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<p>08 COVER INTERVIEW</p>		<p>17 eSIM</p>
	<p>12 CASE STUDIES</p>	

IN THIS ISSUE

- 04 EDITOR'S COMMENT**
George Malim on SIMbiotic relationships
- 05 COMPANY NEWS**
Qualcomm snaps up Sequans 4G tech, Memfault joins STMicroelectronics partner programme
- 06 MARKET NEWS**
China targets 3.6 billion mobile IoT connections, Oracle integrates AT&T IoT connectivity into enterprise communications platform

08 COVER INTERVIEW
Stéphane Fund, the CEO of Trasna details how the company is addressing the demands of the IoT market, following its acquisition of Workz

12 CASE STUDIES
The latest deployments from iONLINE, 1oT, Monogoto and Virgin Mobile MEA

17 eSIM
Antony Savvas asks the market if the jury is still out on how eSIM uptake will increase?

20 MWC LAS VEGAS EVENT PREVIEW
Our preview of MWC Las Vegas 2024

22 EVENTS DIARY



Cover sponsor: Trasna is focused on technology leadership providing semiconductors and its related software and services solutions for IoT mass deployment. The company combines innovation in semiconductor design, secure software, edge computing, AI and blockchain integration to deliver the most innovative and optimised System-On-Chip (SOC) to take advantage of a huge IoT opportunities facilitated by the emergence of 5G in which networks can meet the communication needs of billions of connected objects and where NB-IoT is part of 5G specifications. www.trasna.io


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The relationship between IoT and cellular connectivity is SIMbiotic

IoT has always relied on cellular connectivity to provide wire-free, secure, ubiquitous coverage to support IoT use cases. The technology is ideal for the needs of IoT devices but connecting to cellular networks has always been complex, fragmented and inflexible. This puts IoT in a chicken-and-egg situation in which complicated connectivity requirements slow time to market and impede growth



George Malim,
managing editor

The arrival of the massive IoT era has put immense pressure on the current situation as it has become increasingly recognised that current SIM regimes are a barrier to introduction of new use cases and hyperscale growth in others. This isn't news, though. The marketplace has been struggling to simplify the SIM situation for almost a decade, riding on innovations such as embedded SIM (eSIM) and, more recently, integrated SIM (iSIM).

The promise these technologies have, in terms of enabling SIM functions to be installed into devices at the point of manufacture before connecting to a mobile operator at the point of deployment, provides a glimpse of a simplified future. Ideally, a device should be turned on and automatically connect to the optimum available connectivity. Today, that's a step too far and vested interests, existing contractual obligations and even the regulatory environment exert a range of sophisticated pressures on IoT organisations.

Managing global connectivity is still complex, although connectivity management platforms have been developed to abstract much of the burden away from organisations that deploy IoT offerings. Flexibility is also not uniformly possible with much depending on commercial agreements, operator and regulator policies, and full awareness of the options continuing to elude much of the market place.

The virtuous circle of simple to access, global connectivity fuelling increased volumes of connected devices has substantial bottlenecks that new SIM technologies can ease. This faster, easier, more efficient and ultimately simpler to change SIM landscape matches the developmental priorities of IoT devices. The two are symbiotic and the more the alignment is recognised the more that easy connectivity will fuel uptake of IoT offerings and foster innovation that brings huge hyperscale use cases to life.

It's time for IoT organisations to embrace the SIM revolution and stimulate deployments with simple cellular connectivity.

Enjoy the magazine!

George Malim

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Qualcomm to acquire Sequans' 4G IoT technologies in new deal

Qualcomm and **Sequans Communications** have entered into a definitive agreement for Qualcomm to buy Sequans' 4G IoT technologies. The acquisition includes certain employees, assets and licences. The transaction is subject to customary closing conditions, including French regulatory approval.

Sequans is a designer, developer and supplier of cellular semiconductor solutions for massive and critical IoT markets. The addition of Sequans' 4G IoT technologies to Qualcomm's IoT solutions will strengthen Qualcomm's Industrial IoT portfolio.

"Digital transformation is being driven by high-performance processing and intelligence at the edge, positioning Qualcomm for growth in one of the largest addressable opportunities," said Nakul Duggal, the group general manager, automotive, industrial and embedded IoT, and cloud computing at Qualcomm Technologies. "This acquisition of Sequans' 4G IoT technology adds to Qualcomm's broad portfolio, further strengthening our offerings across enterprise customers of low-power solutions for reliable, optimised cellular connectivity for Industrial IoT applications."

Sequans will retain full rights to continue to use the technology commercially, via a



Georges Karam, Sequans

perpetual licence agreement, supporting the company's ability to expand its 4G business and develop its 5G portfolio.

"We are excited to announce this important transaction with Qualcomm," said Georges Karam, the CEO of Sequans. "This agreement underscores the value of our 4G IoT technology and provides us with significant capital to continue to further invest in our IoT business ambitions. We are dedicated to pushing the boundaries of innovation and providing cutting-edge 4G/5G semiconductor solutions that meet the advancing needs of AI-powered Internet of Things applications. This transaction is expected to provide us the resources and flexibility to enhance our product offerings and expand our market presence." ■

Memfault joins STMicroelectronics partner programme to accelerate customer time-to-market

Memfault, a provider of an embedded device observability and over-the-air (OTA) platform, has announced that it has joined the ST Partner Programme, allowing **STMicroelectronics** customers that develop embedded IoT devices to gain visibility into device performance and reliability, proactively identify issues and quickly push targeted fixes out to devices.

Memfault equips engineering and product teams with critical insights into real-world product performance, such as firmware stability, battery life and connectivity. Its automatic diagnostic data extraction, aggregation, analysis and notification capabilities improve issue detection and shorten resolution time from days to minutes, the company claims.

"Memfault's extensive experience and specialised tools uniquely position us to support STMicroelectronics' customers right from the start," said François Baldassari, the CEO of Memfault. "Our solution supports embedded engineers and developers in remotely debugging issues, deploying OTA firmware updates and continuously monitoring fleets of connected devices at scale, enabling them

to make better products faster. This capability extends throughout the entire product lifecycle, from initial development to deployment."

Memfault works closely with multiple ST customers and can support any IoT device configuration. Memfault has a well-established integration with STM32 chips that is currently being used by many customers around the world. ■



François Baldassari, Memfault

News in Brief

Deutsche Telekom IoT joins Bridge Alliance

Deutsche Telekom IoT has joined **Bridge Alliance**, a business alliance of 35 mobile communications companies in Asia Pacific (APAC), the Middle East, Africa and now Europe. Bridge Alliance provides connectivity and integrated value-added services, including IoT/M2M, to its members. The cooperation claims to open the 'greatest possible flexibility' for both sides to meet individual customer requirements in an international environment.

Deutsche Telekom, through its Deutsche Telekom IoT subsidiary, is the first European telecoms company in the alliance. Its IoT subsidiary is part of the business customer activities within T Business. By joining the alliance, Deutsche Telekom can now offer global companies easy access to the APAC region. ■

Sateliot launches four satellites for IoT connectivity

Sateliot has successfully launched four additional satellites as part of its 5G narrowband-IoT (NB-IoT) non-terrestrial network (NTN) constellation. These satellites, designed to extend the coverage of mobile telecoms operators to 100% of the planet, were deployed on the **SpaceX** Transporter-11 mission. The launch took place on 16 August aboard a Falcon 9 rocket from Vandenberg Air Force Base in California, USA.

"This launch propels us into a new phase of development," said Jaume Sanpera, the CEO and co-founder of Sateliot. "Not only will we begin generating revenue, but we will also position Spain as a global leader in IoT connectivity." ■



News in Brief

Smart meters evolve from analogue to digital

In a report titled, ‘Electricity Smart Meters: Government policies and sustainability initiatives will drive 2.1 billion connections in 2033’ **Transforma Insights** estimates that the total number of electricity smart meter devices will grow to reach 2.1 billion in 2033. The firm says smart metering systems either use wireless communication options or fixed wired connections such as powerline carrier (PLC). A wide range of different wireless communication options have been used, such as Wi-Fi, RF mesh networks, LoRa, Wize, Zigbee, NB-IoT, traditional cellular communication technologies (2G/3G/4G) and Wi-SUN.

Technologies such as PLC and RF mesh are currently the most common primary communication technologies with a share of 60% of devices shipped in 2023. The vast majority of the remaining new devices use 5G massive machine-type communication (mMTC) (including NB-IoT and LTE-M) and non-mMTC LPWA (including, for example, LoRaWAN) as their primary means of communication. In 2023, 5G mMTC had a share of 17%, non-mMTC LPWA had a share of 10%, 4G had a share of 9% and short range had 2%. In 2033, 5G mMTC (share of 32%), LPWA non-mMTC (30%) and PLC and RF-Mesh (30%) will be the pre-eminent means of connectivity for new devices. ■

Remote patient monitoring to grow at 12.8% CAGR, reports Berg Insight

Berg Insight has reported that the number of remotely monitored patients reached 76.7 million worldwide in 2023 as the market acceptance continues to grow in several key verticals. This number includes all patients enrolled in mHealth care programmes in which connected medical devices are used as a part of the care regimen. Connected medical devices used for various forms of personal health tracking are not included in this figure. Berg Insight estimates that the number of remotely monitored patients will grow at a compound annual growth rate (CAGR) of 12.8% to reach 140.1 million by 2028.

The three main applications are monitoring of patients with sleep therapy devices, glucose level monitoring of patients with diabetes and monitoring of patients with implantable cardiac rhythm management (CRM) devices. Sleep therapy is by far the most connected segment, dominated by **ResMed**. In 2023, approximately 32.2 million sleep therapy patients were remotely monitored, which has more than

doubled since 2018. The growth is driven by the compliance monitoring requirements introduced in the US and across European countries.

Glucose level monitoring has grown in the last few years and is now the second largest segment with 12.6 million connections at the end of the year. The growth is driven by the increased adoption of continuous glucose monitoring (CGM) systems from providers such as **Abbott** and **Dexcom**. Other device categories include ECG, telehealth, medication compliance, blood pressure monitors and others. The fastest growing market segments in the next five years are anticipated to be remote ECG monitoring and medication compliance monitoring.

“With advancements in AI and machine learning, mHealth platforms are evolving from monitoring tools to comprehensive systems that assist in diagnosing and treating patients, paving the way for more effective healthcare”, said Vatsala Raina, an IoT analyst at Berg Insight. ■

China targets 3.6 billion mobile IoT connections by 2027

China’s Ministry of Industry and Information Technology has unveiled a plan to push the development of the mobile Internet of things (IoT), aiming to boost the sector’s supply, innovation capabilities and industrial value. By 2027, China will strive to further improve its mobile IoT ecosystem, with the number of mobile IoT terminal connections expected to exceed 3.6 billion, according to the plan. The country expects to support the establishment of more than five mobile IoT industrial clusters and set up over ten mobile IoT industry demonstration bases by 2027, it said.

The plan outlined four key tasks, namely strengthening the foundational IoT network, enhancing industrial innovation capacity, boosting the integrated application of smart technologies and fostering a favourable development environment. China will promote the

application of mobile IoT in fields such as intelligent connected vehicles, healthcare and smart homes, according to the plan.

For intelligent connected vehicles, it said efforts will be made to drive the application of mobile IoT in scenarios like driving monitoring and autonomous driving, and realise functions like information exchange and sharing, complex environment perception and intelligent decision-making.

The ministry said it will also work to accelerate the integration of mobile IoT with key industries to support their digital transformation and new industrialisation. By the end of July this year, the number of mobile IoT connections in China neared 2.55 billion, accounting for 59% of China’s total mobile terminal connections, official data showed. ■



Swisscom Broadcast and Nokia launch drones-as-a-service network in Switzerland

Swisscom Broadcast has selected Nokia to deploy a nationwide drones-as-a-service network across Switzerland. 300 Nokia Drone-in-a-Box units are planned for deployment to enable emergency response, perimeter protection and infrastructure inspection, which will help keep public safety workers safe. The companies will continue cooperating with competent regulatory bodies to ensure that operations comply with regulatory frameworks, especially from spectrum and aviation safety standpoints.

This will be the second nationwide Nokia Drone Networks project after Belgium's Citymesh deployment. It will support Switzerland's public safety and Industry 4.0 efforts and highlight Nokia's strength in modernising digital infrastructure projects and utilising mission-critical industrial edge computing (MXIE) with the support of 3GPP technologies for beyond visual line of sight (BVLOS) autonomous operation.

Public safety agencies in Switzerland will tap into the nationwide drone network by requesting a drone flight, similar to a ride-sharing service, from Swisscom Broadcast. They will also be backed up by a service portfolio with expertise, compliance, data collection and analysis of the collected data from Nokia and Swisscom Broadcast. The deployment is expected to be available in all areas of Switzerland.

"We are pleased to select Nokia as a partner for this important infrastructure project in



Raghav Sahgal, Nokia

Switzerland. Together, we can speed up the go-to-market of our Drones-as-a-Service offering to our customers in the industrial and public safety landscape in Switzerland," Dominik Müller, CEO at Swisscom Broadcast, said in a media statement. The integration of our existing People Density Tool and our Drone Operations expertise with Nokia's industrial grade hardware in combination with an open and future proof Software architecture is an important key to support such large-scale projects."

"We are proud to partner with Swisscom Broadcast, a true innovator in Drones-as-a-Service operation, for this important project to establish a nationwide Drones-as-a-Service network in Switzerland," said Raghav Sahgal, president of cloud and network services at Nokia. "Nokia's Drone Networks solution enables large-scale projects as it incorporates our mission-critical industrial edge (MXIE) technology to power its advanced computing functions and software. It will undoubtedly help Swiss enterprises gain access to a superior Drones-as-a-Service offering to enhance worker and public safety." ■

Oracle integrates AT&T IoT connectivity into enterprise communications platform

Oracle is incorporating AT&T IoT connectivity and network application programme interfaces (APIs) into its Enterprise Communications Platform (ECP). The initiative will enable Oracle's industry cloud application customers to connect and manage their IoT devices on the AT&T network all in one platform, enabling reliable and secure communications.

Supported by AT&T, ECP delivers IoT connectivity and near real-time communications to Oracle's suite of industry cloud applications. With integrated capabilities such as IoT edge application management, this all-in-one offering removes the customer burden of managing complex integrations and network contracts.

Built on the high performance and security of Oracle Cloud Infrastructure (OCI), the unified communication and edge architecture gives businesses the connectivity and real-time data intelligence they need to power critical new services and experiences. The integration with AT&T IoT

connectivity and network APIs is available across OCI regions in the U.S.

"Our mission has always been to help improve the way the world communicates, and with ECP supported by AT&T and FirstNet, we're taking a massive step toward that vision," said Andrew Morawski, executive vice president and general manager at Oracle Communications. "Together, we can help organisations across industries benefit from the full potential of 5G, by building a new generation of vertical applications offering endless opportunities to innovate."

Sarita Rao, the senior vice president of AT&T Partner Solutions, added: "By teaming with Oracle to incorporate IoT connectivity and programmable APIs into Oracle industry applications, we are providing businesses and organisations a tighter level of integration between the network and application, driving performance and reliability gains while also eliminating integration requirements and separate contracting events. It's co-creation at its best." ■

News in Brief

Kargo unveils lift for forklifts and AGVs

Kargo has announced the Kargo Lift, a new addition to the Kargo product portfolio, that has been purpose-built for forklifts and automated guided vehicles (AGV). The Kargo Lift extends the AI capabilities of the Kargo Towers, automating critical processes and enhancing visibility for warehouses, manufacturing facilities and distribution centres.

"Our goal has always been to push the boundaries of what's possible in industrial automation," said Sam Lurye, the founder and CEO of Kargo. "Like with all Kargo products, we have meticulously designed the Kargo Lift to be easy to install, drive immediate value and handle all the complexity of an industrial environment." ■

Intelligent Living and Specifix join forces for smart locks

Intelligent Living Application Group has announced that it has entered into a cooperation agreement with Specifix. Specifix deploys its artificial intelligence (AI) assisted robotics research and development for construction and industrial engineering services and technology. This cooperation underscores its commitment to enhance its technological capabilities for new product development which will expand its market presence.

Specifix's approach and technology align with Intelligent Living's goal for development of smart locks and smart home security devices. The cooperation will enable it to use Specifix's technologies to enhance research and development abilities, and even new automated industrial production processes to help improve efficiency and precision. ■



It's full steam ahead for Trasna and Workz in the evolving IoT market

To fully support the rapid evolution of IoT technologies, suppliers usually have to offer a varied portfolio and have an expansive view of the market. Antony Savvas speaks to Trasna CEO Stéphane Fund, whose company has also been acquisitive to fully address the demands of the IoT market

“Trasna” is Irish and means “to go across”. It reflects our mission

In 2018, Fund, a seasoned tech entrepreneur who had sold his previous software business to UK chip giant **ARM**, envisioned a future brimming with trillions of connected devices. The IoT market, poised for explosive and unprecedented growth, presented a golden opportunity. Seeing the challenges of device makers and network operators with heavy expenses, slow implementations, and a fragmented vendor landscape, here was a chance to build the foundation for an alternative future for the Internet of Things.

So, that same year, Fund established **Trasna**. With a vision to harness the power of semiconductor and mobile technologies, Trasna then strategically acquired **Elatec** (Germany) and **SAFE-IoT** (France), gaining crucial expertise in hardware and software, and uniting some very bright minds.

Five years on, in 2023, the company achieved a milestone producing its first SIM chip. The same year, it developed its own RISC-V core processor, a testament to its commitment to in-house innovation. By then, it had also designed and deployed more than 40 secure microcontrollers across smart cards, point-of-sale terminals, secure readers, smart meters and security devices.

Then came the acquisition of cloud eSIM specialist, **Workz**, in February 2024. This marked a giant step

towards Trasna's vision of vertical integration. From chip design to product lifecycle management, the company was taking control of its destiny to guarantee customers complete efficiency, quality and security.

With headquarters in Cork, Ireland, and innovation hubs in France, Dubai and Tunisia, plus GSMA-certified production facilities in Dubai, the company has now built a platform to serve the global market. With a range of innovative products, from its core processors and microcontrollers, to its multi-eSIM orchestration hub and IoT eSIM remote manager, its portfolio addresses the market's evolving needs.

This trend is expected to continue, with the company currently developing its own System-on-Chip (SoC), that incorporates an integrated SIM (iSIM). This innovation has the potential to significantly disrupt the IoT market.

Employing over 400 dedicated specialists, supporting the development of semiconductors, SIMs, eSIMs, a SoC platform and iSIM technologies, the firm clearly provides a complete end-to-end solution to support the rapid changes and needs in IoT communications.

IoT Now: So Stéphane, Trasna has wide-scale industry and geographical involvement, why was ►

SPONSORED INTERVIEW



Trasna's headquarters located in Cork, Ireland?

Stéphane Fund: "Trasna" is Irish and means "to go across". It reflects our mission: to seamlessly connect people and devices with transformative experiences for mass IoT. So I guess it is only fitting we have our headquarters in Ireland. It also has a strong tech ecosystem, established infrastructure, supportive business policies and a talent pool that makes it an ideal location. Nevertheless, as you point out, we are a global company now with a semiconductor R&D centre in France, an IoT development centre in Dubai, and a second one to be opened in India in October.

IoT Now: Last year, Trasna launched its Secure SIM Chip family for the telecoms market. In a market that has seen many chip capacities impacted by production shortages, how did the firm mitigate this issue? On the other hand, was the demand there from potential customers, as some would point to relatively weak demand for new 5G/IoT connections globally?

SF: Generally speaking, the higher the chip grade, the higher the impact on production. Chips in SIM cards are less complex than those in high-end electronics, which have faced

more of the ripple effects of the broader shortage.

Trasna has not seen much disruption as it strategically manages chip production challenges by securing multi-sourcing agreements with foundries and prioritising supply chain resilience. With our strong partnerships, we have maintained a steady flow of products, and demand for our SIM chips remains strong, driven by our clients' ongoing investments in 5G and IoT.

IoT Now: At the same time, working with Secure-IC, Trasna developed PUF IP that can generate one or several unique IDs or keys without the need for any cryptographic enrolment phase, while being integrated into a Trasna all-in-one NB-IoT SoC. How significant has this been to the business so far?

SF: The development of physically uncloneable function (PUF) IP in conjunction with Secure-IC has been crucial for Trasna. Integrating this technology into NB-IoT System-on-Chips provides enhanced security without the need for cryptographic enrolment, which is a differentiator for us in the IoT market. It is an example of the technology-focused approach at Trasna, and we are receiving a lot of interest in the product. ▶



Stéphane Fund
Trasna

Currently, Trasna operates with a flexible go-to-market model that uses partnerships with telcos, IoT providers, system integrators and other service providers

IoT Now: Now the recent acquisition of Workz, why did you want this company, is it a case of creating a one-stop-shop, from design and security to chip service deployment and management, for instance?

SF: The acquisition of Workz was a strategic move to support our goal to become the market leader within five years. It creates a secure, comprehensive, end-to-end IoT solution from chip design to deployment.

By integrating Workz's expertise in subscription management, we create a full end-to-end supply chain for telcos, device manufacturers and IoT providers, enhancing our capability to deliver seamless and scalable IoT connectivity solutions. This aligns with Trasna's vision of providing holistic, innovative services that meet the evolving needs of the IoT ecosystem.

Workz and Trasna are a perfect fit, with no overlap and complementary offerings, meaning the overall value of our IoT offering to customers is significantly strengthened.

IoT Now: Will the more customer-facing Workz give Trasna a higher profile in the industry perhaps? If that's the case, how will you measure that – marketing and web presence, industry shows profile, social media and shared industry intelligence or collateral?

SF: Yes, I would imagine so, particularly at the beginning. Workz has a very strong reputation in the market, having over 25 years in operation and almost 200 clients in the telecoms sector. Our ambition is to be the market leader in the mobile or cellular IoT market within five years, so our offering needs to be highly compelling. The growth of our customer base will be one of the biggest testaments to this.

IoT Now: On the business operations side, how will Workz help Trasna grow in terms of things like sales, compound annual growth rates, increased profits, increased profit margins, growing headcounts, wider office footprints for engineering, sales and marketing?

SF: The synergy between the two companies is expected to drive growth through increased capabilities, greater economies of scale, and

enhanced revenues. Workz's integration will allow Trasna to expand sales channels, allow access to a broader customer base and improve market penetration. Additionally, it will support Trasna's plans to scale its workforce, extend its geographical footprint and strengthen its engineering and support capabilities.

IoT Now: And on the go-to-market, what is the model at the moment, and how do you see this developing in terms of partner numbers, whether they are global system integrators, managed service providers, telcos, mobile virtual network operators or other service providers?

SF: Currently, Trasna operates with a flexible go-to-market model that creates partnerships with telcos, IoT providers, system integrators, and other service providers. Trasna aims to expand its partner ecosystem and market demand from the OEMs and device manufacturer segment is expected to grow substantially. We aim to deepen collaborations, enhance service delivery and extend reach into new markets, positioning Trasna as the number one choice in the mobile IoT landscape.

IoT Now: Looking at the eSIM market overall, not only is it a crowded market, it is also one that probably hasn't grown as fast as was expected. Why is there limited consumer/business end customer demand despite Apple backing it and the general hype?

SF: They say that for any new technology, two things are generally true: One, its speed of adoption is overestimated, and two, its impact is underestimated. eSIM appears no different in that respect.

Yes, the expected growth in the eSIM market has taken longer than originally expected. In the case of the consumer market, this can be attributed to a combination of factors such as low user awareness, low penetration in the lower-priced device segments, and some carriers being slow to make the investment.

In the enterprise IoT market, however, things are different. The current GSMA M2M standard has not worked and has had a very low uptake, with relatively few implementations. But the new eSIM standard for IoT devices, SGP.32, will ►



dramatically change connectivity in the IoT space, and it is a hugely exciting and dynamic opportunity, on which we are ready to help our customers capitalise.

IoT Now: Is this now eSIM's time? If so, what are your predictions for industry growth, and what specific market targets do you have for Trasna/Workz over the short to medium-term?

SF: One of Trasna's principles is that we are a technology-agnostic provider, meaning we do not have a vested interest in any specific technology or format. We find the best way to address our customers' needs and achieve their mobile connectivity goals, whether it be a traditional SIM card, an embedded chip, an integrated SIM or a System-on-Chip solution. Without a doubt, there is a shift towards digital formats, such as eSIMs. When considering the developments in the eSIM IoT model it is understandable why many market analysts are forecasting significant growth. Trasna aims to be at the forefront of this and capture a substantial market share. Short to medium-term goals include expanding market penetration, launching new products, and increasing customer acquisitions in the Americas and APAC regions, specifically in India.

IoT Now: And how about the product roadmap over the next two to three years, what is planned and where do you think you are going as a company, when it comes to targeting new product markets and new geographical markets?

SF: Last year, the company achieved a milestone with its first SIM chip produced. The same year, it developed its own RISC-V core processor, a testament to its commitment to in-house innovation.

Trasna plans to continue to build on this success and expand its product portfolio with innovations in SIM, eSIM and integrated SoC solutions. The three market approaches (SIM card, eSIM, and SoC) will coexist for several years. It is essential to address them in parallel despite differences in product and implementation. Their primary function remains the same: enabling connectivity, and customers expect flexibility.

Our roadmap includes developing secure SIM technologies that capitalise on the opportunities created by next-generation mobile networks such as 5G and NB-IoT and combine our expertise in semiconductor design, secure software, edge computing, AI, and blockchain to deliver highly innovative solutions.

Geographically, Trasna is focused on strengthening its presence in Europe, North America, and, like I said, India, where we see high growth potential in the IoT market for these technologies.

IoT Now: Finally, what would you like the readers to take away from this interview when it comes to key Trasna/Workz messages for telcos, service providers and end business customers?

SF: Trasna and Workz are committed to helping our customers drive the future of IoT with secure and innovative solutions, that offer them complete control and efficiency. We are a forward-looking, technology-driven company. Additionally, we are much leaner and more agile than some of the traditional market players, we are seeing that customers really appreciate the value that we provide them in terms of innovation, collaboration and agility. ■

One of Trasna's principles is that we are a technology-agnostic provider, meaning we do not have a vested interest in any specific technology or format

www.transna.io



David Farquharson
iONLINE



Improve business connectivity and sustainability with eSIM

“Trasna was uniquely positioned to help us develop customised solutions to meet our clients’ needs, and in them, we found a supplier and like-minded ally to achieve our global IoT vision. Their dedication, innovation and collaborative spirit resonate deeply with our values at iONLINE. Their SIMs are manufactured on site with sustainability front of mind, ensuring minimal environmental impact.”

David Farquharson, CEO of iONLINE

“We enjoyed working on this project with iONLINE. Their willingness to utilise new technology encouraged us to push the boundaries. It’s been great to see how companies use our technology to protect their assets, react quicker to situations and gain greater visibility of their business. This partnership provides a springboard for us both as we continue to help businesses gain a competitive advantage from IoT.”

Robert Varty, CSO of Trasna

Challenge

Companies managing connected assets on the move face significant challenges, including high roaming costs when leaving subscribed coverage zones, loss of signal in low coverage areas, and operational inefficiencies due to the need for dedicated resources to manage these issues. These challenges can lead to decreased device visibility and disrupt critical business tasks.

Partnership

The collaboration with **iONLINE**, a global IoT connectivity solutions provider, resulted in the development of FlexiSIM — an advanced hybrid eSIM solution. This partnership uses a cloud eSIM platform, enabling remote network switching and enhancing connectivity.

Solution and results

The hybrid eSIM solution enables businesses to automate network switching based on real-time conditions, significantly lowering running costs and avoiding service disruptions. The eSIM technology allows on-demand network selection, freeing companies from being locked into predefined network options. Additionally, the solution supports sustainability efforts by using 50% less plastic than traditional SIMs and enables remote updates, eliminating the need for physical SIM replacements. As a result, iONLINE’s private network now provides secure, high-speed connectivity in over 190 countries across more than 700 carrier networks. Launched in 2023 in South Africa, the UK and later the US, FlexiSIM is already benefiting companies such as **Fujifilm**, **AloTSense**, **BrightBlue**, **Trellis Works**, **Online Direct**, **Amber Group** and **Fidelity ADT**, enhancing their connectivity and operational efficiency.

David Farquharson, CEO of iONLINE, said he approached several SIM manufacturers when first investigating options but that none brought the flexibility he wanted for the product.





Mark Kroodo
1oT



Reduce the time and cost of IoT connectivity

“We see Trasna as the perfect fit for 1oT to allow us to deliver faster connectivity to our clients. Their certified SIMs and supporting technical services give us a full flush of GSMA-certified products as well as the agility to scale up or down as needed, without some of the industry’s usual heavy commitments required or competitive restrictions.”

Märt Kroodo, co-founder and CEO of 1oT

“Our goal is to make it easier and cheaper for telcos to deploy connectivity. Whilst the SIM form factor has evolved over the decades, the process for generating their data has remained the same and is generally perceived as time-consuming. Our Data-Generation-as-a-Service cuts SIM development time and cost allowing telcos to activate connections and revenue far quicker.”

Robert Varty, CSO of Trasna

Challenge

IoT-focused businesses attempting to digitise operations face challenges deploying secure and cost-effective IoT connectivity due to the complexities, time and costs associated with traditional SIM management.

Partnership

The partnership with **1oT**, an IoT connectivity provider combines 1oT’s M2M global connectivity solutions with GSMA-certified eSIMs and Data Generation as a Service, streamlining the connectivity process for 1oT’s enterprise customers.

Solution and results

The collaboration led to the launch of 1oT’s eSIM Core, a remote SIM provisioning platform designed to simplify and reduce the costs of IoT device connectivity. Since its **GSMA** certification, eSIM Core manages over 1.4 million connected devices in over 170 countries in sectors such as micromobility, smart cities, autonomous vehicles, air monitoring and agricultural appliances.

Data-Generation-as-a-Service has further enhanced the offering by significantly cutting down SIM development time and costs, allowing telcos to deploy connections more efficiently. As a result, businesses can scale their connectivity solutions flexibly without the usual industry constraints, activating new connections and generating revenue much faster.





Itamar Kuni
Monogoto



Drive business growth with the flexibility of cloud eSIM

“We are proud to partner with Trasna and offer our customers a new platform for eSIM. Moving over to the eSIM cloud was easier and a lot quicker than expected. The move gives Monogoto the agility to address the evolving connectivity needs of our customers and partners as they arise.”

Itamar Kunik, CEO of Monogoto

“eSIM adoption is rising rapidly as the opportunity for operators across consumer and M2M verticals expands – developments such as the first eSIM-only iPhone launched this month will only heighten this. Our cloud-based solution is designed to enable innovative connectivity providers like Monogoto to scale up quickly in this new market allowing them to move fast, grow and achieve a tangible return on investment.”

Robert Varty, CSO of Trasna

Challenge

As the demand for connected devices continues to rise, **Monogoto’s** clients across 180 countries face challenges in managing multiple network profiles and ensuring seamless connectivity for both consumer and M2M devices. There was a need for a scalable and flexible eSIM solution to support diverse applications such as point-of-sale systems, ATMs, wearables, smart lighting and vehicle fleets.

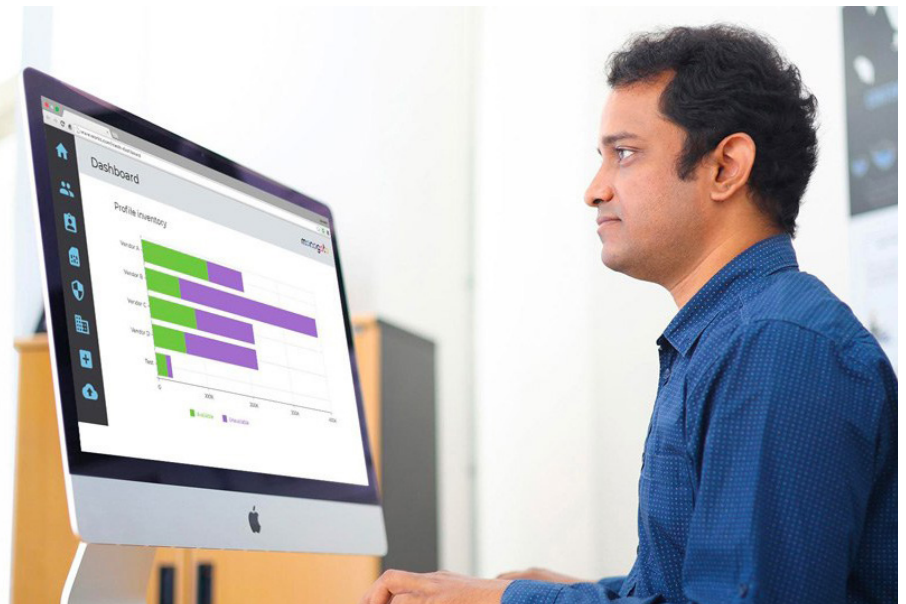
Partnership

This project with Monogoto, a global connectivity provider, established a cloud-based platform for managing consumer and M2M eSIM devices. This partnership utilises a GSMA-certified eSIM management platform to offer scalable and secure eSIM solutions.

Solution and results

The cloud platform developed through this partnership allows Monogoto’s customers to easily manage eSIM profiles and install SIMs in QR code-supported devices, providing unprecedented flexibility in changing network profiles. This eSIM technology solution enables Monogoto to provide connectivity services for devices such as point of sales, ATMs, wearables, smart lights, fleets of cars and packages.

The collaboration has positioned Monogoto to cater to the rapidly growing eSIM market. The platform’s flexibility and scalability enable Monogoto to provide enhanced connectivity services, helping clients seamlessly adapt to the evolving IoT landscape and driving the company’s growth strategy.





Robert Varty,
Trasna



Revolutionise water management with eSIM

“We are delighted to be a part of such a large-scale government venture that uses new eSIM technology to make such a significant impact on people’s quality of life. Our aim as a company is to provide quality and rapidly deployable solutions and, alongside our team in Africa, we have been able to quickly get this project off the ground and make it a full-scale reality.”

Robert Varty, CSO of Trasna

Challenge

In many African regions, access to clean drinking water is a critical issue, with poor water management contributing to health crises such as cholera outbreaks. To address this challenge, a large African government aimed to implement a smart water management solution that could improve the availability and quality of drinking water for its population.

Partnership

Working with a leading African network operator and government, this multi-party venture aimed to deploy embedded SIM (eSIM) technology in smart water meters. As the only GSMA-certified eSIM manufacturer in the Middle East and Africa, Trasna provided the eSIM modules and remote provisioning solutions necessary for this large-scale project.

Solution and results

eSIM technology, from the SIM chips to their remote SIM provisioning cloud platform, plays a key role in supporting this government’s smart city initiative, enhancing water management infrastructure, and improving public health conditions. The project launched in 2019 and has significantly enhanced the quality of life by making clean water more accessible and supporting the broader goal of sustainable urban development.





Rob Beswick,
Virgin Mobile UAE



Increase telco sustainability and reduce plastic usage

“As consumers are becoming more environmentally conscious, the onus is on companies to innovate and introduce sustainable alternatives to ensure a collective effort towards building a better future. Our new sustainable SIM cards are another key step in the right direction.”

Rob Beswick, managing director of Virgin Mobile UAE

“We’re delighted to have achieved yet another market-first with Virgin. We are currently seeing a sharp rise in interest from network operators worldwide for more sustainable alternatives such as biodegradable SIMs and eSIM – this can only be a good thing. What this project with Virgin demonstrates is, that with a dynamic, forward-thinking approach, just how quick and significant the impact can be.”

Robert Varty, CSO of Trasna

Challenge

Every year, an estimated 14 million tons of plastic end up in the oceans, harming fragile ecosystems. With around six billion SIM cards produced annually, the telecom industry significantly contributes to global plastic waste. Virgin Mobile MEA aimed to address this environmental challenge and reduce its plastic footprint across its operations.

Partnership

Virgin Mobile MEA turned to its long-term partner to tackle the plastic waste issue. Over their twelve-year partnership, the companies have collaborated on various initiatives to reduce environmental impact across the telecom supply chain. This time, they focused on introducing an eco-friendly alternative to traditional SIM cards.

Solution and results

Virgin Mobile MEA became one of the first mobile network operators in the Middle East to adopt **EcoSIM**, a biodegradable SIM card made from oxo-biodegradable plastic. Unlike standard SIM cards that take hundreds of years to decompose, the EcoSIM breaks down in landfills within 18-30 months. This environmentally conscious initiative aligns with Virgin Mobile MEA’s commitment to becoming carbon negative.

EcoSIM not only reduces the plastic footprint but also incorporates sustainable practices, such as using recycled paper packaging, reusable wooden pallets for transportation, and supply chain optimisation to lower carbon emissions. The adoption of EcoSIM has allowed Virgin Mobile MEA to take a leading role in promoting sustainability within the telecom industry, significantly enhancing its eco-friendly brand credentials while contributing to global plastic waste reduction.





Toby Gasston,
Wireless Logic



Itamar Kunik,
Monogoto



Nick Earle,
Eseye

Is the jury still out on how far the eSIM market will rise?

Market estimates for the size of the embedded SIM (eSIM) market are varied among analysts, but one thing that is certain, is that it's growing. Antony Savvas looks at the driving forces behind this growth and considers whether the technology really will hit critical mass this time, after a pretty long run-up

An eSIM can offer enterprises and consumers the freedom and flexibility to roam through different territories using the same SIM credentials, without having to use a changeable physical SIM card. A prime advantage is that an eSIM can also connect to the best performing network at the best price, well that's the theory anyway.

Enabling a major shift

As analyst **Statista** outlines, an eSIM is a technology enabling a major shift in the way cellular plans are activated and transferred. An eSIM functions as a digital SIM card embedded within a device, and offering greater ease of use, security and sustainability benefits, when compared to a traditional, physical SIM card.

While eSIM usage is expected to become commonplace in smartphones, their use extends to all manner of connected devices that use a cellular network, such as connected cars, drones and smartwatches. According to Statista, the market for eSIMs is forecast to 'explode' alongside the rise of IoT devices.

It says the eSIM market was valued at US\$4.7 billion in 2023, and is expected to grow to US\$16.3bn by 2027. Other analysts have other estimates.

According to **Fact.MR**, the eSIM market was valued at US\$7.3bn in 2022, and is forecast to grow to US\$22.2bn by 2032. And, **Grand View Research** says the market was worth US\$8bn in 2022 and is expected to grow at a compound annual growth rate (CAGR) of 7.9% from 2023 to 2030.

Citing other sources, Grand View estimates there were 1.2 billion eSIM-enabled devices in 2021, with that number expected to climb to 3.4 billion by 2025. Other estimates point to six billion devices, covering smartphones, consumer electronics, health monitoring, transport and smart energy, using eSIMs by 2025.

Pioneering Apple

Apple has been a pioneer of consumer eSIM transition, particularly in the US, where it has just released its third consecutive eSIM-only iPhone. Eric Morhenn, chief operating officer at eSIM provider **Nomad eSIM**, says: "Apple's decision to produce and sell only eSIM-compatible iPhones for the US market is another step towards a wider global strategy. Apple's vision is to move away from physical SIM cards completely within the next few product cycles." ►

"Trasna" is Irish and means "to go across". It reflects our mission

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The benefits of eSIMs have led Apple to shift to eSIM not only in its iPhones, but across the product range. For instance, the 2024 iPads are now eSIM-only worldwide, and as Morhenn notes: "Apple is likely to expand this shift to other devices, with Apple Watch and even MacBooks using eSIM functionality as the norm, which then will end up creating a fully connected ecosystem."

This interconnectedness simplifies how users manage devices, network access and data across Apple's ecosystem, enhancing both the user experience and device performance, as well as keeping Apple customers ever closer to the company, of course.

As IoT ecosystems expand, businesses will need to adapt to new technologies, evolving market conditions and different MNO priorities

Moreover, the global adoption of eSIM aligns with Apple's environmental and privacy goals. The removal of physical SIM trays reduces electronic waste and allows for better water and dust resistance, making devices more durable. In addition to these hardware benefits, the digital nature of eSIM also enhances security by reducing the risk of SIM swapping attacks, which is a common form of fraud in the industry.

While Apple has pioneered the move towards eSIM-only phones in the US, the company is expected to expand this strategy globally. Morhenn says: "We can expect Apple to make the same move – starting as early as the iPhone 17 or 18 – in international markets like Europe, Japan, and Singapore, where the digital infrastructure is strong."

Apple is likely to continue to monitor global market readiness and gradually introduce eSIM-only devices in emerging markets once more carriers and regulators adapt to the technology. Apple isn't the only one leading this change though. **Samsung** has already taken its first step towards this transition by recently announcing that its new Galaxy S24 series will include built-in eSIM capabilities.

Morhenn maintains: "The complete transition to eSIM globally is not a question of 'if', but 'when', but Apple is taking the lead in this change."

Factors affecting the market

As always though, various factors can affect any new market. Toby Gasston, the mobile core product lead at **Wireless Logic**, says: "When

looking at the difference between local and global deployments, it's easy to forget that any deployment of IoT devices is challenging at scale. For example, a rollout in a local market requires consideration of a variety of factors, such as coverage, the appropriate technologies and local regulations."

"These factors can vary significantly based on geographic and technical conditions, from network availability to compliance with specific regulatory standards," he adds.

However, when deployments expand to a multi-national or global scale, the complexity increases exponentially, he says. Not only must businesses address the same local challenges across multiple regions, but they must also account for additional variables, such as managing diverse regulatory frameworks, roaming agreements and operational differences across countries.

"Moreover, the global connectivity landscape is always shifting, with new technologies, changing market conditions and shifting operator partnerships," says Gasston. "The ability to maintain seamless, reliable connectivity while adapting to these dynamic conditions is critical for the success of global IoT deployments."

Remote provisioning

Remote SIM provisioning (RSP) was initially presented as a step change in the market, promising customers the ability to take control of their connectivity provider options throughout the lifespan of their devices.

"However, with the introduction of the SGP.02 standard [ten years ago], it quickly became apparent that the reality was far more complex, requiring expensive integrations between providers to bring this functionality to life," Gasston adds.

Now, with SGP.32, it seems the same excitement is being generated within the industry "without sufficient considerations beyond the technology itself", he maintains. RSP and embedded universal integrated circuit cards (eUICC) and eSIMs serve as delivery mechanisms, which means they do not resolve issues like contractual ownership changes or the practicality of end customers managing devices in the field.

Market confusion

While connectivity providers can address some of the challenges around RSP and SGP standards, the confusion in the market extends beyond remote SIM provisioning, Gasston adds. "Although 3GPP and GSMA are doing excellent work defining the future of IoT, a recurring issue remains. Mobile network operators (MNOs) around the world have differing priorities and approaches to making these technologies available in their respective markets. As a result, module manufacturers often find themselves ahead of MNOs in adopting and implementing new technologies."

And, while we'll see more advanced solutions being developed, they are likely to come with new challenges. Global deployments will demand seamless connectivity across regions, with evolving standards like SGP.32 helping to improve ►



interoperability. However, addressing non-technical issues like regulatory compliance and ownership rights will remain critical.

“As IoT ecosystems expand, businesses will need to adapt to new technologies, evolving market conditions and different MNO priorities,” says Gasston. “Collaboration between industry stakeholders will be essential to ensure that the promise of flexible, global connectivity becomes a practical reality.”

A mixed picture

A recent industry podcast covered the importance of SGP.32, but also outlined the mixed picture when it came to building eSIM success around the standard.

On **Eseye's** IoT Leaders podcast, Matt Hatton, founding partner at analyst **Transforma Insights**, says: “SGP.32 has generated significant interest and confusion within the industry. While some see it as a panacea for all IoT deployment issues, the reality is more nuanced. But still, there's been a rush of startups and companies experimenting with this next-generation eSIM standard.”

The GSMA developed SGP.02 for M2M communications back in 2014, followed by SGP.22 for consumer devices in 2016. Each had its limitations, prompting the need for a more versatile standard, hence the introduction of SGP.32 in 2023. “The ongoing efforts to improve IoT connectivity have been essential, hence the introduction of SGP.32, particularly in areas where traditional SIM solutions have fallen short,” Hatton explains.

Flexibility

Flexibility has been critical for businesses needing to deploy IoT devices in diverse and often challenging environments where past connectivity solutions have struggled. One of the most notable advancements in SGP.32 is the introduction of the IoT profile assistant (IPA), which acts as a user to pull profiles from chosen providers. This mechanism simplifies switching operators, addressing the clunkiness of previous standards and making it easier for businesses to maintain consistent connectivity across their IoT deployments.

“SGP.32 is not just an incremental upgrade, it's a significant leap forward in IoT connectivity,” says Nick Earle, the chief executive of Eseye. “It is designed to be more flexible and lightweight than its predecessors. It supports a variety of deployment scenarios without the need for SMS and offers reduced footprint requirements, making it suitable for constrained IoT deployments.”

But, as promising as SGP.32 may be, it's essential to understand its current limitations, Earle says. “SGP.32 is not yet fully available. Standards are still being finalised, and we don't expect full SGP.32 capabilities until early 2025.”

Navigating issues

It is essential therefore, that enterprises know that any solutions marketed as SGP.32 today

are likely pre-standard versions with significant potential interoperability issues. Although the transition to SGP.32 will not be without its challenges. These can be effectively navigated with proper planning and support though.

“Ensuring consistent APN settings and properly notifying the current operator to avoid continued billing are just a few of the considerations that businesses need to manage,” Earle adds. “Managing the transition from existing standards to SGP.32 will be complex and likely require a managed service provider. This approach ensures all aspects of connectivity, including access point name (APN) settings, local breakout and service level agreements (SLAs) are properly handled.”

Deployments

Despite the issues though, there's still plenty of business of course being built around eSIMs. International connectivity provider **Monogoto**, for instance, is partnering with global eSIM provider **Workz**, to establish a cloud platform to manage both consumer and M2M eSIM devices for its client base across 180 countries.

Monogoto uses eSIMs to provide connectivity services for devices such as point-of-sale systems, ATMs, wearables, smart lights and car fleets, among other applications. Workz has launched a cloud-based eSIM management platform for networks, which is certified by the **GSMA**.

“Moving over to Workz's eSIM cloud was easier and a lot quicker than expected,” says Itamar Kunik, the chief executive of Monogoto. “The move gives Monogoto the agility to address the evolving connectivity needs of our customers and partners as they arise.”

Another eSIM player is **u-blox**, a provider of positioning and wireless communication services through the use of connected and secure modules in various form factors.

Wireless Logic's IoT connectivity network, Conexa, has been integrated into u-blox's cellular modules. The integration provides customers with enhanced control and visibility over their IoT deployments, allowing them to manage connectivity directly through Wireless Logic's platform. Additionally, they can benefit from various complementary service extensions, such as anomaly detection offered by Wireless Logic.

“By combining our technologies, we are enhancing the value proposition for IoT deployments, providing unmatched connectivity, security, and flexibility,” says Martin Leach, the head of the u-blox cellular business unit.

According to the GSMA, even in 2022, eSIM services had already grown 500% over the previous three years, with more than 230 network providers in 80 countries catering for the next-generation technology. So, the eSIM obstacles that do exist, were and are, being overcome one way or another. ■

Flexibility has been critical for businesses needing to deploy IoT devices in diverse and often challenging environments where past connectivity solutions have struggled





Mobile World Congress returns to the US to set the industry trends

8-10 October 2024 sees the return of Mobile World Congress Las Vegas, and the organisers from GSMA are again expecting to welcome CEOs, CIOs and other directors and their teams from sectors such as automotive, aviation and manufacturing



Being staged at the Las Vegas Convention Center, West Hall, the show will bring together the enterprise IT ecosystem, including c-suite executives, systems integrators, network architects, developers, technology leaders and mobile operators.

“Taking place in one of the world’s most advanced mobile markets, MWC Las Vegas gives us the opportunity to glimpse into the future of connectivity,” says John Hoffman, the CEO of **GSMA**.

Las Vegas in numbers

GSMA is aiming to beat the numbers from last year’s event. Then, more than 8,000 attendees, including nearly 40% from industries adjacent to the mobile industry, focused on digital transformation. Attendees represented over 2,800 companies, and there was representation from 80 countries too. Including online viewing, total overall participation in MWC Las Vegas came to around 10,000.

The show welcomed 380 exhibitors and sponsors across the show floor and over 300 businesses, policymakers and connectivity leaders on stage for the event keynotes and speaking sessions. 57% of attendees were at director level and above, of which over 17% were from the c-suite. 35% of the conference speakers were female.

Mats Granryd, the director general of the GSMA, said: “Only at MWC Las Vegas could we find such an eclectic mix of leaders

to bring together, which included representatives from mobile, technology, fintech, manufacturing, security, sports and entertainment and policymakers.”

This year, tech innovators and industry experts will take to the stage to share their insights around key event themes: Enterprise Transformation, AI Networks and 5G Edge Cloud. Attendees will hear from CIOs from the **City of Las Vegas, the Metropolitan Airports Commission, Ontario International Airport, the Port of Oakland, Qualcomm** and **SouthWest Airlines**. In addition, speakers at MWC Las Vegas will include leaders from **Boingo Wireless, Hogan Lovells, MeetKai, Nvidia, T-Mobile, US Cellular, the US Department of Defense, Verizon Global Services** and **Wiley Rein**.

MWC Las Vegas will also host a range of exhibitors and sponsors, including Boingo Wireless, **Boldyn, Cisco, Intel, Microsoft, Nokia, Qualcomm, T-Mobile for Business** and **Verizon Business**.

Women trailblazers

The Bay FC professional soccer player, Asiat Oshoala, will join the GSMA’s CMO Lara Dewar on the keynote stage. Through her foundation, the Asiat Oshoala Academy, Oshoala is committed to providing opportunities for girls to excel. And returning to MWC Las Vegas once again, the GSMA’s Tech4Girls programme, as part of the EQUALS Her Digital Skill ►



Coalition, will seek to inspire the next generation of female technology leaders. This programme introduces young women and girls to the professional digital world through workshops, career advice and seminars. During the show, students will have the opportunity to hear from female trailblazers, tour the exhibition show floor and learn how to kickstart a career in technology.

Enterprise IT ecosystem

The show will bring together experts and thought leaders to explore connectivity through a series of summits, including the CIO Summit, Enterprise AI Summit, the Private Network Summit, GSMA Open Gateway and DevCon Summit, Telco AI Summit, the e-SIM Summit, Non-Terrestrial Networks (NTN) Summit, and the Government, Homeland Security & Defense Summit.

And, spanning the show floor, Connected Industries will showcase what Industry 4.0 can achieve now and in the future. Previously known as Industry City, it will feature everything from AI-driven aviation systems to IoT-enabled automation in manufacturing, and

smart city infrastructures. Connected Industries will host four summits across two show floor stages, focused on connected aviation, connected car, manufacturing, and sports and entertainment. T-Mobile for Business, as the lead sponsor of Connected Industries, will showcase its latest 5G solutions for the enterprise and government marketplace.

5G showcase

GSMA Foundry, the 'home of mobile innovation', will be at the GSMA Pavilion to showcase a new 5G/NTN (non-terrestrial network) initiative in partnership with **Bewhere** and **Bell Canada**. The showcase includes a technology demonstration about the future of mobile asset tracking at the **Port of Vancouver**, Canada's largest and busiest seaport. The demo will show the potential for 5G and satellite solutions for global monitoring across land, sea, and air.

In addition, the Exhibition Networking Lounge and VIP Networking Lounge will provide two dedicated areas that will bring leaders together in a bustling and collaborative environment.

Trends

So, according to industry players, what will be some of the key trends to show their face at the show?

Luc Vidal-Madjar, head of SIM for Things at **BICS**, says: "One of the biggest shake-ups to the comms industry is no doubt going to be the eSIM. It's the key to putting end users in the driver's seat, by digitalising connectivity and making it available with just a few clicks."

He says: "Enterprises have already been reaping the benefits of eSIMs for IoT in remote and diverse environments. Consumers, on the other hand, have yet to truly reap the benefits of the technology. When they do, it will effectively turn consumer brands into MVNOs, allowing travellers to connect to a local network and pay local rates instead of roaming rates from their domestic network. The solutions are easy enough to launch, we're already seeing brands like **Revolut**, **Nord VPN**, and **Carrefour** offer these services. Over time, this could spell the end of international roaming fees, and that is going to force telcos reliant on roaming revenues to adapt."

Sandeep Raithatha, head of strategy, innovation and 5G IoT products at **Virgin Media O2**, thinks AI will take the next step. "I would expect to see more on AI, tapping into both practical deployment learnings and ethical usage of the tech. And it will be interesting to see the reinvention of business models through edge computing, AI and more," says Raithatha.

Raithatha adds: "Collaborating across the ecosystem of partners will be important to stay competitive in this evolving landscape. To keep meeting demand, organisations will seek out and invest in pockets of growth like 5G private networks, network slicing, cloud, and security, among areas." ■

"One of the biggest shake-ups to the comms industry is no doubt going to be the eSIM. It's the key to putting end users in the driver's seat, by digitalising connectivity and making it available with just a few clicks."

Luc Vidal-Madjar



Our pick of the IoT industry's upcoming events

tmforum INNOVATE 24 AMERICAS

September 24-25
Dallas

Innovate Americas 2024
24-25 September 2024
Dallas, Texas, USA
<https://www.iot-now.com/event/innovate-americas-2024/>

DATA 2030 SUMMIT

Data2030 Summit
24-26 September 2024
Stockholm, Sweden and online
<https://www.iot-now.com/event/data2030-summit/>

AI & BIG DATA EXPO

EUROPE

1-2 October 2024
RAI, Amsterdam

AI & Big Data Expo Europe
1-2 October 2024
Amsterdam, The Netherlands
<https://www.iot-now.com/event/ai-big-data-expo-europe-2/>

CYBER SECURITY & CLOUD EXPO

EUROPE

Cyber Security & Cloud Expo Europe
1-2 October 2024
Amsterdam, The Netherlands
<https://www.iot-now.com/event/cyber-security-cloud-expo-europe/>

INTELLIGENT AUTOMATION

EUROPE

1-2 October 2024
RAI, Amsterdam

Intelligent Automation Conference Europe
1-2 October 2024
Amsterdam, The Netherlands
<https://www.iot-now.com/event/intelligent-automation-conference-europe-2024/>

UNIFIED COMMUNICATIONS

EUROPE

1-2 October 2024
RAI Amsterdam, Netherlands

Unified Communications Conference Europe
1-2 October 2024
Amsterdam, The Netherlands
<https://www.iot-now.com/event/unified-communications-conference-europe/>

IOT TECH EXPO

EUROPE

1-2 October 2024
RAI, Amsterdam

IoT Tech Expo Europe
1-2 October 2024
Amsterdam, The Netherlands
<https://www.iot-now.com/event/iot-tech-expo-europe-3/>



MOMENTUM AI London 2024

AI Summit | 2-3 October, 2024 | Convene 133 Houndsditch

Momentum AI London 2024
2-3 October 2024
London, UK
<https://www.iot-now.com/event/momentum-ai-london-2024/>

NETWORK X

8 - 10 October 2024
Porte De Versailles,
Paris, France

Network X
8-10 October 2024
Paris, France
<https://www.iot-now.com/event/network-x-2/>



MWC Las Vegas
8-10 October 2024
Las Vegas, Nevada, USA
<https://www.iot-now.com/event/mwc-las-vegas/>



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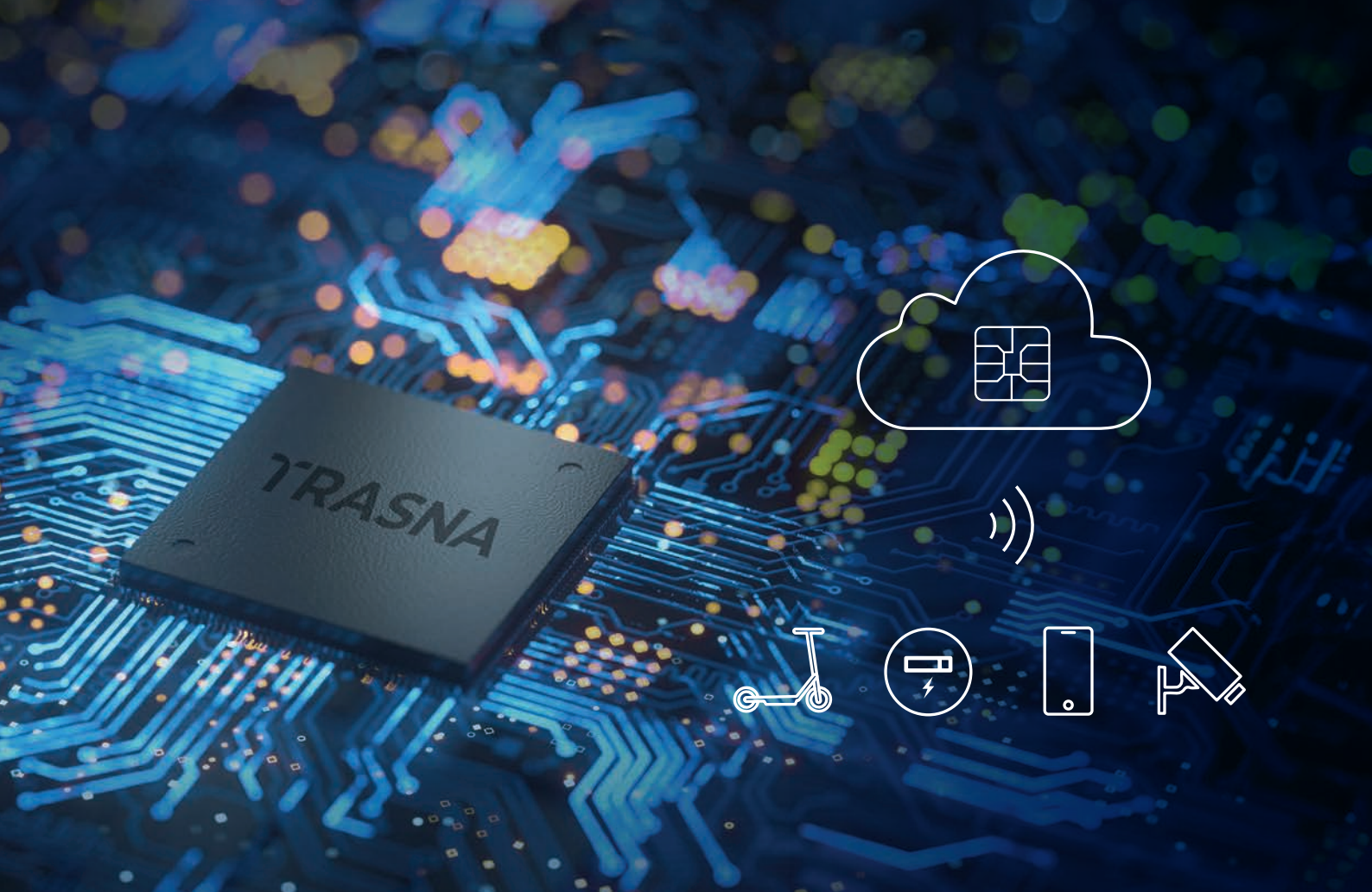
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Pamela Trevino, EMEA Marketing Manager, Gurobi Optimization

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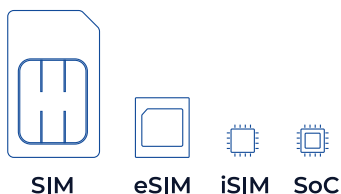


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