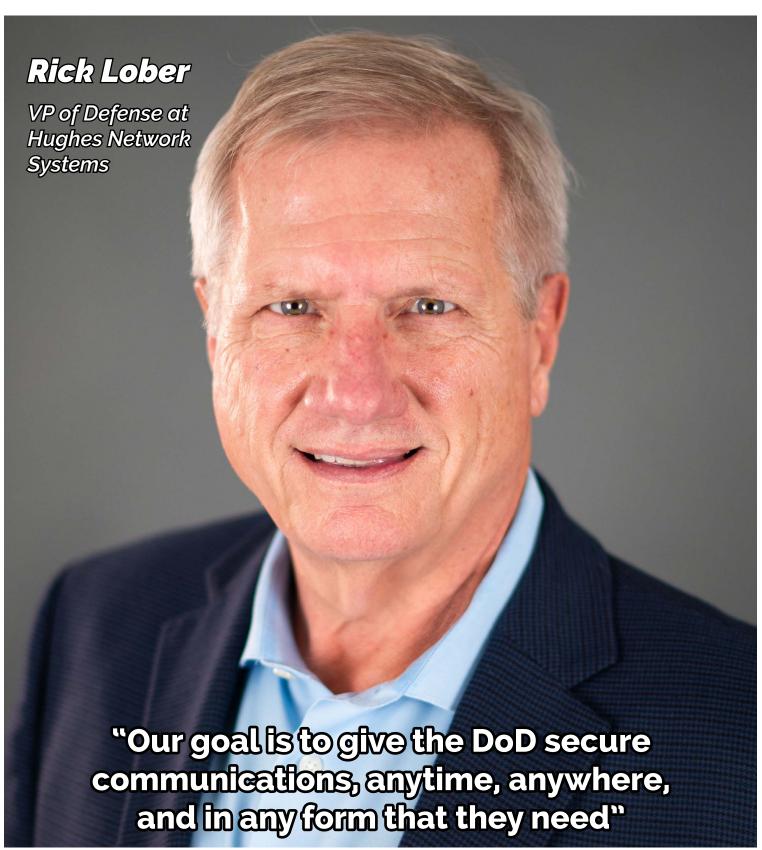


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Editor's Note



Dear Reader,

Welcome to the latest edition of Teletimes International.

The global telecom industry is experiencing rapid growth and technological advancements. The shift towards 5G technology is driving this growth, with many countries investing heavily in upgrading their infrastructure to support this new technology.

The rise of 5G is expected to bring significant changes to the telecom industry. It promises faster data speeds, improved connectivity, and lower latency, which will enable new applications and services such as autonomous vehicles, augmented reality, and smart cities.

However, the deployment of 5G networks is not without its challenges. One of the biggest challenges is the high cost of building the necessary infrastructure, which has led to some countries falling behind in the race to deploy 5G.

Another challenge facing the telecom industry is the issue of net neutrality. This is the principle that all internet traffic should be treated equally, without discrimination or favoritism. There have been concerns that some telecom companies may try to prioritize certain types of traffic, such as their own services or those of their partners, over others.

Both of these challenges were discussed thoroughly in this year Mobile World Congress in Barcelona amongst senior executives and thought leaders of the industry. You will find inside this edition, a detailed coverage of the event and the discussions within.

Despite these challenges, the global telecom industry is still growing and evolving. While we tackle 5G on one side, we approach a world of 5.5G on the other - and so, we move forward.

One of the main industry leaders in this space, is STC who has outgrown its traditional approach to become an ICT enabler. You will find an exclusive interview with stc GCTO Haithem Alfaraj in this edition that sheds some light on stc's recent success and the vision behind it.

As always, you will also find the latest news and updates from the industry in Teletimes. Your feedback is welcome on info@teletimesinternational.com

Khalid Athar

Chief Editor



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stc showcases its digital solutions at the Mobile World Congress (MWC) in Barcelona





The stc Group is participating in the activities of the Mobile World Congress MWC 2023 in Barcelona, where the group is showcasing its latest technologies and digital solutions, in addition to its journey in digital transformation in the Kingdom and the latest digital solutions it offers to various sectors.

During stc Group's strategic partnership with the MWC 2023 Mobile World Congress, which is being hosted in Barcelona from February 27 to March 2, stc will focus on showcasing the latest digital products and services and highlighting the most prominent innovative global solutions and technologies.

While the pavilion shows stc's future vision and innovation, the theme touches about how stc expanded and evolved over the past decades into the ICT backbone of the region which it is and how the recent initiatives are evolving it into the digital enabler of the future for Saudi Arabia and



for the region.

The group is displaying its latest technologies and digital solutions in its participating pavilion, which includes a presentation of the digital transformation journey that includes digital and cloud services, the Internet of Things, data centers, technologies based on the 5G network, digital medical solutions, smart ports, and others. During the conference, stc will be signing a number of agreements with major international companies, in

addition to the participation of a number of stc Group executives in the dialogue sessions.

The conference will discuss the most important challenges facing the telecommunications sector in general and the future of the mobile industry in the world, and ways to develop it. It will also review the latest technologies, products and digital solutions. Major international companies in the telecommunications sector, many international experts and government officials will participate in the conference.

stc Group presents its experience and success in the digital transformation journey at the global conference, as it is the leader in digital transformation in the Middle East. The group will also discuss, during the Mobile World Congress, a number of investment opportunities in technology within the Kingdom and explore areas of cooperation with global partners.



MWC Barcelona 2023

Huawei advocates striding faster towards an intelligent world



Huawei's Carrier BG President Li Peng spoke at Huawei's MWC Barcelona 2023 Day O Forum on how 5G was opening the door to an intelligent world, and how the leap to 5.5G would be a key milestone along this journey. Li emphasized that the industry had to work together to move faster towards an ultra-broadband, green, and intelligent world, and that Huawei's GUIDE business blueprint could help lay the foundation for this important achievement.

Huawei launched the Green 1-2-3 Solution

On the sidelines of MWC 2023, Huawei held its Green ICT Summit. Peng Song,

President of ICT Strategy & Marketing of Huawei, delivered a keynote speech entitled "Green & Development, Choosing Not to Choose". He pointed out that an Al Big Bang is underway, and that AI brings new benefits and opportunities to operators. However, it also requires better ICT infrastructure, due to higher bandwidth and increased computing power leading to a rapid increase in network energy consumption. "The ICT industry seems to be faced with the tough choice to either go green or develop. However, we believe the industry can choose not to choose, and instead go green and develop simultaneously," Peng

Peng emphasized that Huawei iteratively

updates its green solutions in accordance with its belief in the potential of the three aforementioned areas, and has launched the Huawei Green 1-2-3 solution. Within this solution, "1" refers to one index for green network construction; "2" refers to the focus on two scenarios: high energy efficiency and ultra-low energy consumption; and "3" refers to a systematic three-layer solution that covers sites, networks, and operations.

Peng closed his speech by highlighting Huawei's willingness to work with operators worldwide to strike a balance between going green and development, in order to accelerate green ICT development.



Huawei unveiled HUAWEI XMAGE Trend Report 2023

Also, during the event, Huawei unveiled the HUAWEI XMAGE Trend Report 2023. This is the first trend report since the launch of HUAWEI XMAGE in 2022, a new mobile imagery brand which clearly defined the structure of Huawei's Mobile Imagery Strategy: technology innovation, consumer experience and culture exploration.

Images have become the common language of today, and mobile phones

era of mobile imagery, and we spare no efforts in forging a strong imagery culture via innovation, which brings users superior experience," said Li. According to research, over 1.4 trillion photos are taken globally each year, among which more than 89% are captured on mobile phones.

Connectivity+ is key to prosperous 5G development

By the end of 2022, more than 230 5G networks had already been commercially a one-stop digital service provider.

General-purpose technologies like 5G, Al, and cloud computing are driving industrial digitalization and bringing new strategic opportunities. Enterprise customers need more offering portfolios, carriers need to reinforce "Connectivity+". One Chinese carrier had combined connectivity with cloud, AI, security, and platform services to expand into new markets and grow its revenue from industrial digitalization by over 20% in 2022.

Moving forward, carriers will continue to improve their network capabilities, to provide more guaranteed experiences. So, carriers are making "Connectivity+" more open. Huawei has joined the CAMARA project led by the GSMA. Through this project, we aim to help carriers transform networks into service enablement platforms and monetize better customer experience.

Moving faster into an ultra-broadband, green, and intelligent world

Moving forward, the intelligent world will be deeply integrated with the physical world. Everything, including personal entertainment, work, and industrial production, will be intelligently connected. This means that networks will have to evolve from ubiquitous Gbps to ubiquitous 10Gbps, connectivity and sensing will need to be integrated, and the ICT industry will have to shift its focus from energy consumption to energy efficiency.

The evolution from 5G to 5.5G will be key to meeting these growing requirements.

Huawei is ready to work with its industry partners to deliver a ubiquitous 10Gbps experience with innovative wireless, optical, and IP technologies; explore use cases like vehicle-road collaboration and environment monitoring to integrate sensing and communication; and build a unified energy efficiency indicator system to drive green industry development.



play an increasingly important role in this new trend, said Li Changzhu, Vice President of Strategy Marketing, Huawei Consumer BG, as well as judge of HUAWEI NEXT IMAGE Awards. Li announced the launch of the report at the HUAWEI XMAGE Salon themed Insight in Mobile Imagery. Based on works generated from submissions to the annual awards, derived from XMAGE, the report identifies trends in the type of visual content that Huawei smartphone users generate.

"HUAWEI XMAGE aims to bring a new

deployed, supporting over one billion 5G users and a multitude of 5G devices, and 5G has driven rapid development of the ICT industry. In the consumer market, carriers have been innovating to extend "Connectivity+". As 5G capabilities continue to improve, leading carriers in Europe, Asia Pacific, and the Middle East have scrambled to develop different kinds of digital services. Some carriers have converged connectivity with local OTT services, which allows them to achieve shared success. These offerings bundle connectivity with digital services like social media, helping them grow into

Teletimes Report



During the 2023 Mobile World Congress (MWC 2023), Huawei has successfully launched a series of innovative solutions to GUIDE to the intelligent world. Together with global industry customers, partners, and opinion leaders, Huawei discussed how digital technologies will affect our future - from the development of the world economy, through to global cultures, societies, and the environment.

At Huawei 5th Industry Digital Transformation Summit, Huawei released a new series of advanced solutions for simplified networks, with which DCs can build a solid network foundation, leading to the development of new DCs, and unleashing digital innovation, to meet the requirements and pain points of enterprise network management efficiency, connection experience, data center (DC) security, and computing power.

In his opening speech, David Wang, Huawei's Executive Director of the Board, Chairman of the ICT Infrastructure Managing Board, and President of the Enterprise BG, said,



Bob Chen VP, Huawei Enterprise BG

"Huawei will deepen our roots in the enterprise market and continue our pursuit of innovation. We are ready to use leading technologies and dive deep into scenarios. Together with our partners, we will enable industry digitalization, help SMEs access intelligence, and promote sustainable

development, creating new value together."

Bob Chen, Vice President of Huawei Enterprise BG, delivered a keynote speech entitled "Digital Technology Leads the Way to the Intelligent World", which outlined how digital technologies have impacted the development of the world's economy, cultures, societies, and environment.

Chen stated that connectivity is crucial to digitalization, while networks are key to connectivity. He noted that Huawei is committed to helping enterprises build intelligent cloud-networks with cloudnetwork synergy, simplified architecture, and energy-saving features, thereby maximizing digital productivity and creating the ultimate experience.

During MWC, Huawei also released a new ICT Digital Intelligence Service and Software Solution.

Bruce Xun, Vice President of Huawei

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David Wang - Huawei's Executive Director of the Board, Chairman, ICT Infrastructure Managing Board, & President, Enterprise BG

Global Technical Service Dept, said: "ICT infrastructure has become the foundation of the intelligent world. Being Green, Efficient, Secure, and Intelligent are key requirements in order to deliver the Ultimate experience and support Open Innovation. We are now pleased to offer a portfolio that is intelligent, green and efficient, offering comprehensive digital services and the ultimate experience across the whole lifecycle of the network, including planning, construction, O&M, optimization and service operations."

Huawei believes the most important thing is to continually develop the talents and capabilities of staff. Huawei Learning Service provides a comprehensive talent development service, covering both digital leadership and certification in broad ICT skills, to accelerate talent transformation. In 2022, Huawei has provided training to 160,000 ICT talents worldwide, and over 100,000 engineers are certified by Huawei every year.

In parallel, Huawei held Product & Solution Launch 2023 at MWC, and Huawei Cloud released its new global offerings such as Landing Zone and Cloud on Cloud.

Jacqueline Shi, President of Huawei Cloud Global Marketing and Sales Service, delivered a keynote speech entitled "Unleash Digital with Everything as a Service".



Bruce Xun Vice President Global Technical Service Dept, Huawei

"We hope to provide reliable, secure, and sustainable services for our customers, partners, and developers, with everything done on the cloud," said Shi.



Jacqueline Shi President, Huawei Cloud Global Marketing and Sales Service

and innovate, working alongside global customers and partners to deeply integrate ICT, accelerate digital transformation, promote digital economy development and



Huawei believes the most important thing is to continually develop the talents and capabilities of staff



Landing Zone is a sustainable, scalable multitenancy solution to automate B2B services for carriers. The solution offers layered cloud resource management, identity and permissions design, data boundaries, compliance audit, and financial management.

To help carriers expand into the enterprise market, Huawei Cloud releases the Cloud on Cloud solution. Carriers now make the most of the services, technologies, ecosystems, and sales resources of Huawei Cloud, together with their own industry-leading networks, to fuel digital transformation.

In the future, Huawei will continue to invest

speed up the realization of the intelligent world within industries, in order to create new value.

MWC Barcelona 2023 held from February 27 to March 2 in Barcelona, Spain. Huawei showcases its products and solutions at stand 1H50 in Fira Gran Via Hall 1.

Together with global operators, industry professionals, and opinion leaders, we dive into topics such as 5G business success, 5.5G opportunities, green development, digital transformation, and our vision of using the GUIDE business blueprint to lay the foundation for 5.5G and build on the success of 5G for even greater prosperity.





Mobile operators must continually invest in maintaining, expanding, and evolving their networks to deliver this digital revolution

> Interview: Gulraiz Khalid

stc Group

is focused on offering digital solutions across all verticals in a step to develop the socio-economy and enhance the way of life

stc GCTO Haithem Alfaraj talks to Teletimes in exclusive interview at Mobile World Congress Barcelona

Gulraiz Khalid: Why is MWC important to stc Group?

Haithem Alfaraj: MWC is a remarkable event for stc Group, and it's a well-reputed platform to showcase our new technologies that ensure world-class connectivity for our customers, as well as our 5G network as vital to realising our goals.

As always, we put user experience at the heart of our actions and seek to provide services and solutions that better meet or even exceed the requirements of our customers, whether individuals or organisations.

Our 5G network, AI, IoT, Cloud Computing, and Big data technologies will enable

individuals, and enterprises, regionally and internationally, with a higher data speed underpinned by a host of new, low-latency applications.

Today, the stc technologies reinforce several businesses and government entities as our infrastructure is built to support these parties and those of essential strategic



importance for the nation's economy.

G.K: What are stc's key solutions present at the MWC 2023?

H.A: stc Group is participating in MWC in the Ministerial Program. We intend to explore new horizons of digital innovation and the advantages that evolving mobile networks continue to deliver. We will showcase our IoT squared company, which offers a wide range of Internet of Things solutions to facilitate communication between devices and the cloud, as well as between devices only, in addition to our 5G connectivity solutions, supplemented by mobile edge computing.

Moreover, we will exhibit our Artificial Intelligence solutions that enable smart cities and industrial automation, bring new experiences to life, and support innovation.

Furthermore, stc is showcasing Digital connectivity at the heart of transforming economies and societies. Mobile operators must continually invest in maintaining, expanding, and evolving their networks to deliver this digital revolution.

G.K: Why is the Ministerial Programme vital for you to attend? stc Group has taken a leading role in deploying 5G: could you update us on your progress in deploying the technology and new use cases it delivers in the consumer/enterprise sectors?

H.A: The Ministerial Programme is essential to MWC, allowing us to explore new horizons of digital expansion, regulation, and international policy. As a digital



We have partnered with various sector leaders, including Huawei, Ericsson and Qualcomm, to accelerate our 5G implementations across our markets

communications leader, stc Group is focused on deploying new technologies to ensure we provide world-class connectivity for our customers. Our 5G network is a vital part of realising this goal.

We have partnered with various sector leaders, including Huawei, Ericsson and Qualcomm, to accelerate our 5G implementations across our markets. Our 5G network deployment aims to offer higher data speeds underpinned by a host of new, low-latency applications to increase speed and accessibility for all our customers. We have developed our digital infrastructure to support our strategic goals for Saudi Arabia and our global goals.

G.K: What are you most looking forward to in Ministerial Programme this year?

H.A: We are focusing on building further strategic partnerships, joint ventures, and collaborations with global entities to expand our reach and further drive digital transformation.

Uniting with the key voices of the digital world at MWC 2023 solidifies the importance of global collaboration to drive growth in the sector. We always look forward to participating in the discussion and hearing how different entities and countries are approaching digital transformation. With the rise of the digital economy and growing global uncertainty, the three-day discussion feels timelier than ever as we address the new realities we face and unite to share knowledge and improve existing policies, including; consumer, trade, transport and more.

G.K: What are stc's key products, services and solutions that should attain a spot on during this session?

H.A: stc Group has been enhancing and delivering various digital solutions. As the digital enabler in Saudi Arabia and the region, we seek to enable economies and vital industries. Our portfolio has a significant number of solutions, including AI, to serve businesses and individuals, which will affect the overall socio-economy and help reduce unnecessary costs. On the other hand, we provide AI and IoT for smart cities. This will enable the longevity of resources and play a major role in our sustainability approach. Moreover, we have helped the medical sector through our smart technologies. In addition, our Big Data centres deliver easy and secure processing of data that enables many businesses.

Generally, stc Group is no longer a telecommunication company; we are operating on a larger scale offering digital solutions across all verticals, in a step to develop the socio-economy and enhance the way of life. I



We are operating on a larger scale offering digital solutions across all verticals, in a step to develop the socio-economy and enhance the way of life







MWC Barcelona 2023 was held from February 27 to March 2 in Barcelona, Spain. This year, Huawei's Carrier Business Group, Enterprise Business Group, and Consumer Business Group will once again participate in the exhibition together, displaying their latest products and solutions at Huawei's booth in 1H50, Hall 1, Fira Gran Via. At the event, the company will join with global carriers, industry professionals, and opinion leaders to discuss a number of hot topics, including new growth opportunities, 5G business success, 5.5G, green development, and digital transformation. Together, the parties will also explore how the GUIDE business blueprint can help make rapid strides towards an intelligent world.

As the intelligent world approaches, digital infrastructure for people, homes, and industries is facing an unprecedented set of new demands. In the carrier market, ICT technologies like 5G, cloud, and

Al are converging faster than ever and fueling innovation that will help carriers meet evolving demands and create more opportunities for new growth. To better seize these opportunities, Huawei will work alongside carriers and partners worldwide to explore and build simplified, green, and intelligent ICT infrastructure that can turbocharge digital transformation and empower innovation. We will work together to lay the foundation for 5.5G and build on the success of 5G for even greater prosperity.

In the enterprise business domain, following the theme of "Leading Digital Infrastructure for New Value Together", Huawei continuously innovates alongside its customers and partners across numerous industries such as public utilities, finance, energy, transport, and manufacturing. This work is intended to identify technologies that can be adapted to specific scenarios

and explore ways to support the digital transformation of the related industries. In addition, Huawei works with partners to accelerate the intelligent transformation of small- and medium-sized enterprises. Through these joint efforts, we hope to stride together towards an intelligent world.

In the consumer business domain, Huawei will launch a number of innovative products, including the Mate 50 series, WATCH Buds, and WATCH GT Cyber, demonstrating the company's technological innovation in different scenarios, such as mobile imaging, health and fitness, and smart office, and providing users with smart, innovative, and industry-leading experiences. At this year's event, Huawei will unveil more surprises, including those related to leading, innovative, and all-scenario technologies centered on mobile phones, to bring more disruptive products and experiences to users worldwide.





stc Group and Huawei Cloud Core Network product line signed a Memorandum of Understanding (MoU) to establish a Cloud & Core Infrastructure Collaboration (CIC) at Mobile World Congress (MWC) in Barcelona. This signing ceremony marks the beginning of a friendly partnership between Cloud infrastructure team and Huawei Cloud Core Network team for the next decade.

The MoU was signed by stc Vice President of Technology Strategy & Architecture Sector, Khaled Aldharrab, and COO of stc Global Key Account, Qiangli Qiu. The signing ceremony was attended by officials from the high-level representatives from the stc and Huawei.

The CIC, which will serve as a platform for the development of new cloud & core technologies and solutions that can benefit the telecommunications industry in Saudi Arabia, will leverage the strengths of stc, Huawei, and other relevant parties to

accelerate the traffic migration towards Telco Cloud, turn concepts into prototype solutions and iterate them to transform them into solutions that are ready for commercialization.

"We are pleased to announce the establishment of the Cloud & Core Infrastructure Collaboration, which will serve as a catalyst for collaboration in the telecommunications industry in Saudi Arabia," said Khaled Aldharrab. "We believe that the CIC will create a collaborative environment where we can work with our partners to develop telco cloud related new technologies and solutions that will help us deliver world-class telecommunications services to our customers."

Qiangli Qiu also expressed his enthusiasm for the partnership, stating, "We are committed to working closely with stc to help them achieve their goals of providing world-class telecommunications services to the people of Saudi Arabia. The establishment of the Cloud & Core Infrastructure Collaboration is a testament to our shared commitment to collaboration and excellence."

Huawei's Cloud Core Network is built on a cloud-native architecture that enables it to deliver superior performance, scalability, and agility. The company is committed to continuing its investment in research and development to drive the evolution of cloud and core networks.

The CIC is a significant step forward for both companies and for the telecommunications industry in Saudi Arabia. It demonstrates the willingness of stc and Huawei to collaborate on projects that can help drive growth and progress in the industry. With the support of stc's cloud relevant departments and partners, the CIC will be able to convert ideas into tangible solutions that can bring real value to customers.





During the Mobile World Congress (MWC 2023) that was recently held in Barcelona, Huawei bagged a number of significant awards in various categories at GSMA's Global Mobile (GLOMO) Awards. Judged by the sector's most prominent subject matter experts, GLOMO Awards are the industry's most prestigious accolade that celebrate the companies, individuals and governments who have driven the greatest innovation in mobile and adjacent industries.

The company was awarded 'Best Mobile Network Infrastructure' for its MetaAAU series. This award recognizes Huawei's long-term breakthroughs in Massive-MIMO with its innovative products that help build 5G networks with optimal performance and energy efficiency, industry's simplest deployment, and industry's strongest evolution capabilities.

The MetaAAU series is Huawei's thirdgeneration AAU products, including MetaAAU and Meta BladeAAU. This portfolio is the first-of-its-class to introduce the ELAA (Extremely Large Antenna Array) technology to open a new green track for Massive MIMO, and is the optimal solution

for improving 5G coverage, capacity, and energy efficiency. Compared with the second-generation AAUs which use 192 antenna arrays, MetaAAU doubles the antenna array scale, uses narrower beams, and provides more focused energy. Combined with the unique AHR Turbo (Adaptive High-Resolution) beamforming algorithm, uplink and downlink coverage is improved by 3 dB, user experience is improved by 30%, and energy consumption is reduced by 30%. MetaAAU boosts both network performance and energy efficiency. It is a new direction for Massive MIMO innovation and a new path for stronger and greener 5G evolution.

MWC 2023 Hertz Antenna Mobile Best Mobile Technology Breakthrough Huawei FDD Beamforming Radio System, Double Spectrum and Energy Efficiency Capacity Building a Fully Connected, Intelligent World

In another category, Midea, China Mobile, and Huawei were named winners of the '5G Industry Challenge Award in collaboration with the GSMA 5G Hub' for the 5G fullyconnected laundry appliance factory project — the largest of its kind the world has ever seen — that they built together in Jingzhou, a major industrial city in China's central Hubei province. This award recognizes the extensive application of 5G technologies to smart manufacturing.

Midea Group is a Guangdong-based leading electrical appliance manufacturer and plays a pioneering role in bringing 5G to manufacturing. With advanced mobile solutions provided by China Mobile and

teletimes

Huawei, it has built the world's first 5G fullyconnected factory in the home appliance sector. This is the first time that 5G has been fully applied to all industrial production and business operations. In this smart factory, 5G connections have been applied across 15 scenarios and all production links are seamlessly connected through 5G devices. To date, this is the industry's largest 5G application in industrial campuses, with the largest number of 5G devices used and the most comprehensive use of 5G for production. The project has seen 5G replace complex cabling between machines in the factory, improving workplace safety and allowing machines to operate automatically for higher productivity.

Additionally, Huawei's FDD Beamforming series took home the 'Best Mobile Technology Breakthrough'. This award recognizes Huawei's continuous work to create simplified ultra-wideband, precise multi-antenna beamforming, and green solutions. Huawei's revolutionary beamforming products are helping operators across the globe build best-inclass 5G networks that feature the ultimate performance, lowest energy consumption, optimal user experience, and strongest evolution capability.

Huawei FDD beamforming series products consist of Massive MIMO, 8T8R, and Hertz antennas. Thanks to its exclusive intelligent beamforming algorithm, these products can flexibly support 4G and 5G beams. FDD Massive MIMO provides up to five-fold spectral efficiency, meeting operators' requirements for capacity growth in hotspots. 8T8R is designed for FDD medium bands. It provides capacity- and experience-based solutions that can be widely deployed, and tackles issues like 4G congestion and poor indoor 5G experience. Compared with 4T4R, 8T8R brings three times the spectral efficiency, helping operators build experience.

The 'Best Mobile Innovation for Emerging Markets' award was another award Huawei received for RuralLink — Green, Simplified, and Evolvable Solution for Rural Connectivity, proving that Huawei's



continuous innovation in scenario-based coverage solutions for remote areas has been well recognized by the industry.

Around 40% of the world's population still have no access to mobile Internet, and among those, hundreds of millions of people living in very remote areas are not even covered by mobile broadband networks. This has set the stage for Huawei to explore innovations that are able to expand mobile broadband to connect the unconnected while also being able to provide good experience.

Huawei's RuralLink solution uses innovative unique technologies to address challenges in rural communications, and provides

ubiquitous coverage with ultra-low cost and power consumption. This solution is the industry's first to use microwave fronthaul technology. Rural sites can share baseband resources of existing base stations, eliminating the need to deploy independent baseband units. One RRU and one Channel Expand Antenna are capable of achieving three-sector coverage. Not only that, there is no longer a requirement for BBUs, which further reduces site power consumption. Only 4 PV modules are needed for supplying power to the entire site. With one-off deployment, RuralLink can currently support 2G, 3G, and 4G services and can evolve to 5G, providing long-term experience-quaranteed coverage for rural areas.



The GSMA has announced the winners of the 2023 Global Mobile (GLOMO) Awards, live on the Industry City and Ministerial stages at MWC Barcelona. The awards celebrate the companies, individuals and governments who have driven the greatest innovation in mobile and adjacent industries.

New for 2023, the GSMA has honoured Martin Cooper, as the first recipient of the GLOMO Lifetime Achievement Award. This award recognizes Martin's innovative and pioneering leadership in the technology industry. Martin placed the first public call from a handheld portable cell phone at Motorola, on 3rd April 1973. Now cited as the 'father of the cell phone', within ten years, Martin had led the team that brought the first handheld cellular mobile phone to market in 1983.

"In another year when staying connected proved to be more important than ever,

we received an incredible number of entries showcasing amazing innovation which is redefining what it means to work together," said John Hoffman, CEO of GSMA Ltd. "Huge congratulations to all of this year's winners and the full network of shortlisted companies who all represent the most forward-looking innovation and sheer brilliance our sector has to offer."

2023's Winners

Outstanding Achievement

Outstanding Contribution to the Mobile Industry / Chairman's Award:

- •Doreen Bogdan-Martin, ITU Secretary-General
- •Hon. Paula Ingabire, Minister Ministry of ICT and Innovation Rwanda
- •Mapula Bodibe, CEO MTN Rwanda
- •Dr. Diane Karusisi, CEO Bank of Kigali

Diversity in Tech Award

•Eugina Jordan, CMO, Telecom Infra Project (TIP)

Government Leadership Award

Government of India

Lifetime Achievement Award

Martin Cooper

Mobile Tech

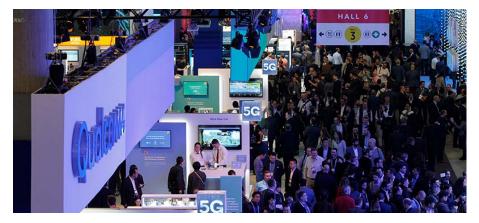
CTO Choice: Outstanding Mobile Technology Award:

•EdgeQ's 5G + Al Base Station on a Chip

Best Mobile Network Infrastructure:

• Huawei for MetaAAU Series – Boosting Performance & Energy Efficiency





Best Mobile Technology Breakthrough:

 Huawei for FDD Beamforming Radio System, Double Spectrum and Energy Efficiency

Best Network Software Breakthrough:

•Rakuten Symphony for Symworld with Juniper RAN Intelligent Controller (RIC)

Best Digital Tech Breakthrough for companies with under \$10 million Annual Global Revenue:

•EdgeQ's 5G + Al Base Station on a Chip

Best Mobile Security Solution:

•IDEMIA for eXtraOne 5G SIM

5G Industry Challenge Award in collaboration with the GSMA 5G Hub:

•Midea, China Mobile and Huawei for World's Largest 5G Fully-connected Factory

Best Cloud Solution:

•Rakuten Symphony for Symworld Cloud

Digital Everything

Best Mobile Operator Service for Connected Consumers:

•VEON: DO1440

Best Mobile Innovation for Connected

Economy:

 Guangzhou Metro, China Mobile and ZTE for 5G-empowered Smart Metro in Guangzhou

Best Mobile Innovation for the Connected Health and Wellbeing:

•Xuanwu Hospital of Capital Medical University, China Unicom, CITC, and Huawei for 5G Mobile Stroke Unit - Maintaining Brain Health

Best Mobile Innovation for Digital Life:

•Metro Pacific Health Tech for mWell

Best Mobile Innovation for Cities:

•SK Telecom for Location Intelligent Solution 'LITMUS'

Best Mobile Innovation for Web3:

•Authena for Secured Phygitals

Device

Best Smartphone:

•Apple iPhone 14 Pro

Disruptive Device Innovation:

 $\bullet {\sf Apple - Emergency SOS \ via \ Satellite}$

Best Connected Consumer Device:

•TCL Mobile for NXTWEAR S

Best In Show:

•Motorola Defy Satellite Link made by Bullitt powered by MediaTek

Tech4Good

Best Mobile Innovation for Emerging Markets:

 Huawei for RuralLink – Green, Simplified and Evolvable Solution for Rural Connectivity

Best Mobile Innovation supporting Emergency or Humanitarian Situations:

• lifecell for Project Operator's Work Under Fire

Best Use of Mobile for Accessibility & Inclusion:

•SK Telecom, LBStech and SAPEON Korea for 'G-EYE PLUS Powered by SKT's Visual Localization and Mapping Technology

Best Mobile Innovation for Climate Action:

•The Wiliot IoT Platform for Supply Chain Sustainability

Outstanding Mobile Contribution to the UN SDGs:

•Telefónica for ProFuturo Programme

The Process

The GLOMO Awards are the most prestigious accolade in the mobile industry, judged by over 150 independent judges worldwide – led by Head Judge, Shaun Collins, Chairman of CCS Insights - over a period of six weeks. This year's Government Leadership Award was judged by Sigve Brekke, President and CEO of Telenor; Ambassador David Gross, Partner at Wiley; and John Giusti, Chief Regulatory Officer at the GSMA.

All MWC Barcelona 2023 keynotes and broadcasting will be livestreamed by Mobile World Live and available on-demand.



e& receives Brand Finance Awards during **Mobile World Congress in Barcelona**



e& has received the Brand Finance Telecoms 150 2023 award as the most valuable portfolio of telecom brands in the Middle East and Africa.

e& has undergone a significant transformation, resulting in remarkable business growth and sustained stakeholder confidence. The transformation into a global technology and investment group has seen e&'s portfolio of brands grow by 12.3 per cent year-on-year to a new record of \$14.6 billion.

The Group's largest telecom brand, etisalat by e&, was also awarded as the strongest brand across all categories in the MEA region and was ranked in the top three telecoms brands globally. This new global position is a reflection of a tech-driven telecoms brand enabled by superior 5G connectivity, high NPS scores through richer personalised customer interactions and increased employee satisfaction through a vibrant corporate culture that makes it an attractive employer.

Hatem Dowidar, Group CEO of e&, and Masood M. Sharif Mahmood, CEO of etisalat by e& UAE, received the awards on the sidelines of the Mobile World Congress held in Barcelona.

Dowidar said; "We are determined to remain at the forefront of technological transformation in the digital sphere. To this end, we are committed to exploring new business models to enhance our offerings and services for more than 162 million subscribers in the markets we serve. Our primary strategic objective is to create new collaborations and investment opportunities that will enable us to accelerate growth in all our business verticals.

"Customer satisfaction is a non-negotiable priority for us, and we aim to exceed their expectations. Our customercentric approach drives us to continually improve our products and services to deliver unparalleled value. Our fixation on customer happiness allows us to build lasting relationships and maintain our position as a leading global technology Group."

The success of the Group's business strategy is reflected in the Brand Finance report, which recognised etisalat by e& as the strongest telecom brand in the MEA region, with a Brand Strength Index (BSI) score of 89.1 out of 100 and an "AAA" rating.

Mahmood said: "This recognition reflects our commitment to providing our

customers with the most outstanding services and experiences. We will continue to leverage the strength of our brand and market reach to drive growth and success, while investing in cutting-edge technology and innovation to provide our customers with the best products and services. Our strategic priority is to strengthen etisalat by e&'s position as a leader in the technology and telecom sectors, known for its innovation, customer service and commitment to sustainability."

Hatem Dowidar, Group CEO of e&, has been ranked 1st globally in the Telecom Brand Guardianship Index (BGI) for 2023, and is the first CEO from the Middle East and Africa region to top the index. This ranking incorporates original market research from 1,000 analysts and journalists from around the world, and looks at three areas: Investment and how leaders steer the company in the right direction, Fairness and how different stakeholders perceive it, and Performance and how the brand and company have performed during their tenure.

Brand Finance is the world's leading independent branded business valuation and strategy authority, evaluating over 5,000 brands across all sectors and geographies every year.

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Ooredoo and Huawei

sign agreements during MWC 2023

During MWC 2023, Ooredoo Group has signed a partnership agreement with Huawei to leverage Huawei Mobile Fintech platform to provide Fintech services in markets across the company's footprint. Under the agreement, the two entities will cooperate for Ooredoo to provide state-of the art, mobile-first financial services on Huawei's platform for both consumers and merchants in Ooredoo's markets.

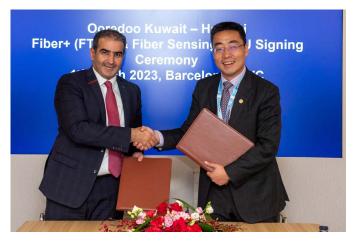
Aziz Aluthman Fakhroo, Managing Director and Group CEO at Ooredoo Group, said: "A key pillar of our strategy is evolving our core, and this includes identifying new use cases and exploring new businesses in our immediate industry adjacency such as Fintech, where Ooredoo has already established successful operations in our home market Qatar. Our plan in 2023 is to evolve our Fintech marketplace to other markets within our footprint, enabling us to simplify everyday financial transactions and drive financial inclusion. This new partnership agreement with Huawei will solidly underpin our efforts in this field."

Li Peng, President of Carrier BG at Huawei said: "This agreement is an important step forward to foster our long-term strategic partnership with Ooredoo. Huawei is committed to providing industry-leading technology with purpose that will ensure the realization of this project and help Ooredoo achieve business success.

Ooredoo Kuwait has signed another agreement with its partner Huawei during the recently concluded Mobile World Congress



Ooredoo Group signs Fintech Service Agreement with Huawei at MWC 2023



Ooredoo and Huawei sign agreement to jointly develop fiber-optic sensing smart solution

2023, Barcelona. The agreement aims to jointly upgrade FIBER+ high-speed Internet experience, and develop a fiber-optic sensing smart solution.

Abdulaziz Al-Babtain, Chief Executive Officer said, "This cooperation comes in line with Ooredoo's vision to empower Kuwait's society by driving digital transformation and enriching people's digital lives. As a leader of Kuwait's broadband infrastructure development, we continuously seek to develop our 5G innovative network, build smart connectivity products, and provide digital services to support the digital transformation journey of our customers. Ooredoo is keen to continuously provide unique innovative and advanced technologies that elevate its customer experience, empower full connection of home and office Internet of Thing (IOT) devices, and provide industries with more reliable and efficient solutions to accelerate their digitalization process."

An Jian, President of Huawei Carrier Business Group in the Middle East & Central Asia, said: "This agreement is a key milestone to foster our long-term strategic partnership with Ooredoo Huawei is committed to using its global knowledge and expertise to support Ooredoo in accomplishing digital transformation and achieving business success. We hope our partnership expansion with Ooredoo will actively contribute to Kuwait's progress in strengthening the country's digital infrastructure and becoming a global leader in digitalization."



"Our goal is to give the DoD secure communications, anytime, anywhere, and in any form that they need"

Rick Lober - VP of Defense at Hughes Network Systems speaks to Teletimes Interview - Khalid Athar

Khalid Athar: How was the year 2022 for Hughes? How did the market evolve over the year and what are you hoping to achieve in 2023?

Rick Lober: The government group at Hughes is coming off another strong year and we will continue our success in 2023 by leveraging Hughes expertise in managing networks while delivering new technologies to defense and other government customers. The U.S. Department of Defense has begun to focus more directly on using commercial solutions, looking for providers who deliver a managed network service rather than just hardware or bandwidth. We are delivering a range of new technologies to the government customer, including stand-alone 5G networks, electronically steerable antennas, and satellite connections for Internet-of-things applications.

Hughes has long operated using a partnership strategy, working with a broad network of service providers as

well as alliances with satellite owners and operators and partnerships with aerospace innovators. The model also makes sense for supporting the military. The DoD wants to be able to rely on companies with well-established partnerships that can streamline delivery of solutions and services to the battlefield.

One example of how we worked with our partner OneWeb in 2022 was completing the installation of LEO terminals at Thule Air Base on the northwest coast of Greenland where 600 personnel are stationed. A thousand miles from the North Pole, the base is below the horizon of geosynchronous satellites flying above the

equator. The new OneWeb LEO satellites fly in a near-polar orbit so that at least one satellite is always in range of the ground receivers at Thule. Hughes designed the network and installed the equipment that gives the men and women stationed there high-speed, low-latency broadband for the first time.

Another example was a prime contract Hughes was awarded to deploy a secure, "standalone" 5G network at Naval Air Station Whidbey Island in Washington state to support operations, maintenance and flight traffic management. Hughes is the integrator for this 5G network, working together with Boingo Wireless, Cisco, Dell,





DISH, JMA Wireless and Intel. The Hughes 5G network will utilize spectrum from DISH Wireless, the only carrier capable of providing the right combination multiple spectrum bands.

K.A: Would you like to talk about the most common use cases for Hughes services in the defense space? Did Covid affect the demand in any way?

R.L: Our goal is to give the DoD secure communications, anytime, anywhere, and in any form that they need it. We are evolving from single-satellite solutions to providing the DoD customer with multitransport pathways including commercial satellites in the low, medium and geosynchronous orbital planes connected to ground-based 5G networks. All points of the network have important roles to play in serving customers' needs for connectivity, redundancy and resiliency. For military use cases, we have seen significant interest in these hybrid networks.

During the COVID pandemic, we did see a spike in demand for morale, welfare and recreational applications as troops were quarantining after returning from deployments. In fact, when travel was restricted, some members of our team got in their cars and drove VSAT equipment to a base in the Southeast U.S. to bring connectivity to soldiers quarantining there.

K.A: Hughes has lately been in the news for its multi-network, multi-orbit capabilities. Can you elaborate on the importance of these capabilities and the difference they are making for your clients?

R.L: Yes, we are focused on leveraging multiple transport technologies to serve our users. Getting satellites from multiple orbital planes to provide smooth communications requires complex network management tools. Let me give you an example.

In October 2022, we conducted demonstrations with General Atomics and SES to prove the value of resilient, multipath connectivity for remotely piloted



We are evolving from single-satellite solutions to providing the DoD customer with multi-transport pathways including commercial satellites in the low, medium and geosynchronous orbital planes connected to ground-based 5G networks



aircraft. We paired Hughes softwaredefined modems and our networking tools with SES's satellites that operate in geosynchronous and medium-earth orbits. These multiple orbits were leveraged to show how unmanned aircraft such as the GA-ASI MQ-9 series can maintain crucial connectivity and resiliency, even in contested environments.

These demonstrations replicated a typical unmanned intelligence, surveillance and reconnaissance (ISR) mission, transmitting high-definition video and sensor data to and from the unmanned vehicle to the



Hughes has the highest network security standards and capabilities, critical when connecting hundreds if not thousands of devices from different manufacturers

command center. Based on the mission's pre-set policies, the network management system automatically switched the satellite signals to stay connected – even when a signal experienced interference and jamming scenarios.

Working together with General Atomics for many years, we have now integrated the commercially based HM400 modem onto this important remotely piloted aircraft. The Hughes modem has become the standard for real-time communications for beyond line-of-sight missions. The frequencyagnostic, open architecture Hughes system helps GA-ASI meet their military customer's requirements for uninterrupted, high-datarate, multi-orbit SATCOM, ensuring secure information accessibility for the right people at the right time.

K.A: Some of our readers would be very interested in reading about the importance of Low Earth Orbit satellite capabilities. LEO satellites have been around for a while; why are certain market segments only starting to talk about adoption now?

R.L: It's true that there have been LEO constellations in the past, but they had relatively few satellites and were used for mapping or atmospheric observation. They did not provide complete coverage of the globe for communications.

In 2022, we finally started to see LEO constellations with hundreds of satellites





Connecting terrestrial 5G networks with LEO satellites is a game-changer. It's the end of the satellite telephone and the portable field satellite dish. In the not-too-distant future, every cell phone will have a high-speed connection anywhere on the globe

come online and begin delivering bandwidth for low-latency applications. Because the satellites are now available, the DoD is moving further toward its goal of creating hybrid networks that combine advanced commercial network technology with satellites in multiple

But for the DoD to fully take advantage of what new LEO constellations have to offer, a number of hurdles must be cleared.

- •First, we need to develop ruggedized antennas and terminals that can simultaneously connect to both types of satellite.
- •Second, so far, the LEO operators don't have enough satellites in orbit to promise the quality of service the DoD has historically required of commercial operators. The DoD needs service-level agreements in place first before using LEO satellites for critical missions.
- •Finally, for the past two decades, the DoD has purchased commercial bandwidth on GEO satellites on a fairly straightforward megahertz per month basis. But due to the complexity of spectrum reuse among thousands of LEO satellites and multiple beams, leasing bandwidth in this manner can be very difficult once a constellation is up. The DoD and commercial operators need to

agree on a new way to pay for service.

Of these three, solving the ground terminal problem is probably the most difficult right now. Portable terminals that can use capacity from both LEO and GEO satellites are a work in progress and are perhaps years away. For now, the best terminals have at least two separate antennas. One is pointed at a fixed GEO satellite. The other is electronically steerable so that it can send to and receive from satellites moving rapidly overhead and can shift from one spacecraft to another seamlessly.

K.A: The use cases that have been enabled by 5G place a critical importance on satellite backhaul. Would you like to talk about the demand for these services in your markets and Hughes' capabilities in this space?

R.L: Providing better satellite backhaul is only a very small part of new suite of managed services that Hughes and other companies will be able to provide with 5G technology. In 2022, we announced that our JUPITER™ System ground platform for geostationary satellites is 5G-compatible for mobile network backhaul. More than that, however, we are particularly focused on using the narrow S-band spectrum on 5G networks for a wide range of defense and other applications, such as monitoring flightline operations, moving driverless trucks in a convoy, and keeping soldiers in the field

aware of the entire battlespace. Connecting terrestrial 5G networks with LEO satellites is a game-changer. It's the end of the satellite telephone and the portable field satellite dish. In the not-too-distant future, every cell phone will have a high-speed connection anywhere on the globe.

The key to making the most of this nextgeneration technology is being able to manage the new hybrid network, to weave all parts of the space and ground network into a seamless whole. That is where Hughes is focused, working on network management systems that use artificial intelligence and machine learning to bring all the parts together and self-repair in the event of a problem.

K.A: What differentiates Hughes from other satellite companies in respect to the defense sector?

R.L: I think we have an advantage over a lot of service providers in that we are not JUST a telecom service provider, or a hardware manufacturer, or a satellite operator, or a software developer. We are ALL of these. Our focus has always been on the whole network, not just parts of it. This enables us to bring a highly custom approach to specialized defense networks, and to translate commercial services into military applications. We are vendor and system agnostic, and our systems are built with off-the-shelf hardware that is easy to understand and to use.

More importantly, Hughes has the highest network security standards and capabilities, critical when connecting hundreds if not thousands of devices from different manufacturers. We use zero-trust architecture, in which every component on the network meets the requirements for role-based access control within the perimeter. For security, management data, user data and control data all run on different paths within the network.

When you combine our network capabilities with our security mindset, we can provide the DoD with a package of services that is second-to-none in the industry.

reports a record 7.4% growth in consolidated net profit to AED 10.0 billion in FY 2022

e& has announced its consolidated financial results for fiscal year 2022 reporting an impressive growth in consolidated net profit by a record 7.4 per cent to AED 10.0 billion.

Consolidated revenues reached to AED 52.4 billion, a growth of 4.7 per cent yearover-year, at constant exchange rates, underpinned by the Group's successful business transformation, expanding to new business verticals and diversifying the revenue streams.

Consolidated EBITDA increased by 3.7 per cent year-over-year at constant exchange rate, to AED 26.2 billion, leading to an EBITDA margin of 50 per cent, highlighting the strong profitability of e&'s operations.

Reporting strong growth in subscriber base in the UAE, etisalat by e& recorded 13.8 million subscribers, an increase of 8.8 per cent compared to last year, and the Group's aggregate subscribers reached 163 million, an increase of 2.5 per cent over 2021.

Underlining the Group's commitment to value creation for its shareholders, e&'s Board of Directors proposes a dividend of AED 0.40 per share for the second half (July



to December) of 2022, representing a total dividend of AED 0.80 per share for FY 2022.

e&'s pathbreaking evolution as a tech group

The impressive growth achieved by e& in 2022 underscores the success of the e&'s

transformational evolution as a global technology and investment group. The strategic pivot reflected the vision of the Group's leadership to embrace the new realities and stay ahead of the curve by delivering innovative digital solutions to its customers.

Building on its rich 47-year legacy of excellence, the Group achieved significant progress in its transformational journey by expanding into new business verticals, diversifying revenue streams, and optimising operations. This cemented e&'s position as a leading global technology group, delivering growth and building resilience despite global macroeconomic challenges.

The Group strengthened its partnerships regionally and globally to deliver high-value

Financial Highlights for FY 2022							
	2022	2021	Percent change				
Revenue	AED 52.4 billion	AED 53.3 billion	-1.7% *				
Net Profit	AED 10.0 billion	AED 9.3 billion	+7.4%				
EBITDA	AED 26.2 billion	AED 26.7 billion	-1.9% *				
Earnings per Share	AED 1.15	AED 1.07	+7.4%				
Aggregate Group Subscribers	163m	159m	+2.5%				

(*) At constant exchange rates, revenue increased by +4.7% percent and EBITDA increased by +3.7% percent year-over-year



solutions that meet the evolving needs of communities and markets and fostering digitally connected communities.

The strong financial results are backed by e&'s focus in 2022 on unlocking new opportunities for growth and accelerating its innovation journey, by leveraging cutting edge technologies such as 5G, artificial intelligence, and the Internet of Things. This positioned the Group at the forefront of the digital era.

Building on the trust of 163 million subscribers

Commenting on the results, Chairman of e&, H.E. Jassem Mohamed Bu Ataba Alzaabi, said: "The exceptional financial results achieved by e&, with revenues of AED 52.4 billion and a record net profit of AED 10.0 billion in 2022 is a strong testament to the success of our business transformation strategy. We are inspired by the UAE's leadership to push our boundaries and be at the forefront of the digital era by developing next-generation digital connectivity and cutting-edge solutions.

"From diversifying our business and revenue streams to expanding to new verticals and introducing innovative services, we had a laser focus on leveraging the potential offered by digital transformation to create value for our 163 million subscribers across 16 markets.

"As one of the top global telecom



Jassem Mohamed Bu Ataba Alzaabi Chairman, e&

companies by market capitalisation today, our foremost priorities in 2022 was to be the digital transformation champion and create unique solutions that meet the aspirations of our subscribers, while delivering added value to the economies we serve. We take pride in being the trusted digital and tech partner, and in bringing the latest innovations to the fingertips of our customers.

"We remain committed to serving our customers and creating long-term value for our shareholders. As a global technology and investment group, we will continue to work towards making a positive impact in the communities we serve. Our outstanding results in 2022 are the result of the dedication and hard work of our management team, who are relentless in their pursuit to establish e& as one of the

world's most admired, trusted and valuable brands, and help communities shape their digital future."

Committed to innovation and value creation

Hatem Dowidar, Group Chief Executive Officer of e&, added: "2022 has been a defining year for e& as we strengthened our transformation into a global technology and investment group committed to digitally empowering societies. Despite various global challenges, our domestic and international operations achieved impressive results, reinforcing our leadership position in highly competitive and evolving markets.

"Our strong fundamentals, knowledgeable and passionate team, and focus on developing innovative solutions, products, and services positioned us as one of the top providers across the communities we serve, as we empower them to unlock the true potential of the digital era. Our growth mindset enables us to achieve our goals while creating additional and long-term value for our customers and shareholders.

"e&'s strategy and progressive vision allow us to explore future opportunities while fostering strong strategic partnerships with global technology players. Prudent mergers and acquisitions further accelerated our growth and diversification creating new streams of revenue and positioned us as a leading global technology group. We are grateful to our customers and shareholders for their continued support as we continue to pioneer broad-spectrum technologies, build impactful partnerships, and contribute to shaping the digital era of the future.

"The Group's recognition as the most valuable portfolio of telecom brands in the MEA region, and etisalat by e&'s retention of its position as the strongest telecom brand across all categories in the region and one of the top three telecom brands in the world, underline the success of our strategic evolution and our commitment to building one of the fastest networks in the world."

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GISEC Global's CISO Circle pledges to provide opportunities for regional businesses to strengthen their security posture

Top regional and global information security officers discussed creating a 'community of action' and chalked out strategies to help digital businesses in the region build cyberresilience at the GISEC CISO Circle, part of GISEC Global 2023.

Held on day two of the event under the theme of 'Building a united cyber frontier', the CISO Circle agreed that collaboration and information sharing within the cybersecurity industry is critical to tackling cybercrime, now a constant threat in the digital age.

Since its launch last year, the CISO Circle has brought together like-minded security experts from diverse sectors to exchange insights on tackling cybersecurity challenges and address critical priorities reinforcing business, economic, and national security agendas. The panellists at this year's CISO

Circle were H.E. Dr. Mohamed Al-Kuwaiti, Head of the UAE Cybersecurity Council; Dr. Aloysius Cheang, CSO, Huawei Middle East & Central Asia; and Hadi Anwar, Chief Cyber Defence Officer, CPX.

Addressing the CISOs in his keynote speech, H.E. Dr. Al-Kuwaiti, stressed the importance of partnerships and collaborations based on the values of trust and transparency to achieve the common goal of building better cyber resilience.

The UAE Cybersecurity Council is showcasing its National Security Operations Centre (NSOC) at GISEC, with Dr. Al-Kuwaiti highlighting its importance, stating: "We cannot control what we cannot measure and we cannot measure without having that visibility, and the NSOC brings us that visibility." He explained that by connecting all Security Operations Centres (SOCs)

across all sectors at a national level, the UAE Cybersecurity Council could deliver greater visibility for the nation's leadership.

Hadi Anwar, Chief Cyber Defense Officer at CPX, added: "CISOs are faced with many cybersecurity challenges in today's rapidly changing world. Having a trusted advisor to counsel on best practices is crucial to fight against cybercrime, and now more than ever, it is important to collaborate. A platform such as the CISO Circle enables us to join forces and discuss ways to combat cyber threats and protect the UAE's cyber landscape."

Establishing Dubai as a global leader in innovation and security

Speaking at the GISEC Mainstage, Amer Sharaf, Director, Compliance, Support and Alliances, Dubai Electronic Security Center,



discussed the public and private sectors' efforts to digitally transform Dubai into the safest city in the world.

"It is no surprise that cyber threats are evolving at the same pace as emerging technologies," said Sharaf. "That's why we must work together, private and government sectors alike, to develop practices to protect ourselves from potential threats that may arise from these technologies. This is in line with the Dubai Cybersecurity Strategy, which aims to place Dubai among the most secure cities electronically in the world."

Kingpin of Hardware Hacking shares his secrets

Hardware hacker, tech wizard, and author, Joe 'Kingpin' Grand, explained to the audience his hardware hacking mindset and showed live demonstrations of some of the more common hacking techniques.

"Cyber-attacks are continuously evolving," said Grand. "Complex attacks such as Fault Injections and Side-Channel Analysis, which were earlier limited to mostly those with knowledge in engineering, are now more common." Grand added that it is, therefore, important for organisations to have proper mitigations in place to tackle these attacks.



Dr. Mohamed Al-Kuwaiti - Head of the UAE Cybersecurity Council, at the CISO Circle, GISEC Global 2023

"With the knowledge of hardware hacking, organisations can get into the mindset of an attacker and make their products more secure."

Dr. Al-Kuwaiti recognised for outstanding contributions in advancing global cybersecurity

H.E. Dr. Al-Kuwaiti was meanwhile recognised and celebrated by hundreds of cyber leaders from across the world for his outstanding contributions towards advancing global cybersecurity and digital transformation. Dr. Al-Kuwaiti, who is also the Head of Cybersecurity for the UAE Government, was presented with the Cybersecurity Excellence Awards' Global Leadership Award at GISEC Global's Mainstage, in recognition of his bold mission to spread cyber awareness and culture, develop cyber talent, empower cross-border collaboration, and position the UAE at the forefront of international cyber resilience

GISEC Global, the Middle East's largest and most impactful cybersecurity event, has grown in size by 50 percent yearon-year, and runs until 16 March 2023 at the Dubai World Trade Centre (DWTC), hosting a record 500 exhibiting brands from 53 countries, 300 leading InfoSec and cybersecurity speakers, and 1,000 of the world's top ethical hackers, to dismantle and demystify the world's greatest digital threats.

The annual three-day super-connector is hosted by the UAE Cybersecurity Council and organised by DWTC, and takes place amid a rapidly expanding Middle East cybersecurity market that, according to analysts Frost & Sullivan, will grow in value from US\$7.5 billion in 2022 to US\$31 billion by 2030, clocking 20 per cent annual growth. 🗖



UAE Cybersecurity Council paper urges global CISOs to 'take the fight to cyber attackers'

GISEC CISO Circle was created on 15th March, a 'community of action' for the cybersecurity industry by building a united cyber front against digital adversaries. The UAE Cybersecurity Council and GISEC Global 2023, the Middle East's largest and most impactful cybersecurity event, has released a special position paper for global CISOs and cybersecurity professionals titled "A GISEC-first Strategy: Attack is the best form of Defence".

Co-authored by H.E. Dr. Mohamed Hamad Al-Kuwaiti, Head of Cybersecurity, UAE Government, and Dr. Aloysius Cheang, Chief Security Officer, Huawei Middle East & Central Asia, the paper urges global CISOs to "take the fight to cyber attackers by following the ageold adage: attack is the best form of defence."

The paper warns businesses that assuming they will not be at the receiving end of cyberattacks "is no longer a luxury we can afford," especially as ransomware attacks are expected to remain prevalent this year. "The time is ripe for us to take a proactive approach to defend our assets rather than being reactive." It stated that cybercrime is highly rewarding financially for successful attacks, the primary driver for escalating cybercrime, while the Covid-19 pandemic, geopolitical instability, and rapid de-globalisation have fuelled global tensions, sparking off a "paradox of a global cyber pandemic amid rapid digital transformation and growth".

The UAE was not spared of these changes, and the upheaval of the Covid-19 pandemic cultivated an urgent need to increase the pace of digital transformation, hence "paving the way for the UAE to establish itself as a trusted regional digital hub." The four-page position piece added that a GISEC-first strategy encourages CISOs to take a proactive approach because the traditional reactive model is simply ineffective. "Today, only 19 percent of global cyber leaders are confident that their organisations are cyber resilient," it stated. "Further, the need for more effective cyber



Dr. Mohamed Hamad Al-Kuwaiti Head of Cybersecurity, UAE Government

defence tactics is only becoming more urgent as digitisation takes hold. By 2025, digital transformation will inject \$100 trillion into the world economy, according to the WEF."

The editorial concludes that GISEC Global "is a treasure trove of tools, providing the necessary people-process-technology support that we can harness to realise our strategy and burn cybersecurity into the DNA of our organisations, keeping the enemies at bay and on the back foot, pushing them to be on a constant retreat from our line of defence and pushing it deep within enemies' territories with no time to create havoc for us making it economically inviable."

"These cyber adversaries will eventually collapse like a house of cards as we enter a new era where the CISOs finally enter the boardroom and be counted as equals among our peers. And that is where the CISO revolution starts, not ended as we usher in the new digital era and the CISOs as the guardians of this new digital era."

GISEC CISO Circle a 'community of action' building a united cyber frontier

The UAE Cybersecurity Council's paper arrives as top cyber executives prepare to unveil CISOs' 2023 strategy at GISEC Global to

decode the uptick in cyberattacks and costs while navigating the evolving threat landscape.

Organised by Dubai World Trade Centre and hosted by the UAE Cybersecurity Council, the 11th edition of GISEC Global takes place from 14-16 March 2023 at the Dubai World Trade Centre (DWTC). With the theme of 'Connecting minds, boosting cyber resilience,' the event is set to host a record 500-plus cybersecurity brands, 300 leading InfoSec and cybersecurity speakers, and 1,000 of the world's top ethical hackers to address opportunities in a global cybersecurity market valued at \$2 trillion by McKinsey & Company.

The UAE Cybersecurity Council will showcase its latest National Security Operations Centre (NSOC) during GISEC, while an exclusive GISEC CISO Circle will take place on the 15th March at the CISO Lounge, Hall 4, under the theme "Building a united cyber frontier." This session will be an exclusive community of action for the cybersecurity industry, gathering top regional & global CISOs to adopt a baseline cybersecurity strategy with a common design factor of a proactive approach of pushing the last line of defence towards the cyber attackers and away from the company's digital assets.

GISEC Global 2023 will feature global technology leaders including Huawei, Microsoft, Cisco, Honeywell, and du showcasing their innovative cybersecurity solutions, alongside industry-leading infosec companies such as Spire Solutions, CPX, Crowdstrike, Mandiant, Pentera, Pvotal, Port53, Cloudfare, Edgio, Secureworks, Synack, Threatlocker, Votiro, Spidersilk, and Waterfall.

Dubai Electronic Security Center (DESC) is the Official Government Cybersecurity Partner, and the Ministry of Interior, the Telecommunications and Digital Government Regulatory Authority (TDRA), and Dubai Police are Official Supporters of GISEC Global 2023. More than 35,000 visitors from over 100 countries are expected to attend.



A GISEC-first Strategy

Attack is the best form of defence

Background

The past three years have been of immense global upheaval. The Covid-19 pandemic, geopolitical instability, and rapid deglobalization have fuelled global tensions, sparking off a paradox of a global cyber pandemic amid rapid digital transformation and growth. The UAE was not spared of these changes. The upheaval of the Covid-19 pandemic cultivated an urgent need to increase the pace of digital transformation, hence paving the way for the UAE to establish itself as a trusted regional digital hub. The country took advantage of the situation and ramped up digital initiatives to become a digital economy leader in the region. Immense efforts were employed to build a conducive environment in the UAE with the right government policies. An industryled regulatory regime and a uniquely open economy helped drive digital innovation further while many other countries were closing their borders to contain Covid-19. Having said that, the UAE did not throw caution to the wind. Instead, it implemented well-calibrated measures designed to build controls that enhance trust, security and branding of a world-leading economy. Such an economy is resilient in the face of cyber pandemic headwinds characterized by supply chain attacks and ransomware blitz, amongst other threats in a volatile risk landscape. Indeed, this bold approach embraced by the UAE over the last three years has been instrumental in the rapid digitalization in the country, building up a momentum that elevates UAE into a global digital leader.

Moving from a position of defence to offense

Over the years, various platforms have become increasingly influential in supporting the digital leadership efforts of the UAE. Among these are DWTC's flagship event GITEX and its sister event, GISEC. While GITEX focuses on the entire ICT spectrum, GISEC specifically



Dr. Aloysius Cheang - Chief Security Officer, Huawei Middle East & Central Asia

provides cybersecurity leadership. Being hosted for the 11th consecutive year in 2023, GISEC has grown from strength to strength, becoming a platform of choice for the UAE to be an agent of change for top cybersecurity enterprises from 40 countries. CISOs from major corporations across the Middle East, Africa & Asia, government dignitaries and cyber leaders, regional and international innovators and experts come together to shed light on the world's most pressing cybersecurity challenges and discuss ways to stay ahead of potential threats through robust and innovative strategies.

Football offers an excellent analogy, with the recent FIFA World Cup still fresh in our minds. While the defence is critical, winning the game requires players such as Lionel Messi, who, as a midfield general, will not only orchestrate and control the game to play according to the winner's tune but also possesses a poacher instinct that enables him to switch role instantaneously into a menacing striker and a magnificent goal getter. As such, this year's theme for GISEC is to take the fight to the cyber attackers by following the age-old adage: attack is the best form of defence. CISOs should, therefore, adopt a GISEC-first strategy, using a page out of the cyber attacker's own playbook. Through GISEC, we can build a

platform based on openness, transparency and collaboration because, just like football, building cybersecurity requires teamwork.

The case for a GISEC-first strategy in proactive defence strategy

A GISEC-first strategy encourages CISOs to take a proactive approach because the traditional reactive model is simply ineffective. Today, only 19% of global cyber leaders are confident that their organizations are cyber resilient. Further, the need for more effective cyber defence tactics is only becoming more urgent as digitization takes hold. By 2025, digital transformation will inject \$100 trillion into the world economy, according to the WEF. With this in mind, top cyber executives will unveil CISO's 2023 strategy at GISEC to decode the uptick in cyberattacks and costs while navigating the evolving threat landscape. The new era of cyberattacks ranges from Metaverse cybercrime, crypto-jacking, 51% attacks on blockchains, drone exploit delivery attacks to Quantum threat, cloud security to applying AI internally and at the edge across healthcare, banking & finance, utilities, oil & gas, transport, nuclear, defence & communications. GISEC is, therefore, the ideal platform of choice for CISOs to learn from each other as we develop our own game plan for our organizations. There's a renewed sense of urgency for collaboration because cybersecurity rules have changed since the pandemic and the rapid rise of threats in new ecosystems like the Metaverse & Quantum computing. To define the new cybersecurity paradigms, we are gathering an extraordinary league of cybersecurity leaders at GISEC. The UAE Cybersecurity Council fully supports GISEC's initiative of creating an inner circle for InfoSec leaders to discuss critical challenges and help build the cyber resilience of businesses in the UAE and the world.

Moreover, GISEC is not just a platform for CISOs to join forces, it is also the platform of choice to



train our technical team to beat cyber attackers at their own game! This will be the second year GISEC will host a Bug Bounty Challenge. Last year, The Bug Bounty Challenge set a Guinness World Record for the largest Bug Bounty competition in the world. In GISEC 2022, we also set another Guinness World Record for most users in a Capture-The-Flag (CTF) competition. Together with the \$1 million award bounty for the World Cyber Championship (a form of CTF competition), we are set for a fruitful CTF, bug bounty and technical exchange for GISEC in 2023. Thirdly, in line with tradition, an innovation sandbox for start-ups and/or new/ emerging technology pitching will be held again under GISEC. Known as GISEC Cyber Stars, we shall work with transformers of the industry towards cyber resilience and, therefore, build capabilities to get in front of the cyber attackers in addressing some of the BHAG in cybersecurity globally today.

Back to basics

However, before we start to tackle sophisticated cybersecurity problem set, we need to return to basics through capacity building, by providing training and enablement to all stakeholders of the ecosystem, while at the same time reinforcing the recognition of the importance of cybersecurity and encouraging the adoption of basic cyber hygiene thus building a culture of cybersecurity for the nation as a whole. Towards this end, the UAE Cybersecurity Council, in collaboration with its strategic partners, launched the Cyber Pulse initiative that aims to encourage the community members in the UAE to play part in cybersecurity efforts. It seeks to increase public awareness on suspicious online activities and explains the necessary steps to be taken to prevent becoming a victim of Phishing. The initiative also provides training courses, workshops and lectures about cybersecurity in an increasingly digital world. As a result, the UAE has successfully integrated the digital lifestyle into everyday living of its citizens and residents, through creating smart telecommunications and digital transformation infrastructure, further advancing its status as an inspiring model of development and digitisation.

In fact, the first national cybersecurity

innovation centre was launched in Abu Dhabi Polytechnic last October, that provided an action plan to enable the next generation of cyber professionals to tackle cyber skills gaps while also protecting UAE citizens and businesses from global threats. This lays the foundation for UAE to be a key player in the region for cybersecurity, and further position the country as a safe hub.

Truly entering into a new era of the CISOs

Last but not least, GISEC aims to empower the industry to take a proactive posture by fostering collaboration between partners and professional bodies. The various partnerships formed during GISEC will serve as feeders for future projects and collaborations that will be featured in future GISEC and GITEX conferences. We have previously written about the coming of the golden age of CISOs, marking a turning point in cybersecurity. We have stated a pre-requisite for that to happen, which is the need to return to basics when it matters the most. GISEC as a platform and the adoption of the adage "attack is the best form of defence" as the heart and soul of the cybersecurity industry, binding all the stakeholders in the ecosystem together, will be critical for realizing this dream. Otherwise, we'd be risking everything on a pipedream if non-action is allowed to prevail.

Conclusion

"Attack is the best form of defence" is the cyber art of war theme for 2023. The time is ripe for us to take a proactive approach to defend our assets rather than being reactive, setting up stalls and waiting for cyber attackers to appear but not knowing when they will appear, where they will show up and in what form and shape that they will be carrying out the attack. Assuming that you will not get hit is no longer a luxury we can afford, given that ransomware attacks will remain prevalent this year. Cybercrime is highly rewarding financially for successful attacks, the primary driver for escalating cybercrime. Taking the fight to the cyber-attack requires brains as well as brawn. In the Art of War, Sun Tzu talked about the importance of "Laying Plans" in any warfare. While he advocated against war fare, but once that decision is made he spoke of the

need to take actions swiftly, but not without an elaborated plan that dedicates more than 50% of the estimated time taken for the battle to complete, where all possible scenarios are played out. And chief among all, is the need to ensure a robust, united backline that are harmonized in not actions but in intents as well, leveraging on culture and mindset to reach a common ground internally that will mobilise the entire nation into supporting the warfare. Fortification, supply chain and constant capacity building to ensure the reserves are ready to be called up anytime, and that is what it takes in cybersecurity as well. Before we take the offensive, we need to ensure that we have the best cyber defence mechanism in place. And that is the motivation for the National Security Operations Centre or NSOC initiative that will be showcased during GISEC.

Following that, we shall create a community of action for the cybersecurity industry, for example, through the GISEC CISO Circle, that the industry can come to adopt a baseline cybersecurity strategy with a common design factor of a proactive approach of pushing the last line of defence forward towards the enemy den further away from our defence line and our digital assets. Next, we shall turn on protein overdrive and build up the muscles to wrestle with the enemies in the pit, with technical excellence taking center stage where our best of the best can hone their skills in the various competitions such as Bug Bounty and CTF that will be hosted at GISEC. Lastly, we shall validate our latest techniques and technology in the innovation sandbox. GISEC is a treasure trove of tools, providing the necessary people-process-technology support that we can harness to realize our strategy and burn cybersecurity into the DNA of our organizations, keeping the enemies at bay and on the back foot, pushing them to be on a constant retreat from our line of defence and pushing it deep within enemies' territories with no time to create havoc for us making it economically inviable. These cyber adversaries will eventually collapse like a house of cards as we enter a new era where the CISOs finally enter the boardroom and be counted as equals among our peers. And that is where the CISO revolution starts, not ended as we usher in the new digital era and the CISOs as the guardians of this new digital era.







Cyber protection experts fear rise in Al-driven cyberattacks - Acronis

The accelerated advancement of Artificial Intelligence-driven (AI) innovations are feared to be clawing back some of the much-needed gains in the global war against cyberattacks as the chances of cyber criminals using the technology to create complex cyber threats loom.

According to the latest Acronis Cyberthreats Report, regionally, breaches reported in the Kingdom of Saudi Arabia, for example, could reach an average of US\$7 million even as the country continues to report one out of five attacks to be Ransomware. This, according to security experts, is driven by factors such as weak credentials, phishing emails, and unpatched vulnerabilities remain the top cyber-attacking vectors. In the UAE, targeted organizations lost over US\$1.4 million in Ransomware, forcing over 40 percent of them to shut down.

Speaking on the sidelines of this year's Gulf Information Security Expo and Conference (GISEC), Ziad Nasr, General Manager for

the Middle East at Acronis noted that while Al and ML are phenomenal technologies, there's a greater need to identify potential loopholes that cybercriminals can exploit to attack businesses.

"Al and ML have emerged as two major digital ecosystem disruptors that can be utilized to enhance business competitiveness and boost productivity within an organization. However, it's emerging that these technologies can be used by cybercriminals to create malware or phishing emails, thereby, reducing the barriers to entering the cybercrime space and increasing the frequency of attacks. As part of our GISEC participation this year, our goal is to highlight the need to mainstream these issues and also showcase ready-todeploy solutions to the current potential cyber threats," said Nasr.

Top 3 industry pain points

As the industry continues to make meaningful strides against cybercrimes, IT departments are likely to face sophisticated challenges in 2023. Some of these include the ever-shifting threat landscape that is making it difficult for security professionals to keep up, the demand for cybersecurity talents, and budget constraints as most organizations may continue to face financial constraints that may limit their ability to invest in the latest cybersecurity technologies and solutions.

Other challenges include third-party risk as many organizations continue to work with third-party vendors, which can introduce additional cybersecurity risks and challenges in meeting compliance requirements can be complex and timeconsuming, especially as regulations continue to evolve. "In light of the emerging challenges, Chief Information Security Officers (CISOs) and other IT professionals will now need to prioritize risk management and invest in cybersecurity solutions that can provide effective threat detection and response capabilities," noted



stc Kuwait and Huawei sign MoU on 5.5G Strategic Cooperation, **Leading the Digitalization Innovation**

stc Kuwait has signed a MoU with Huawei on 5.5G strategic cooperation. 5.5G technology is designed to revolutionize the capacity, speed, and reliability of communication networks. The technology targets building an advanced 10 Gbps connected smart network by features that provide higher data speed, increasing system capacity, boosted coverage, lower latency and massive device connectivity.

stc Kuwait carried out a 5.5G three Carrier Components Carrier Aggregation (5.5G 3CC CA) trial by utilizing three Sub-6GHz frequency bands to achieve extensive broadband speed of 3.6 Gbps on commercial devices.

stc Kuwait also trialed an advanced 5.5G Passive IOT connectivity which could successfully obtain its tag remotely at a very wide distance of 200 meter. The technology is projected to lead in evolving the business models of companies across various industries by identifying opportunities for new revenue streams. This may also open the possibility for verticals to accelerate their competitive digitalization plans using the technology. stc's future 5.5G Passive IoT network will be capable of supporting millions of passive connectivity sensors from many industries, such as retail, medical, logistics, manufacturing, and other industries.

Nevertheless, at the Mobile World Congress (MWC) Barcelona 2023, stc and Huawei signed a memorandum of understanding (MoU) on strategic cooperation as a further step in their continuous cooperation efforts in 5G network evolution. stc and Huawei jointly built Kuwait's first nationwide 5G C-band network, providing excellent network experience for users. Now as 5.5G comes to the forefront, the two partners will work together on



5.5G innovation, includes innovated key ultra-fast connectivity, XR and IoT technologies, discussing E2E network evolution, developing high-value use cases, and local and global industry partners ecosystem build to continuously accelerate 5G business success. Such innovations and pioneering are meant to bring further use cases to stc enterprise customers under stc's specialized business arm, solutions by stc and e-Portal.

Eng. Maziad Alharbi, CEO of stc Kuwait, said, "In 2022, we successfully established a state-of-the-art nationwide 5G dualband network in collaboration with Huawei, which has revolutionized our 5G coverage and elevated the user experience to unprecedented levels. As we progress towards the future, our partnership with Huawei remains strong and we are

committed to further enhancing the uplink experience, introducing cutting-edge XR experiences, and integrating full-scenario IoT. Through joint efforts, we will validate 5.5G technologies and delve into innovative applications, capitalizing on our respective strengths to set the standard for regional mobile networks."

Yang Chaobin said, "As a global ICT and network technology provider, we're committed to supporting leading operators in continuous network upgrade and providing end users with ubiquitous superior network experience. We're excited to work with stc Kuwait to carry out joint tests on 5.5G technology innovations, explore business scenarios based on Kuwait's needs, and promote high-value 5.5G use cases. We'll help stc Kuwait achieve business success."



du partners with Ericsson to boost digital transformation through **Al-powered managed services**



du and Ericsson have announced a strategic partnership at Mobile World Congress 2023 to transform du's Information Technology (IT) operations. du will leverage Ericsson's Artificial Intelligence (AI) and Ericsson **Business and Operations Support Systems** Services to improve quality, unlock efficiencies, and increase agility.

The partnership will mark a significant step forward in du's digital transformation program. It will focus on introducing AI & automation use cases and digitally transforming the IT operations environment, which will help to improve operational and service metrics, making operations data-driven and intelligent. This will support and maintain du's high-quality services while increasing efficiency and reducing time-to-market.

Fahad Al Hassawi, Chief Executive Officer of du said: "Our latest partnership with Ericsson is a major step in advancing our IT

operations in line with the UAE leadership's vision to build a futuristic, tech-powered economy. It aligns with our commitment to build and maintain a secure and reliable network infrastructure that can support our rapidly accelerating digital transformation journey. Ericsson's AI and data-driven operations solutions will be critical in powering our customer-centric approach and enabling us to meet increased and changing market demands with agility and quality. We believe our collaboration will lead to game-changing opportunities in developing our operational capability, empowering our digital transformation ambitions, and driving economic growth."

The partnership will see Ericsson and du collaborate to extend and evolve the ongoing IT Managed Services, introduce new AI and Machine learning capabilities, empower digital transformation through agile and intelligent operational capabilities.

Nicolas Blixell, Vice President, and Head of Ericsson Gulf Council Countries commented: "With specialized experience in advising, building, operating, and certifying digital transformation programs we help tackle the key customer challenges that service providers face in today's increasingly digitalizing world. We will provide du with proactive, data-driven Al operations that will enable improved network performance, enhanced user experience, and a decrease in costs associated with performance challenges. We are confident our cutting-edge solutions will support du to run advanced next-generation connectivity and services, achieve its business objectives, and stay ahead in a competitive marketplace."

As a trusted partner of du, Ericsson continues to be a strategic collaborator for Managed Services providing IT Operation services and ensuring exceptional user experiences for du's customers.



e& successfully completes the acquisition of ServiceMarket to expand range of digital services in Smiles online marketplace

etisalat by e& has completed the acquisition of Service Souk DMCC "ServiceMarket", acquiring 100 per cent of shareholding of the online marketplace. This acquisition is in line with the Group's strategy to empower consumers, strengthen Smiles online marketplace presence and drive diversification of our business.

ServiceMarket is a leading online marketplace for household services. It currently offers more than 40 services under several segments across the UAE. It enjoys a strong market position that will complement etisalat by e&'s existing marketplace services under the brand 'Smiles' which already includes online food and grocery delivery, lifestyle offers and the ability to earn and redeem points at more than 10,000 outlets across the UAE.

etisalat by e&'s commitment has always been to stay aligned with the UAE's digitalisation ambitions by providing best-in-class innovative solutions and



Bana Shomali - Chief Executive Officer, ServiceMarket

harness advanced technologies, increasing penetration of digital services, this acquisition contributes to the growth of the country's ambitions of becoming a digital economy.

Khaled ElKhouly, Chief Consumer Officer of etisalat by e& said: "The online household services market has



Khaled ElKhouly - Chief Consumer Officer, etisalat by e&

demonstrated strong growth over the past few years with an increasing number of consumers preferring to access a broad range of services at the comfort of their homes, and through digital platforms they can trust. As a pioneer in the digital transformation journey for all UAE citizens, we have been expanding our portfolio of lifestyle services on the Smiles platform, including the recent addition of food and grocery delivery services. This acquisition is in line with our strategy to continue enriching the lives of our customers with convenient range of services, within the Smiles ecosystem and drive diversification of our business."

Bana Shomali, Chief Executive Officer of ServiceMarket said: "We are excited to join the etisalat by e& family which will enable ServiceMarket to leverage e&'s digital capabilities and customer base to accelerate our growth and unlock significant synergies. As part of the Smiles ecosystem, we will continue to provide best-in-class services to consumers in the UAE and enrich our portfolio with new services to offer greater convenience every day."







Ericsson and stc Group explore Cloud RAN, new 5G deployment models in new collaboration

Ericsson and stc Group have signed a Memorandum of Understanding (MoU) to explore deployment options and future network architectures for delivering 5G services. Signed at Mobile World Congress 2023, the MoU seeks to support stc in its goal to seamlessly evolve towards cloudnative technologies and open network designs, thus increasing the flexibility of stc's 5G infrastructure to accelerate delivery of services while scaling up 5G offerings.

Under this MoU, stc and Ericsson will also examine how future network architectures will enable a variety of new 5G use cases in Saudi Arabia, in line with the Saudi Vision 2030's national objectives to build cuttingedge digital infrastructure.

stc aims to implement open, resilient, and secure network designs by exploring novel 5G deployment models and different network architectures. This involves driving Cloud Radio Access Network (RAN) discussions and providing the latest Ericsson Fronthaul 6000 solutions. Cloud RAN is a cloud-native software solution that handles compute functionality in the RAN.

Bader Abdullah Allhieb, Infrastructure Sector VP, stc Group says: "In our journey to provide enhanced 5G services to individuals and businesses across Saudi Arabia in line with Saudi Vision 2030, we are constantly exploring future network architectures based on the principles of openness, intelligence, automation, and security. In particular, the cloudification of RAN opens exciting opportunities for us and our customers. We look forward to collaborating with Ericsson to explore new models for network performance while ensuring the operational excellence that our customers expect from stc."

Håkan Cervell, Vice President and Head of Customer Unit stc, Saudi Arabia and Egypt at Ericsson Middle East and Africa, says: "We are pleased to sign the Memorandum of Understanding with stc, to explore how the adoption of Cloud RAN solutions can help stc optimize their 5G bandwidth, operate networks more efficiently, and improve overall network performance. We look forward to collaborating with stc to identify new ways of deploying cloud-native networks virtually everywhere, on any cloud, and any server platform for increased network flexibility, faster delivery of services, and greater scalability."

Ericsson and stc started collaborating on 5G technology in 2019 and continue today with the goal of rapidly promoting the adoption of 5G in the region and accelerating the Kingdom of Saudi Arabia's digital age.



Huawei joins UNESCO Global Alliance for Literacy to step up talent cultivation

Huawei has announced that it has joined the UNESCO Global Alliance for Literacy (GAL) as part of the company's lead up to the Mobile World Congress 2023. The announcement was made at a Digital Talent Summit co-hosted by Huawei and the Institute for Lifelong Learning (UIL) which serves as the Secretariat of the GAL.

At the Summit, Huawei and the UIL agreed to jointly promote the use of technology to raise literacy. The two parties also signed a cooperation agreement under which Huawei will fund an expansion of the UIL's current initiatives to enhance educators' use of technology in developing countries. Currently, the UIL initiative operates in Bangladesh, Côte d'Ivoire, Egypt, Nigeria, and Pakistan.

Huawei is the first private company to become an associate member of the GAL and the company is excited its own goals align with the GAL's vision of eradicating digital illiteracy in young people.

UIL Director, David Atchoarena explained at the event, "Our rapidly changing world calls for concerted efforts and strong partnerships to achieve quality education and lifelong learning for all."

Atchoarena continued, "Huawei's expertise in the area of innovation in learning will be a great asset to the Global Alliance for Literacy. Collaborative projects such as ours will ensure that no one is left behind on this journey."

Huawei's own Vice President of Corporate Communications Vicky Zhang also commented; "Getting the right education is often the key to success in life. As a major player in the technology sector, Huawei feels it has a responsibility to provide technology skills in all parts of the world, trying our best to include as many people as possible."

"We are proud to join forces with UNESCO to



better deliver on this responsibility," Zhang added.

Huawei believes digital talent is a key driver in achieving digital transformation, solid economic growth, and better quality of life. Since 2008, Huawei has offered a wide and expanding range of talent programs. Under its Seeds for the Future umbrella, Huawei provides tens of thousands of people every year with scholarships and digital training courses targeting all age groups. The company also organizes and sponsors tech competitions where students can expand their knowledge, win prizes, and make new friends.

Husain Basem Hasan, student at Bahrain Polytechnic, represented talents from the Middle East at the Digital Talent Summit. As a winner of the latest Huawei Middle East ICT Competition from Bahrain, Hasan expressed his gratitude to Huawei for granting him the opportunity to be part of this unique experience.

Dr. Piti Srisangnam, Executive Director of ASEAN Foundation applauded Huawei's contribution to the local talent community. "The ASEAN Seeds for the Future program that we launched in 2022 together with Huawei has already become a resourceful platform for hundreds of local students in ten ASEAN countries to learn ICT knowledge and have cultural exchanges," he said.

John Omo, Secretary General of African Telecommunication Union (ATU), also emphasized on the necessity of bridging the local talent to the international community. He said "It is critical that youth in Africa have access to global opportunities and can be a part of global conversations."

Sen. Jorge Ramirez Marin, President of the Commission of Science and Technology of Mexico Senate also called for a global synergy. "Digital education should be a factor that brings us closer to equity, instead of aggravating inequality," he said.

The summit concluded with a profound and interesting panel session on imagining the future of education. The panel discussion was shared by George Gilder, the renowned economist and co-founder of the Discovery Institute, Dr. Ricardo Gil-da-Costa, the CEO and co-founder of Neuroverse, and two Huawei Seeds for the Future alumni.

So far, Huawei's Seeds for the Future program has helped nurture more than 2.2 million digital talents in over 150 countries. The company's ICT Academy can train about 200,000 students each year. In 2021, Huawei announced it had already invested US\$150 million and planned invest another US\$150 million in digital talent development before 2026, which is expected to benefit an additional 3 million people.





Zain KSA and Huawei sign MoU to build a global 5.5G pioneer network "5.5G City"

During MWC 2023 in Barcelona, Huawei and leading Saudi Arabian telecommunications operator Zain KSA signed a strategic cooperation Memorandum of Understanding (MoU) for "5.5G City" joint innovation project. The MoU was signed during MWC 2023 held in Barcelona from February 27 to March 2.

Under the MoU, both parties will work together to promote technological innovation for 5.5G evolution and expand scalable offerings to individual, enterprise, and government customers. Additionally, they will strengthen the digital infrastructure and build a global 5.5G evolution pioneer network, providing a strong engine to achieve the national digitalization goals outlined in Saudi Vision 2030.

Zain KSA and Huawei will collaborate to enhance technological innovation, improve user experience, and develop new use cases. The collaboration will involve providing a seamless gigabit experience in both indoor and outdoor scenarios through the large-scale deployment of MetaAAU and 5G carrier aggregation, as well as LampSite digital indoor solutions. Additionally, initiatives will be taken to enhance the performance of Massive MIMO networks and to develop end-to-end autonomous network operation and optimization capabilities. Both parties will also work together to develop new use cases for the Internet of Things (IoT) and private network solutions. Finally, the partnership will explore innovative

cooperation in areas such as ultracompact site and green energy solutions, among others.

Zain KSA's Chief Technology Officer, Eng. Abdulrahman Al-Mufadda, commented: "Our commitment to driving digital transformation in the Kingdom has been made possible by combining innovative technology investments with pioneering digital solutions across multiple fields, including cloud computing, fintech, business support, and drone technologies. Zain KSA is on a mission to empower a digital society and support the transition towards a digital economy, in line with Saudi Vision 2030 and the Kingdom's digital transformation strategy. By partnering with global ICT leaders, including Huawei, we are committed to enhancing Zain KSA's end-to-end network through our joint innovation on 5G-Advanced technology and by incubating a range of vertical services for industry digitalization."

Ritchie Peng, President of Huawei's 5G Product Line, said, "We are committed to providing leading products and solutions for operators and helping them build high-quality mobile networks through continuous technical innovations. We are excited to work with Zain KSA on this 5.5G City project and hope that this cooperation will allow our innovative products and solutions to create business and social value. Our vision is to help Zain KSA build better 5G networks and more importantly, leading digital infrastructure."

MWC Barcelona 2023 ran from February 27 to March 2 in Barcelona, Spain. Huawei showcased its products and solutions at stand 1H50 in Fira Gran Via Hall 1. Together with global operators, industry professionals, and opinion leaders, Huawei delved into topics such as 5G business success, 5.5G opportunities, green development, digital transformation, and our vision of using the GUIDE business blueprint to lay the foundation for 5.5G and build on the success of 5G for even greater prosperity.



Hughes and Stargroup extend Mobile Networks in Mexico, Help connect the unconnected

Hughes Network Systems, LLC (HUGHES) has announced that Stargroup has selected the Hughes JUPITER™ System and managed satellite broadband to extend LTE service to customers in rural communities. As part of the Mexican government's Comisión Federal de Electricidad (CFE) Telecomunicaciones e Internet para Todos initiative to help bridge the digital divide, Stargroup is connecting hundreds of remote cell towers using Hughes JUPITER System terminals and Hughes JUPITER 2 high-throughput satellite capacity.

"The government has made it a priority to extend internet access to every municipal capital in Mexico, and we are proud to help achieve that objective together with Hughes," said Monica Aguirre, Chief Executive Officer, Stargroup. "In areas of the country outside the reach of fiber, the only way to access the internet is by satellite, and Hughes JUPITER technology sets the standard when it comes to LTE backhaul by satellite."

"Stargroup's choice of a managed service that combines our high-throughput JUPITER satellite and high-performing ground system will bring more Mexicans the connectivity they need for work, school, community and more," said Ramesh Ramaswamy, Executive Vice President, international, EchoStar. "We're proud to continue supporting Stargroup in their important work connecting the unconnected as part of the Internet para Todos program."

Powering connections from each cell tower to the network core, the Hughes JUPITER 2 satellite provides the bridge connecting rural mobile phone users to the internet with reliable, high-speed Ka-band capacity and enterprise-grade service level agreements to meet the criteria for service delivery set by CFE Telecom. At each location in the deployment, a Hughes remote terminal (model number HT2524), designed and





Ramesh Ramaswamy -Executive VP, international, EchoStar

optimized for LTE backhaul (including support for GTP acceleration), powers services at 20-60 Mbps down, ensuring fast and reliable internet connections for individual users. This deployment follows that of several service providers, including Stargroup, that are employing Hughes JUPITER System technology to connect more than 7,200 Community Wi-Fi and internet access sites across Mexico.



Monica Aguirre Chief Executive Officer, Stargroup

The Hughes JUPITER System is the leading satellite ground platform, enabling services on geostationary satellites around the world. A multiservice platform, the system powers direct-to-home satellite internet services, Community Wi-Fi hotspots, enterprise networks and cellular backhaul, with available software-defined networking and cloud-delivered management.



SpaceBridge Inc. has announced that SkyNet de Colombia has selected SpaceBridge technology as a satellite equipment provider to modernize its ground equipment infrastructure for satellite services delivery in Colombia.

SpaceBridge's VSAT satellite platform ASAT II will allow SkyNet de Colombia to benefit from the use of DVB-S2X on the Forward Link and DVB-RCS2 on the Return Link, which will provide a significant improvement in spectral efficiency of the network. This will lead to substantial OPEX savings, allowing Skynet to be more competitive and face the new challenges of the current satellite market.

The SpaceBridge ASAT II platform has been selected to meet the needs of the most demanding customers, enabling Skynet to run multi-service applications. This includes 3G/4G and 5G Cellular Backhaul, one of Colombia's high-growth vertical targets.



Javier Recio - CCO, SpaceBridge

SpaceBridge's WaveSwitch™ will allow for SkyNet to have a system that enables real-time, on-the-fly waveform orchestration that maximizes bandwidth efficiency and provides the best user experience. The system will dynamically assign the proper industry-leading RCSX™ waveform, including, ASCPC™, MF-TDMA, SCPC DVBS2 and DVB-S₂X access technologies based on the

systems requirements.

"After a strict selection process, we are very pleased that SkyNet de Colombia chose SpaceBridge's multi-service VSAT platform as the foundation for their future growth," said Javier Recio, SpaceBridge's Chief Commercial Officer. Recio continued; "The SpaceBridge technological excellence and unparalleled customer support provides key elements for the success of SkyNet's high standards of quality of service and customer satisfaction."

Camilo Olea, General Manager at SkyNet de Colombia, commented on the process: "As part of our continued network enhancement initiatives we are pleased to rely on SpaceBridge's ASAT II platform to provide efficient and secure corporate branch connectivity, mobile backhaul and mission critical services. The platform based at our Bogota Teleport will be operational before June 2023, with high throughput C and Ku band satellites".

SpaceBridge and nexTenna™ partner to deliver Satellite Broadband Solutions

SpaceBridge has announced that the company will partner with nexTenna™, a cutting edge provider of advanced Ultrathin ESA (Electronically Steerable Antennas) featuring the industry leading lowest power consumption, to develop of new line of wireless communication systems targeting IoT, mobility IoT, broadband, and fixed broadband solution for consumer, enterprise and military services.

The SpaceBridge U7720 modem will be integrated into various nexTenna™ antennas, optimally defined to tackle specific verticals, including Communications-On-The-Pause (COTP) and Communications-On-The Move (COTM) markets. This includes nexTenna™ LEO IOT, nexTenna™ V for vehicles, nexTenna™ LEO Home for fixed consumer and enterprise.

David Gelerman, President and CEO of



David GelermanPresident and CEO, SpaceBridge

SpaceBridge, comments, "SpaceBridge partnering with nexTenna™ will create new paradigm in how we address IoT, mobility, and broadband markets. Installation of these terminals, in conjunction with

our iPoint, simple and pain-free autoprovisioning tool, commissioning of these terminals will significantly reduce rollout costs, eliminating one of the main impediments to rapid deployment." Gelerman continued, "The nexTenna™ technology is the only ESA (Electronically Steerable Antenna) tested with the SpaceBridge U7720 modems, that utilises a full continuous 1.5 GHz wide bandwidth capability, without any dispersion and/or squinting issues."

Dedi David Haziza, CEO and Founder of nexTenna™, comments, "The unique and cost-effective combination of the SpaceBridge latest baseband equipment, together with the nexTenna™ ESA technology, is the 1st combination to allow the needed seamless switching on-the-fly between GEO and other NGSO constellations and their respective orbits." ■

MEASAT selects the Hughes JUPITER System to help connect the unconnected across Malaysia

Hughes Network Systems, LLC (HUGHES), has announced that MEASAT Global Berhad (MEASAT) has selected the Hughes JUPITER™ System ground platform to enable broadband services on the MEASAT-3d High-Throughput Satellite (HTS). MEASAT-3d will leverage the JUPITER System gateway and terminals to extend its CONNECTme NOW satellite broadband services throughout Malaysia.

Yau Chyong Lim, Chief Operating Officer, MEASAT, said: "We are glad to partner with Hughes to bring this next generation upgrade to our vital CONNECTme NOW services. The Hughes JUPITER System will help us turn our ambitions for MEASAT-3d into reality, serving more than two million unconnected citizens across Malaysia within



the next three years."

"MEASAT's choice of the JUPITER System to enable service on the MEASAT-3d HTS underscores their commitment to delivering greater connectivity across Malaysia,"

said Ramesh Ramaswamy, Executive Vice President and General Manager, International Division, EchoStar. "We value the partnership and the trust MEASAT has placed in Hughes in helping to bridge the digital divide."



etisalat by e& has announced the implementation of the EUTELSAT QUANTUM satellite solution, becoming the first telco in the country to expand 5G network capabilities over a softwaredefined satellite giving customers access to high speeds, enhanced coverage and scalability to meet future demands for high bandwidth applications.

This deployment was a result of rigorous testing with customers for over a year to rapidly scale up the 5G mobile network deployment. etisalat by e& implemented Eutelsat's latest technology Quantum satellite with the recently installed state-ofthe-art Newtech Dialog Hub enhancing the mobile network capability.

Khalid Murshed, Chief Technology and Information Officer, etisalat by e& UAE said: "With the demand for 'always-on' connectivity as technologies like IoT, AI and blockchain make a bigger impact on consumer lives, satellite connectivity can empower communities and business in this rapidly evolving digital landscape. With the deployment of this satellite solution and technology, our customers will be able to



Khalid Murshed - CTIO, etisalat by e&, UAE

access their data at 5G speeds even when terrestrial connectivity is unavailable, marking another important step towards the regions' 5G adoption and bridging the digital divide".

Oscar Garcia, Business Marketing and Product Innovation, etisalat by e& said: "The need for connectivity has grown beyond traditional communications with customers wanting to access the highest speeds in the network to meet their requirements and demands for bandwidthintensive applications such as GSM services, Remote IT, Unified communications, OTT, and media streaming among others.. The testing and implementation of this satellite solution greatly enhances the mobile network capability to address the futuristic development of new age applications while being able to build and deploy 5G use cases for various industry verticals and business."

"Eutelsat are proud to partner with etisalat by e& to deploy this 5G use case on the world's first Software Defined satellite network. Our fully steerable beams are capable of meeting the most rigorous demands of Next Generation mobile and satellite networks," said Ghassan Murat, Head of Connectivity Business Unit for Middle East, Africa and Asia Pacific, Eutelsat.

EUTELSAT QUANTUM is the first commercial Ku-band satellite to have a fully flexible payload that can be remotely configured by software from a user's premises. As a software-defined steerable beam, it can be controlled in real-time to deliver maximum throughput on down/ uplink and optimised for various operational scenarios.



Satcoms Innovation Group

announces winners of 2023 awards





The Satcoms Innovation Group (SIG) has announced the winners of the prestigious 2023 SIG Awards. The awards celebrate the standout innovative technologies and solutions being delivered by individuals, companies, and institutions within the SIG membership. This year's winners are: Ashram (Engineering Program Manager, Micro-Ant), Atheras Analytics' SGD Design Tool, Digital Intermediate Frequency Interoperability (DIFI) Consortium, and Valentin Eder (Space Analyses).

The categories were: Cooperation of the Year, Innovation of the Year, and Young Engineer of the Year.

Helen Weedon, Managing Director, SIG, commented: "This is the third year that the SIG awards have been running and, as usual, the high calibre of the entries has made it incredibly difficult for the board of directors to select the winners. The entries have each demonstrated tireless effort, bold vision, and an unwavering commitment to the satcom industry. Congratulations to all the winners and thank you to everyone who submitted an entry."

Digital Intermediate Frequency Interoperability (DIFI) Consortium has won the Cooperation of the Year award for its work in providing a simple, open, interoperable Digital IF/RF standard that replaces the natural interoperability of analogue IF signals and helps prevent vendor lock-in, thereby enabling the digital transformation of space, satellite, and related industries.

Atheras Analytics has won the Innovation of the Year award for its SGD Design Tool that applies AI and ML techniques to optimise the design of the ground network by mitigating the effects of adverse weather and ensuring maximum network availability. It incorporates hybrid Q/V-band/Ka-band network modelling and enables network designers and engineers to determine the optimum number and locations of gateways needed to meet specific network availability targets.

Ashram, Engineering Program Manager, Micro-Ant won the award for Young Engineer of the Year for his work leading the development of the Iridium High Gain airborne antenna (Micro-Ant

Airborne LeoDome). While working on the project, Ashram, who graduated in mechanical engineering in 2018, identified incongruencies in the integrated assembly then quickly resolved with practical solutions that would have been expected from someone with years of experience in the satcoms industry.

The SIG Board also chose to award a special individual award to Valentin Eder of Space Analyses in recognition of his contribution to furthering innovation in satcoms. Valentin founded Space Analyses in 2014 to dig into the convergence of Big Data with the Space-Time Continuum, applying the results to domains such as Satellite Communication and Space Debris Management.

Martin Coleman, Advisory Board, SIG responded, "Valentin has been instrumental in developing unique holistic data analytic solutions for satellite payload and spacecraft operations. His highly important and innovative work has supported the industry to better understand and clarify situational awareness in both physical space and RF spectrum environments."





StarGroup has once again selected Eutelsat Communications for StarTV, its Direct-to-Home (DTH) pay-TV service. Operating via Eutelsat since 2016, StarTV will continue to benefit from the exceptional coverage of Mexico at 117° West.

The StarTV DTH service was launched in 2016, replacing the regional platform TVZac, which had been broadcast through microwave distribution. Partnering with Eutelsat, StarTV switched to satellite technology in order to offer a nationwide, robust, high-quality and affordable service to even the most remote areas of the country. The platform quickly became a success and has grown steadily, adding new channels to its offering, and in less than five-years, the audience had increased a massive eight-fold, counting 250 thousand subscribers in 2020. Today, the StarTV platform offers over 100 TV channels, in SD and HD quality, and with a constantly expanding installer base, it has become one of the most successful TV providers in Mexico.

DTH platform

StarTV in Mexico

Under this multi-year agreement, additional Ku-band transponders on EUTELSAT 117 West B will be used to further develop StarTV's DTH services. The EUTELSAT 117 West B satellite, co-located with EUTELSAT 117 West A, has established 117° West as one of the premium broadcast neighbourhoods

for Latin America over the past decade. Offering four regional Ku-band beams, it provides exceptional coverage of Mexico, Central America and the Caribbean, the Andean region and the Southern Cone, making it a prime choice for service providers and audiences across the region.

Jose Aguirre, President and CEO of StarTV commented on the partnership; "Eutelsat has enabled StarTV to deliver low-cost pay-TV services across Mexico. In addition to being a satellite provider, Eutelsat has been a partner in designing services that enrich our entertainment offering and enhance our customer experience".

José Ignacio González-Núñez, Eutelsat Americas Video Senior Vice President, added: "We are delighted to renew our partnership with StarGroup and to share the undeniable success of StarTV over the past years. The development of DTH services in the Americas is a strategic objective for Eutelsat and we are thrilled to be able to leverage our prime 117° West video neighbourhood to expand the pay-TV offering in Mexico and beyond."



HISPASAT presents the Amazonas Nexus at Washington Satellite 2023

HISPASAT presented the latest regarding its Amazonas Nexus satellite, which was launched into space from Cape Canaveral during the Washington Satellite Conference and Exhibition, the most important event in the sector. The stand also featured the company's latest advances in managed services and solutions to help bridge the digital divide.

Amazonas Nexus boasts coverage over the Americas, the north and south Atlantic corridors and Greenland, and is aimed at providing connectivity services in remote areas and mobility settings. Nexus is especially designed to offer high-quality connectivity on airplanes and ships and will help bridge the digital divide in Latin America in a flexible, efficient manner once it enters into service in mid-2023.

Managed services tailored to each client

Hispasat Wave, the company's latest generation of managed wholesale services, aimed at service providers,



telecommunications operators, governments and multimedia companies combines the excellent performance of HISPASAT's fleet of satellites with the cutting-edge technology of its teleports and value-added solutions that are grouped in two large pillars: Networks and Videos. Wave is based on a collaborative client-centered proposal to provide the best support in each step of the value chain.

Intelsat selects NOVELSAT to power High-Performance Networks

NOVELSAT has announced that Intelsat has selected NOVELSAT's satellite connectivity technology for high-performance networks. Intelsat will utilize NOVELSAT's satellite modems to supply high-speed trunking and backhaul connectivity for wireless and wireline networks. This collaboration allows Intelsat to further strengthen its AgileCore UX offering, a performance-optimized trunking solution that integrates high performance and reliability with managed wireless WAN optimization. By utilizing NOVELSAT's high-speed satellite technology, Intelsat can enhance the

performance and capabilities of its network, to meet the ever-increasing demands of its customers.

NOVELSAT satellite modem technology boasts advanced capabilities, including NOVELSAT DUETTM bandwidth reuse technology and NOVELSAT NS4TM bandwidth-efficient waveform, which deliver unparalleled transmission speeds and maximum spectral efficiency. NOVELSAT modems are also equipped with powerful networking capabilities, high interference resiliency, and a

comprehensive management system, ensuring maximum performance and reliability for high-value communication applications.

"We are thrilled to be partnering with Intelsat to power their high-performance networks with our cutting-edge satellite technology," said Gary Drutin, CEO of NOVELSAT. "Our satellite modems are designed to deliver the most capable and reliable network connectivity, making them the perfect fit for Intelsat's mission-critical networks."

Alfred-Maurice de Zayas

Former United Nations Independent Expert on International Order (2012-2018)



From 1 May 2012 to 30 April 2018, Alfred-Maurice de Zayas served as the first UN Independent Expert on the promotion of a democratic and equitable international order. Alfred-Maurice de Zayas studied history and law at Harvard, where he obtained his J.D. He practiced corporate law with the New York law firm Simpson Thacher and Bartlett and is a retired member of the New York and Florida Bar. He obtained a doctorate in history from the University of Göttingen in Germany.

Mr. de Zayas has been visiting professor of law at numerous universities including the University of British Columbia in Canada, the Graduate Institute of the University of Geneva, the DePaul University Law School (Chicago), the Human Rights Institute at the Irish National University (Galway) and the University of Trier (Germany). At present he teaches international law at the Geneva School of Diplomacy.

In 2009 de Zayas was a member of the UN workshop that drafted a report on the human right to peace, which was subsequently discussed and further elaborated by the Advisory Committee of the Human Rights Council. He is also a signatory of the Declaración de Bilbao and Declaración de Santiago de Compostela on the Human Right to Peace. He served as a consultant to the Office of the High Commissioner for Human Rights on the issue of mercenaries.

De Zayas is an expert for civil and political rights and has published nine books on a variety of legal and historical issues, including "United Nations Human Rights Committee Case Law" (together with Jakob th. Möller, N.P. Engel 2009), and has been co-author and co-editor of numerous other books.

I make the point that "If we want to make America great again, we should begin by reviving the legacy of Eleanor Roosevelt, especially those virtues that made Americans loved worldwide, and by reaffirming our commitment to the achievement of FDR's Four Freedoms. MAGA does dot mean bullying - it means listening, opening up, cooperating with others, convincing by reason, practicing international solidarity, showing compassion." Essays in Counterpunch https://www.counterpunch.org/author/alfred-de-zayas/

stc Group joined the GSMA Open Gateway initiative

stc Group has joined the GSMA Open Gateway. The framework of Application Programming Interfaces (APIs) is designed to provide universal access to operator networks for developers, making it easier and faster for them to enhance existing services and deploy new ones to customers across operator networks. The move represents a paradigm shift in the way the telecoms industry designs and delivers services in an API economy world. With the support of 21 mobile network operators, including stc group, GSMA Open Gateway will help hyperscalers and developers to gain access to the world's largest connectivity platform, with a single point of access to a wide range of network capabilities via common, CAMARAcompliant APIs.

The GSMA Open Gateway initiative will provide operators with capabilities that make the world simpler for developers to create choice and deliver value for consumers. With an initial focus on eight



network APIs ranging from device location or SIM swap to verify users and combat online financial crime to Edge Discovery or Quality on Demand to deliver convincing and immersive game experiences or drones to carry out data intensive mission safely. The launch of GSMA Open Gateway will simplify service delivery, provide faster routes to market and spark innovation opportunities for developers and hyperscalers. The consistent, interoperable

and federated framework is expected to accelerate digital transformation in the telecommunications industry and help stc Group continue its leading role in this space. Many collaborative projects and demonstrations of the new capabilities are available to see at MWC Barcelona 2023, demonstrating the tremendous potential of GSMA Open Gateway for transforming the way telecoms services are delivered in the digital age.**■**

Aftab Raza Khan

stc collaborates with Cisco to accelerate stc's cloud journey

stc and Cisco have announced that stc is expanding the use of cloud at an accelerated pace to maintain its competitive edge, foster innovation, and transform interactions with digital services. As stc continues its cloud journey, it is building on the current foundation for greater agility, security, efficiency, and innovation.

The collaboration with Cisco will be a key component to stc realizing their ambitions for the 5G future. By pursuing a cloud-first approach and transforming their stacks into cloud-native architecture using the Cisco cloud platform, Redhat Openshift Container Platform, full automation suite, and DevOps Digital pipeline, stc will be able to offer high quality and better telco applications while reducing the time to roll out new services. In addition, stc will be able to quickly integrate



Adam MacHale VP, EMEA Service Provider, Cisco

cloud-based apps and features targeted to specific customer segments.

"As a leading digital operator in the region, we have achieved a lot of transformative change in a short time. We have an opportunity with our cloud-first approach to improve the economics of 5G & Cloud stacks to transform the way we are dealing with our network to create faster and more compelling experiences at scale. We work together with Cisco seeking new ways to drive market differentiation and deliver business outcomes through agile, secure infrastructure, at every stage of the technology journey," said Eng. Anwar I. Alsubhi, Cloud infrastructure GM, stc.

"With this collaboration, our Telco Cloud solution will help accelerate the deployment of the next generation of secure, agile digital services. This will drive innovation around stc's multivendor workload services and further strengthen its digital transformation efforts," said Adam MacHale, Vice President, EMEA Service Provider, Cisco.



center3 & stc Bahrain to land the 2Africa Pearls Submarine cable system, connecting Arabian Gulf with Europe, Africa and Asia

centers and stc Bahrain have officially completed the marine survey for 2Africa Pearls in Bahrain, marking a significant milestone in the development of the overall 2Africa subsea cable project.

The 2Africa Pearls subsea cable is a unique transcontinental communication system that connects 33 countries through 46 landing locations, spanning across three continents, and positioning the Middle East at the center of operations.

Once completed, 2Africa Pearls will break records as the longest subsea cable ever deployed. Spanning over 45,000 km in length, the cable system will provide reliable connectivity and internet services across a number of vital landing locations in KSA, Bahrain, Kuwait, Oman, UAE, Qatar, Iraq, Pakistan, and India.

According to Fahad A. Alhajeri, CEO of center3: "Connecting 2Africa Pearls with Bahrain marks another significant accomplishment for center3. The project progress is critical to center3 in linking Asia,



Fahad A. Alhajeri - CEO, center3

Africa, and Europe. center3 is dedicated to investing in communication infrastructure with the aim of offering exceptional connectivity to its customers and contributing to the realization of the Kingdom's 2030 Vision. The 2Africa subsea cable is a vital step towards achieving this objective and solidifying center3's position as a leading player in the region's connectivity landscape."

Eng Nezar Banabeela, CEO of stc Bahrain: "This is a landmark achievement for us



Eng Nezar Banabeela - CEO of stc Bahrain

and affirms stc Bahrain's commitment to spearheading digital transformation and solidifies the region's position as a regional ICT hub. Investments in this advanced network infrastructure will drive economic growth for businesses, serve industries that rely on the internet and enhance the living standards in the region. 2Africa Pearls will vastly increase the data backbone of Bahrain by 100x providing high-speed connectivity services that will accommodate the futuristic heavy data-demand."

stc Group confirms its outstanding achievements in driving sustainability in the ME

stc Group has won the sustainability Middle East Champion of the year award 2023. The awards were arranged by "SME Awards -Sustainability Middle East", highlighting the ME's best sustainability and climate actions.

On behalf of the stc Group, Mashaal AlRubaian, General Manager of Corporate Communication at stc, received the award during the ceremony held in Dubai, UAE.

The group focused on sustainability practices recognizing extraordinary achievements, including driving the sustainability agenda for the Middle East



region. With climate change becoming an existential threat, stc worked towards accomplishing net-zero / low-carbon emission and sustainable operations and adopted innovative sustainability strategies by migrating to renewable energy sources, eco-friendly raw materials, and technologically advanced low-carbonfootprint machinery and equipment.

stc was awarded due to standing out by its unique sustainability program implemented on the ground while demonstrating measurable improvements in making industry and day-to-day living cleaner and greener for the people in the Middle East.

■

e& enterprise partners with Microsoft

to help businesses in their sustainability journey

e& enterprise has announced the implementation of a unique Microsoft solution powered by cutting-edge data technologies that enables companies of any size to define and implement their sustainability agenda and reduce their carbon emissions.

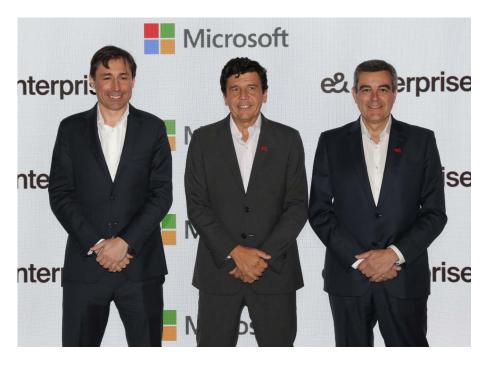
The solution called 'Microsoft Sustainability Manager' is an extensible solution that unifies data intelligence and offers organizations an increasingly automated and comprehensive view into the emissions impact of their entire operations and value chain. It enables organizations to record and more accurately report their emissions, and continually test and optimize reduction strategies to reach their goals.

Sustainability is one of the major pillars of the multi-year strategic partnership between e& enterprise and Microsoft. As part of the overall commitment of e& enterprise, it is focused on accelerating the implementation of sustainability services and solutions in the geographies, markets, and communities it serves.

e& enterprise has selected Microsoft Cloud for Sustainability solutions as the foundation for their Sustainability-asa-Service offering, citing the platform's functionality, coverage of ESG topics, and flexibility. The synergies between e& enterprise wide ranging Smart City solutions portfolio, sustainability consultancy and the data-focused aspects of sustainability management position the company as a competent leader in the field.

With its Sustainability Consultancy practice, e& enterprise will help customers to comprehensively analyze their greenhouse gas (GHG) footprint across the value chain and develop a strategy of services and solutions to implement reduction measures and achieve certified reduction targets.

e& enterprise offers a wide range of



solutions from its Smart City portfolio, including Solar Energy, Energy Management, apart from various other IoT solutions like Smart Buildings, Waste Management, etc., which focus on delivering outcomes like reducing operating costs and utility consumption.

e& enterprise also brings to its customers a Sustainability Center of Excellence, which helps govern and continuously operate all the services and solutions deployed, in order to ensure the fulfilment of sustainability objectives, while enhancing the strategy as the business of our customers grows.

"As a company we are committed to sustainability and innovation, specifically with our plans and ambitions aligned to support the UAE's Net Zero 2050 strategic initiative and the United Nations Sustainable Development Goals (UN SDGs). This offering aligns with our long term sustainability goals as well as those of our customers. By bringing this cuttingedge solution to market we will enable

enterprises and government agencies to understand their carbon emissions and make a positive impact on the environment." said Alberto Araque, CEO, e& enterprise IoT and AI.

"With Microsoft Sustainability Manager, we're enabling organizations to gain continuous visibility into their emissions activities, reliably report their impact and progress in near real time, and access the intelligence required to collaborate with others to refine and scale sustainability initiatives and transform their business, end to end," said Paco Salcedo, Enterprise and Commercial Lead, Microsoft Middle East and Africa.

The new solution will enable organizations to take a more data driven approach to sustainability management. By bringing together disparate data sources and providing near real time access to information, organizations can analyze, visualize and report impact and progress toward their goals at any stage of their sustainability journey.

■



David Robinson

Journey of an Australian Software Engineer



By Aslam Ansari

Life moves on... Though the pitfalls appear and go – but the tales around these pitfalls always carry some larger-than-life stories! David Robinson, born in Syria, raised in Australia since the age of 9 years, is such an untold

Images of sorrow, pictures of delight. Things that go to make up a life: Glimpses from the last year are like sparkling shadows that knock me every now and then when I think of David Robinson or actually several other players who are seen in the fields of human rights – in Geneva, at the United Nations, a hub for conflict management, creation of building bridges...

21st September 2022. It was International Day of Peace (Geneva Peace Talks) at the United Nations. I had just come out from Palais des Nations after attending the UN Sessions and the closing ceremony. Outside the UN building, a little square with a huge Broken Chair is the ground for various protests against human rights violations. I crossed the square, took a tram towards the town center and stepped out near Geneva Cornavin. As I walked down in Rue de Neuchâtel, and passed by SAJNA Restaurant, some known faces and voices caught my attention. Munir Mengal -Shaukat Kashmiri - Fazal Afridi were at the terrace, along with a group of other human rights players... "Hey, come join us," they invited me. There, the first time I came across David Robinson who was in a wheelchair, speaking to a group of dissidents...

"So what's your current function or on which side you're playing here in this human rights arena in Geneva?" I asked him. "I represent an NGO that holds Special Consultative Status with the United Nations Economic and Social Council (ECOSOC.) So I speak at different UN sessions," responded David.

I have known about various UN mechanisms, and about what role each mechanism or Working Groups perform for the UN Charter. The dissidents from different regions of the world also contribute a great deal of feedback to the UN on the current situations in their regions. Observing the current and undercurrents of international affairs – partly for my ducumentary films and partly for my writings has been not only my passion, but the core of my existentialism. So I watch all these actions through many different prisms. Now I could see a former sportsman from Australia among these activists in Geneva. His journey from the business ventures in telecommunication and playgrounds to the arena of human rights issues could be something interesting. I sensed an air of arrogance around David-which was probably more apparent at that time than in the next phases. So David Robinson the player spoke on health and human rights issues at the UN sessions – he played football for Australia and then he was a gold medalist of Taekwondo. A fine contrast! Taekwondo is a Korean form of martial arts involving punching and kicking techniques, with emphasis on head-height kicks, spinning jump kicks, and fast kicking techniques. They are a kind of martial arts in which one attacks or defends with hands and feet anytime or anywhere, with occasional use of weapons. The physical training undertaken in Taekwondo is purposeful and fosters strength of mind through mental armament. It is a combat sport and was developed during the 1940s and 1950s by Korean martial artists with experience in martial arts such as karate, Chinese martial arts, and indigenous Korean martial arts traditions such as Taekkyon,



A Software Engineer in Telecommunication (M.I.T from University of Canberra) and a well-known sportsman in Australia, he played football for PARRAMATTA, the senior football team in Sydney - from 1993 to 1998. Then in 1999 he qualified for the Japanese world championship in TAEKWONDO, and won a gold medal in the category of lightweight (163 lbs/74 KG.). He also had his business ventures in the telecommunication sector. After completion of his Master of Information Technology (M.I.T) at University of Canberra (2000), he ran his own company Global Solutions Network (GSN.) He developed and provided services in the field of internet data system for Orange mobile. His quest for knowledge and learning did not stop here. He is also a graduate in Political Science.

Subak, and Gwonbeop.

"So our David Robinson must have been a tough guy, a guru of fighting," I thought. On 3rd July 2018, David Robinson filed an allegation at the UN against high-profile corruption and the deep-rooted embezzlement in the funds attributed to specific purpose and particular regions. He continued the due process... But the fate held something else for him in store. On 18 October 2020, an unfortunate and unexpected incident took place - something that is usually unlikely to occur in Switzerland. David Robinson received a call from the police that the number plate



of his car that was parked near Geneva train station had fallen down. He was advised to reach there and take care of this matter. When he arrived there, he came across two police officers, a man and a lady officer who first spoke to him – and then without any warning or provocation, the policeman assaulted him, knocked him down on the street, with a kung-fu manœuvre, round neck choke. David landed flat on his head/back spine, on the hard concrete footpath, immediately David lost consciousness for two minutes and 22 seconds, caught by security surveillance cameras. Then two police officers, tag-team, roll-over poor unconscious David over his stomach, to appear that they are handcuffing him. No paramedics were called, rather instead, police remarkably decided to lift up unconscious David and leaned his head forward, upright position, directly on the side bumper bar of the car. David out cold, his body weight slips back, police continued with downplaying the seriousity of David's need for emergency medical attention. Then the policeman is caught redhanded using his bodyweight, placing one of his knee used as a backrest on David backspine. David's slips backwards, at this point, the male policeman places his right fist arm on his face. While the second police officer, picks up David's mobile phone that was dropped on the floor and places it inside her pocket. The two police officers call in for back up, the first policeman to arrive, greets his colleagues with a smirk and appears to make a gesture, while the two police officers are frowned. Seconds later David laying still unconscious on the cold cement side walk, with his two legs dangling over the street kerb, then eight police officers surround David, all appear waiting for him regain consciousness. Few police, backaway, and disperse, then, David shows first sign of breath, with white foam pouring out of Davids mouth, police is seen lifting David backside while still handcuffed, with both hands behind his back, all along after being knocked out cold by the policeman with a high neck tackle. Then, police is seen lifting David up and thrown him into the police van and took him to the police station. The whole incident was recorded by the high tech - security cameras fixed outside the main train station in Geneva.

David said, "the whole incident was racially

and politically motivated... Till now the Canton of Geneva is falsifying evidence with trumped charges, threatening to expel David from Switzerland and return to Australia." Police detained him for 24 hours - and then let him go on his own. They did not have any grounds to keep this M.I.T educated and former player and human rights activist in their custody. David said, 'It was arbitrary detention, denied transportation to hospital, denied a lawyer, denied an English translator and denied Australian Consulate assistance by police custody, rather instead I was also assaulted by police at the police station and left with more physical injuries and trauma, that is forensically recorded by HUG Hospital medical staff in Genéve.'

By now, the situation had already worsened. David Robinson, due to the last day's police assault was going through a severe pain. As soon as he came out from the police station next afternoon on 19 October 2020, he rushed to Geneva University Hospital. There in the hospital, they conducted a routine examination and released him around 3 AM in the night. An unusual interference came from the police... Police doctor sent a letter to Geneva University Hospital the same day, advising them not to conduct any MRI of the patient, and keep it limited just to perform a normal x-ray. (The letter from the police cell doctor addressed to the hospital has been presented by the patient.) For the next three months, the patient could not get his MRI done at the hospital. Finally, David went in and demanded an MRI from the hospital, the doctor, was reluctant, at first, and gave out clear instructions to David, that an MRI must not be done at the hospital, because of notation on its computer system, rather instead, gave David an MRI referal for his back spine, on the condition that it is performed outside the perimeters of the hospital. David conducted an MRI examination on 12 February 2021 at Lancy Radiology. David's physical state had been worsened, without proper examination to diagnose. MRI results revealed he had the nerve damage on his lower back/ the spine. He went through an operation on 21 February 2021. The operation was not successful. And ultimately, David Robinson, a gold medalist of Taekwondo ended up in wheelchair. And he is still going through his

physical and psychological trauma!

I thought of my last meeting with Alain Berset, President of Swiss Confederation. It was at the Opening Ceremony of Locarno Film Festival in August 2018. I wish if next time I could tell him about this unlikely but indecent incident that knocked out a former sportsman and human rights activist in Switzerland. I am sure, he would feel the shock of those sharp blows given to David Robinson in Geneva. After all, a head of state is an indirect caretaker of every citizen in his country. Alain Berset carries a sportsman like personage and has a good sense of humour. I have experienced it when I said to him: "The Northern areas of Pakistan hold a pure and raw natural beauty and I am thinking that one day we would create another Switzerland in that region." He appreciated the idea with an open heart. Then at the time of good bye, I reminded him,

"In future, with a New Switzerland in Pakistan, we'll be in your competition!"

And when we came across next time at Locarno Film Festival in 2022, he greeted me even more warmly. He certainly holds a sportsman's personage with a sportsman spirit!

Now I would tell him, to the President of Swiss Confederation about the trauma of David Robinson – and see how his presidential sportsman spirit gives a supporting hand to a man whose life has been confined to a wheelchair in Switzerland due to a police assault and other related events, I thought. Every man has a place, in his heart there's a space. And the world can't erase his fantasies. Every thought is a dream, rushing by in a stream. Bringing life to the kingdom of doing. The dignity of human being and their rights as citizens must be protected in all circumstances - though these rights are violated in certain parts of the world as an inherent policy while in some countries, incidents happen coincidentally, yet a complete investigation on all the possible aspects must be accomplished by the State and also by serious and responsible non-state actors.

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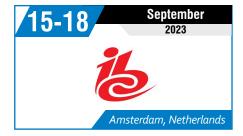








































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