announcement follows plans to double its data centre capacity in India in the coming years, highlighting the company’s strategic focus on expanding its infrastructure in key markets.

The MIST cable, spanning 8,100km, connects Malaysia, India, Singapore, and Thailand, featuring 12 fibre pairs and a design capacity exceeding 200Tbps. It is

owned by Orient Link (OLL), a joint venture that comprises NTT, the Fund Corporation for the Overseas Development of Japan’s ICT and Postal Services Inc. (JICT), and WEN Capital. The project was initiated in 2019 as part of NTT’s effort to enhance connectivity between its data centres in Singapore, Myanmar, and India, with NEC contracted for its construction in 2020. Initially expected to be operational in the third quarter of FY2022, the project faced delays before the June 2024 commissioning date.

In conjunction with the MIST

update, NTT Data outlined a broader investment strategy in India, which includes two landing points for the cable in Chennai and Mumbai. According to reports from Nikkei Asia, the company plans to invest approximately US\$1.5 billion in India over three years, aiming to expand its data centre footprint from 21 existing facilities to 30, with a total IT load capacity increasing from 290MW to 700MW by 2027.

Additionally, NTT Data is rolling out its Innovative Optical and Wireless Network (IOWN) — next-gen all-photonics network (APN) technology — to interconnect its data centres in Mumbai. This innovative approach is designed to facilitate higher performance data transmission at reduced costs, with intentions to market the technology globally by 2030 to address the growing demand for AI-driven data solutions.

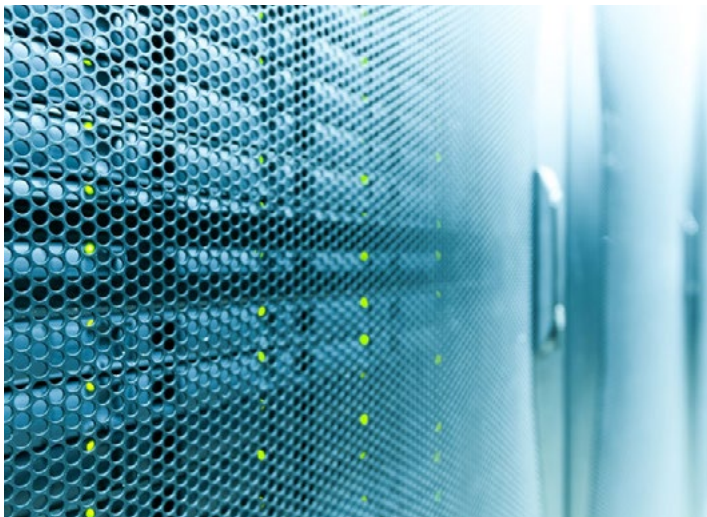
The company also announced upgrades and expansions to its Innovation Centre in Bengaluru, focusing on AI, digital twin technologies, and quantum computing projects to bolster its research and development capabilities in cutting-edge technologies.

## U Mobile to launch Malaysia’s second 5G network

U Mobile has officially received the letter of award from the Malaysian Communications and Multimedia Commission (MCMC) to deploy the latest 5G network in Malaysia. This announcement comes on the heels of the government’s decision in November 2024 to grant U Mobile the second nationwide 5G license, advancing the country’s shift to a dual-network model.

“U Mobile is honoured by the trust placed in us by the government and MCMC to implement Malaysia’s newest 5G network. This mandate allows us to play a pivotal role in advancing Malaysia’s digital economy by delivering an enterprise-grade, next-gen 5G network. We are committed to driving 5G adoption and supporting the nation’s ambition of becoming a high-income digital leader,” said Wong Heang Tuck, CEO of U Mobile.

As U Mobile embarks on constructing the nation’s second 5G network, it aims to complement the first network, which was rolled out by Digital Nasional Berhad (DNB), a special purpose vehicle established for this purpose.





P25

DMR

UHF/VHF

# Together for a safer world.

The new TP9900 Multiprotocol, Multiband Portable enables multi-agency cooperation that significantly improves community safety thanks to the enhanced interoperability between P25, DMR and analog channels in multiple frequency bands.



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# Altius and Tarantula focus on telecom infrastructure digital transformation

Altius has announced a strategic partnership with Tarantula to propel digital transformation across its operations management systems. This collaboration aims to boost Altius' operational efficiency, data management, and customer experience by integrating advanced digital technologies into all facets of its operations using robust solutions provided by Tarantula.

As part of this transformative initiative, Altius will introduce an upgraded operational platform featuring Tarantula's fully configurable Red Cube platform. This enhanced system will facilitate project management, asset tracking, data integration, and monitoring of power and fuel consumption, contributing to comprehensive operations management. Designed for flexibility and scalability, the new platform will enable seamless interoperability, improve lead times to support both existing and new business efforts, enhance security measures, and foster better decision-making through intuitive user interfaces.

"At Altius, we are committed to adopting technology-driven solutions that optimize operations, enhance customer satisfaction, and drive innovation. Our partnership with Tarantula will enable us to leverage competitive advantage, ensuring seamless integration with existing tools and boosting productivity. This is a significant step in our journey to establish Altius as the premier digital platform in the country and the world," said Pushpinder Gupta, Chief Information Officer of Altius.

"We are thrilled to work with Altius on their digital transformation initiatives and drive productivity through an agile and future-proof platform. Our industry-leading product, Red Cube, is designed to help wireless and wireline infrastructure owners simplify their site management processes and maximize returns. We are confident that our solution will enhance business process automation, improve asset utilization, and reduce overall costs for Altius. We look forward to this partnership," said Ramesh Khanna, CEO of Tarantula.



## Talking critical

### Managing mission critical video on a massive scale

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

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

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

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

From the outset, in creating the white paper, an emphasis was placed on identifying the key questions and challenges posed by mass use of video. This involved, amongst other things, polling representatives from

government agencies and the critical communications industry. The results of the poll showed that the most frequent key challenges related to:

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

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

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

Critical incidents are often characterised by very high traffic levels, not only from first responders but also consumers using commercial networks, which if not managed could generate congestion impacting all. Implementing QPP including access and application priority mechanisms and optimising the radio network will serve to manage these high

load situations. Most situations would benefit from implementing greater video compression techniques and prioritisation of video streams wherever possible.

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

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

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

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



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



## Airwallex to acquire CTIN Pay, strengthens fintech capabilities

Airwallex has signed definitive agreements to acquire CTIN Pay, an intermediary payment service (IPS) licensed company operating in Vietnam.

This acquisition, which is subject to standard closing conditions, will enhance Airwallex's existing licenses across major Asia-Pacific (APAC) markets, including Australia, Singapore, Hong Kong, Malaysia, New Zealand, mainland China, and Japan.

This strategic move will strengthen Airwallex's global financial infrastructure, assisting Vietnamese merchants in their international expansion and facilitating entry for international businesses into the Vietnamese market.

Airwallex recognizes Vietnam's economy as a strategically significant growth market in the region, citing its robust growth and rapid digital

transformation. By extending its financial infrastructure throughout Southeast Asia, Airwallex aims to better support businesses in Vietnam, enabling them to scale internationally with greater efficiency.

Founded in Australia in 2015 and now based in Singapore, Airwallex has experienced significant growth across the APAC region in recent years. On a global scale, the company has surpassed US\$600 million in annualized revenue and US\$130 billion in annualized transaction volume, highlighting the increasing demand for its cross-border payment solutions and global financial infrastructure.



## Bangladesh Government plans major overhaul of telecom policy

The Bangladesh government is reportedly planning a comprehensive overhaul of its telecom policy aimed at accelerating the country's transition to a digital economy and improving overall service quality.

Faiz Ahmad Taiyeb, the newly appointed special assistant to the chief adviser, has criticized the existing telecom policy structure as outdated and primarily focused on voice services instead of data. He described the current approach as "obsolete," advocating for a system that transitions away from monopolistic or duopolistic ownership of telecom infrastructure.

"The government is determined to dismantle policies that have stifled Bangladesh's data market

by allowing certain companies to hoard the existing fibre infrastructure as if it were a treasure trove," said Taiyeb. "The more fibre you lay, the more business you create."

Taiyeb also acknowledged that Bangladesh's communications sector has not adequately adapted to the demands of the digital age and the Internet of Things (IoT), citing past governments' digital policies as "inconsistent, subpar, and globally misaligned."

As the Bangladesh government gears up for this essential transformation, it aims to establish a telecom environment that not only enhances service quality but also supports the nation's broader digital economy ambitions.

## Vinaphone signs up 3 million 5G subscribers

VNPT Group's mobile arm Vinaphone has signed on 3 million active subscribers to its 5G service and plans to triple its 5G coverage by the end of this year.

VNPT launched its 5G network in late December 2024 after securing a licence for 3700-3800MHz spectrum in March 2024. While 5 million of VNPT's subscribers use 5G-enabled devices, 3 million are actively using the service.

The telco's 5G network currently covers all central areas of Vietnam's 63 provinces and cities, all 705 district-level administrative units, and key locations such as industrial zones, airports, and political centres. VNPT aims to triple that coverage this year in accordance with the government's Resolution No. 57/NQ-TĐ, which requires 5G operators to cover 99% of the population by 2030. The telco said it has also planned its digital infrastructure expansion from 2026 to 2030, with a 10-15% increase in IT infrastructure capacity compared to 2024.

VNPT is also strengthening infrastructure-sharing agreements for 4G and 5G networks with other telecom providers to reduce costs and expand coverage. The company will continue testing and developing advanced 5G services for its customers, and partner with international technology companies to explore new business cooperation opportunities in areas such as data centres, AI factories, network APIs, satellites, and industry-specific applications.

## Novosol scores new mobile video advertising deal in Indonesia

Telkomsel has entered into a strategic partnership with Novosol to enhance mobile video advertising and increase high-margin ad revenue in the country. The Indonesian advertising market, valued at approximately US\$20 billion, is poised for growth as the companies aim to generate US\$300 million in revenue within the first three years of their collaboration.

This partnership will provide brands, advertisers, agencies, and resellers access to over 270 million Indonesian mobile users, including 170 million Telkomsel subscribers. The initiative leverages Novosol's moLotus platform, which allows brands to automate key processes and optimize operations amid their digital transformation efforts.

The moLotus platform distinguishes itself by enabling brands to send 40-second mobile video ads directly to smartphones and feature phones across all models, without the need for apps or data plans — a significant advantage over traditional advertising platforms. This feature enhances the platform's accessibility and reach, allowing for direct interaction with customers.

With established partnerships across Asia, including countries like Malaysia, Singapore, India, and Vietnam, Novosol is now looking to extend its footprint into Western markets. The moLotus platform has demonstrated success in driving revenue growth across various sectors, including banking, insurance, automotive, consumer goods, e-commerce, retail, and government.

### PLDT sounds out Maya Innovations stake

PLDT has revealed its interest in acquiring private equity firm KKR's stake in fintech company Maya Innovations.

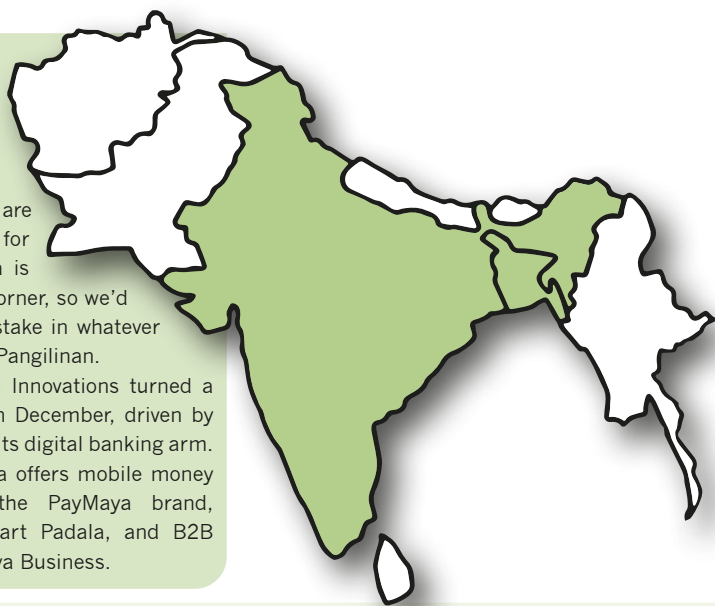
PLDT chairman and CEO Manuel Pangilinan said that the company wants to increase its stake in Maya and has engaged Goldman Sachs to explore a potential transaction. Maya competes with Globe Telecom's financial services platform GCash, which is operated by Mynt.

According to DealStreetAsia, KKR holds around 30% of shares in Maya, but it remains unclear whether the investment firm intends to sell its stake.

"We know they (KKR) are trying to scan the market for the value of Maya. Maya is just starting to turn the corner, so we'd be keen to increase our stake in whatever might be available," said Pangilinan.

PLDT noted that Maya Innovations turned a profit for the first time in December, driven by strong performance from its digital banking arm.

Founded in 2013, Maya offers mobile money and payments under the PayMaya brand, remittances through Smart Padala, and B2B card payments as PayMaya Business.



### Tata Sons secures CCI approval for increased stake in Tata Play

Tata Sons, the parent company of Tata Play, has received the green light from the Competition Commission of India (CCI) to acquire an additional 10% stake in the country's largest DTH (Direct-to-Home) operator.

With this acquisition, Tata Sons has boosted its ownership in Tata Play from 60% to 70%. The additional stake was purchased from Baytree Investments (Mauritius) Pte, an affiliate of Singapore's sovereign wealth fund, Temasek Holdings, according to a report by Reuters.

Walt Disney continues to hold the remaining 30% stake in Tata Play. As the DTH market in India faces challenges, the recent move by Tata Sons signifies a strategic effort to strengthen its position in the sector.

### Bangladesh Submarine Cables PLC cuts prices by 10%

Bangladesh Submarine Cables PLC (BSCPLC) has announced a 10% reduction in its wholesale bandwidth prices in a bid to make internet access more affordable in Bangladesh.

In addition to the price cuts, Taiyeb mentioned ongoing discussions with mobile operators to grant them access to Dense Wavelength Division Multiplexing (DWDM) facilities. This move could potentially decrease transmission costs by up to 39%, further aiding in the reduction of internet service rates for consumers. Currently, BSCPLC provides international bandwidth via the SEA-ME-WE 4 and SEA-ME-WE 5 subsea cables, of which it is a co-owner.

### Tencent Cloud and TrueWatch launch Indonesia's first multi-cloud SaaS observability platform

In a significant development for Indonesia's digital landscape, Tencent Cloud has partnered with TrueWatch to unveil the country's first multi-cloud Software as a Service (SaaS) observability platform.

This collaboration is set to enhance real-time monitoring capabilities for Indonesian enterprises by deploying TrueWatch's innovative platform within Tencent Cloud's Indonesia Availability Zone.

An availability zone refers to a physically separate data centre (IDC) within Tencent Cloud that operates with independent power and network supplies, ensuring high reliability and performance. Through this partnership, TrueWatch aims to offer low-latency access while adhering to robust security protocols and compliance requirements specific to Indonesian enterprises.

TrueWatch's observability platform is designed to consolidate various monitoring tools into a unified interface, simplifying complex data management while providing complete cost transparency. By leveraging Tencent Cloud's local data centre infrastructure, the platform aims to deliver real-time monitoring, analytics, and cloud-native observability tools across multiple cloud environments.

According to TrueWatch, hosting its observability solutions on Tencent Cloud's Indonesia Availability Zone allows for an impressive 99.99% uptime Service Level Agreement (SLA) for enterprise clients, underscoring the platform's

high availability and reliability. Furthermore, the collaboration has reportedly expedited infrastructure setup and deployment times by 50%, enabling quicker integration for businesses.

This partnership not only enhances operational efficiency but also ensures compliance with local data protection regulations across key markets, including Indonesia, Singapore, Europe, and North America, thanks to Tencent Cloud's globally certified infrastructure.

Mike Loong, Executive Director of TrueWatch, emphasized the significance of this collaboration, calling it "a game-changer for enterprises struggling with fragmented cloud environments." He added that Tencent Cloud's robust infrastructure enables TrueWatch to provide a unified observability platform that caters to Indonesia's data sovereignty needs, ultimately empowering local enterprises to manage their cloud resources more effectively.

As the digital economy continues to evolve in Indonesia, this partnership between Tencent Cloud and TrueWatch is anticipated to play a pivotal role in enhancing enterprise capabilities and simplifying cloud operations, paving the way for a more integrated and efficient digital infrastructure in the region.





## XL Axiata and Openmind Networks to safeguard SMS revenues in Indonesia

XL Axiata has teamed up with Openmind Networks to introduce a cutting-edge revenue assurance solution to safeguard and optimize Application-to-Person (A2P) SMS revenues.

The new revenue assurance product builds upon the existing SMSC and SMS Firewall infrastructure that has been supporting and securing Indonesian communications for the past eight years.

The successful collaboration has been further strengthened through the involvement of CAA, a leading IT and telecommunications consulting firm based in Indonesia. Leveraging CAA's extensive expertise in the local market and Openmind Networks' advanced technological capabilities, XL Axiata has implemented a revenue assurance model that has shown exceptional results in its initial deployment.

This innovative solution harnesses AI-powered messaging technology to effectively combat grey route traffic and detect unauthorized SIM boxes, which attempt to circumvent established charging models. As a result, XL Axiata's end-to-end messaging services are becoming a more robust and transparent revenue stream.

"Initial signs indicate that we can halt revenue leakage at its source, effectively eliminating grey

route traffic," said Richard Lemmers, Chief Sales Officer at Openmind Networks.

The AI-based approach to A2P SMS security proves operators can secure their messaging revenues without sacrificing service quality.

The partnership has yielded several key achievements. Openmind Networks' AI-driven solution has successfully identified and blocked fraudulent messaging routes, preventing revenue losses while ensuring a high-quality user experience. Moreover, the collaboration has significantly curtailed the presence of SIM boxes by accurately detecting unauthorized traffic, thus ensuring proper billing and reducing opportunities for fraud.

XL Axiata's proactive approach to utilizing the latest technology solutions to fight fraud demonstrates their commitment to protecting customer experience. The company has reported substantial reductions in revenue leakage, reinforcing their revenue streams and fostering a fair competitive environment for all players in the market.

"The initial results are extremely promising, and we are thrilled with the performance of the solution," said Arifa Febriyanti, Commercial Director at CAA.



## Veon Group appoints Johan Buse as CEO of Banglalink

Veon Group has announced the appointment of Johan Buse, the consumer chief from Singapore-based telecommunications operator StarHub, as the new CEO of its Banglalink unit. This strategic move aims to bolster Veon's digital expansion efforts in emerging markets.

With a robust background in telecommunications, Buse brings decades of experience to his new role. He previously held positions at Deutsche Telekom in the Netherlands and Croatia, as well as senior roles at AXIS, SingTel, and Ooredoo Group, where he served as the chief commercial officer of Ooredoo Oman. Before joining Banglalink, he spent over six years at StarHub leading its Consumer Business Group.

Buse is set to take the helm at Banglalink on 6 April, succeeding Erik Aas, who is stepping down after a noteworthy nine-year tenure to explore new opportunities.

Veon Group CEO Kaan Terzioğlu expressed confidence in Buse's ability to contribute to the company's growth, stating that his extensive experience positions him well to advance digital initiatives in Bangladesh. Terzioğlu also acknowledged Aas's impactful leadership, noting that under his guidance, Banglalink transformed into a nationwide operator known for delivering innovative digital services.

In response to his new role, Buse highlighted Bangladesh's potential, describing it as a market brimming with customer-centric and value-driven opportunities. He underscored the importance of enhancing the country's digital infrastructure amidst its current transformative phase, emphasizing the need to provide citizens with essential digital and connectivity services.

## Global Internet of Things market set to reach \$1.8 trillion by 2028

The global Internet of Things (IoT) market is projected to grow at an impressive annual rate of 13.5%, reaching US\$1.8 trillion in revenue by 2028.

This growth represents a substantial increase from the US\$959.6 billion recorded in 2023. The surge in market size is largely driven by the expanding application of IoT in various business sectors, supported by advancements in technologies such as 5G and artificial intelligence (AI). However, to fully realize this potential, challenges like security vulnerabilities and the absence of standardized protocols need to be addressed.

According to GlobalData's recent report – 'Internet of Things' – enterprise IoT will increasingly dominate market contributions, anticipating a rise from 70% of total revenue in 2023 to 72% by 2028. Conversely, the consumer segment is expected to see a decline in its market share from 30% in 2023 to 28% in 2028. The evolution of new wireless technologies, which can be deployed on land and in space,

offers a greater variety of connectivity options for IoT devices.

Enhanced 5G technology is paving the way for IoT applications that demand reduced complexity, lower costs, and minimized power consumption. One notable innovation is the 5G-satellite non-terrestrial network (NTN), which facilitates data transmission and reception for devices in remote or underserved areas via satellite. This technology will benefit devices that need constant connectivity and long battery life, without the necessity for all of 5G's advanced features like high bandwidth and low latency.

AI's integration into the IoT landscape is catalyzing significant growth, leading to the concept of Artificial Intelligence of Things (AIoT). By merging AI capabilities with IoT devices, software, and services, organizations can enable automated operations and predictive maintenance. AI can function across several domains — it can operate directly on IoT devices with some constraints, in the cloud, or through a hybrid approach.

# Mobile identity API revenue to reach \$22 billion by 2029

A recent study by Juniper Research forecasts that global revenue from mobile identity application programming interfaces (APIs) will soar to US\$22 billion by 2029, a remarkable increase from the US\$2.4 billion anticipated in 2025. This growth is expected to be driven by the rising adoption of network APIs that authenticate users directly through operator networks, moving away from traditional SMS-based methods.

Mobile identity services leverage a subscriber's phone number to verify identities across various sectors, including banking, healthcare, and online retail. The report identifies a new generation of 'verification APIs' that are set to transform conventional mobile identity solutions, such as one-time passwords (OTPs), in the coming four years.

APIs that validate the phone number submitted during account registration against the number accessing the network are anticipated to be key drivers of growth in the mobile identity API sector. Juniper Research highlights that the added security benefits provided by these APIs, including advanced protection against spoofing attacks, will notably enhance their appeal to digital service providers, offering more value compared to SMS-based authentication methods.

To ensure the sustainable growth of mobile identity APIs, the report recommends that vendors impose limitations on the number of API calls users can make to mitigate potential misuse.

"APIs now cost about the same as SMS, but the added security from APIs alone is enough to convince businesses to switch their mobile identity traffic quickly," said Georgia Allen, a researcher at Juniper Research.

The projected surge in revenue underscores a significant shift toward more secure and efficient methods of user authentication, making mobile identity APIs a critical component in the evolving landscape of digital security and verification. As businesses increasingly recognize the value of enhanced security measures, the transition to mobile identity APIs is anticipated to accelerate, shaping the future of identity verification across multiple industries.



## Talking satellite

### India's satcom showdown

India's incoming LEO constellations are poised to complement existing MEO and GSO satellite offerings, playing a transformative role in enhancing multi-orbit connectivity, driving innovation, and creating significant opportunities for collaboration within India's telecommunications sector.

Satellite technology offers a promising solution to expand internet access to remote, unserved, and underserved regions in India where terrestrial networks are either unavailable or inadequate. By leveraging satellite connectivity, we can bring the benefits of the internet to communities that have historically lacked reliable broadband infrastructure. This has the potential to spur economic development, improve access to education and healthcare, and connect more Indians to the digital world.

The advancements in satellite technology are likely to introduce new services and business models among MNOs, including IoT solutions and enhanced mobile broadband, thereby improving overall connectivity.

### Spectrum rights

Spectrum is a finite resource, and its allocation is critical for both MNOs and satellite operators, especially as capacity demands grow. The tensions between MNOs and satellite operators reflect broader challenges in managing spectrum allocation and regulatory practices, necessitating ongoing dialogue and collaboration among all stakeholders.

Effective collaboration requires a conducive regulatory environment. Unresolved spectrum disputes could lead to delays in service deployment, increased costs for consumers, and hinder India's digital transformation goals. It is essential to find a balanced solution that ensures both sectors can thrive without compromising connectivity for end-users. MNOs, satellite operators, and policymakers must work together to develop spectrum regulations that allow both terrestrial and non-terrestrial networks to coexist harmoniously, ensuring efficient use of available frequency bands.

However, while satellite operators share allocated spectrum through coordination, the mobile industry relies on exclusive spectrum usage. Introducing mobile services in a band currently used by satellites would prevent incumbent operators from continuing their operations.

We advocate for regulatory frameworks that ensure fair and non-discriminatory

access to spectrum, balancing rapid technological evolution with the need for all players—both terrestrial and non-terrestrial—to operate effectively.

### Auction vs allocation

Auctioning spectrum works well when the demand for exclusive use of the resource exceeds supply, which is the case for mobile spectrum. However, satellite spectrum is shared among GSO and NGSO operators, making auctions an inefficient and impractical approach, contrary to international best practices. Auctions could lead to monopolistic or semi-monopolistic control, requiring non-transparent private arrangements for non-winners to gain access.

Moreover, satellites typically have global or regional coverage, necessitating harmonized spectrum use across countries. The same satellite cannot use different frequencies in neighbouring countries, highlighting the importance of ITU filings and operator-level coordination.

GSOA believes that auctioning satellite spectrum is not in the public interest, as it could create barriers to entry for new operators, limit access to this shared resource, and lead to artificial scarcity. Instead, GSOA supports administrative allocation practices, which have proven effective in fostering a healthy and competitive satellite sector globally.

### Boosting profitability

MNOs and satellite operators can work together to achieve universal connectivity while creating profitable business scenarios that support sustainable growth in both sectors. In India and internationally, we've seen encouraging examples of cooperation. For instance, last year, GSOA and GSMA signed a cooperation agreement to work together to foster innovation and seamless Terrestrial and Non Terrestrial Network (TN-NTN) integration.

By forming partnerships, MNOs can invest in satellite systems alongside satellite operators, sharing the costs and benefits of deployment. This joint investment can make infrastructure more affordable for both parties and lead to improved service offerings.

MNOs can integrate satellite technology with existing mobile networks to enhance service delivery. For example, satellites can serve as backhaul for rural mobile sites, extending coverage to underserved and remote areas where traditional terrestrial infrastructure is not economically viable.

Peng Zhao, Vice President, Policy & Regulatory, GSOA



Such collaboration can facilitate better coverage and extend services without the need for extensive ground infrastructure, and create new revenue streams for MNOs, and expand the market reach of satellite operators, resulting in a win-win-win situation for satellite operators, mobile operators and consumers.

Government and regulatory bodies play a crucial role in facilitating these collaborations by creating a supportive policy environment, ensuring fair spectrum allocation, and incentivizing investments in hybrid network infrastructure. Their involvement will be key to unlocking the full potential of MNO-satellite partnerships.

### Outlook

The ideal vision for India's communications industry in 2025 is achieving universal and meaningful connectivity, particularly for underserved rural areas. This vision could be realized through the effective use of advanced satellite technologies that complement terrestrial networks, fostering an integrated 'Network of Networks' to bridge the digital divide. Such an approach would create a resilient ecosystem where both satellite and terrestrial communications converge to provide widespread coverage and robust services, enabling various government initiatives related to e-Governance, financial inclusion, and healthcare to flourish.

To unlock the potential of convergence and industry collaboration, a regulatory framework that supports technology neutrality is essential. Policymakers should focus on inclusivity rather than favouring any single technology, as no single solution can address all connectivity challenges. This requires eliminating barriers that prevent the optimal use of combined technologies and providing technology-agnostic solutions and funding.

India's new Space Policy has made significant progress in streamlining and centralizing space activities. It is crucial to maintain adherence to these standardized procedures, as they provide the certainty needed for industry investment and growth. However, ongoing discussions around spectrum allocation, pricing, and availability have created uncertainty and delayed service deployment. It is now imperative to provide clarity and help the industry move forward with confidence. Operators are ready and eager to access the spectrum and begin providing services to Indian consumers.





## Wireless Solutions for Exploration, Mining, Fleet Tracking & Surveillance

Mobile Mark is a leading supplier of innovative, high performance antennas to wireless companies across the globe. We've been in the wireless industry for over 30 years and have our roots in the early Cellular trials. Today, we benefit from enhanced design capabilities and expanded production capacity – along with a greater understanding of new and emerging markets such as mining and exploration.

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

# Beyond connectivity: how convergent charging is monetising next generation services



Shashank Singh, Head of Sales, Asia, Cerillion

For CSPs in Asia, traditional broadband and mobile services are no longer the only sources of revenue, and the typical barriers between prepaid and postpaid services are blurring as telcos diversify through digital services and content delivery.

The need for a sophisticated, best-of-breed convergent charging system (CCS) to provide a single point of charging is critical, offering a new approach to monetisation which supports the creation of new areas of growth.

Charging has evolved from a simple mechanism for prepaid voice and SMS services to become a comprehensive convergent solution, handling all service types, payment methods and customer segments, including 5G Standalone services like eMBB, URLLC and mMTC. The primary driver behind this evolution is the changing nature of telecoms services themselves; as traditional voice and SMS use declines, along with the revenues they used to generate, data services and digital content have become the primary revenue generators.

Telcos are now realising the importance of providing a complete solution rather than just enabling connectivity. For example, connecting two AWS data centres is just providing connectivity; however, providing a full AWS solution with data centres, infrastructure, co-location spaces, training, professional services and support, in addition to connectivity is what the telco industry should aspire to.

This shift has created a need for charging systems that can handle multiple service types simultaneously while maintaining real-time accuracy and visibility for both CSPs and subscribers. This is especially important for premium services,

such as immersive gaming, remote surgery, etc. It also underlines the importance of a strong product catalogue that must provide the capability to configure products, solutions and bundles rapidly.

In addition, increased competition in all markets is creating demand for a more personalised service, with new customer spending controls and pricing transparency required to create a more compelling customer experience and increase customer lifetime value.

In Asia, where digital adoption rates are among the highest globally, CSPs must manage complex charging scenarios that incorporate not only traditional fixed-line services, mobile data and fibre broadband, but also emerging digital services. Key factors shaping the market include:

- Diverse customer segments with varying service needs
- Growing demand for bundled services including mobile, broadband and content
- Strong competition from both traditional operators and digital-first service providers
- Widespread adoption of digital payment methods

With convergent charging across services, CSPs can simplify the customer experience and reduce the amount of friction in service adoption. Flexible charging capabilities enable operators to launch new services quickly and implement innovative pricing strategies, while reducing operational costs and minimising revenue leakage.

As 5G Standalone networks continue their roll out – though coverage nevertheless remains uneven, with vast disparities in access between countries and within – business support systems must adapt to handle new service types and pricing models, including network slicing and quality-of-service-based charging.

In contrast to more developed markets, high-opportunity frontier markets experiencing rapid digital

transformation have high rates of smartphone penetration and higher rates of data consumption, requiring flexible charging solutions that can accommodate both traditional telecoms and modern digital services.

## The future of convergent charging

Looking ahead, there are several trends currently shaping convergent charging:

Charging for network slicing for enterprises with specific, customised QoS requirements for separate slices on a single physical network.

Charging for compute and storage usage at the edge, for B2B – for example, a bank purchases cloud connectivity for a multi-country operation through their CSP, which charges them in turn on the basis of a pre-agreed tariff; the cloud provider will send the usage data, and the CCS will apply charges based on the tariffs.

Charging for IoT platform services including device management, data integration and analytics. This is particularly applicable for smart city services, where IoT plays a crucial role in enabling and future-proofing the cities of tomorrow, providing the scalability to support millions of connected devices and sensors.

Charging for e-commerce and digital marketplace transactions and fees. For example, reselling other SaaS based platforms where the customer is charged based on API consumption. Or the marketplace platform charging listing fees to a customer based on the quantity and time the product stays on the marketplace.

Charging for media and entertainment content, where rather than a flat monthly access fee, some platforms may want to charge customers based on usage (i.e. per film watched or song streamed) or on the length of the media.

## Technical requirements

Modern convergent charging systems must address several technical requirements to meet

market demands. Real-time charging capabilities are essential, as they enable CSPs to implement sophisticated pricing strategies and prevent revenue leakage. CCS platforms must also support multiple charging models, including:

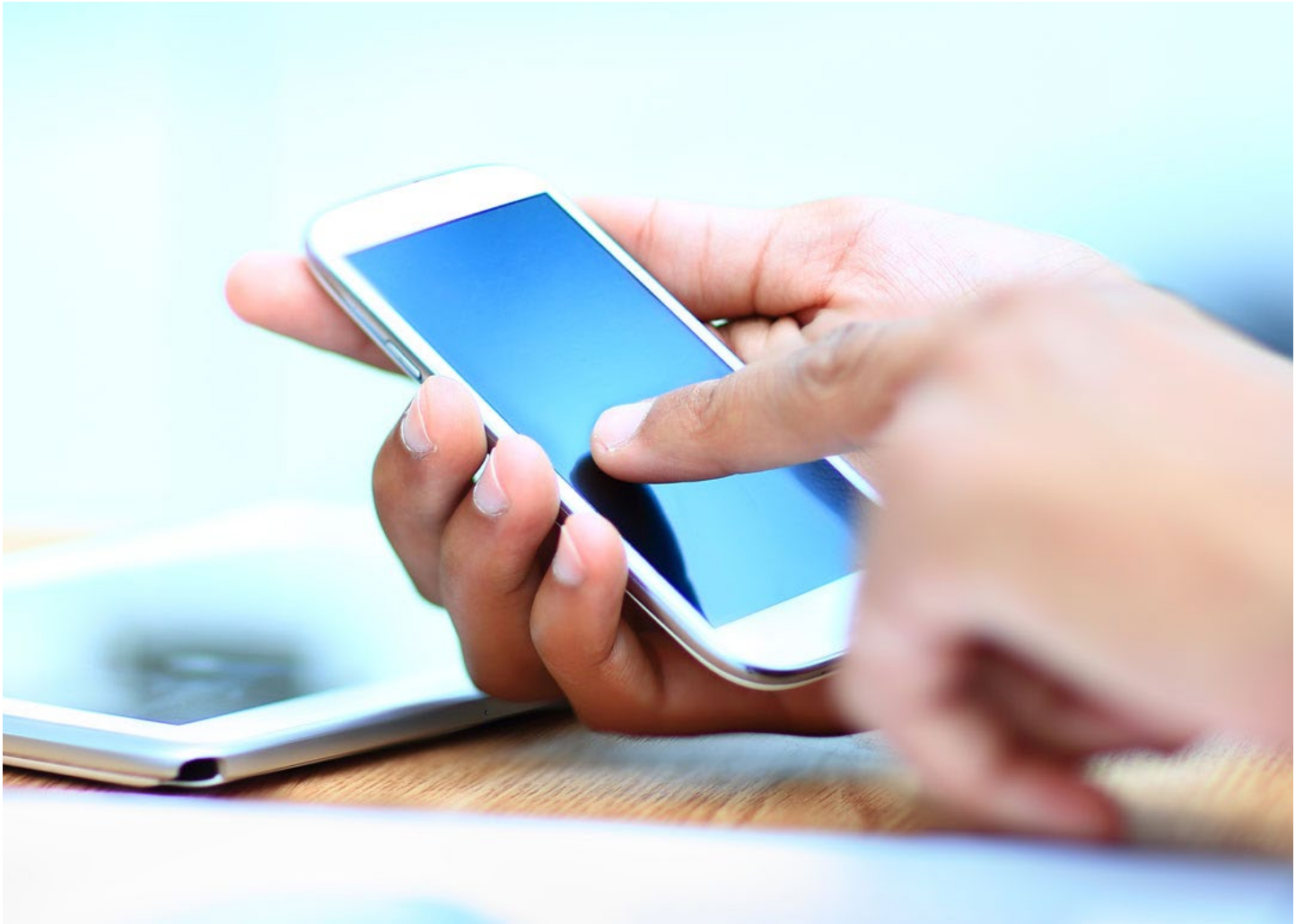
- 5G SA use cases for services including network slicing, eMBB, URLLC and mMTC
- Usage-based charging, especially including third-party charging, API-based charging, and similar models (anything that can be counted)
- Subscription-based services
- Pay-per-use content
- Dynamic pricing, based on network conditions or time of day

Integration challenges remain a significant concern, particularly when dealing with legacy systems and multiple service platforms. CSPs must ensure their charging systems can interact seamlessly with various network elements and customer relationship management systems, as well as third-party service providers.

The evolution of convergent charging is reflective of the industry's broader transformation from delivering just traditional communications services to comprehensive digital services portfolios. Success in this environment requires charging systems that can handle the complexity of modern telecommunications services while remaining flexible enough to accommodate future innovations.

To go beyond just differentiating between prepaid and postpaid, telcos need a charging system that can monetise network assets and create value in new content services, while maintaining the efficiency and reliability that customers expect. Those who can successfully implement and leverage advanced convergent charging capabilities will be best positioned to capture opportunities in the market. ■





# Transforming business messaging with RCS

In line with rampant digitalisation, business messaging services are evolving to enable richer communications with customers, and in doing so, offer MNOs a way to win back clients and revenues from OTT players...

**A**s businesses in South and Southeast Asia embrace digital transformation, the way they interact with customers is rapidly evolving. The shift from SMS to Rich Communication Services (RCS) is one of the most significant developments in mobile messaging, offering enterprises a richer, more interactive platform that enhances engagement, security, and monetisation opportunities.

## Changing priorities

The transition from traditional SMS to RCS is being driven by businesses' growing need for interactive, multimedia-rich customer experiences. Unlike SMS, which is limited to plain text, RCS enables verified sender profiles, high-quality images, videos, carousels, and interactive buttons, making it a much more engaging

channel for enterprises.

"The shift is driven by the limitations of SMS, like plain text-only communication and lack of interactivity," explains Midhun Mohan, Director - Growth & Partnership, GreenAds Global. "RCS offers richer media capabilities, verified sender information, and enhanced security, making it more appealing for businesses to deliver engaging and reliable messages."

“Businesses today need more than just text - they need rich, interactive experiences that drive engagement,” echoes Singh Mumick, CEO of Dotgo. “RCS delivers this through verified sender profiles, rich media capabilities, and interactive elements that achieve significantly higher conversion rates. We’re seeing significant ROI improvements compared to traditional SMS campaigns. Simply put, RCS brings messaging into the modern era while maintaining the reach and reliability that made SMS successful.”

In highly digitalised markets like India and Indonesia, RCS is becoming a necessity rather than an option. Matt Ekram, Programme Director for Asia at the Mobile Ecosystem Forum (MEF) reports that OTT messaging platforms like WhatsApp and WeChat have dominated the space, but Apple’s recent announcement to support RCS is a game-changer, particularly in markets with high iPhone penetration, such as Japan.

### Messaging monetisation

For Asia’s MNOs, RCS presents a unique opportunity to reclaim business messaging revenue that has been eroded by OTT platforms.

“RCS provides a channel for businesses to send interactive, branded messages, driving higher engagement rates. This, in turn, creates significant revenue streams for MNOs through



“As businesses seek richer, more secure messaging solutions, RCS is becoming the preferred choice for everything from e-commerce transactions and banking alerts to customer service interactions and appointment scheduling.”

premium messaging fees,” outlines Mohan.

The impact has been substantial, says Mumick: “RCS is opening up new revenue streams for

operators who have seen their messaging revenue eroded by OTT apps. We’re seeing operators not just recapturing lost business but expanding into

messaging through this combination of accessibility and affordability,” adds Mumick. “Additionally, the platform’s built-in verification and security features help prevent fraud and spam, which protects both the operator’s network and their customers. This comprehensive package - lower costs, native integration, and enhanced security - is what makes RCS such a compelling proposition for operators looking to grow their messaging business.”

Beyond monetisation, RCS also enhances customer retention for MNOs.

Ekram reports that “RCS is helping reduce business customer churn through better engagement tools and analytics for businesses, seamless integration with existing business systems, and enhanced security and verification features.”

“RCS creates stickiness through its rich features and proven ROI. When businesses see engagement rates increase by 2-3x and conversion rates improve significantly, they’re more likely to upgrade SMS to RCS,” says Mumick. “The interactive capabilities also help businesses build stronger relationships with their customers all at a cost little higher than SMS, making RCS an essential part of their communication strategy.”

“Businesses are less likely to switch providers when their needs are being met with innovative solutions,” adds Mohan.

### Maximising investment

While RCS present substantial opportunities for MNOs to deepen their engagement with customers and enhance service offerings, successful implementation of this technology requires a well-thought-out and strategic approach.

MNOs must fundamentally shift their perception

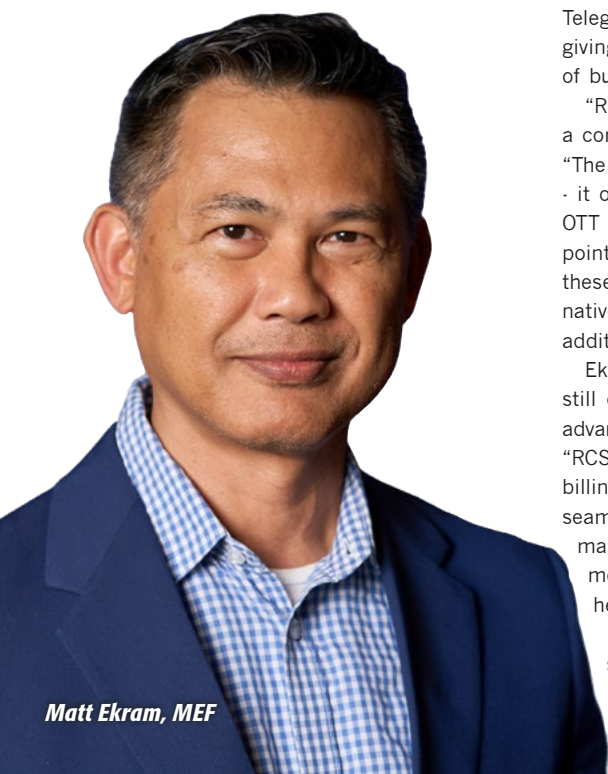
new verticals that weren’t possible with SMS.”

Indeed, one of the biggest challenges MNOs have faced in recent years is competing with OTT messaging platforms like WhatsApp, Telegram, and WeChat. RCS, however, is now giving them a real chance to regain control of business messaging.

“RCS puts operators back in the game with a compelling competitive edge,” notes Mumick. “The game-changer here is RCS’s cost structure - it offers the same rich, interactive features as OTT platforms but at a significantly lower cost point. This is particularly powerful because these features are available right in the user’s native messaging app, eliminating the need for additional app downloads or maintenance.”

Ekram acknowledges that while OTT apps still dominate certain regions, RCS has unique advantages that OTT platforms cannot replicate: “RCS provides network-level security, direct billing relationships with enterprises, and seamless cross-operator messaging. This makes it far more reliable for business-critical messaging, such as banking notifications and healthcare updates.”

“We’re seeing operators significantly strengthen their position in business



Matt Ekram, MEF

of RCS, treating it not merely as an upgraded version of SMS, but rather as a transformative platform that has the potential to revolutionise customer communication and interaction.

“Choosing the right RCS partner is critical,” advises Mumick. “Operators need a provider with proven expertise, technical scalability, and strong industry relationships. The ability to handle complex integrations while offering robust analytics and security features is what makes an RCS partner valuable.”

Ekram agrees, stating that MNOs need to align their RCS strategy with local market needs: “for instance, India’s enterprise market is rapidly adopting RCS for e-commerce and financial services, while Indonesia is seeing growth in retail and small business applications. Understanding these regional differences is key to successful adoption.”

Mohan recommends that MNOs consider partnering with a robust RCS platform provider that not only delivers technological solutions but also plays a critical role in educating business customers on the benefits of RCS. This education is pivotal, as it empowers enterprises to leverage RCS capabilities effectively for their marketing and customer engagement strategies.

MNOs should also commit to continuously updating RCS features in response to evolving market trends and user expectations: “by staying attuned to the latest developments in the industry, MNOs can refine their messaging strategies and ensure that they remain relevant and competitive in a rapidly changing landscape,” continues Mohan. “Additionally, leveraging analytics to gather insights on customer interactions can provide invaluable information to fine-tune RCS campaigns, optimise engagement tactics, and ultimately enhance overall performance.”

MNOs would be wise to look for partners who offer end-to-end solutions, from technical integration to business development support, adds Mumick.

Key evaluation criteria should include:

- The partner’s global presence and experience with diverse markets
- Existing relationships with brands and aggregators
- Ability to handle complex integrations
- Robust analytics and reporting tools
- Track record of successful implementations with major operators
- Innovation capabilities and adherence to evolving RCS standards

“Having a partner with established expertise helps operators avoid common implementation pitfalls and accelerates their time to market for RCS services. The ideal partner should not

significant advantages, it will be one component of a multi-channel messaging strategy rather than a complete replacement for other platforms,” shares Ekram.

“Looking at global adoption, emerging markets like India, Brazil, and Mexico are showing strong growth in RCS usage. Major operators worldwide are rolling out RCS support, and with RCS now coming pre-installed on Android devices, the adoption barriers are minimal,” notes Mumick. “As we look ahead, RCS is positioned to become the dominant platform for business messaging, offering the perfect combination of reach, rich features, security, and measurable results. It’s not just an evolution of SMS - it’s a complete reimaging of business messaging for the modern era.”

**“This comprehensive package - lower costs, native integration, and enhanced security - is what makes RCS such a compelling proposition for operators looking to grow their messaging business.”**

only provide the technical infrastructure but also help operators build their RCS ecosystem and maximise revenue potential from their RCS investment,” says Mumick.

### Is RCS the future of business messaging?

The adoption of RCS is accelerating, and industry leaders believe it is set to become the dominant platform for business messaging in South and Southeast Asia. According to Google, RCS has already reached over 1 billion monthly active users, and with Apple’s recent support, that number is projected to grow to 3 billion by the end of the year.

“RCS is not just the future — it’s already becoming the standard in business messaging,” says Mumick. “From retail brands using RCS for interactive product showcases to banks leveraging it for secure transactions, the versatility of RCS makes it an essential part of modern customer engagement strategies.”

Mohan adds that businesses are increasingly recognising RCS as a more secure and measurable alternative to traditional SMS and OTT platforms: “RCS is redefining the way businesses interact with customers by merging the simplicity of SMS with the interactive capabilities of apps. Its adoption is expected to grow as more MNOs and businesses realise its potential.”

However, Ekram believes RCS will coexist with other messaging platforms rather than completely replacing them.

“While RCS adoption is strong in India, Japan and Indonesia, some markets may continue to use multi-channel strategies that combine SMS, OTT apps, and RCS based on consumer preferences. While RCS offers

The momentum behind RCS is undeniable, with MNOs, enterprises, and technology providers aligning to accelerate its adoption. As businesses seek richer, more secure messaging solutions, RCS is becoming the preferred choice for everything from e-commerce transactions and banking alerts to customer service interactions and appointment scheduling. However, success will depend on strategic implementation, strong technology partnerships, and ongoing education for enterprises.

As South and Southeast Asia continue on the path of rapid digital transformation, one thing is clear: RCS is no longer just an emerging technology — it is shaping the future of business messaging in the region. ■



**Inderpal Singh Mumick, Dotgo**



**Midhun Mohan, Greenads Global**





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# Why P25 technology is a good fit for public safety communications in India



Sandra Wendelken, Market Insights Manager, Tait Communications

**P**ublic safety agencies in India and other countries depend on two-way radio communications for daily and incident communications. Digital land mobile radio (LMR) technology is particularly critical and ensures police officers, firefighters, and emergency management technicians can respond quickly and efficiently when emergencies arise.

## P25 for public safety

One digital LMR standard that is particularly beneficial for public safety communications is Project 25 (P25) technology. Developed with state, local, and federal government representatives and Telecommunications Industry Association (TIA) governance, P25 has gained worldwide acceptance for public safety, security, public service, and commercial applications. Radio equipment that demonstrates compliance with P25 can meet a set of minimum requirements to fit the needs of users. In fact, the P25 standard was originally created for public safety professionals, although the technology is also used globally by utilities, transportation agencies, and other mission-critical infrastructure entities.

P25 systems can operate in conventional or trunked modes, with two phases of the technology. Phase 1 is based on Frequency Division Multiple Access (FDMA) technology and was designed to use the same bandwidth as a narrowband analog FM 25 kilohertz channel, meaning they could be used side by side, and narrowband FM channels could gradually be replaced by P25 digital channels.

P25 Phase 2 is based on Time Division Multiple Access (TDMA) technology and is more spectrally

efficient than Phase 1, providing two effective channels per 12.5 kilohertz bandwidth. In P25 Phase 2, each physical base station provides two voice channels. With TDMA, two independent conversations share the same channel.

Another benefit of P25 Phase 2 is longer battery life. Because of TDMA, the transmitter is only working half the time during a transmission, therefore increasing the battery life of the portable. In addition, Phase 2, only available for trunked P25 operation, is backwards compatible with Phase 1 radios, allowing a new Phase 2 radio to operate with users of P25 Phase 1 equipment, and to operate on Phase 1 network equipment.

Customers can choose from multiple P25 system configurations including direct mode,

repeated, single site, multi-site, voting, multicast, and simulcast systems. Optional features create cost-effective system applications and geographic coverage based on unique user requirements. Backward and forward compatibility considerations are built into the P25 standards and ease future system expansions and migration to new technology upgrades.

## P25's standardized interfaces

In a recent social media poll asking what the biggest advantage of open standards is in the critical communications industry, more than half (53%) of poll respondents said 'interoperability.' While other considerations







including freedom of vendor choice, lower prices and avoiding technology obsolescence are important, interoperability is a huge issue for communications managers around the globe. Communication during disasters is rarely easy and often crosses different agencies and companies, involving several emergency networks. Interoperable communications systems are the key to keeping first responders safe and for the most effective and efficient response to incidents where mutual aid is required.

One way to address interoperability challenges is by purchasing standards-based equipment. The TIA TR-8 Working Group that oversees P25 standards updates the technology, with recent enhancements to security for example, and ensures it continually addresses first responders' needs.

The P25 standard includes several interfaces to help ensure interoperability. The Common Air Interface (CAI) standardizes the point of connection between radio transmitters and receivers. Simply put, the CAI defines the technical form and function of the digital signal that goes over the airwaves and how P25 radios would communicate with one another at the most basic level. The CAI allows radios from Vendor A to operate on P25 infrastructure from Vendor B, for example.

Some other interfaces include the following:

- The Inter-RF Subsystem Interface (ISSI) defines how different P25 radio networks can connect with one another—a key issue of communications interoperability. This effectively allows the full P25 system of Vendor A to be connected to the full P25 network of Vendor B, for example.
- The Console Subsystem Interface (CSSI) allows the radio frequency (RF) components of a P25 system and command and control consoles to connect with one another.
- The Fixed Station Interface (FSI) defines how components of a P25 radio system that are fixed in place connect with other components of the system. Dispatcher consoles are typically used to access fixed RF stations, so the CSSI and FSI are interdependent in most applications.

The P25 Compliance Assessment Program (CAP), overseen by the U.S. Department of Homeland Security (DHS), ensures interoperability between the equipment from the various P25 manufacturers. The program allows suppliers to publicly attest to their products' compliance through P25 CAP testing at DHS-recognized laboratories. As proof, suppliers are required

to submit test reports and other documents to confirm the testing. All the documents and lists of compliant equipment are housed on the P25 CAP website.

Also, as public safety agencies adopt broadband services to enhance their data connectivity, P25 systems can interoperate with commercial 4G/5G services. The 3GPP-compliant Inter Working Function (IWF) with authentication anchored on the respective core networks will support P25 and LTE interoperability.

### The Indian market

Analog technology is still prevalent in India, but agencies see the value in investing in digital radio networks and devices when they update outdated equipment. More than 83% of the 2023 LMR terminal shipments in India were for digital technologies. As agencies replace older units and add new terminals to their equipment portfolios, P25 technology makes for a sound long-term investment as P25 radios are rugged and last more than a decade in most situations.

In line with the Indian government's digitalisation plan, Captive Mobile Radio Trunking Services (CMRTS) organisations such as police, fire, and government security are upgrading to digital LMR networks for exclusive use. India is in ITU Region 3 where parts of the 406-470 frequency band and 4.94-4.99 GHz are harmonised for Public Protection and Disaster Relief (PPDR) applications. In addition, parts of the frequency range 806-894 MHz may also be considered for PPDR applications. The UHF and 800 MHz spectrum are a strong fit for P25 technology. PPDR agencies in other regions of the world including North America also use UHF and 800 MHz frequencies, providing a large ecosystem of manufacturers and partners that



provide P25 products.

India has a quickly growing population, and its PPDR services must also grow quickly to ensure there is a safe environment for the country's citizens. Both central (national) police forces and state police forces operate in the country. Both types of agencies have added personnel in recent years, and many rely on technology as a public safety resource to help the forces work as efficiently as possible. Not every police station in India has wireless communications but the trend is improving as more agencies deploy digital LMR systems.

As with most PPDR forces around the world, securing the necessary funding to buy communications equipment can be difficult. In an ideal world, every police officer would have a handheld device, and every police vehicle would be outfitted with a mobile radio. India has made strides in the number of handheld devices and mobile devices available in the field, but adding to the cache of available radios continues to be a priority for most agencies.

## Indian P25 case studies

Two separate police agencies in India recently contracted for new P25 networks from Tait Communications. Rajasthan Police is a state police agency in the capital city of Jaipur, located near the center of India. The law enforcement agency replaced outdated analog technology with one of the largest P25 networks in the country. This upgrade will support thousands of portable, mobile and fixed radios to enhance its operations. Importantly, the trunked radio network also offers enhanced security and reliability. A dispatch system is integrated with the radio technology, which provides man down, lone worker, and location services.

The Bhopal Police, which helps ensure public safety in the capital city of the state of Madhya Pradesh, also updated its legacy mobile radio network with P25 Phase 2 technology. Bhopal, known as the City of Lakes because of the natural and artificial lakes near the city boundary, is the 16th largest city in India. The new P25 system is an end-to-end system including Tait controller and base station infrastructure, along with thousands of portable and mobile radios for use in police vehicles. The police force now has access to enhanced security through the trunked network's voice recording, man

down and lone worker features.

While investing in new digital technology can be expensive, there are alternatives in the market that provide cost-effective solutions. Agencies working with the right partners can ensure that the public money used for technology upgrades maximizes funding to achieve reliable critical communications networks with enhanced coverage and security at reasonable costs. As more natural disasters affect more communities worldwide, the reliability of P25 networks is an additional benefit.

Both Rajasthan Police and Bhopal Police understand the importance of standards-based

digital LMR technology. The upgrades allow police officers to take advantage of mission-critical technology to enhance their daily and incident communications. The agencies have invested in a solution that will serve them for years, while also interoperating with other agencies and technologies.

With P25 gaining popularity across India, more public safety agencies are moving to the standard because of its many benefits. The P25 deployments will enhance interoperability across the country and ensure India's law enforcement personnel can boost safety among the country's citizens and communities. ■

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# Enhancing connectivity on Ho Chi Minh City Metro Line 1 with EPIC DAS

The Ho Chi Minh City Urban Railway is a transformative initiative aimed at modernizing transportation in Vietnam's busiest metropolis. At the heart of this ambitious project is Metro Line 1, a 19.7km rapid transit line featuring 2.6km of underground tracks and 17.1km of elevated rail. Construction began in 2012, and the line was opened in December 2024. Designed to integrate urban communities and support economic growth, Metro Line 1 is set to revolutionize mobility in Ho Chi Minh City. However, ensuring seamless network coverage posed a significant challenge.

As construction progressed, a critical issue emerged: the lack of adequate network coverage across the metro line. Without a robust connectivity solution, passengers would face disrupted communication, unreliable mobile transactions, and limited access to digital services, exacerbating the digital divide among commuters. Additionally, reliable network infrastructure was essential for operational efficiency, from real-time monitoring and security systems to automated ticketing and passenger information services. The challenge was to design a high-performance, multi-operator solution capable of handling high passenger density, diverse frequency bands, and the complex urban landscape.

## Deploying the EPIC DAS System

To address these challenges, Enhanced PROSE Integrated Coverage Distributed Antenna

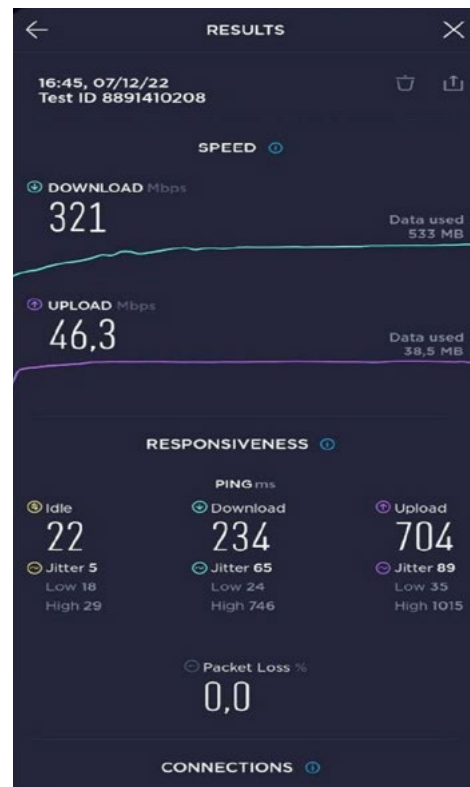
System (EPIC DAS) was deployed, offering an innovative and scalable solution tailored to the metro's infrastructure. Designed to support a comprehensive range of frequencies — including UMTS2100, LTE1800, and LTE2300 — EPIC DAS provided uninterrupted 2G, 3G, and 4G connectivity throughout the metro system.

The first phase of implementation introduced Multiple Input Multiple Output (MIMO) technology for 1800MHz, 2100MHz, and 2300MHz bands, allowing for increased network capacity while mitigating congestion. Three of the country's leading mobile network operators collaborated on the deployment, ensuring multi-operator compatibility and seamless service integration.

A carefully planned hardware configuration was executed, consisting of 12 Central Units (CU), 12 IM2U Modules, 21 Network Expansion Units (NEU), 132 Intermediate Remote Units (IRU), and 14 High-Power Remote Units (HPRU). These components worked in unison to create a high-density, low-latency network architecture optimized for metro transit environments.

## A high-performance, future-ready network

The integration of EPIC DAS into Metro Line 1 exceeded key performance expectations, transforming the metro system into a model of seamless connectivity. Network coverage was significantly enhanced, eliminating previous signal dropouts and ensuring a



consistent user experience for passengers. The synchronized operation of multiple frequency bands across different generations of mobile technology (2G, 3G, 4G) resulted in improved coverage and capacity, creating a harmonized multi-operator ecosystem.

Low-latency data transmission and high-output power reinforced network stability, allowing passengers to access mobile services with unprecedented reliability. The system's compact and energy-efficient design, incorporating natural cooling mechanisms, contributed to sustainable power consumption, aligning with modern energy efficiency standards.

Performance enhancements were evident in uplink signal amplification, expanded cell coverage, and improved network quality, all of which played a vital role in elevating passenger satisfaction. Additionally, the streamlined deployment of EPIC DAS minimized field-testing requirements while providing autonomous remote unit power management, making ongoing maintenance more cost-effective.

The deployment of EPIC DAS on Metro Line 1 represents a significant leap forward in urban network infrastructure. By addressing critical connectivity challenges, the system has redefined the digital experience for both residents and travellers, fostering a more inclusive and technologically integrated transit environment. ■



# Singapore's Mass Rapid Transit (SMRT) network gets future-ready coverage

Since its inception in 1987, the Singapore Mass Rapid Transit (SMRT) network has served as the backbone of the city's public transportation system, carrying millions of passengers annually.

The North-South and East-West Lines (NSEWL), the oldest and most heavily trafficked routes, were in need of a comprehensive modernization to meet growing passenger demands. This renewal project — the largest ever undertaken on a live MRT system — aimed to increase train frequency, enhance passenger capacity, and improve the commuter experience. A key component of this initiative was the deployment of robust cellular connectivity, ensuring seamless mobile communications for passengers across underground platforms and tunnels.

## High-density, multi-operator coverage

To achieve the required connectivity, SMRT selected the JMA Distributed Antenna System (DAS) from JMA Wireless. Designed to deliver uninterrupted, high-capacity mobile coverage, JMA DAS was the ideal solution to overcome the technical challenges of deploying a wireless network across miles of tunnels and 18 underground stations.

Deploying a wireless system within the NSEWL lines presented multiple challenges. The underground infrastructure, constructed primarily from concrete and steel, severely obstructed external cellular signals, creating coverage gaps across stations and tunnels. Additionally, densification — where large numbers of passengers simultaneously demand high-bandwidth mobile connectivity — was a major issue during peak commuting hours.

The project required a versatile solution that could support multiple mobile operators, diverse frequency bands, and next-generation network technologies. Furthermore, logistical constraints made deployment highly complex. The transit system operates nearly 24/7, leaving only a four-hour window each night for installation work. This severely restricted project timelines and required meticulous coordination between engineering teams and SMRT scheduling authorities to ensure efficient deployment without disrupting daily operations.

## JMA DAS delivers scalable connectivity

The JMA DAS has enabled seamless mobile communication across the NSEWL network. This modular system integrates multiple wireless technologies, including DCS, LTE, and UMTS, while supporting four frequency bands: EGSM900,

DCS1800, UMTS2100, and LTE2600. Designed for future-proof scalability, the system was initially deployed with 3G capability, followed by 4G integration in phase two. Its adaptive architecture ensures a smooth transition to 5G without requiring major infrastructure overhauls.

The network infrastructure consists of a Master Unit (MU), which consolidates various wireless technologies and bands, linked via optical fibre to 33 four-band low-power Remote Units (RU). A total of 36 sectors were deployed, with 18 dedicated to tunnel coverage and 18 allocated to underground stations. The system's fibre-optic backbone significantly reduces the amount of fibre cabling required — cutting fibre needs by over 50% compared to conventional systems — resulting in lower costs and faster deployment.

Each Remote Unit was custom-engineered with separate Rx (receive) and Tx (transmit) ports, optimizing signal strength, data throughput, and coverage reliability. Additionally, leaky coaxial cables and strategically placed antennas were implemented to ensure uninterrupted cellular coverage across tunnels and enclosed underground spaces. The multi-operator configuration seamlessly integrates Singapore's leading mobile providers — SingTel Mobile, MobileOne, and StarHub — ensuring a unified and high-performance network for all commuters.

Despite the strict time constraints on installation, the project was executed through two specialized teams, each comprising installers, supervisors, and SMRT safety officers. This coordinated approach allowed the DAS infrastructure to be deployed efficiently within the limited nightly work windows.

## Future-ready transit

Since its deployment, JMA DAS has successfully delivered seamless mobile connectivity across Singapore's busiest transit corridors, supporting millions of daily commuters. The system maintains low-latency, high-bandwidth connections, even during peak congestion periods, enabling passengers to enjoy uninterrupted voice calls, high-speed data access, and real-time mobile transactions.

The project's phased rollout allowed for the smooth introduction of 3G and 4G services, with built-in 5G readiness ensuring long-term scalability. Unlike traditional DAS systems that require significant infrastructure replacement for upgrades, the JMA DAS modular design enables future network enhancements with minimal additional investment.

Beyond technical performance, the solution delivers operational and economic efficiencies by minimizing fibre deployment costs, streamlining field testing, and enabling remote unit power autonomy. The high-reliability architecture ensures network continuity while reducing maintenance requirements, reinforcing SMRT's commitment to an enhanced passenger experience.

Moreover, as 5G adoption accelerates, the scalable architecture of JMA DAS ensures that Singapore's MRT remains at the forefront of next-generation connectivity, paving the way for advanced mobile services, smart transit applications, and a more connected passenger experience. ■





# Reshaping telecom investment in a next-generation world

Vincenzo Basile and Fabio Bianchi, Arthur D. Little



**T**elcos face a key business challenge – greater competition is bringing down revenues while they are under pressure to invest more to meet customer needs. Over the long term, this is financially unsustainable. Essentially, traditional telco efficiency programs that focus only on cost reduction through analyzing costs and budgets, redesigning processes, and adopting automation are no longer enough in a next-generation world. How can telcos reshape investment to meet changing needs, wherever in the world they operate?

## Understanding the pressures on operators

Four key factors are widening the gap between revenues and required investment:

### 1. Regulatory pressure

Regulatory interventions are increasing to support various objectives, such as creating more competitive markets with lower customer costs and providing with higher-quality services and experiences.

### 2. Growing technology complexity

The rapid evolution of technology is adding new layers and network components, increasing the need for capital expenditure (CAPEX) spending to compete with rivals.

### 3. Market hyper-competition

Competition is lowering average revenue per user as operators offer generous deals to attract customers, with consequent low margins reducing resources to reinvest in the network.

### 4. Mounting data traffic volumes

Data traffic is constantly growing, due to streaming, 5G devices, and fixed wireless access (FWA). Huge capacity expansions are required to maintain the same quality of service, necessitating higher CAPEX for investments and operating expenditure (OPEX)

spending on maintenance.

## Taking a new approach to telecoms investment

To bridge the gap, operators need to take a new approach, starting with a focus on new metrics. When prioritizing network investments, operators have traditionally focused on metrics such as speed and coverage, as these are seen as vital to customer retention. Although meeting customer needs is crucial, two other critical key performance indicators (KPIs) are now equally important when making investment decisions:

### 1. Network reliability and quality

Currently, customers are generally satisfied with modern networks that deliver speeds of 50Mbps or higher and offer consistent coverage, so they are unlikely to perceive or value any future improvements. Operators should focus on reliability and quality, shifting from coverage and speed to pursuing network resilience based on achieving operational and infrastructure-led excellence and running service-centric operations.

### 2. Network sustainability

The telco sector is seeing an increasing focus on sustainability from stakeholders, including investors and regulators. Operators must therefore ensure that their technology investments support this objective. To deliver this, many telcos have modified their CAPEX appraisal process, for instance, setting aside ring-fenced funds for projects that offer sustainability benefits.

## A framework to reshape telecom investment

These factors mean that operators need to put in place a new framework to guide spending to ensure ROI. There should be less emphasis on

spending reductions and more on targeting investments geographically and over time. This framework should be built on five levers:

### 1. Geolocated tailored services

Instead of a blanket approach to network CAPEX, operators need to evaluate their spending on a geographical basis, centered on the three KPIs of commercial drivers (population density, GDP and market share), technology drivers (mobile voice, mobile data, fixed line voice and data), and customer experience drivers (complaints and churn).

They must also evaluate their complete service portfolio on a geographical basis to meet the diverse and varied demands of their region. They should tailor the quality of service (including throughput and latency) and the portfolio itself at an access node level (i.e., the mobile site). This analysis should be based on a financial evaluation of required CAPEX/OPEX versus expected revenues generated by the forecast customer base, competition, and customer requirements and expectations at a local level.

### 2. Technology transformation

Technology surely drives costs up; however, it can also bring costs down. Automation, AI adoption, and equipment modernization are fundamental levers to speed up processes, reduce operational costs, and improve customer experience. An emphasis on adopting modular, reusable, cloud-native, and AI-ready architectures supports scalability and modernization for both developing and developed markets.

### 3. Vendor management

Effectively managing vendors is a classic approach to delivering cost savings. However, often more can be done. Well-structured sourcing and negotiation strategies built on a thorough

analysis of strengths, weaknesses, opportunities, and threats (SWOT) should form the foundation of strong vendor management, especially when operators must rebalance costs and revenues.

### 4. Infrastructure as a service

Many mobile and fixed operators have implemented physical or virtual company separations, splitting themselves into a network company (NetCo) and a service company (ServCo). The NetCo can generate new revenue streams by offering its infrastructure as a service more widely to other telcos and non-telcos.

### 5. Building partnerships

Establishing partnerships with vendors or market players enables operators to create an ecosystem where they can cost-effectively offer a wider portfolio of services to their customers or increase volumes to decrease costs through economies of scale. Opening their network to other companies through APIs allows operators to create an ecosystem where third-party developers and businesses can leverage their infrastructure, leading to increased innovation, expanded service offerings, and enhanced customer experiences.

## A next-generation approach to telecom investment

Telcos need to rethink their business models and quickly adopt a new, bottom-up, data-driven framework to address the widening gap between stagnant revenues and increasing investments.

That means they need to take a more holistic approach, built from the bottom up and focused on local needs. This will enable them to stay within budgets, better manage costs and deliver for customers. ■

## Amdocs streamlines fibre network deployment

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

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

Selected benefits for service providers include 30% faster deployment times for fibre rollouts; reduction of cabling and trenching by 10% or more; significant reduction in network management

cost by seamlessly integrating existing systems, replacing manual processes and reducing errors and rework.

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

"As increasing their share of the growing broadband market with fibre offerings becomes increasingly critical to service providers around the globe, our fibre solutions will help service providers manage fiber deployment from inception to operations," said Anthony Goonetilleke, Group President of



Technology and Head of Strategy at Amdocs. "Service providers know that seamless connected experiences matter, and broadband is often critical to creating those experiences. Our enhanced offering,

including IQGeo's advanced network management capabilities, will help service providers achieve differentiated experiences for their customers more quickly and efficiently."

## mmWave testing made simpler with Anritsu

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

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

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

An image response can occur when measuring with external mixers lacking preselectors to eliminate unwanted signals, causing erroneous



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

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

## Smart Label redefines convenience and accuracy in location tracking

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

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

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

needs and allow users to manage, monitor, and ensure the integrity of their assets at every stage of their journey, whether stationary or on the move.

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





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

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

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

As demand for 5G-enabled FWA continues to surge, MNOs face

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

theStation provides operators with deep network insights, enabling accurate, proactive decisions on coverage and capacity expansion. Operators can access detailed data on network performance in the home, including Wi-Fi clients, usage patterns, speed and latency – providing proactive support and

direct customer communication through the101's touch screen. This visibility gives MNOs comprehensive control over the entire FWA ecosystem, anticipates capacity needs, and delivers high-speed connectivity for both residential and commercial customers.

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

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

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



## Compact GNSS receiver modules cut SWaP

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

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

It opens doors to reliable high-accuracy positioning for a variety of devices that require components with minimal size, weight or power, including commercial UAVs,

compact industrial robots, high-performance hand-held devices and other high-volume compact professional equipment.

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

precision positioning to an ever-expanding array of industrial and professional applications."

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



### Look out for...

#### Need for speed

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

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

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

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

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

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

# Angola Cables and Megaport partner for enhanced connectivity



Angola Cables has teamed up with Megaport to deliver an innovative dual arrangement enabling customers to connect to over 930 data centres and more than 300 cloud nodes worldwide. This partnership leverages the Megaport global network underlay in conjunction with the extensive international infrastructure of Angola Cables.

Through this collaboration, Angola Cables and Megaport will establish interconnections at key global hubs including New York, Miami, and London, allowing users on the Angola Cables network to access Megaport's vast ecosystem of data centers, service providers, and

cloud solutions.

Mahen Naidu, Head of Business Solutions at TelCables South Africa, a subsidiary of Angola Cables, expressed enthusiasm about the partnership. He remarked that the integration of Megaport's global Software Defined Network (SDN) represents a significant advancement for digital connectivity across Africa. Naidu emphasized that the unique configuration of their subsea cable and partner networks creates a "super corridor" that facilitates the seamless transit of data and traffic between East and West.

"The agreement with Megaport offers multiple benefits for businesses looking to connect and expand

their operations, whether in South America, the USA, Europe, or Asian markets," said Naidu. "The simple and efficient interface allows users to access financial institutions, ranging from major stock exchanges to international banking and investment houses. The options are nearly limitless — whether it's an academic institution connecting with a learning partner in the US or a business seeking expansion into Singapore. The low-latency connections can be established in minutes through Megaport's user-friendly platform, allowing companies to connect and scale instantly."

"Our extensive SDN simplifies connectivity for enterprises seeking

to interconnect across data centers, cloud services, AI, internet exchanges, and over 300 service providers on five continents," said Matt Simpson, Executive Vice President of Business Development and Global Channel at Megaport. "The reach and capabilities of our global NaaS platform alleviate many traditional access challenges, enabling businesses to address technical resources, capital investments, performance, and network security with ease."

The Megaport global ecosystem affords customers direct access to advanced platforms such as the AI Exchange and Financial Services Exchange, further augmenting their operational capabilities.

## Wim launches all-digital MNO in Mexico



Wim has announced the successful launch of an innovative all-digital, cloud-native mobile network operator (MNO) in Mexico.

Built entirely on Amazon Web Services (AWS), Wim signifies a transformative shift in the telecommunications landscape, offering not just connectivity, but a comprehensive digital lifestyle platform tailored for the modern consumer.

Wim's vision revolves around creating an extensive ecosystem of digital experiences that expand well beyond traditional mobile services. By harnessing the power of AWS, Wim seamlessly integrates popular streaming platforms like Prime Video, Paramount+, VIX, and Deezer into its service offerings, redefining mobile subscriptions as gateways to entertainment, community, and a variety of digital services.

In addition to connectivity, Wim enhances its offerings with exclusive benefits, including LoungeKey access for airport lounges and BigBox, which features curated lifestyle products and experiences.

Launched within just four months, Wim's cloud-native architecture on AWS facilitates unparalleled agility and innovation. This robust platform allows for the

swift integration of new services and features, enabling Wim to continuously adapt its digital experiences to meet evolving consumer expectations. Customers enjoy the flexibility to easily customize their service packages through a user-friendly app and AI-driven interfaces, with seamless integration across network components, business processes, and operational support services.

Looking forward, Wim and AWS are setting an ambitious agenda to further elevate the digital experience through machine learning and generative AI technologies. Building on their established integration of a generative AI chatbot for customer support and AI algorithms for fraud detection, their roadmap includes several significant initiatives. This will feature AI-driven personalization within the Wim app, delivering tailored service recommendations based on individual user behavior, as well as employing AI for network optimization to improve service quality.

Additionally, Wim intends to explore the use of generative AI for crafting compelling marketing content and to investigate AI-powered tools designed to expedite software development.

## Historic decline for telecom equipment revenues



Early findings from the Dell'Oro Group reveal a significant downturn in global telecom equipment revenues across six key categories — broadband access, microwave and optical transport, mobile core network (MCN), radio access network (RAN), and service provider (SP) router and switch.

In 2024, these revenues dropped by 11% year-on-year, marking the largest annual decline in over two decades, with a similar decline of over 20% last recorded in 2002. Over the past two years, total equipment revenue has decreased by 14%.

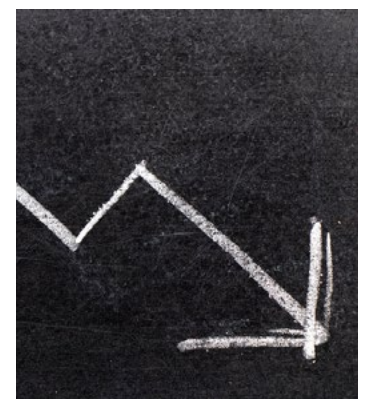
This decline was observed across various telecom segments and was attributed to several factors including excess inventory, a challenging macroeconomic environment, and tough comparisons against 5G rollout periods. While the fourth quarter of 2024 saw growth in North America and Europe, the Middle East, and Africa (EMEA), which helped stabilize the market, demand remained weak in the Asia Pacific region, particularly in China.

The decline varied among the six telecom segments. Notably, optical transport, SP routers, and RAN experienced significant contractions, shrinking by a collective 14%. Microwave transport

and MCN saw moderate declines in the low single digits, while revenues from broadband access remained relatively stable.

Regional trends indicated a mixed outlook in 2024. All five regions — North America, EMEA, Asia Pacific, China, and the Caribbean and Latin America (CALA) — experienced slow growth, yet the broader Asia Pacific region faced the steepest decline due to adverse conditions in China and other areas.

Analysts anticipate market conditions to stabilize in 2025, although they expect it will continue to be a difficult year for the telecom equipment sector. Projections suggest that global telecom equipment revenues across the six tracked sectors will likely remain flat in 2025.





## Telefónica to sell Colombian unit to Millicom for \$400 million

Spain's Telefónica has reached an agreement to sell its 67.5% stake in its Colombian unit to Millicom in Latin America, for \$400 million.

This transaction has been anticipated for some time, with reports as early as July 2024 indicating that Telefónica had signed a non-binding agreement with Millicom to explore the potential deal.

Telefónica has indicated that this move aligns with its strategic intent to gradually reduce its exposure to Latin American markets. The company has been actively divesting from various Latin American operations, citing lower returns compared to capital costs. Instead, Telefónica aims to concentrate on its businesses in Spain, Brazil, the UK, and Germany.

Newly appointed Chief Executive Marc Murtra has stated that the company intends to complete a strategic review by the end of this year. Recent activities have included the sale of its Argentine unit last month, as well as reports of initiating the sale process for its units in Mexico and Peru earlier this month.

In addition to these divestitures, Telefónica still operates in Chile, Ecuador, Uruguay, and Venezuela. However, the exits from Argentina, Mexico, and Colombia substantially reduce its presence in Latin America, where it has also divested its operations in El Salvador and Costa Rica.

This strategic pivot underscores Telefónica's commitment to focus on regions with stronger growth prospects and improved returns, reflecting broader trends in the telecommunications industry as companies reassess their geographical portfolios.

## Netmore Group expands into Brazil and South America with Everynet acquisition



IoT network operator Netmore Group has announced its strategic expansion into Brazil and the broader South American markets following the successful acquisition of Everynet, an operator specializing in neutral-host, low power wide area (LPWA) networks.

This expansion is expected to unlock new market opportunities for Netmore while simultaneously catering to the increasing demand for digital transformation across critical sectors such as utilities, agriculture, smart cities, and transportation and logistics.

As Netmore establishes a

more substantial presence in the region, customers in Brazil and South America will gain access to enhanced, best-in-class low power wide area network (LPWAN) coverage, along with improved product offerings. The company's enhanced operations will focus on expanding LPWAN coverage areas through collaborations with existing and new infrastructure partners.

Additionally, Netmore plans to introduce its network-as-a-service (NaaS) and platform-as-a-service (PaaS) solutions, which will offer businesses flexible and scalable options for IoT connectivity and network deployment. This shift is

designed to accommodate various businesses of all sizes and sectors, promoting a more integrated approach to IoT solutions.

The company's capabilities will also feature unique network deployment and densification options, offering SLA-backed, carrier-grade network services tailored for critical infrastructure and essential business applications.

With this expansion, Netmore Group aims to not only reinforce its market position but also catalyze the digital transformation journey across South America's critical sectors.

## Wireless Logic and Thales join forces on secure IoT connectivity



Wireless Logic has announced a strategic partnership with Thales to provide secure, scalable, and resilient IoT connectivity across diverse global regions.

This collaboration will see the integration of Thales' Adaptive Connect — an advanced GSMA SGP.32-based eSIM solution designed for seamless IoT connectivity management — into Wireless Logic's carrier-grade IoT network, Conexa. This integration allows Thales' customers to deploy and manage IoT fleets effortlessly, ensuring a convenient 'out of the box' experience. By leveraging partnerships with leading mobile network operators, Conexa enhances enterprise IoT deployment flexibility while ensuring secure and reliable performance on a global scale.

Wireless Logic will supply a bootstrap profile, also known as a provisioning or default profile, which will be preloaded onto Thales' eSIMs during manufacturing. This allows IoT devices to gain instant global connectivity through Wireless Logic's Conexa and its network of roaming partners upon activation. This approach ensures optimized device performance, adaptability to evolving coverage requirements, and compliance

with market regulations.

"With Wireless Logic as our connectivity partner, we not only acquire scalability and performance but also the flexibility necessary for complex, cross-border IoT deployments. Their proposal strategically aligns with our goals and competitive approach. More importantly, their expertise and proven track record reinforce our commitment to technical excellence. Built on the latest GSMA SGP.32 standard, our joint solution is essential for anyone managing IoT connectivity across diverse regions," said Guillaume Lafaix, VP Connectivity Solutions at Thales.

"Combining our expertise in IoT connectivity with Thales' advanced IoT eSIM technology allows us to

assist customers in overcoming the challenges of scaling their IoT solutions and deployments. This partnership streamlines operations, enhances network performance, and strengthens our confidence that together we can help customers navigate the complexities of scaling their IoT deployments. We are honored and excited for the journey ahead," said John Dillon, Managing Director of Product and Marketing at Wireless Logic.

This collaboration signals a significant step forward in addressing the growing demands of IoT deployment, enabling businesses to achieve seamless and secure connectivity while expanding their reach in an increasingly interconnected world.



# Telespazio and ABS explore corporate connectivity with new C-band solutions



Telespazio and Agility Beyond Space (ABS) are taking their partnership to new heights by launching innovative managed C-band service solutions specifically designed for the Brazilian corporate market.

By combining Telespazio's robust ground infrastructure with ABS's extensive satellite capacity, this collaboration aims to deliver high-performance, customized connectivity tailored to meet the unique needs of enterprises.

In 2024 alone, the partnership has already made strides with several strategic projects, including a crucial air traffic control connectivity initiative and

the upcoming launch of a teleport facility in Maricá, Brazil. With these advancements, Telespazio and ABS are set to broaden their capabilities, catering to businesses that require scalable and application-specific satellite solutions.

C-band connectivity projects often necessitate personalized services instead of one-size-fits-all offerings. This latest service commitment ensures dependable and adaptable connectivity, specifically designed to address enterprise and mission-critical requirements spanning various industries.

"We are excited to embark on this next chapter of our partnership with ABS, empowering businesses

in Brazil with enhanced control over their satellite connectivity," said Marzio Laurenti, CEO of Telespazio. "By leveraging ABS's satellite capacity alongside our ground infrastructure, we are poised to deliver solutions that keep pace with the evolving demands of corporate customers."

"As ABS and Telespazio continue to refine our partnership, we remain dedicated to providing high-quality, adaptable satellite services that businesses can depend on. This collaboration guarantees that companies operating within Brazil have access to customized connectivity solutions tailored for enterprise applications, mission-

critical operations, and network expansion," said Ramsey Khanfour, Chief Commercial Officer of ABS.

This latest initiative underscores the commitment of both Telespazio and ABS to innovation and customer-centric satellite solutions, further solidifying the growth of Brazil's corporate connectivity ecosystem.



## Orange partners with Telesat for enhanced non-terrestrial connectivity



Orange has announced a multi-year partnership with Telesat to provide non-terrestrial connectivity services leveraging Telesat's fleet of low Earth orbit (LEO) satellites. As part of this deal, a Telesat Lightspeed Landing Station will be established at Orange's teleport facility in Bercenay-en-Othe, France.

The station will utilize Orange's existing ground infrastructure to

connect with its point of presence in Paris through the Orange Wholesale International Private Line (IPL), thereby facilitating seamless integration of satellite connectivity into Orange's services.

Under this partnership, Orange has committed to integrating Telesat's Lightspeed LEO satellite services into its global connectivity offerings, aimed at businesses and telecom

operators. The Telesat Lightspeed Carrier Ethernet services will enhance enterprise-class connectivity with features such as a Zero-Trust Security Architecture, providing real-time configuration and monitoring capabilities. This autonomy allows telecom operators to manage services dynamically, redirecting capacity as required without needing intervention from satellite operators.

## Hotspot Network Limited plans for 312 solar-powered sites



Hotspot Network Limited is preparing to roll out 312 solar-powered telecom sites nationwide, aiming to enhance its network amidst ongoing challenges related to power supply.

The announcement follows the signing of a Memorandum of Understanding (MoU) with a consortium led by Clear Blue. This consortium also includes Empower New Energy, a specialist in financing clean energy projects, and Netis, known for its expertise in telecom infrastructure management.

By harnessing solar power, Hotspot aims to improve telecom service availability in rural regions where conventional electricity access is scarce, while also lowering energy costs typically associated with diesel fuel.



## O2's Call Defence technology cuts down on scam calls for consumers



In November 2024, O2 (Virgin Media) implemented Hiya's innovative AI-powered scam detection service, dubbed 'Call Defence,' as a proactive measure to combat fraud and nuisance calls. Since its launch, the service has marked a remarkable impact, flagging over 150 million 'suspected' scam and spam calls, with numbers now surpassing 50 million per month.

This technology leverages Adaptive AI to analyse call number behaviour in real-time. By determining whether an incoming call may be a scam or spam, the service alerts customers before they answer.

As a result, calls tagged as 'suspected scam' are now answered 42% less often and tend to be 89% shorter than unflagged calls, illustrating a significant reduction in engagement with potentially harmful calls.

The Call Defence technology has been automatically rolled out to Android users and iPhone (Apple) customers running the latest iOS v18 and above. Customers with older software versions may not be able to fully utilize the features of this service, making an update essential for complete protection.

"With more than 50 million calls suspected of being nuisance and scam calls now being flagged

every month, we're empowering O2 customers in the fight against fraud, arming them with important information when deciding whether to pick up the phone," said Murray Mackenzie, Director of Fraud Prevention at VMO2.

This AI service forms part of O2's broader strategy to enhance customer safety, which includes blocking over 168 million scam texts in the past two years. Mackenzie urges customers to actively participate in this fight against fraud by reporting scam calls and texts through the free service via 7726, noting that each report helps refine their systems to better thwart scammers.



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