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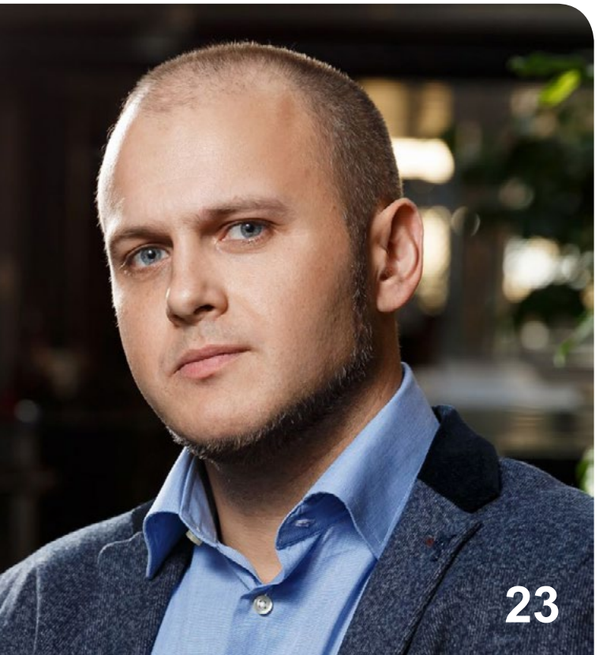
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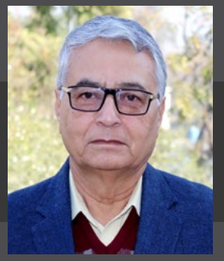
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Editor's Note



Dear Reader,

Welcome to the latest edition of Teletimes International.

The month of December brings us to IBC2021, one of the leading global satellite and broadcasting events which includes a comprehensive content programme, a platform to view the latest products and innovations and the opportunity to meet and connect with the industry. Teletimes is a media supporter to the event for the past many years and will provide coverage from the discussions & updates from the event in the next edition.

This edition features an exclusive interview with Dmitry Okorokov, the Chief Executive Officer of Infinet Wireless. The interview talks about Infinet's vision for the telecommunications market and what makes it unique from its competitors.

I would also recommend two very interesting articles; "A comprehensive look at 5G powering industries in the Middle East" on page 8 and "Why use air cooling when we can do much better" on page 14.

As always, you will find news and updates from all major players in the industry in this issue of Teletimes. Your feedback is welcome on info@teletimesinternational.com

Enjoy reading!

Khalid Athar
Chief Editor

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A Comprehensive Look at 5G Empowering Industries in the ME



Khalid Athar

We are entering a new era of information technology. In addition to the needs of consumers, most industries have now expressed an enormous appetite for digital transformation. Recently- introduced advanced ICT technologies such as 5G, Cloud and AI are attracting interest across various industrial sectors, including factories, campuses, seaports, mining fields, power grid transmission, oil and gas, and more.

Indeed, most industrial players are investing substantial resources in digital transformation to meet business objectives related to productivity boost, manufacturing better products, effective maintenance, improving working conditions, cost reductions, and so on.

Examples of such strategic activities can already be found in various industries, from hotspots and campuses to wide-area facilities.

National public infrastructure:

1. Public Safety: In general, public safety has strict requirements to guarantee highly secure and reliable communications with wide-area coverage. The network must remain unblocked, and services must be available 24/7 without downtime and unplanned interruptions. Real-time audio and video backhaul in onsite scenarios also ensure command center control.

2. Civil Transportation: In civil aviation, airports, and backbone transportation scenarios, the transmission of a large volume of data needs reliable connectivity. Therefore, a WAN (wide area network) is required to implement high-speed and reliable transmission.

3. Energy Grid: Providing end-to-end secured transmission among all power grid equipment is generally regarded as very challenging. Typically, power grid transmission line inspection is difficult as a result ofwide area of coverage, complex landscape, and weather challenges. Therefore, wide-area coverage, extremely low latency, and high-reliability power grid data transmission is required to make the overall control of the power grid system effective and operating on a 24/7 basis.

Industry Campuses:

1. Oil and gas campus: Digital transformation is becoming part of the oil and gas industry's strategic vision. The large-scale use of more and more cutting-edge applications is improving the productivity of tools such as HD cameras with cloud-based machine vision, digital twins, HD sensors, remote control of robots, AGV, and more. All these use cases need ubiquitous, mobile, reliable connectivity with wide area coverage. Some leading oil companies in GCC countries, for example, are currently conducting 5G beta tests to validate the productivity gain of innovative use cases.

2. Ports: The working environment in ports brings various health risks and increased pressure on workforce management and recruitment costs. Therefore, the industry is evaluating new intelligent solutions to improve working conditions, reduce the pressure of staff recruiting and health safety, reduce operation costs and improve efficiency.

3. Smart factory: "Flexible manufacturing" is increasingly a major trend for smart factories, which relies on the responsiveness of the production line and supply chain. The evolution of highly-automated processes relies on reliable connections everywhere, artificial intelligence and cloud capability to realize advanced data transmission and analytics on the factory floor among machines, sensors, control center, maintenance teams, etc. In Germany for



example, nearly 125 campus owners have applied licenses for deploying 5G since 2019. Other countries such as China, Japan, Korea, Europe and North America do embrace such trends.

To summarize, mobility, low latency, large bandwidth, multi-connection, security and reliability, and QoS guarantee in wide-area scenarios are becoming key requirements for digitalization in most industries. From a long-term development perspective, there is no doubt that 5G, as the most advanced communications technology, is a cornerstone of the digital transformation of these industries.

The unique value of 5G in industry digitalization

To promote technological development and social progress, the 3GPP has already defined relevant 5G capabilities to address the digital industrial transformation roadmap..

In R15, which has been frozen in March 2019, the 3GPP has defined full eMBB capabilities (NSA, SA); basic low latency capabilities and vertical industry capabilities (eMBB slicing definition). In R16 (frozen in July 2020) the 3GPP, has defined full URLLC capabilities (oms handover interruption/Network time synchronization/ Latency monitoring/Multi-channel transmission); Vertical industry capabilities (Enhanced slicing to support URLLC/5G LAN/High-precision positioning/NR-V2X Ph1); in the upcoming R17 (to be Frozen by March 2022), will define full mMTC capabilities, Vertical industry capabilities (RAN slicing, NR multicast and broadcast, Enhanced NR node, NR-V2X Ph1).

All the milestones indicate that 5G, as a cutting-edge technology, has the most advanced features that no other technologies can replace:

1. Air interface: Large-scale Massive MIMO antenna technology is used in 5G networks, with 64T64R being the mainstream M-MIMO active antenna in the industry. This technology greatly increases the peak and average cell throughput. In addition, Massive MIMO significantly improves the signal coverage and strength on vertical and horizontal dimensions. Meanwhile, 5G further enhances flexibility and spectrum utilization efficiency and addresses the requirements of ultra-large bandwidth, ultra-low latency, and ultra-large-scale connection scenarios. Furthermore, 5G has advantages in decoding capability, decoding delay, chip size, and power consumption.

2. Coverage: The transmission power of outdoor 5G base stations can reach 320W, and the coverage is at the level of several kilometers (depending on the frequency bands). It is ideal for outdoor wide coverage scenarios. In addition, current largest 5G macro base stations can provide a cell capacity of several Gbps and allow simultaneous users to enjoy at least DL 100Mbps at the

cell edge. In indoor scenarios, - using 5G air interface technology- 5G small base stations are ideal for industries thanks to high performance, E2E security, QoS differentiation, high reliability, full mobility including handover, and slicing functionalities.

3. Low Latency: 5G introduces flexible frame structure design, which can use multiple parameters (uplink-downlink ratio configuration, subcarrier bandwidth, and system bandwidth, UL grant-free, mini-slot, etc.). With edge computing technology and new network architecture, 5G effectively meets the 1ms user-plane latency requirement of the International Telecommunication Union.

4. Connection Capability: NB-IoT and eMTC use OFDMA in the downlink and SC-FDMA in the uplink. The number of NB-IoT connections per 5G site is 100,000, and the number of eMTC connections per site is set to 50,000. The number of connections



per site is far more than other previous wireless technologies for multi-connection in various industries.

5. Mobility: In 5G networks the mobility and relevant handover mechanisms are fully supported between both 5G network and 5G terminals, which means significantly fewer handovers and more stable data transmission than WIFI APs, which is more suitable for mobile scenarios such as remote control, mobile video backhaul, and AGV in industries. In comparison, due to limited WIFI APs coverage, numerous wireless access points must be deployed. Therefore, it does impact the optical fiber links to connect APs (some possible optimization like meshed WiFi could partly solve this issue, but it brings more complexity and cost in the overall WiFi network design).

6. SLA Assurance and Network Isolation:

• 5G Network Slicing: To tackle the large set of network requirements among multiple end-users (including verticals), 3GPP has defined the network slicing concept, providing the capability to define networks in a more dynamic way. With slicing, one can have network resources physically or logically isolated from one another, with specific instances of the 5G network dedicated to users and services as per their exact and specific requirements and SLA. One could assume that each vertical has its own slices, fully independent of any other services.

• MEC5G allows for the most agile network deployment to meet every possible use case in the ultra-reliable, low latency, high throughput communication world. MEC enables a more reliable and robust, edge with 99.999% reliability being the foundation of 5G networks Additionally, one can bring telco-grade reliability to the enterprise world with MEC, as well as meet the requirements of enterprises' networks while keeping enterprise data inside their campus.

• In accordance with the scheduling and coordination mode of access terminals, 5G adopts the logical separation architecture of access, control, and forwarding. The control plane function of core NEs is used to manage mobility and command and coordinate numerous terminals. This feature solves congestion issues when a large number of devices are accessing the network simultaneously.

• 5G E2E Security: To extend the security of 5G sessions, the encryption keys size stands at 128 bits. Additionally, there is a much higher level of air interface security by best-in-class integrity check on both user plane and control plane messages which brings a new dimension to network security. Today, with robust encryption, integrity and confidentiality, networks can better guarantee security, resilience, privacy, and identity management and communication security. All of this is end-to-end across a 5G radio interface, 5G transport and 5G core network. Moreover, 5G not only delivers bidirectional authentication, but the integrity check and concealed identity concept introduced in 5G SA provides the highest level of network security.

Conclusion

In general, 5G can deliver irreplaceable capabilities in terms of wide-area coverage, bandwidth, low latency, multi-connection capabilities, E2E encryption, and differentiated experience with E2E slicing, not only to benefit verticals such as public safety, transportation, medium- and large-sized campuses, ports, and smart factories which require high-QoS services, SLA assurance, wide-area (outdoor) coverage and precise end-to-end security. Additionally, 5Galso benefits SMEs pursuing digital transformation through cost-saving, automation, production efficiency improvement, safety improvement of working environment etc. It is accurate that various technologies can coexist for a long time as opposed to one replacing the other. Simply put, different technologies can be deployed for different scenarios. However, from a long-term development perspective, 5G will prove its unique benefits as the most advanced communications technology.

Human beings' quest for progress is boundless. The launch of each generation of communications technologies has brought far-reaching impact on social progress and people's lives. The evolution from 2G to 4G greatly enriched people's work and lives. The advent of 5G is bound to generate more applications and bring significant changes to numerous industries, further meet more future-oriented scenarios, and promote the rapid growth of the national economy and help achieve the harmonious progress of human society. T

stc Continue the Biggest Project of Data Center across the MENA Region

Saudi Arabia's leading digital company stc is continuing its data centers project Phase 3, which will be the biggest project of Data Center Construction across the region at one time, after the completion of Phases 1 &2. The new phase of constructing its next-generation cloud-enabled Data Centers, expanding presence and capacity, accelerating the implementation of the Kingdom's digital transformation objectives, will be providing world-class seamless data distribution with energy optimization solutions which align with the environmental sustainability Saudi Arabia goals.





Designed and built to excel in capacity, functionality, operational integrity and efficiency, the investment signifies stc's leadership role in digital transformation across the MENA region. stc next step is improving the "time to value", "customer experience and self-service capabilities", "innovative partnership models", "focusing on faster, smarter and better services" as well as all business ambitious requirements.

stc is now implementing Phase 3 of its new ERA Data Center Construction Program with Phase 1 completed in 2019 and Phase 2 already is in the final commissioning stage. The Tier III enhanced Data Centers is a planned IT Computing power at maximum capacity of 125 MW, with allocated landscape area of more than 180,000 sqm is part of stc's broader ambition and it's overall strategy to provide best in class digital and telecommunication services across the Kingdom.

stc Data Centers program constitutes of 16 Data Centers that include 17,000 racks which will be incorporating 8 parallel projects distributed across multiple zones within 6 cities, makes this the biggest program of Data Center Construction at one time, across the region. The program will create critical digital availability zones that will provide a full range of services together with world-class security and service management as well as safety measures of asset's, across key cities such as Riyadh, Jeddah, and Dammam.

stc is building new Data Centers that incorporate a modular smart design, fully Hyper-scaler compliant and deliver highly resilient infrastructure availability. On top of the Design & Construction excellence, the latest connectivity technologies are used to assure resilient and smooth traffic flow between different technical facilities and maintain Business Continuity. The world-class Data Centers are part of stc's overall strategy to provide enhanced digital and telecommunication services across all major cities in the Kingdom. The construction program for six sites is now underway, with Phase 3 expected to be completed in 12 months, with a total IT compute power capacity of 125 MW and a broader ambition for future growth in only 8 months, with Phase 1 completed in 2019 and Phase 2 in the final stage of commissioning.

Haithem Alfaraj, stc Chief Technology Officer, stated: "We have big plans for our Data Centers to become a gateway for the MENA infrastructure. stc is now established to be the leading data platform in the region and supporting the demand for international connectivity. We aim not only to build new Data Centers but also expand our existing ones to ensure stc is fully equipped to meet the future growing demands of our customers.' He concluded, "stc is geared up to grow-on-demand with its unique Data Center solution, by easily replicating a standardized design, that could exceed 300 MW of our current computing power capacity by reacting quickly to the market". Mohammed Alabbadi, stc Chief Wholesale Officer, stated: "These Data Centers are vital components of our premier digital hub offering that stc announced towards the end of 2020. Aligned with the Saudi Vision 2030 goals, it enables Saudi as a center of digitalization, attracting local and foreign direct investments. Digital hub will be available, as a one-stop-shop experience, to all customer segments including local, regional and global, in a carrier-neutral environment. Enabling a locally hosted eco-system of hyper-scalers, cloud, content, and enterprises, providing the best customer experience. We envision future growth driven by evolution to cloud 4.0 and subsequently to Industry 4.0".

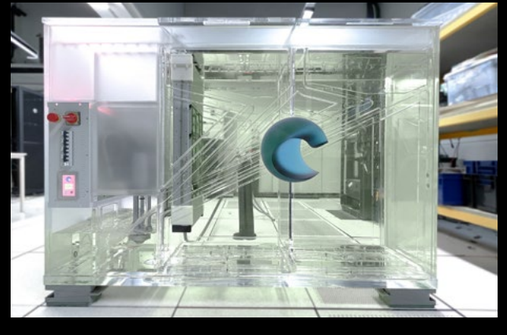
He continued, "These DCs will be enabled with the vast national, regional and global connectivity networks, offering high resilience and diversity, that stc owns and is investing on as a leading regional interconnection platform developed as an agile model to capitalize on the rapidly growing infrastructure and services market opportunities."

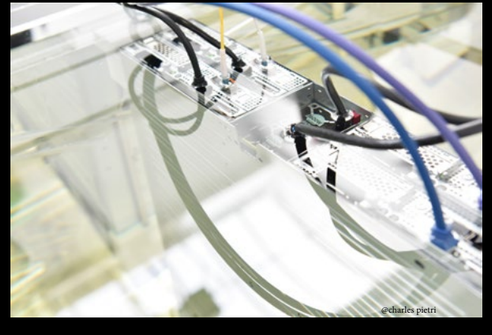
The first two phases of the program have enabled stc to lead edge digital products and services to the MENA region like never before and contribute to positioning the Kingdom as a major international technology hub." T

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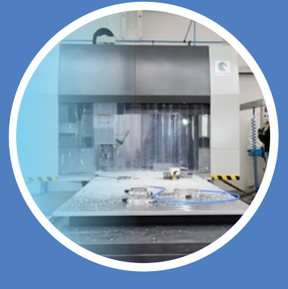
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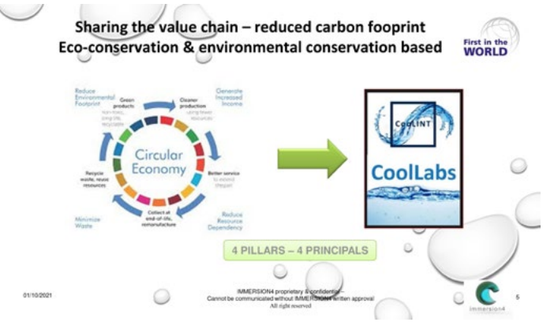
POWERED BY immersion4 ECOSYSTEM

Why use air cooling when we can do much better?



Within several sectors such as Artificial Intelligence or Blockchain, data centers are prevalent and widely used. Data centers or mining farms tend to be the most energy-intensive buildings on the planet. By 2030, it is expected that most today's technologies will consume 30% of the world's electricity, over 10% of green house gases (GHGs) as well as 3 trillion liters of water.

It is quite clear that there is no future without eco-conservation and environmental preservation. The Immersion4 Ecosystem was created based on these very principles.



Immersion4 technology uses the circular economy to share the value chain and reduce the carbon footprint. Immersion4's IBCTM & DTMTM technologies revolutionize the cooling paradigm without the need of natural resources, thus pushing the laws of physics even further. Any problems previously encountered with electronics can be solved using Immersion4 technology.

The DUDETM (Distributed Urban Data-centre Efficiency) Architecture allows data to be seamlessly collected and computed at the EDGE into any urban environment. Using this technology, data can be transformed into a new source of energy. For Immersion4, the COP26 can be dealt with NOW!

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Yahsat's Mobility Arm estimates $80 million of revenues from new broadband distribution agreement with Cobham SATCOM

Yahsat has announced that its Mobile Satellite Services subsidiary, Thuraya Telecommunications Company has entered into a long-term agreement with Cobham SATCOM, for the distribution of next-generation broadband products for land, aeronautical and maritime users. This agreement further builds on Yahsat's existing partnership with Cobham and marks an important milestone in the roll out of the Thuraya 4-NGS enabled portfolio.



As part of the agreement, Cobham will be appointed as the main distributor, on a non-exclusive basis, for Thuraya Next Generation Broadband Products (NGBP) for a minimum term of five years, starting from the commencement of commercial operations on Thuraya 4-NGS, following its expected launch in the second half of 2023.

Through this partnership, Cobham will drive NGBP sales through its own extensive distribution channels but will also work closely with Thuraya's broad service partner network. The agreement is expected to generate more than US$80 million of potential service revenue to Thuraya. Both partners and customers will significantly benefit from the combined distribution network as well as from Cobham's technical knowledge and after-sales capabilities and expertise.

Ali Al Hashemi, Group Chief Executive Officer at Yahsat, said: "We are very pleased to have signed this agreement with our partner, Cobham who is deeply committed to the success of the Thuraya 4-NGS program. This partnership enables us to leverage the unique capabilities and expertise of Cobham thereby augmenting the shared value we can deliver together to distribution partners and to end customers. We are confident that our customers in different market segments, whether maritime, government or enterprise, will see this partnership as a key differentiator in fulfilling their MSS connectivity needs".



Leif Ottosson, Chief Executive Officer at Cobham, said: "We are equally pleased and excited to enter into this agreement as it demonstrates the mutual benefit of the partnership we have built with Yahsat and Thuraya. Not only are we trusted to provide Thuraya with the innovative technology that thousands of customers are relying on every day, but we are also trusted to ensure the commercial success of the partnership through our extensive distribution network of service partners, distributors, and retailers. We are very proud of being appointed, as it is a manifestation of the technology leadership and commercial strength we have in the market."

Thuraya recently announced a partnership with Cobham to drive significant enhancements to its future broadband portfolio. Under this partnership, Cobham will deliver a comprehensive mobile broadband system as part of the next-generation Thuraya 4-NGS satellite system, and multiple broadband terminals for land, sea and aeronautical applications to strengthen Thuraya's portfolio, capabilities and performance across a wide coverage area. T



Huawei Shares How to Tackle Climate Change with Technology Innovation at COP26

Dr. Fang Liangzhou, Vice President and CMO of Huawei Digital Power, recently spoke at COP26. At the session "System Change and Climate Innovation in the Technology Industry" hosted by the UNFCCC Global Innovation Hub, Fang virtually delivered a keynote address on "Building a Low-Carbon Smart Society." Fang described how Huawei Digital Power integrates digital and power electronics technologies to help industries save energy and reduce emissions from both power generation and consumption. Digitalization of power can cut waste in energy consumption, sharply boost power generation from renewables, and make transportation and cities green. Fang called for joint efforts to build a low carbon smart society together.

Fang said, "Carbon neutrality has become a shared mission of the world. Technology innovation will play a central role in tackling climate change and achieving carbon reduction goals. Huawei Digital Power integrates digital and power electronics technologies, develops clean power, and enables energy digitalization to drive energy revolution for a better, greener future. We focus on converging and innovating on technologies to accelerate the digitalization of energy and enable various industries to upgrade. We aim to accelerate clean power generation, build green transportation, sites, and data centers, and work with industry partners to build a low-carbon smart society."

According to the International Energy Agency (IEA), the main sources of global carbon emissions are electricity, industry, and transportation. The electricity and transportation sectors account for 40% and 21% of carbon emissions respectively. The ICT sector consumes 4% of global electricity. To achieve carbon neutrality, low-carbon electricity production and electric energy consumption, are a must. Huawei Digital Power works with partners to continuously



innovate on energy production and consumption to achieve green and low-carbon outcomes:

• In smart PV, Huawei develops a clean power system that focuses on renewable energy technologies such as wind, solar, and energy storage. In the Middle East, Huawei is helping Saudi Arabia's Red Sea Energy Storage Project supply power to the entire city. This project will use the 400 MW PV + 1.3 GWh energy storage system, going to meet the energy requirements of millions of people in the future. Once the project is rolled out, the city will be the first in the world to be powered with 100% clean energy of PV and storage.

• In energy digitalization, Huawei leverages a combination of digital and power electronics technologies to reduce consumption during energy conversion, storage, and use, thereby improving energy efficiency. Huawei, together with China Southern Power Grid, uses AI technologies to automatically identify typical risky scenarios and defects on transmission lines. Thanks to the new preventive

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Huawei Releases Business Results for First Three Quarters of 2021

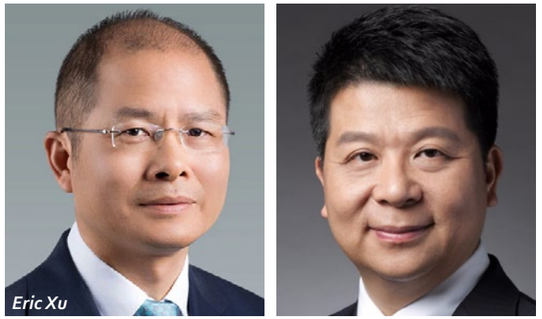
Huawei has released its business results for the first three quarters of 2021. During this period, Huawei generated USD70.44 billion in revenue, and its net profit margin was 10.2% .

"Overall performance was in line with forecast," said Guo Ping, Huawei's Rotating Chairman. "While our B2C business has been significantly impacted, our B2B businesses remain stable. Through our ongoing commitment to innovation, R&D, and talent acquisition, and rigorous attention to operating efficiency, we are confident we will continue to create practical value for our customers and the communities in which we work."

"We would like to thank our customers and partners for their ongoing trust and support," continued Guo. "With their collaboration, and the excellent work and dedication of our Huawei team across the globe, we will together use digital technology to drive a greener, intelligent world."

In his keynote speech at the Huawei Global Analyst Summit last April, Huawei Rotating Chairman Eric Xu said: "We have spent a long time reviewing and adjusting our business portfolios and are confident in our ability to survive and do so sustainably. There is currently a lot of growth momentum in the Chinese economy, and overseas markets are gradually recovering from COVID-19. We believe deeply in the power of digital technology to provide fresh solutions to the problems the world is facing right now. So we will keep innovating and driving digital transformation forward with our customers and partners to speed up the arrival of a fully connected, intelligent world."

Speaking on Huawei's new Digital Power business line, Xu added at the Huawei Connect event in September 2021 that: "Using technology innovation to help different sectors reduce carbon



Eric Xu

emissions is not a new strategy. It's something we have been working on for years. ICT is expected to help other industries cut carbon emissions by 12.1 billion tons by 2030. That is roughly 10 times the amount emitted by the ICT industry itself. Huawei's share in global ICT infrastructure currently stands at more than 30% as a major supplier of ICT infrastructure. We have always believed that the biggest value that Huawei can bring to advance the green agenda is to use continuous technology innovation to help all industries reduce their energy consumption and achieve low-carbon development. This is a strategy we were committed to in the past and a strategy we will stay true to in the future."

"Within this context, we are stepping up efforts in one particular area, which is digital power. We want to bring together digital technology and power electronics, and 'use bits to manage watts' as we say at Huawei. We believe this will allow us to contribute more to power savings in data centers, ICT infrastructure, among others," Xu noted. T

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maintenance approach based on intelligent analysis and manual judgment, the time for completing onsite work is shortened from 20 days to 2 hours, improving the efficiency by 80 times.

• In site power facility, Huawei uses cabinets instead of rooms, and poles instead of cabinets to simplify sites, and have launched a series of off-grid fuel-removal power supply solutions to help carriers accelerate network carbon neutrality and bridge the energy divide. For example, the carrier in Zhejiang, China used Huawei Site Power high-density eMIMO technology to replace six cabinets with one cabinet, reducing the footprint from 5 m2 to 1 m2 and improving the site energy efficiency from 85% to 96%. They also adopted Huawei's green power solution where the unique iPV technology helps generate 20% more electricity, enabling PV to become the main power supply for green ICT networks and reducing carbon emissions by 8 tons per site each year.

• In data center facility, prefabrication, modularization, and intelligent technologies are used to build simplified, green, intelligent, and secure next-generation data centers. For example, Huawei's prefabricated modular data center solution helped Wuhan quickly build an AI computing center. The center was built in 120 days and put into use in 180 days, shortening the rollout time by more than 50%. In addition, AI energy conservation technology is adopted to decrease the PUE to 1.25, which represents a saving of more than 3.4 million kWh of electricity each year. In addition, carbon dioxide emissions can be reduced by approximately 42,000 tons over the course of the lifecycle.

• In mPower, Huawei provides power domain solutions and charging infrastructure to accelerate the process of transportation electrification. For example, Huawei's DriveONE powertrain system helped SERES build the world's first mass-produced, high-performance electric coupe SUV with a cruising range of more than 1000 km, achieving 0–50 km/h acceleration in 1.99 seconds. T

National winners of Huawei Middle East ICT Competition 2021 head to regional finals

Huawei has announced the national winners of the 2021 Huawei Middle East ICT Competition, recently held in 10 countries across the region. It is the fifth year of the annual competition, which aims to nurture and empower the future generation of local ICT talent to effectively contribute to the region's national digitization plans and technology-driven strategies.

This year's competition saw around 15,000 entries from 453 local colleges and universities in the Middle East, with Huawei teaming up with various public sector partners, such as ministries of education, telecom regulators, and youth empowerment authorities to run the competition in local markets. The winning national teams from each country will now proceed to a Middle East regional competition—the final leg of the program—where they stand a chance of taking home USD20,000 in prize money, as well as other accolades and certificates, with the opportunity to compete in the global finals. Each team comprised of three students and an academic tutor.

This year also saw the return of the highly successful Huawei Innovation Competition, held in parallel to the ICT Competition. The Huawei Innovation Competition empowers undergraduate students and their teachers to use innovative technologies – such as 5G, artificial intelligence (AI), cloud computing, and big data – to create valuable and meaningful applications for society.

Steven Yi, President of Huawei Middle East, said: "The Middle East is home to some of the most creative young talents who are looking to advance their skills and showcase their innovation capabilities on the global level, especially in the technology field which has become a vital driver of development in societies. We have seen sustained improvement in the quality of entries over the past five years of the Huawei Middle East ICT Competition, thanks to the support provided by the public sector.



"We continue to host the Huawei Middle East ICT Competition because we see the long-term benefit and impact of nurturing talent in the region. Talent development needs openness and collaborative efforts to keep pace with the rapid digital transformation trends across the region, and the Huawei ICT Competition is one of the ways we can show our ongoing commitment to support nations' development visions using technology," he added.

The Huawei ICT Competition was launched in 2017 and today has become one of Huawei's most influential competitions. Last year, the company collaborated with more than 20 ministries and 442 institutions, with over 15,000 students participating in the competition. Last year also saw the launch of the first "Innovation Track" to guide students in their development and provide a platform for realizing specific capabilities and applications in the Middle East.

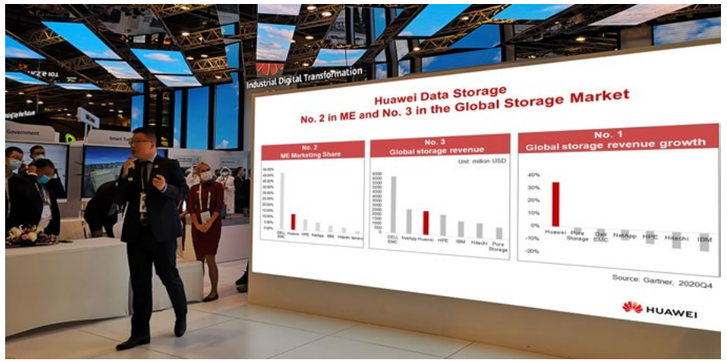
The Huawei Middle East ICT Competition is one of several CSR initiatives undertaken by Huawei to nurture talent for Middle East youth. Together with the Huawei ICT Academy, the Huawei Innovation Competition, Seeds for the Future program, joint university labs, and other initiatives, thousands of young people in the region benefit from an advanced skills development pipeline every year, equipping them with the necessary skills to lead digital transformation and development efforts within their country. T

Huawei Launches Ocean Protect Data Protection Solution

Huawei has announced the launch of OceanProtect Data Protection Solution high-end storage products and solutions for the Middle East region. From enterprise storage to distributed storage in massive data scenarios, to data backup storage, Huawei storage has covered all categories in the Middle East region and will provide customers with more comprehensive and high-quality storage solutions.

OceanProtect Data Protection Solution covers both Disaster Recovery (DR) and backup fields to offer comprehensive protection for diversified types of data throughout the lifecycle. It belongs to the Huawei All-Flash Data Center Solution to build the fast, green, reliable, and intelligent infrastructure for various industries. The solution is built on the concept of & "full DR of hot data, and quick backup and restore of warm data", which ensures zero service interruption, zero data loss, and long-term data retention.

Robert Jin Feng, Director of the Data Storage Solution Sales Department at Huawei



Enterprise Business Group Middle East, said, "In DR scenarios, it provides various features, such as gateway-free active-active or 3 Data Centers solutions, one-click DR drills, and failover (within seconds). In backup scenarios, the Ocean Protect X series provides fast backup and recovery, efficient space reduction, unified SAN and NAS DR backup, and one-click recovery, achieving zero data loss and zero RPO."

Huawei OceanStor storage has been deployed in more than 150 countries for more than 12,000 customers in a variety of sectors, including carriers, finance, government, energy, healthcare, manufacturing, and transportation.

Huawei OceanStor storage is the ideal choice for worldwide customers looking to store and process their service data. T

Eutelsat and Gazprom collaborate to reduce greenhouse gas emissions and improve energy efficiency of gas pipelines

Eutelsat Communications' Konnect Russia and Gazprom MKS, a company specializing in gas conservation using mobile compressor stations, have published the results of a major cooperation project aimed at reducing the CO_2 emissions of Gazprom's gas transmission subsidiaries.



The two-year program focused on reducing the volume of vented gas during repairs on gas pipelines at 13 companies, saw some 400 transfers undertaken using mobile compressor stations across a section of Russia spanning from the North-Western District to the Khanty-Mansiysk region. Over such a vast region, satellite communications was the optimal infrastructure to oversee complex operations including the centralized management of the network of mobile compressor stations, designing the logistics for the movement of complexes, enabling regular monitoring of the works, and assuring round-the-clock communication between dispatch centers and mobile station crews.

The program yielded considerable benefits, saving circa one billion cubic meters of natural gas, and equating to a reduction in greenhouse gas emissions of 17 million tons of CO_2-equivalent

Dmitry Bronner, CEO of Konnect Russia said: "We have been honored to support Gazprom in this hugely meaningful project. The results show how effective satellite internet can be in the oil and gas industry thanks to its ubiquitous coverage and flexible functionality for mobile objects. We hope to continue to partner with Gazprom, and others in projects which serve, among other things, to preserve nature and improve ecological situation in Russia. This program has truly showcased the benefits of aligning ecological ambitions with business objectives, resulting in a win-win outcome for the company, our customers, and our planet." T

中国移动 China Mobile | International

iCONNECT

Our Global Network Infrastructure
Your Connected Highway to the World

With extensive global network resources, China Mobile International is committed to providing the premium carrier services to our partners worldwide, helping them to drive digital transformation and realize the potential of disruptive innovations worldwide.

Our network resources in Middle East region further enhanced our global network, ensuring our service can meet customers' needs.

180+ PoPs
70+ Cable Resources
98T+ International Transmission Bandwidth
4 Self-owned IDC
37 Overseas Business Support



SpaceBridge partners with XipLink to provide Best in Class Satellite Backhaul for Rural and Hard-to-Reach Areas

SpaceBridge Inc., a manufacturer of High Throughput Satellite (HTS)/VHTS Broadband VSAT Satellite Network Platforms, and Xiplink, the leading provider of Radio Access Network (RAN) Optimization and Acceleration have jointly announced a technology partnership. XipLink will be integrating their 2G, 3G, 4G, 5G RAN and L2/VLAN optimization software into SpaceBridge's U7780 and U7800 Professional Satellite modems to provide high efficiency bandwidth on demand (BOD), which enables exceptional user experience and bandwidth savings. The integration of Xiplink's Virtual Software solution into SpaceBridge's blade distributed HUB architecture will provide quick and dynamically scalable capacity, providing mobile network operators (MNOs) a fully optimized dynamically shared bandwidth on demand backhaul solution, faster time-to-market and better ROI to deliver coverage.

SpaceBridge is a leading designer, manufacturer and provider of High Throughput Satellite (HTS)/VHTS Broadband VSAT Satellite Network Platforms, Terminals and network solutions. SpaceBridge's ASATTM VSAT solution features high throughput forward



David Gelerman
President and CEO of SpaceBridge

carriers based on DVB-S2X and return carriers based on advanced DVB-RCS2 MF-TDMA, and is available with scalable tiers to support thousands of remote User Terminals (UTs) in the delivery of services to enterprises, mobile network operators, broadband users, etc. The new U7780, born of SpaceBridge's close collaboration with its customers, delivers a high efficiency, high throughput TDMA solution encompassing optimizations and accelerations essential to the delivery of mobile services with high user satisfaction. The U7800 also features SpaceBridge's WaveSwitchTM which allows dynamic switching of bigger bandwidth customers from MF-TDMA to/from SCPC on the fly. This in turn allows sites to benefit from high performance of SCPC waveform and spectral efficiency on the returns, reduces overall satellite consumption and enables increased network sharing factor to serve larger amount of CBH sites with the same amount of satellite bandwidth.

The XipLink solution is designed to address the disadvantages associated with expensive and latency prone backhaul transport. It supports a comprehensive array of features that include GTP Transparency, RAN Optimization, TCP Acceleration, Congestion Control, Link Estimation, Traffic Steering, Security and Quality of Service (QoS). Globally, leading MNOs have deployed XipLink to boost mobile backhaul throughput, by significantly reducing satellite or microwave bandwidth consumption across the RAN.

SpaceBridge showcased its satellite backhaul solution at CABSAT 2021, at Dubai. T

Airbus consortium finalist in European BroadWay broadband interoperability project



The Airbus consortium has been selected for step three of the BroadWay PCP Innovation pan-European interoperable mobile broadband project for public protection and disaster relief.

Following the successful completion of step two last July, Airbus' submitted offer has thoroughly convinced the Technical Validation Committee (TVC) and Lead Procurer for the final step of the program. The consortium therefore swiftly makes its way towards the third and final step of the innovation project.

"BroadWay is an innovation driven program to ensure interoperability by design, leveraging 4G and 5G technology, for Pan-European collaboration among Police, Fire Brigades and Emergency Medical Services with the goal to deliver enhanced situational awareness for Public Safety organizations." Eric Davalo, Head of Europe for Secure Land Communications at Airbus explains.

"We are truly honored to have been selected for the final step of such an important project for European mission-critical broadband solutions and cross-border interoperability. By having been chosen, Airbus confirms its position as the European leader in mission-critical technology and solutions" explains Eric Davalo. T

We have tripled the capacity of our previous solutions and added exciting new features

Infinet Wireless CEO Dmitry Okorokov speaks to Teletimes International



Interview - Khalid Athar

Q: What new technologies were unveiled at GITEX this year by Infinet Wireless?

A: The Middle East and Africa are two of the most important markets for Infinet brought our newest solutions and products with one of the main ones being InfiLINK, which is a new generation of our core business that is Point-to-Point and Point-to-Multipoint solutions (both licensed and unlicensed). This time around, we have tripled the capacity of our previous solutions, we added lots of new exciting features. So basically, the solution is faster, it can reach longer distances and it can cater for higher capacity.

One of the differentiators we had was that due to global frequency reforming to cater for 5G, this solution supports two frequency bands in one - 5 GHz (our traditional conventional frequency band) and 6 GHz both in one. If someone uses either of those frequency bands, or both, it will be very easy for our customers to stock it up and choose the frequency they want to operate in.

6 GHz is becoming more and more popular as long as it's critical for 5G. And that's only one side. What we also see as a trend in the market is that everybody's going after the millimetre wave and of course Infinet saw that a long time ago and decided to go that direction as well.

"We are proud of our customers and they are proud of us, and this bond we have built with our customers is what makes us unique"

Q: What are some of the most successful Infinet Wireless projects in the Middle East?

A: We have quite a few because we've been here for so many years, and most of them have been ongoing for many, many years. For example, ITC, one of the major Telecom operators in Saudi

Arabia, has been using Infinet for many years, perhaps almost for a decade now. And they have a massive network mostly serving B2B customers all across Saudi Arabia. Another of our clients is Zain Kuwait which has a massive network operating in Kuwait. Also, a great example is the network we have built for a company called Daleel Oil in Oman; that project is one of its kind, maybe

"We are not just providing the customers with great distance or great performance. We're also utilizing spectrum and distribution in the most ef cient way"

super unique to the whole world whereby we are showcasing our mobile nomadic capabilities as far as Infinet Wireless equipment is concerned. Basically, the project is the nomadic drilling rigs, which move around the desert, and the initial task was to interconnect many of those rigs which move around the desert, and to connect them to the central hub. These are just some projects we're really proud of.

Q: What kind of projects do you have in the pipeline at the moment?

A: In fact, there are many of them. We're working with various customers in Saudi Arabia, and the Saudi market has been picking up the pipelines very impressive. Just as usual, there is the question of financing but we hold that now as the world is going to recover and oil prices are up. We hope for the funds to be released. We have very exciting developments in Pakistan, which we haven't spoken about just yet. Multiple projects and totally different applications - whole array of different verticals. Egypt, again, is one of the countries which has traditionally been very important to us. There, we work with Telecom Egypt. We also work on a number of major CCTV projects; some of them have been implemented, and lots of them are in the pipeline.

Q: What sets Infinet Wireless apart from other vendors?

A: First, we are one of the very few companies in the world which have been in the market for so long. We saw players coming in and out or transforming their strategies completely. But, again, I could think of maybe one or two other players who have been in this market for as long as we have. And historically, the Middle East and Africa had been the first region in the world where we started operations apart from our domestic market, which is Russia. And immediately, we have gained a lot of success here.

What makes us unique, of course, is our technology. But apart from the technology, it is the trust and loyalty and great reputation, which I think is as important as the technology itself. That's why I was highlighting the customers who have been with us for 15 or 20 years. We are proud of them, and they are proud of us, and this bond we have built with our customers is what makes us unique.

Q: Do you overlap with satellite networks in your projects?

A: We don't really intersect with the satellite providers. Rather than that, we complement this technology; we don't compete with it. Things are hard to predict right now with the 5G and market disruption. The future may bring new possibilities. As of now, Infinet Wireless solutions are usually used as the backhaul ones. So basically, whatever you need to distribute in a large capacity, this is where our solutions fit. And as an example, satellite can be one of these – I would look at it as convergent applications to what we do.

Q: What is the main benefit of adding in Infinet Wireless' patented signal enhancement to existing systems?

A: One of the most precious resources all of our customers have is the frequency, or the spectrum. And again, there's only a limited spectrum, so there will not be more. As the demand grows all across the world, the frequency resource becomes more and more important for everybody. That's why the customers or the end users are looking for our solutions as they can utilize this precious resource in the most effective way possible.

"Our successful deployments and engagements with customers around the world have shown that wireless can be used even for really critical applications where you need to stream real-time traf c with no losses in extremely challenging conditions"

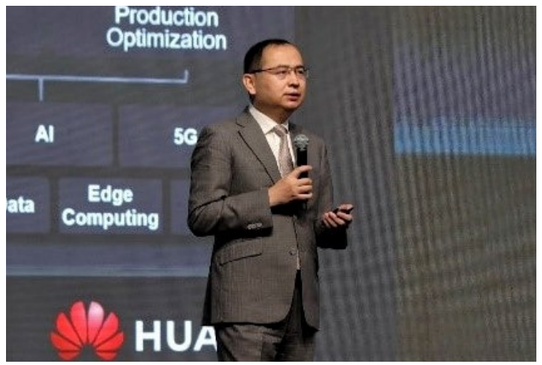
We are not just providing the customers with great distance or great performance. We're also utilizing spectrum and distribution in the most efficient way. Or if you're working in an unlicensed band, to make sure that even in the congested environment, your equipment provides all the capacity that a customer needs.

Q: What are some concerns that you have seen people expressing about wireless technology?

A: We've been in the market for a long time, and with certain customers, I can say with certainty they have absolutely no concerns whatsoever. That said, in different vertical markets, there has been the idea that wireless is something that is either temporary or unreliable, or both.

Our successful deployments and engagements with customers around the world have shown that wireless can be used even for really critical applications where you need to stream real-time traffic with no losses in extremely challenging conditions. And we have done a great job in the most extreme of those conditions, be it signal interference or weather conditions. This is why we do not experience such concerns any more even with potential customers. T

Huawei Global Oil & Gas Summit 2021: Intelligent Oil & Gas Fields Solution





Huawei recently hosted the Global Oil & Gas Summit 2021 in Abu Dhabi, themed "Drive Data to Barrel, Embrace Intelligence to Grow". During the summit, Huawei launched a new solution – Intelligent Oil & Gas Fields – designed to help oil and gas enterprises go digital. The solution covers several aspects of digitalization, including campus security, production inspection and predictive maintenance. Using data and intelligence technologies, Huawei is accelerating digital transformation and intelligent development across the industry.

The world agrees that energy and digital transformation are essential for the planet's future. Lv Gongxun, Former Vice President of PetroChina, CNPC, pointed out that digital transformation of the oil and gas industry will bring innovative service, business model, and management models to the industry.

Carbon neutrality signals both new challenges and opportunities for the global energy industry. In his opening speech, Robin (Yongping) Lu, Executive Vice President of Global Energy Business Unit of Huawei Enterprise BG, highlighted the importance of integrating energy and digital transformation to achieve carbon neutrality. To do so, energy and technology industries need to collaborate, reinforcing each other's strengths and exploring various industry scenarios.

Huawei launched the Intelligent Oil & Gas Fields solution to help the oil and gas industry address challenges.

At the summit, Huawei and G2K Group launched the Intelligent Oil & Gas Fields solution, presented by Robin (Yongping) Lu and Christen Bear, Managing Director, Regional Head GCC at G2K Group. The architecture of the solution consists of four layers: industrial terminal, IoT network, digital platform, and intelligent application.

The solution aims to help oil and gas companies cope with the risks and costs, address data silos, as well as quickly respond to emergencies and build robust information security systems. Based on the solution architecture, Huawei will continuously enhance digital platforms and production service applications, implement data interconnection through the IoT, and drive flattened management transformation. Huawei focuses on security and efficiency requirements, helping increase reserve and production, improve efficiency, reduce costs and carbon emissions, and ensure operational safety.

Huawei's oil and gas all-scenario solution focuses on the collaboration of all fields in the industry.

At the summit, Huawei also demonstrated its all-scenario solutions and technical capabilities in upstream exploration, development and production, midstream pipeline asset management, and downstream refining and chemical sales.

The widespread adoption of such technologies as cloud computing, big data, AI, and 5G makes it easier to discover potential data value, improving the E2E efficiency of oil companies in oil exploration, development, production, storage, transportation, refining, and sales. Wu Shuhong, Secretary of CNPC AI Research Center, and Deng Xili, Principal Lead, G&G (RCM), CNPC RIPED, shared how Huawei's intelligent E&P solution uses cloud, AI, and big data to quickly and accurately process seismic data, identify oil and gas reservoirs, and diagnose working conditions of pumping wells. We can explore more value from "silent data" and "useless data"

At the same time, migrating mission-critical services to the cloud helps resolve common pain points, such as slow response, high cost, and low efficiency of oil and gas field infrastructure. Zhang Tiegang, Former Deputy Chief Engineer of the Exploration and Development Research Institute of Daqing Oilfield, explained the advantages of the Intelligent Oil & Gas Fields solution in real-life scenarios. Using Huawei's cloud computing capabilities, Daqing Oilfield processed over 22,000 square kilometers of seismic data in 2020, which is more than twice the original data processing capability. T



Yahsat reports robust financial performance for 9 months of 2021

Al Yah Satellite Communications Company, one of the largest providers of multi-mission satellite communication solutions in the world, has announced its financial results for the nine months ended 30 September 2021 ("9M 2021").

The top line continued to gain momentum with revenue for the nine months of AED 1.0 billion [USD 284.3 million], which is broadly in line with prior year, demonstrating a strong and sustained performance since Q1 2021. A strong pipeline across all business lines is set to support further revenue growth, with a number of new Commercial and Government contracts secured and further significant deals already signed as of the date of this announcement.

Yahsat maintained an Adjusted EBITDA margin above 60%, with Adjusted EBITDA for the nine months of AED 628.3 million [USD 171.1 million]. Normalised Adjusted EBITDA (refer Alternative Performance Measures). of AED 643.6 million [USD 175.3 million] exceeded prior year by 2.5%, generating a margin of 61.6%, higher than the prior year margin of 58.3%, reflecting continued cost and working capital efficiencies.

Net Income (profit attributable to shareholders) for the nine months was AED 159.0 million [USD 43.3 million]. After adjusting for one-off items (refer Alternative Performance Measures). Normalised Net Income of AED 200.1 million [USD 54.5 million] exceeded prior year by AED 61.4 million [USD 16.7 million] (or 44.3%). Normalised Net Income margin of 19.2% for the nine months significantly exceeded the corresponding margin of 12.9% in prior year.

Underpinning the 9M 2021 results was a resilient Q3 performance, with revenues broadly stable (approximately 1% lower than Q3 2020) and a notable increase in profitability, with Normalised Adjusted

EBITDA up by AED 28.9 million [USD 7.9 million] (15.3%) and Normalised Net Income up by AED 31.7 million [USD 8.6 million] (99.2%).

Yahsat maintained a high cash conversion ratio of approximately 97% for the period ended 30 September 2021, driven by low maintenance related capital expenditure.

Key Business Updates

The T4-NGS programme, which started in 2020, remains on track with several key contracts now concluded. In June 2021, Yahsat entered into a 15-year T4-NGS Capacity Services Agreement adding more than AED 2,570 million [more than USD 700 million] to contracted future revenues. In September 2021, Yahsat selected SpaceX Falcon 9 for the launch of the T4-NGS satellite in 2023 and awarded to Cobham SATCOM the contract to deliver a comprehensive mobile broadband system, including ground infrastructure. The success of the refinancing programme of AED 2,572.6 million [USD 700.5 million], which was completed in June 2021, boosted the Group's already strong cash position, and supported a healthy Net Debt to EBITDA ratio of 0.5x as at 30 September 2021.

Attractive Dividend Policy

In October 2021, the Board of Directors of Yahsat endorsed management's recommendation to update the Group's current dividend policy, allowing it to distribute dividends on a semi-annual basis going forward. The updated policy is subject to shareholder approval at the next AGM in 2022. This reflects the Board's confidence in the financial strength of the business, a positive outlook on cash flow and Yahsat's ability to fund future investments.

A final dividend of AED 192.8 million [USD 52.5 million] for the financial year 2021 is expected to be paid to all shareholders in April 2022, bringing the total dividend for the year 2021 to AED 385.6 million [USD 105 million].

The dividend is expected to grow by at least 2% per year5, with the below illustrating the expected annual dividends to be paid per share:

Year of payment	Total dividend to be paid in calendar year (sum of interim and final dividends) in AE Fils per share
2022	15.96
2023	16.28
2024	16.61

Commenting on the results, Ali Al Hashemi, Chief Executive Officer at Yahsat said:

"We continue to see a strong performance in our revenues coupled with high levels of profitability and cash flow. We are laying the foundations for future growth, by signing new deals across our Commercial and Government businesses, which add to our contracted future revenues and underpin our commitment to a progressive dividend."

"Our recent appointment by the UAE Government to assess the expansion of our existing fleet with two potential new satellites presents Yahsat with significant additional growth opportunities across the business, further enhancing our longer-term outlook." **Al Hashemi added,** "We remain on track to achieve all our strategic objectives, financially and operationally, supported by the rapid post-pandemic recovery of our business segments globally. We will continue forging partnerships with the world's most innovative companies to enhance our competitiveness and continue to create value for our customers, shareholders and the UAE."

Revenue by Operating Segments

Revenue by operating segments, year-on-year comparison and % changes year-on-year (YoY) are provided in the table below.

AED millions	Q1 2021	Q2 2021	Q3 2021	9M 2021	Q1 2020	Q2 2020	Q3 2020	9M 2020
Infrastructure	220.2	220.2	217.8	658.2	217.9	217.6	217.7	653.2
Change YoY	1.0%	1.2%	0.0%	0.8%				
Managed Solutions	44.3	62.4	47.3	154.0	57.8	61.6	42.1	161.4
Change YoY	-23.4%	1.3%	12.4%	-4.6%				
Mobility Solutions	46.6	61.2	60.7	168.5	57.1	65.7	63.1	185.9
Change YoY	-18.3%	-6.9%	-3.9%	-9.4%				
Data Solutions	20.2	23.3	19.9	63.4	24.6	24.6	27.2	76.4
Change YoY	-17.9%	-5.3%	-26.9%	-17.0%				
Total Revenue	331.3	367.1	345.6	1044.1	357.4	369.5	350.1	1076.9
Change YoY	-7.3%	-0.6%	-1.3%	-3.1%				
Cumulative (Year-to-date) Change YoY	-7.3%	-3.9%	-3.1%	-3.1%				

Managed Solutions continued its growth with Q3 2021 revenues of AED 47.3 million [USD 12.9 million], outperforming prior year by AED 5.2 million [USD 1.4 million] (or 12.4%). During the quarter, it continued to capture new business and grow its contracted future revenues by more than AED 40.4 million [USD 11 million]. On a year-to-date basis, revenues of AED 154.0 million [USD 41.9 million] are now just 4.6% lower than prior year compared to -23.4% at Q1 2021. The year-on-year shortfall reflects temporary COVID-19 related delays to certain projects although, for certain programmes, there is clear evidence that the situation is improving.

Mobility Solutions also reported a strong performance with Q3 revenues of AED 60.7 million [USD 16.5 million], in line with Q2. The total revenues of AED 168.5 million [USD 45.9 million] for the nine months are 9.4% lower than prior year, significantly better than the year-on-year shortfall of -18.3% at Q1 2021. The recovery is expected to continue into Q4 and beyond, underpinned by the recent signing of a significant 3-year distribution contract with a global service provider worth more than AED 316 million [USD 86 million] and continued expansion of the Maritime business, in particular across high growth markets in Asia, such as Vietnam.

Data Solutions reported revenues for the nine months of AED 63.4 million [USD 17.3 million], AED 13.0 million [USD 3.5 million] lower than prior year reflecting the wind-down in July 2021 of a multi-year, opportunistic capacity deal with Eutelsat, complementary to the core data solutions strategy. In parallel the Consumer Broadband business continued to accelerate with subscriber numbers up 16% in the nine months and corresponding revenues increasing by 24%, underpinned by rapid expansion of the Direct-to- Market ('DTM') model in South Africa. This growth is expected to continue as subscribers continue to ramp up in South Africa and the DTM model is rolled out across other major markets (including Nigeria) in Q4. The pipeline of Enterprise and Carrier Wholesale deals continues to grow with 5 new deals signed in Q3 adding more than AED 40.4 million [USD 11 million] to contracted future revenues with several further deals expected to be signed in Q4 with increasing uptake in Cellular Backhaul. As both the Consumer Broadband and Enterprise and Carrier Wholesale businesses increase in scale, Data Solutions is poised for growth in 2022.

Key Financial Highlights

AED millions	Q3-2021	Q3-2020	QoQ %	9M 2021	9M 2020	YoY %
Revenue	345.6	350.1	-1.3%	1,044.1	1,076.9	-3.1%
Cost of Revenue	(33.7)	(27.9)	-20.6%	(83.0)	(75.1)	-10.4%
Staff costs	(92.3)	(80.2)	-15.0%	(242.0)	(244.7)	1.1%
Other operating expenses	(19.2)	(54.5)	64.7%	(97.3)	(133.6)	27.2%
Other Income	2.3	47.5	-95.1%	6.5	56.0	-88.4%
Adjusted EBITDA	202.7	235.0	-13.7%	628.3	679.4	-7.5%
Normalised Adjusted EBITDA	218.0	189.1	15.3%	643.6	628.0	2.5%
Net Income (Profit attributable to the shareholders)	48.5	77.9	-37.8%	159.0	190.1	-16.3%
Normalised Net Income	63.8	32.0	99.2%	200.1	138.6	44.3%
Adjusted EBITDA Margin %	58.7%	67.1%		60.2%	63.1%	
Normalised Adjusted EBITDA Margin %	63.1%	54.0%		61.6%	58.3%	
Normalised Net Income Margin %	18.4%	9.1%		19.2%	12.9%	
Cash and short-term deposits				1,462.9	826.0*	77.1%

* (as of 31 Dec 2020)

Yahsat regularly uses alternative performance measures which are relevant to enhance the understanding of the financial performance and financial position of the Group. These measures may not be comparable to similar measures used by other companies; they are neither measurements under IFRS nor any other body of generally accepted accounting principles and thus should not be considered as substitutes for the information contained in the Group's financial statements.

Alternative Performance Measure	Definition
Adjusted EBITDA	Earnings from continuing operations before interest, tax, depreciation, amortisation, impairment, fair value adjustments on investment property and share of results of equity-accounted investments
Normalised Adjusted EBITDA	Adjusted EBITDA excluding material one-off items. 9M 2020 Adjusted EBITDA included the one-off gain arising on the transfer of orbital rights (-AED 51.4 million [-USD 14.0 million]). 9M 2021 Adjusted EBITDA included one-off IPO costs (+AED 15.3 million [+USD 4.2 million]).
Normalised Adjusted EBITDA Margin	Normalised Adjusted EBITDA divided by Revenue
Operating Free Cash Flow	Normalised Adjusted EBITDA minus development and maintenance related capital expenditure, excluding capital work-in-progress
Cash Conversion Ratio	Operating Free Cash Flow divided by Normalised Adjusted EBITDA
Normalised Net Income	Profit attributable to the shareholders, adjusted for material one-off items. 9M 2020 Normalised Net Income of AED 138.6 million [USD 37.7 million] is after adjusting for the one-off gain arising on the transfer of orbital rights (-AED 51.4 million [-USD 14.0 million]). 9M 2021 Normalised Net Income of AED 200.1 million [USD 54.5 million] is after adjusting for one-off costs relating to the refinancing exercise which completed in June 2021, notably the termination of interest rate hedges (+AED 19.2 million [+USD 5.2 million]) and accelerated recognition of unamortised finance costs (+AED 6.6 million [+USD 1.8 million]) as well as one-off IPO costs (+AED 15.3 million [+USD 4.2 million]).
Net Income margin	Net Income (profit attributable to owners) divided by Revenue
Normalised Net Income margin	Normalised net income divided by Revenue

The numbers in UAE Dirhams (AED) have been derived by converting the underlying US Dollar (USD) values using a standard exchange rate of 1 USD = AED 3.6725.

Due to rounding, numbers presented may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

Global broadcasting, media & satellite industries was reconvened in Dubai at CABSAT 2021

The global broadcasting, media, and satellite industries gathered once again in Dubai at CABSAT 2021, the Middle East and Africa's most important exhibition and conference for the satellite, broadcast, and filmed content industries and the broader sector's first in-person meeting since 2019.



Organised at Dubai World Trade Centre from 26th-28th October, CABSAT 2021 explored the world of media, satellite, content, and tech, covering features from satellite solutions to set-top-boxes that can stream content offline, to video analytics and content protection, and more.

CABSAT 2021 attracted the biggest names in the business including Arabsat, which celebrated its 45th anniversary at the show, as well as AsiaSat, Broadcast Solutions, Draka, France24, Gazprom Space Systems, Nilesat - which is readying for the launch of its new satellite - Thomson Broadcasting, Evertz Microsystems, Turksat and many more. They demonstrated a vast range of innovation across the full content journey from creation, through production, to distribution. The show also featured dedicated pavilions representing Bavaria, Great Britain, and Northern Ireland.

CABSAT 2021 featured three dedicated, free-to-attend forums: Content Congress, SatExpo Summit, and NextGen Content, and heared from experts including Ibrahim Al Qasim, Executive Director Space Sector, UAE Space Agency and Siddharth Roy Kapur, the leading film producer, and Founder and MD of Roy Kapur Films and President of the Producers Guild of India, whose filmography includes some of the highest-grossing Indian films of all time.



SatExpo Summit: The Next Frontier & Seeing Red

The Satellite Industry Association (SIA) has reported the commercial satellite industry set new growth records in 2020 with more satellites than ever - almost 1,200 - being launched and the sector witnessing increased capital investment in commercial space ventures. By the end of 2020, the number of satellites circling the earth increased by 37% on 2019 to a total of 3,371.

Leading global space and satellite industry executives, engineers, government officials, and solution providers explored emerging business opportunities and innovations and challenges at the SatExpo Summit, which took place a year after the UAE became the first Arab nation to reach Mars when its 'Hope Probe' mission reached the red planet's orbit. The line-up included representatives of Yahsat, AWS, SAMENA Telecommunications Council, Swedish Space Corporation, Panasonic Avionics, Intelsat, Eutelsat, Turksat and Arabsat, who outlined how space and satellite technology is playing a pivotal role in cross-sector evolution spanning government and military, commercial business enterprise, mobile communication, maritime and space sectors.

Content is king

At CABSAT 2021's Content Congress,

visionaries impacting the content of providers across the Middle East, Africa, Europe, India, and Scandinavia compared thoughts, progress ideas, brainstorm future content and explore delivery mechanisms that will keep the industry at the cutting-edge of technology and competitiveness. The line-up included representatives of some of the biggest names in the business including Twitter, Facebook, OSN, Kenyan Television Network, MBC, and Zee Broadcasting, as well as HE Aduku Armstrong Idachabo, Director General of the National Broadcasting Commission of Nigeria.

Outlooks: MENA Builds Back
PwC's global entertainment and media industries' outlook showed that within the Middle East and North Africa, the pandemic had a major impact on cinema box office takings. The outlook forecasted the sector will bounce back with regional entertainment and media revenues rising by 3% to 2024 – slightly ahead of the global 2% average. The report also predicted the major winners will be digital entertainment led by 'over the top' streaming video services such as Netflix, MBC's Shahid and Dubai-based Starzplay Arabia, gaming and digital music, with revenues rising at an accelerated pace of 12.3% annually to 2024 with pay-TV forecast to grow by only 0.6% in the same period.

Digital TV Research has forecasted the number of streaming subscriptions in Africa will triple over the next five years, with the continent reaching 15.06 million streaming-on-demand subscriptions by 2026. South Africa and Nigeria will lead the march with each contributing more than a million subscribers.

NextGen Content: Seeing Is Believing
With content scouts always looking to seal the next big film and audio ideas, CABSAT 2021 celebrated the best the Middle East and Africa has to offer at NextGen Content - a marketplace for content creators, distributors, and buyers. NextGen Content featured leading industry minds and talent with box office and top streaming contenders screened for review. A prestigious seven-strong NEXTGen Advisory Board steered content screenings from all areas of TV, film, serial drama, kids, documentary, and sport through an exhibition floor, with pre-arranged content buyers' meetings and dedicated networking events boosting business collaborations.

"Faced with disrupted consumption patterns, the broadcast and content industries are rethinking their business models, introducing new subscription-based digital formats, leveraging direct relationships with consumers, and monetising content rather than relying solely on advertising. The disruption is leading to seismic shifts in the way the sector operates," said Thomas Löffler, Assistant Vice President, Exhibitions, DWTC. "With industry players looking to build scale through geographic expansion as well as a robust local content inventory, CABSAT 2021 carries unique opportunities to initiate strategic partnerships that will be crucial to future competitiveness." T

Intelsat's Global, Multi-layered High-throughput FlexMaritime Service Expands Into Indian Territorial Waters

Intelsat, has announced the expansion of its global FlexMaritime service, now enabling connectivity for vessels traveling in Indian territorial waters and immediately enhancing the service coverage for all of Intelsat's 8,000 existing FlexMaritime vessels.

The landmark development also provides access for Indian-registered vessels to Intelsat's award-winning global high throughput maritime network. Intelsat's expansion is made possible by a new in-country gateway that is operationally ready to provide service via Intelsat's HTS satellites under India-based partner Cloudcast's In-Flight and Maritime Connectivity (IFMC) license.

FlexMaritime provides high-speed, resilient connectivity service with 99.95% proven network uptime. The expansion of FlexMaritime into India will open new business opportunities and accelerate digital transformation for thousands of Indian-flagged vessels and ships trading in Indian territorial waters. According to the Ministry of Shipping, around 95% of India's trading by volume and 70% by value is done through maritime transport.

"The completion of this regulatory milestone means customers of our FlexMaritime solutions partners will immediately benefit from the well-known power, performance and resilience of the FlexMaritime service in Indian waters," said Intelsat Senior Vice President of Mobility, Mark Rasmussen. "The network expansion also demonstrates Intelsat's commitment to mobility services providing yet another new dimension of global trade with access for Indian companies."

Intelsat has experienced continued growth in its FlexMaritime service. More than 8,000 vessels benefit from unrivaled network density and a global, multi-layered high-throughput satellite (HTS) fabric that enables partners to create unique service packages at enterprise-grade performance levels. With terminal sizes of 37cm, 45cm, 60cm and 1 meter, FlexMaritime meets the connectivity needs of every type of vessel with scale and global reach, even in high-traffic port locations.

The gateway will be located in Noida, India, serving as a critical link between Intelsat's terrestrial ground network and space assets and extending Intelsat's existing global network to a vital trading port.

Services are slated for availability at the beginning of 2022 through Intelsat's many solutions partners. T

Greater regulation, tackling the space debris "crisis": CABSAT 2021 SATExpo Summit











Yahsat has called for action to address space debris 'crisis'

Steven Doiron, Executive Vice President, Regulatory & Spectrum Affairs at Yahsat, the Abu Dhabi-based multi-mission satellite services company, insisted governments and satellite operators need to work together internationally to improve space situational awareness (SSA) that allows for effective regulatory implementation and monitoring.

At the CABSAT 2021 SATExpo Summit, hosted at Dubai World Trade Centre, Doiron outlined the international satellite operator community's efforts to address space debris and urged governments to take action.

"We need everybody to participate by the same set of rules," he said. "Governments should support research and development efforts both nationally and internationally to improve space situational awareness."

Doiron said regulatory frameworks governing commercial and non-commercial missions should incorporate space debris mitigation requirements to proactively mitigate risks while giving operators flexibility on meeting the requirements. "We need to have that collaboration not just with governments but with operators and companies internationally, to make sure that everybody is playing by the same rule book. These actions will go a long way to ensure the continued use and critical benefits of space for all humankind."

Low Earth Orbit: Unregulated Billionaire Frontier?

Mesut Ciceker, Chief Advisor at SSI of Monaco questioned whether low earth orbit (LEO) is now becoming an uncontrolled billionaires' playground, and called for increased regulation of space activities. Speaking at the CABSAT SATExpo Summit, he said, "Regulation is very important, and we don't have enough in place." Ciceker went on to warn of the risk of overcrowded LEO space with an influx of smart satellites to boost the cost-effectiveness of satellite operations and end-user services. "In a rush to make things more cost-effective, we should be aware that we can disturb the eco-system. We must be more sensitive towards space," he said.

Satellite Industry in New Era, said Arabsat Technical Chief

Dr. Badr Alsuwaidan, VP & Chief Technical Officer, Arabsat of Saudi Arabia said the

satellite industry is entering an entirely new development era driven by increasing digital demand. The advent of smart satellites from an increasing range of start-ups is disrupting the industry enabling satellite operators to become more "affordable and accessible."

He said, "As demand for digital services grows, the industry is undergoing disruption and even our end-users have changed from major government and defense entities to everyone, everywhere, so the manufacturers of satellites must also change so we can ensure an improved efficiency of satellite services."

Satellites have role to play in bridging world's connectivity gap, said GSMA

CABSAT's SatExpo heard how the satellite industry has a role to play in bridging a connectivity gap affecting 9.61% of the world's population. Jawad Abbassi said while the mobile industry is the largest connectivity platform on earth with 5.2 billion cellular users, half a billion people are left behind in a coverage dilemma.
"We cannot leave these people behind, and the satellite industry has a role in expanding reach to places where microwave or fiber have no impact," he said.

Abbassi said the mobile trend over the coming five years would see a gradual switch off 2G and 3G networks and growth of 4G and 5G networks. "The major role for NTNs (non-terrestrial networks) will be in bridging the coverage gap much as 4G, as the first harmonised network, unleashed the gig economy, 5G networks can solve the dilemma of half a billion people currently being left behind." T

Airbus signs strategic MoU with Esharah Etisalat Security Solutions

Airbus concluded its participation at Gitex on a high note with the signing of a Memorandum of Understanding (MoU) with Esharah Etisalat Security Solutions. The two parties will collaborate to deploy the Tactilon Agnet communication and collaboration platform across Dubai to support the government's operations and the Emirate's public safety and security efforts.

In the frame of the MoU, Tactilon Agnet licenses will be used by relevant organisations which will give them access to integrated features, including voice services, instant messaging, video communication, location mapping, and emergency calls.

The planned implementation of Tactilon Agnet, which runs on standard and ruggedized smart devices, will benefit public safety personnel and first responders such as Dubai police, ambulance operators, and Civil Defence forces, as well as transport, utility, and industry organisations, corporate sectors, and others.

Tactilon Agnet is a collaborative tool for business and mission-critical users. It offers a hybrid work environment allowing Tetra and LTE radio users to coordinate with their team members using their existing communication infrastructure and smart devices. Users will experience improved situational awareness, thanks to Tactilon Agnet control centre integrations.
By committing to such an implementation, both parties also showed their abilities



to contribute to Dubai's digitalization initiatives and efforts to become the world's smartest city.

"Our latest MoU with Airbus reflects our shared goal to help fast-track the digital transformation of Dubai and the UAE. It is a testament to our keenness to play a key role in the emirate's bid to become not only the world's safest place to live and work in but also the leading smart city globally. This is aligned with the vision of H.H. Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. We are delighted to partner with Airbus in our quest to implement ground-breaking sustainable solutions capable of preserving and enhancing smart living in the country." Explains Ali Bahlooq, General Manager of Esharah Etisalat Security Solutions.

"Our team will work closely with Esharah to ensure the successful deployment of secure and reliable mission-critical solutions for use by security forces, first responders, and business-critical users in Dubai. We are honored that Esharah has renewed its confidence in us through our mutually supportive and beneficial agreement signed during this year's Gitex. Airbus' portfolio of Tactilon solutions and services fully meets the demand for mission-critical and interoperable collaboration and communication tools. Our MoU is another opportunity for us to support the work of public safety entities in Dubai and contribute to seamless operations of businesses, which is vital to the emirate's growth and development." added Walid Lahoud, Head of Sales Middle East North Africa and Asia regions for Secure Land Communications at Airbus. T

Yahsat's Data Solutions Subsidiary YahClick announces Strategic Pan-African Partnership with iSat Africa

Al Yah Satellite Communications Company, Yahsat, has announced that its Data Solutions subsidiary, YahClick, has signed a partnership with iSat Africa to expand its enterprise solutions business in Nigeria, Zambia, the DRC and East Africa.

The new partnership will support iSAT Africa, a Pan-African network operator present in 12 markets, to deliver connectivity solutions for Mobile Cellular Backhaul (CBH) services, business applications, supervisory control and data acquisition (SCADA) systems, as well as provide connectivity to remote sites, including mines. The connectivity solutions will be provided over YahClick's high-throughput satellite (HTS) Ka-band capacity to deliver high-speed broadband solutions, with service plans of up to 100 megabits per second (Mbps), reaching and serving remote locations.

Farhad Khan, YahClick CEO said, "This partnership with iSAT Africa is another step in our plans for further growth and expansion across Africa. With our existing strong presence in these countries, our partnership with iSAT Africa will enhance our reach into the unserved and underserved markets. We look forward to enabling greater connectivity for people and businesses across Africa during the upcoming months."





Spanning several key African markets, this partnership further highlights Yahsat's commitment to offering rich solutions where capacity and connectivity is a key enabler. Revenues from fixed satellite data services in Africa are expected to grow at an average rate of 15.8 percent per year between 2020 and 2029. Linking with iSat Africa also spotlights the massive opportunity the growth of HTS capacity will have on the Sub-Saharan African market, especially when it comes to unlocking high demand flexibility in applications like Backhaul or Community WiFi.

Rakesh Kukreja, Managing Director of iSAT Africa added, "The new partnership with YahClick will bring a significant improvement in services to our customers in these markets with business operations in remote areas. iSAT Africa will equip them with advanced and dependable technical capabilities. Rural cellular backhaul will enhance the connectivity proposition for the major Mobile Network Operators (MNOs) in these countries, thus bringing connectivity to the unconnected, and bridging the digital divide in Africa. Whilst embracing the new norm post COVID era, our connectivity solutions will allow for inter-branch office connectivity and communications, data gathering, redundancy and disaster recovery solutions for our customers in Nigeria, the DRC, East Africa and Zambia. The referenced solutions and other vital tasks will now become easier, effective and reliable thanks to this partnership.

Yahsat and G42 to Collaborate on Remote Sensing and AI enabled Geospatial Analytics

Al Yah Satellite Communications Company, the UAE's flagship satellite solutions provider, has announced that its dedicated government arm, Yahsat Government Solutions ("YGS") and G42, the leading UAE-based artificial intelligence and cloud computing company, have signed a MoU to form a new collaboration focused on advancing remote sensing and geospatial capabilities in the country.

The MoU was formalized at a signing ceremony by Eisa Al Shamsi, General Manager, Yahsat Government Solutions and Talal Al Kaissi, VP of the Space Program, G42 and witnessed by Ali Al Hashemi, Group CEO at Yahsat, and Peng Xiao, Group CEO at G42.

Remote Sensing Technology is used to detect and monitor natural phenomenon and human activities from a distance using various types of sensor modalities including optical, radar, and radio frequency. The imagery and data captured is then processed and analyzed to deliver meaningful and valuable insights. Remote Sensing Technologies are considered integral to a nation's capabilities, playing a vital role in many areas including environmental mapping, urban development, and public safety.

The collaboration between Yahsat and G42 brings together a unique and powerful combination of advanced space technology and satellite communications expertise with AI and Big Data to develop and deploy best-in-class solutions. T

Yahsat's mobility business Thuraya and GTNT Reaffirmed Commitment to Expand Mobile Satcom Business in Russia

The new agreement will enable Thuraya and GTNT to introduce next-generation mobility solutions and tap into new opportunities in the Russian market.

Key focal areas include maritime, oil and gas and IoT sectors requiring flexible and reliable satcom solutions that are operational regardless of user location and weather conditions.

Thuraya Telecommunications Company, the mobile satellite services subsidiary of the UAE's flagship satellite solutions provider, Al Yah Satellite Communications Company PJSC has renewed its commercial agreement with the Russian service partner, GTNT, to expand business within the country. GTNT is a multiservice communications operator, and the exclusive distributor of the best-selling Thuraya mobile satellite phones, broadband terminals and M2M solutions in Russia.



The partnership agreement was renewed during a visit by GTNT's senior leadership team to Thuraya's offices in the UAE, early this month. The renewed partnership is central to GTNT's strategic plans, with new offerings that are substantially enhanced by the ongoing programme to upgrade Thuraya's space, ground and product assets. GTNT will introduce Thuraya's next generation mobility solutions to support key verticals in Russia, including Maritime, Oil and Gas and Internet of Things (IoT).

Highlighting the importance of the agreement, Thuraya's Chief Executive Officer, Sulaiman Al Ali said, "Russia is a priority market for Thuraya. We are happy with what we have achieved with GTNT's support in the past decade, and want to supplement this partnership with the latest, advanced technologies. This is a win-win situation shaped by geography, economic potential and the depth of Thuraya's services. As one of the world's largest oil and natural gas producers with a diversified economy, Russia requires reliable mobile satellite connectivity for its regional and global operations; under Yahsat, we offer seamless, ubiquitous coverage, enabling customers across the Russian Federation to connect instantly and reliably, regardless of their location."

GTNT's Chief Executive Officer, Mikhail Kharitonov said, "We have always enjoyed a close relationship with Thuraya and Yahsat, and are proud of our shared success since GTNT's inception in 2012. Thuraya's solutions now serve key customers from the federal, corporate, maritime, energy, NGO and environmental sectors in Russia. We are now gearing up to widen the scope of our business by introducing new satcom technologies to meet customer requirements across land, sea and air."
According to an NSR study in 2019, Thuraya was the second largest MSS operator globally in terms of active mobile satellite handheld subscribers. In the last two years, Thuraya's M2M solutions have been successfully implemented for critical IoT applications, with additional deployment happening on the ground. The Thuraya 4-NGS programme is set to diversify the company's business to cover growing user segments, including maritime logistics, UAVs, automated vehicles, heavy machinery for mining, agriculture and livestock farming, and fixed and mobile industrial asset tracking.

Sheikh Hasher Bin Maktoum Al Maktoum visited the RSCC stand at Cabsat 2021

Russian Satellite Communications Company participated in Cabsat 2021, a major event in the Middle East region for satellite communications, television and radio broadcasting as well as digital media industry. The international exhibition and panel discussions were held in Dubai: from 26 to 28 October.



At the exhibition, RSCC presented a wide range of satellite solutions, which, using the capacity of modern Express-AM8, Express-AM44, Express-AM7 and Express-AM6 satellites, may be applied in the MENA-countries. With help of these satellites, it is possible to provide high-quality services in the region, including television and radio broadcasting, data exchange, Internet access, etc.

Another popular and promising area, maritime VSAT, was also touched upon: an innovative solution using Express-AM series based on maritime VSAT technology allows RSCC to provide a wide range of digital communication and broadcasting services on vessels of various classes and purposes. Sheikh Hasher Bin Maktoum Al Maktoum, Director General of Dubai Department of Information, got acquainted with the main services and capabilities of the RSCC satellite constellation too. As part of the elegation, he visited the company's stand and talked with RSCC General Director Alexey Volin.

50 years of international cooperation in space



15 November 2021 marks the 50th anniversary of the founding of the Intersputnik International Organization of Space Communications. With its status of an intergovernmental organization, Intersputnik unites 26 member countries on various continents. At present, Intersputnik is a global satellite communications ecosystem that connects people around the world and offers opportunities of economic, social and cultural development using the latest space and infocommunication technologies.

The basis of Intersputnik's activities is its unique status of an intergovernmental organization, which helps implement satellite communications projects of any complexity in close cooperation with partners all over the world while leveraging the resources of international and domestic satellite operators, as well as teleports and terrestrial telecommunications infrastructure on all continents. Evolving towards a global virtual network operator (VNO) model, the ecosystem of Intersputnik includes resources of satellite constellations in different orbits, ground communications networks and teleports in various regions of the world, a wide range of technologies, as well as highly qualified engineering, legal and sales staff. This ecosystem gives Intersputnik's partners access to cutting-edge applications, services and high-tech solutions.

"The principles of respect for sovereignty, independence, equality and international cooperation laid down at the of Intersputnik's foundation, remain relevant and, at the turn of the 50th anniversary of the organization, keep Intersputnik attractive to our esteemed Members and Signatories" - notes Ksenia Drozdova, Intersputnik's Director General.

Jordan's ICT sector set to grow owing to strong human capital and infrastructure

Ministry of Digital Economy and Entrepreneurship has launched Jordan Source to facilitate and ease new investments into Jordan's digital outsourcing economy

27 per cent of MENA's tech entrepreneurs are Jordanian, even if the country's population accounts for 3 per cent of the region, says HRH Al Hussein bin Abdullah II

Teletimes Report

The Ministry of Digital Economy and Entrepreneurship (MoDEE) in Jordan has launched a new groundbreaking initiative to increase regional and international investments in the kingdom's digital outsourcing economy.

In partnership with the World Bank Group (WBG), MoDEE conducted a webinar titled, 'Jordan's Qualified IT Talents: Your Winning Card Against Your Competitors,' in which the ministry launched the Jordan Source programme.

The event kicked off with a speech by HRH Crown Prince Al Hussein bin Abdullah II, who highlighted the strength and potential of the Kingdom's burgeoning ICT sector.

"27 per cent of the Middle East and North Africa (MENA) tech entrepreneurs are Jordanian, even if our population accounts for 3 per cent of the region," HRH said, adding, "Our ICT sector boasts more than 600 technology companies and startups. Our tech talents have had an outstanding impact extending far beyond Jordan's borders."

He emphasised Jordan as a strategic location at the crossroads of Asia and Europe, saying, "From Jordan, you will be able to grow your businesses, reaching every corner of the world."

"Our free trade agreements offer access to 1.5 billion customers in 161 countries," he added.

The event's other key speakers included Ahmad Hanandeh, Jordan's Minister of Digital Economy and Entrepreneurship; Ferid Belhaj, MENA Vice President of the World Bank; Ronaldo Mouchawar, Vice President of Amazon MENA; and Fadi Ghandour, JoExecutive Chairman of Wamda Capital. They highlighted several factors that have paved the way for Jordan's success as a potential regional leader in the ICT sector.

Speaking at the webinar, Minister of Digital Economy and Entrepreneurship Ahmad Hanandeh said Jordan's ICT sector has great growth potential, offering highly skilled human resources, as well as the supporting infrastructure, legislation, and incentives.

The minister highlighted the incentive plan offered through "Jordan Source," outlining why Jordan has become such a major BPO and ITO destination.

"We are starting this programme and project from our full



Ahmad Hanandeh

understanding of what the businesses in general and ICT sectors in specific are facing in a world that is fast transforming. The growing need of business IT and back office outsourcing is essential for the business innovation and its sustainability," he added.

"Jordan's greatest resource has always been its youth talent," said Ferid Belhaj, MENA Vice President, World Bank.

The country has a young, highly skilled population, bilingual in English and Arabic with a neutral accent; they are technologically savvy, highly educated, and eager to work at competitive wages.

A robust infrastructure complements Jordan's strategic location. Reliable internet, mobile connectivity, and Jordan's extensive energy sector keep the power supply reliable, ensuring that ICT companies connect and serve clients without interruption. In a separate panel discussion, representatives of Crystel, Webhelp, Estarta, and Aspire echoed similar advantages of doing business in Jordan's digital economy despite obstacles faced during the pandemic.

Ronaldo Mouchawar, Amazon Vice President, MENA, said that since Amazon entered the region in 2017 after the acquisition of souq.com, the company has positioned Jordan to be a regional hub: "We undertook many of our key activities, such as technical and machine learning development, device development such as Amazon's voice over for Alexa in Arabic, operational excellence, and customer service here." T

Kloudspot partners with Moro Hub to expand its digital platform offerings in the Middle East



Mohammad Bin Sulaiman

Kloudspot Inc, makers of the first network-enabled Situational Awareness and Intelligence Platform, and Moro Hub (Data Hub Integrated Solutions), subsidiary of Digital DEWA, have signed off a strategic partnership to accelerate the adoption of digital technologies in the region.

Kloudspot's award winning situational awareness platform provides real time insights into critical operational activities, behaviours, and patterns, allowing business to interact and provide a rich engaging experience to its visitors in real-time - boosting business sales, generating advertising revenue through a myriad of offerings which include dynamic content management, contextual marketing, interactive signages, zonal campaigns and captive portals.

"Moro Hub is committed to provide public and private entities in the UAE end-to-end solutions to scale their business. This strategic partnership will deliver modern, agile and innovative services, that will further support our drive on accelerating digital transformation for our clients," said Mohammad Bin Sulaiman, CEO of Moro Hub. T

Moro Hub Named 'Cloud Service Provider of The Year'



Moro Hub was named the 'Cloud Service Provider Of The Year' at the Cloud Accelerate Summit And Awards organised by CXODX.com and Leap Media Solutions held at the Habtoor Palace hotel in Dubai.

The summit discussed adoption trends of the Cloud in the region through a series of panel discussions and keynotes with participation from industry experts. while , the award ceremony recognised experts in the industry that facilitate cloud adoption in the UAE with their leading-edge solutions and go to market strategies. The award also awarded key industry specialists that have taken the lead in adopting the Cloud as part of their digital transformation initiatives.

"Moro Hub has been committed to offering innovative services that are in line with the 4th Industrial revolution.
Our resilient, highly available and secure, multi-tenant cloud solution service "Moro Cloud" is equipped with next-generation hyper-converged infrastructure to provide a seamless customer experience.

We are humbled by this recognition and will continue to accelerate our efforts in driving solutions that lead to the digital transformation of the government and private entities in the UAE," said Mohammad bin Sulaiman, CEO of Moro Hub. T

UAE to host Cybertech Global Conference



Syed Zulfiqar Ali

The renowned in-person largest networking event for the cyber industry, the Cybertech Global Conference 2022 returns to Dubai for the second time in full scale after COVID-19 and is being held on the 13 to 14th of June 2022. This event will highlight the latest technological innovations, challenges and solutions to combat threats within the global cyber arena.

With a grand exhibition hall and a cutting-edge conference, Cybertech Global gathers thousands of C level decision makers and brings new market opportunities for multinational corporations, startups, private and corporate investors, venture capital firms, government entities and academia. The first edition held in 2021 was attended by His Highness, Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, the Crown Prince of Dubai.

Cybertech Global Conference provides attendees and companies alike with a unique opportunity to network, strengthen existing alliances and form new ones, all while becoming acquainted with the latest innovations and solutions from the international cyber community.

The UAE as an international hub for technology and innovation will use the event to break boundaries of global innovation. The conference is also a platform to present new cybersecurity programs, while



innovative young startups present their cutting-edge developments and obtain global exposure.

A press conference was held on November 15, 2021 to announce the latest edition of Cybertech Global at Jumeirah Emirates Towers, Dubai. The key speakers were Dr. Mohamed Al Kuwaiti, Head of Cybersecurity, UAE Government, Amir Rapaport, Founder and Chief Editor of Cybertech and co-author of 'Cybermania', and Ankit Shukla, Managing Director, QNA Marcom.

QNA Marcom is the local marketing partner for Cybertech Global. QNA is the leading provider of market intelligence and events for the information technology sector in the EMEA region. Having created its niche as a marketing consultant and researcher, QNA offers global, regional, and local expertise on technology and industry opportunities.

Amir highlighted the experience of bringing Cybertech Global to Dubai in 2022, the vision for this event, the significance of innovation in the cyber domain and the uniqueness of this event as compared to Cybertech in Tel Aviv, New York, Singapore, Rome, Tokyo, Kigali or Miami. Dr. Al Kuwaiti and Ankit Shukla joined Amir to talk about the biggest cyber threats and opportunities in 2022 for UAE, the region and globally as well as the latest trends in the cyber security sector.



Ahmed Al Hujairy, CEO - WorkSmart

Bahrain to host "WomenTech Leaders Across Mena" Virtual Forum

Asif Mehmood

On January 25 and 26, 2022, WorkSmart Bahrain hosts the "WomenTech Leaders Across Mena" virtual forum, which is expected to bring in over 400 participants from over twenty Arab countries and will be addressed by more than 40 visionary executives, decision makers and top women leaders and entrepreneurs.

WomenTech Leaders Across Mena is glad to welcome successful women with footprints creating an impact on the business and startup ecosystems of the MENA region, by setting themselves as examples through consistent work, or by directly creating synergies for new and promising entrepreneurs.

Mr. Ahmed Al Hujairy, CEO of WorkSmart that organizes this event, said that it is held with the participation of female leaders in the technology and business sector in the Kingdom of Bahrain and the entire Arab region to discuss women leadership and innovation in a unique two-day dynamic setup. He added that men who support women's advancement and leadership are welcome to participate in this virtual forum.

The forum will feature a variety of conversation sessions, including a keynote session, panel discussions, and technical lectures, as well as a mentorship session and an innovation session for women entrepreneurs, according to Al Hujairy. During these sessions, the forum also incorporates interactive activities to keep participants engaged. The forum will also include a virtual exhibition, which will run in parallel with the virtual forum to allow sponsors to promote their services on this platform.

The WomenTech Leaders Across MENA is a unique opportunity that will allow participants to interact with high caliber Tech industry women leaders from around the MENA region and listen to the latest technology trends and topics in the Mena region.

Women leading in a disrupted world

The "WomenTech Leaders Across Mena" virtual forum examines how women are dominating the labor market in the Middle East and North Africa, as well as the future of Arab women's entrepreneurship in the region and offers career advice for those looking to pursue a successful career in the technology industry.

The forum will also focus on how women are leading business in the MENA region, and how they lead in a disrupted world focusing on dynamic verticals such as Fintech, EdTech, Cybersecurity, E-Commerce, and Digital Health among other sectors. The forum will also highlight the role of government in adopting digital transformation and how smart governments make our life easier.

The forum will also discuss how PR and media are tackled in tech markets, focusing on the B2B technology PR for companies in the digital economy, as well as the future of media and how technology is changing the media scene.

Today's entrepreneurs' tomorrow's leaders

The ideation session "Today's entrepreneurs tomorrow's leaders" taking place at the end of the forum, will inspire women entrepreneurs to learn from women leaders in the technology and business sectors, and allow them present their startups ideas to the session's panelists and participants. Participants will be able to vote for the innovative startups that maybe eligible for potential investments and funds from the audience.

Worth mentioning that WomenTech Leaders Across MENA virtual forum is sponsored by Infobip and supported by BTECH, AICTU and Alwane Society.

Etisalat launches SMB Awards 2021





Etisalat has announced the launch of SMB Awards 2021 to celebrate the success of the business community and show appreciation for its outstanding performance and contribution to the UAE's economy. This year's Awards will recognise 10 categories, namely Emirati Business, Women in Business, Digital Transformation, Artificial Intelligence, Top Sustainability, Business Mobility, Top Healthcare, CSR, Tech for Good, and SMB of the Year.

Esam Mahmoud, Senior Vice President, SMB, Etisalat, said: "Small and medium businesses today make up for about 98 percent of businesses in the UAE representing over 60 percent of the country's GDP, therefore an important segment in Etisalat's business. This is an integral component to our overall business and is driven by a commitment to the future of UAE".

"We are delighted to recognise such hardworking, dedicated and visionary leaders who have made their mission to drive their business forward. This initiative is in line with our continuous efforts to support SMBs in the UAE by creating a platform that puts a spotlight on our SMB customers, consequently solidifying Etisalat Group's position as the preferred business partner of choice in the UAE", he added. T

Etisalat introduces 'Business App Store' for small and medium businesses

Etisalat has announced the launch of 'Business App Store', a software-as-a-service (SAAS) platform that is the region's first software marketplace dedicated to consolidate all business applications for small and medium businesses (SMBs).

'Business App Store' features a wide range of business applications namely sales, productivity, finance, marketing, customer management and human resources, among others. The multiple Internet software vendors provide SMB customers the freedom to choose the best value proposition relevant to their business and pay on a monthly basis.

The platform provides a portfolio of business applications to ease the day-to-day operations and boost productivity of business customers. All data will be hosted over the cloud, reducing their capital expenditure costs related to hosting these applications on their premises.

Esam Mahmoud, Senior Vice President, SMB at Etisalat, said: "Small and medium businesses are the backbone of the UAE's economy and as part of our efforts to support this vital sector, we constantly strive to innovate and provide a wide range of products and services designed to suit their business needs. 'Business App Store' is a testimony to our commitment to enable the digital transformation of SMBs. This one-stop-shop platform ticks all the right boxes to help SMBs boost their productivity and profitability, improve business outcomes and become more agile in the digital economy." T



Zain Group's net profit for nine months ended September 2021 grows 5% to reach USD 450 million





- **Chairman, Ahmed Al Tahous: "The Board focused on driving efficiencies and seeking new lucrative opportunities to create shareholder value"**
- **Bader Al-Kharafi, VC & Group CEO: "An exceptional 9M performance with significant progress on our '4Sight' strategy, fintech plans and development of numerous digital revenue streams"**
- **USD 143 million interim dividend distributed in Q4, a first by a Premier listed entity in Kuwait**
- **Data revenue represents 42% of consolidated revenue for the nine months**
- **Establishment of ZainTech targeting lucrative enterprise and government business**
- **Zain seeks digital banking license to become first telco-led challenger bank in Middle East**
- **Healthy growth in Fintech services, API platform and Esports participants**
- **Launch of Zain Ventures sees investment in fast-growing startups**
- **Revamp of Group's Wholesale aiming to be a carrier of choice for Telcos, other carriers and OTTs**

Zain Group, the leading telecom innovator in seven markets across the Middle East and Africa, has announced its consolidated financial results for the third-quarter (Q3) and nine-month periods (9M) ended September 30, 2021. The company ended the period with a stable customer base of 48.4 million customers.

Group Key Performance Indicators (KD and USD) for the first nine months (9M) 2021

Consolidated Revenue	KD 1.1 billion	- USD 3.8 billion
EBITDA	KD 478 million	- USD 1.6 billion
EBITDA Margin	42%	
Net Income	KD 135 million	- USD 450 million
EPS	31 fils	- USD 0.10

For 9M 2021, Zain Group generated consolidated revenue of KD 1.1 billion (USD 3.8 billion), down 3% year-on-year (Y-o-Y), while consolidated EBITDA for the period reached KD 478 million (USD 1.6 billion), down 3% Y-o-Y, still reflecting a healthy EBITDA margin of 42%. Efficiency and optimization initiatives resulted in consolidated net income increasing 5% Y-o-Y, amounting to KD 135 million (USD 450 million). Earnings per share amounted to 31 fils (USD 0.10) for the nine-month period.

The increase in 9M consolidated net income is attributable mainly to the impressive revenue performance of the majority of Group operations, except primarily for Zain Iraq, which had its profitability impacted by the currency devaluation in the country. Moreover, Group net income increased on account of successful cost optimization initiatives and loan restructuring across operations and the Group, which resulted in significant savings in financing costs. For 9M 2021, foreign currency translation was impacted mainly due to the currency devaluation in Sudan from 55 in January 2021 to 439 (SDG / USD) end of September 2021, and a 19% currency devaluation in Iraq from 1,190 to 1,470 (IQD / USD). These movements cost the Group USD 609 million in revenue and USD 316 million in EBITDA. Notably, if the USD 609 million currency translation impact on revenue was excluded, Y-o-Y revenue would have grown by 12% for 9M 2021.

Group Key Performance Indicators (KD and USD) for third-quarter

(Q3) 2021

Consolidated Revenue	KD 385 million - USD 1.3 billion
EBITDA	KD 168 million - USD 557 million
EBITDA Margin	43%
Net Income	KD 49 million - USD 165 million
EPS	11 fils - USD 0.04

In Q3 21, Zain Group generated consolidated revenue of KD 385 million (USD 1.3 billion), down 4% Y-o-Y. EBITDA for the quarter reached KD 168 million (USD 557 million), an increase of 3% Y-o-Y, reflecting a 43% EBITDA margin. Net income for the three months amounted to KD 49 million (USD 165 million), a 5% increase Y-o-Y. Earnings per share for Q3'21 amounted to 11 fils (USD 0.04).
For Q3 2021, foreign currency translation was impacted mainly due to the currency devaluation in Sudan from 55 in January 2021 to 439 (SDG / USD) end of September 2021, and a 19% currency devaluation in Iraq from an 1,190 to 1,470 (IQD / USD), costing the Group USD 231 million in revenue and USD 132 million in EBITDA.

Key Operational Notes for 9M 2021

1. ***The Ordinary General Assembly on October 12 approved distribution of an interim cash dividend of 10 fils, totaling US$ 143 million as part of 33 fils per share annual minimum dividend policy***
2. ***The 9M 2021 period was highlighted by the 104% Y-o-Y increase in net income at Zain Sudan, a 23% net income increase in Zain Jordan and a 18% net income rise in Zain Bahrain***
3. ***Data revenue reached USD 1.58 billion representing 42% of the Group's consolidated revenue***
4. ***The first nine months saw Zain Group invest over USD 665 million in CAPEX reflecting 18% of revenue, mainly in Fiber-to-the-Home (FTTH); spectrum fees; 4G upgrades and 5G rollouts***
5. ***Zain Kuwait witnessed impressive growth in 5G consumer and B2B customers, with Zain Saudi Arabia expanding its 5G network to over 51 cities covering all regions in the Kingdom***
6. ***Zain joins forces with four regional operators to implement Open Radio Access Network (Open RAN) solutions to drive innovation, cost efficiencies, and customer mobile experience***
7. ***The growth of Zain Esports continues, holding 16 tournaments since beginning of year with over 18,000 participants and attracting over 35 million social media impressions***
8. **The Zain Group Application Program Interface (API) platform enabling faster deployment of digital partnerships, continues to grow exponentially, offering 32 live services resulting in a robust 43% Y-o-Y increase in revenue and a 70% Y-o-Y increase in API transactions per month**
9. **Zain receives three awards from SAMENA Council-MEA Business Technology Achievement Awards for: New Technology Leadership for 5G launches in Kuwait and KSA; Innovative Collaborations for Zain Esports; Ground-breaking services for fintech solution Tamam in KSA**

Commenting on the 9M performance, the **Chairman of the Board of Directors of Zain Group, Ahmed Al Tahous** said, "We continue to rollout high quality telecommunications services across our markets in an inclusive manner, empowering and improving the socio-economic well-being of the communities we serve. We are also focused on driving efficiencies and seeking new lucrative opportunities to create shareholder value. We thank government authorities across our markets for their vision and support in helping us overcome the many challenges faced by the telecom sector at large."

Zain Vice-Chairman and Group CEO, Bader Al-Kharafi commented, "The operational performance that saw net profit growth over the 9M period, despite the huge impact of unavoidable currency devaluations, is testament to the successful implementation of the '4Sight' strategy. I am extremely proud of the digital transformation achievements and network rollouts our teams have accomplished across our footprint, enabling us to continue in our mission to foster sustainable systemic change and provide meaningful connectivity in offering high-quality and appealing services to our customers."

Regarding the huge impact of unavoidable currency devaluations in Iraq and Sudan, Al-Kharafi noted, "It is unfortunate that factors beyond our control have impacted several key financial indicators. Management is taking concrete steps to mitigate the impact, including revamping of prices, and offering new lucrative digital services and packages to individual and enterprise customers to capitalize on the comprehensive 4G rollouts in these countries."

Al-Kharafi continued, "We are operating at optimal efficiency levels and are confident of the future prosperity of the company, evident by the minimum dividend policy we set in 2019 and the recent decision to distribute interim dividends in Q4 '21, a step that provides a clear indication of the strength of our financial solvency, and the company's ability to execute on its strategic growth and financial plans."

"We remain focused on several new lucrative and strategic business opportunities with a priority today on obtaining a digital banking license and becoming the first telco-led challenger bank across the Middle East. We are keen on fostering innovations in the fintech space, given the success and exponential growth we have achieved to date with Tamam in Saudi Arabia and Zain Cash in Iraq and Jordan."

"Similarly, a priority that will create enormous value, is the recent establishment of ZainTech, a vital development in Zain's determination to transform into a multi-core digital business. A first among telecom operators in the Middle East, ZainTech unifies the Group's ICT assets under one roof to provide comprehensive digital solutions and transformation services to enterprises and governments across the region. The new entity also incorporates NXN and Zain Data Park, both specialized ICT establishments in their respective fields. ZainTech offerings will range from solutions



for cloud, cybersecurity, and associated managed and professional services. The company will also provide standard and customized digital solutions addressing the unique needs of different verticals leveraging the latest innovations in IoT, big data, artificial intelligence, and emerging technologies."

"To support the ever-growing demand for high-quality data and benefit from the many lucrative opportunities especially in the enterprise space, sound international connectivity and capacity is critical in offering customers quality services across all our markets. Accordingly, the company has revamped the Group's Wholesale business, aiming to become the carrier-of-choice in the region for telcos, other carriers and OTTs. The entity will act as the single interface between Zain opcos and other international carriers, thereby operating at scale and achieving efficiencies. It will also invest in its own infrastructure, including platforms, international cables and data centers."

"I'm extremely excited by the recent creation of Zain Ventures, formalizing Zain's entrepreneurial startup-related investments under a single entity and opening the door to future investment opportunities in the venture capital, fintech and tech world. We will support and create enormous value from recent investments we've made in fast-growing innovative startups such as PIPE and SWVL."

Al-Kharafi concluded, "As the world continues to deal and co-exist with the pandemic, Zain's resilience and agility to adapt to a vastly changing environment primes us well to tap into the many lucrative opportunities that are brought forth by the Fourth Industrial Revolution. New business verticals and opportune investments we proactively made in the digital arena in recent times will ensure Zain achieves healthy cashflows and sustainable returns for shareholders. We will continue fostering new value-accretive areas as we drive the business forward."

Operational review of key markets for the nine months ended 30 September, 2021 Kuwait: Maintaining its market leadership, Zain Group's flagship operation saw its customer base serve 2.3 million. It remains the Group's most profitable operation with revenue for 9M 2021 growing 1% and reaching KD 235 million (USD 779 million), EBITDA grew 9% to reach KD 91 million (USD 303 million), representing an EBITDA margin of 39%. Net income grew by 2% to reach KD 58 million (USD 193 million) for 9M 2021, with data revenue accounting for 41% of total revenue, representing 6% growth.

Saudi Arabia: For the 9M 2021, Zain KSA generated revenue of SAR 5.8 billion (USD 1.6 billion), EBITDA for the period reached SAR 2.3 billion (USD 616 million), reflecting an EBITDA margin of 40%. Net income for the nine months reached SAR 143 million (USD 38 million). Data revenue represents 49% of total revenue and customers served stood at 7.5 million. For the 3rd quarter of 2021, Zain KSA revenues increased by 3% to reach USD 530 million, EBITDA increased by 5% to reach USD 215 million, with an impressive EBITDA margin of 41%, and net profit stable at USD 16 million.

Iraq: Zain Iraq's 9M 2021 revenue reached USD 574 million and EBITDA amounted to USD 226 million, reflecting EBITDA margin of 39%. Net income reached USD 31 million for 9M 2021. The operator served 16.5 million customers maintaining its market leading position.

Sudan: For 9M 2021, Zain Sudan generated revenue of USD 241 million, with EBITDA amounting to USD 118 million, reflecting an EBITDA margin of 49%. The operation reported an impressive net profit of USD 72 million, reflecting a 104% increase in USD terms. Data revenue represented 28% of total revenue, while the operator's customer base reached 16.4 million, maintaining its market leadership.

Jordan: For 9M 2021, Zain Jordan revenue increased by 4% to USD 373 million, EBITDA grew by 16% and reached USD 186 million, reflecting a healthy EBITDA margin of 50%, with net income increasing an impressive 23% reaching USD 69 million. With the ongoing expansion of 4G services across the country, data revenue represented 50% of total revenue. Zain Jordan served 3.7 million customers maintaining its market leading position.

Bahrain: Zain Bahrain generated revenue of USD 127 million for 9M 2021 (4% growth). EBITDA grew by 4% to reach USD 44 million, reflecting an EBITDA margin of 34%, while Net income grew by an impressive 18% to reach USD 12 million, for 9M 2021. T

InterSAT partners with Kymeta and Azercosmos to offer complete satellite connectivity solutions across Africa

InterSAT has announced a partnership with Kymeta and Azercosmos to deliver mobile satellite communication services with Kymeta™ U8 terminals and InterSAT's SkyMOVE services across Africa, on Azerspace-2 satellite.

The partnership agreement will enable InterSAT to deliver a complete connectivity solution for on-the-go communications with the revolutionary Kymeta u8 terminal. The u8 terminal was designed with Kymeta's software-defined, electronic beam steering technology and is low profile and mounts easily on vehicles and vessels for seamless communications on the move.

Kymeta's antenna technology is uniquely positioned to meet the demand for mobile broadband, providing internet access via satellite or hybrid satellite-cellular networks on a user-defined basis to enable connectivity while on the move or on the pause. When combined with InterSAT's SkyMOVE connectivity offerings on Azerspace-2 satellite and back-end support suite of services, customers will have unique access to an experience and product that no other ISP company in Africa offers today.

"We are pleased to expand the scope of our longstanding relationship with InterSAT, to now enter into this partnership for the delivery of Comm's on the move services over the Azerspace-2



Bill Marks



Mark Guthrie

satellite throughout Africa," said Mark Guthrie, Chief Commercial Officer at Azercosmos.

"With end-markets for high-speed satellite-based networks growing, this partnership with Kymeta and Azercosmos is a significant step in enhancing our solution offerings. Being technology-agnostic supports our notion that there is no one size fits all solution for our diverse customer base in Africa, and this unique partnership is another step in enhancing our portfolio," said Hanif Kassam, CEO of InterSAT. T

FMC GlobalSat to acquire Santander Teleport

Mohammed Tanveer

FMC GlobalSat has entered into a definitive agreement with the ERZIA Group to acquire 100% of Santander Teleport "ST". Originally established as a joint venture of ERZIA and MTN Satellite Communications (now the Anuvu maritime division), ST has been ranked by the World Teleport Association (WTA) as one of the top 10 Teleport Operators in the world since inception, and in 2019 it was awarded the internationally prestigious "Independent Teleport of the Year" title.

Domiciled in Spain, ST boasts nearly 30 antennas ranging from 3 to 15 meters enabling Ku, Ka, X and C band reception and transmission within its expansive 100,000 square feet premises. Its location features temperate weather and ideal topography which maximizes look angles to fixed satellites providing seamless connectivity and eliminating many of the disruptive variables that can encumber efficiency. FMC, with ST's best-in-class infrastructure and facilities, is well equipped to actively service the significant growth in global data consumption and expand its reach with 5G wireless, terrestrial fiber and GEO, MEO, LEO broadband satellite networks traffic.

Emmanuel Cotrel, CEO of FMC, commented: "We are delighted



Luis Garcia

to welcome Santander Teleport, a company with an unparalleled heritage, talented employees and unique position in the global satellite world, to the FMC family. We intend to develop this infrastructure and will invest in Santander Teleport's unique assets and strong human capital to keep continuing to deliver compelling and cost effective connectivity solutions for our customers. We are optimistic about Santander Teleport's ability to accelerate its growth, innovate and remain at the forefront of our discerning customers satisfaction and excellence, particularly in light of the LEO revolution".

Luis Garcia, Chief Executive Officer of ERZIA, commented, "This transaction, which occurs at a time of internal transformation for Santander Teleport and ERZIA Group, will provide further support, resources and momentum to reach our strategic goals. T

Extending Vital Connectivity to Remote Areas in Sub-Saharan Africa

Internet connectivity is a crucial tool that helps people across the globe work, learn, shop, visit friends and family, and access healthcare. But while billions of lives are improved by access to the internet, hundreds of millions of people living in remote, rural, and hard-to-reach places still struggle to access basic broadband services.

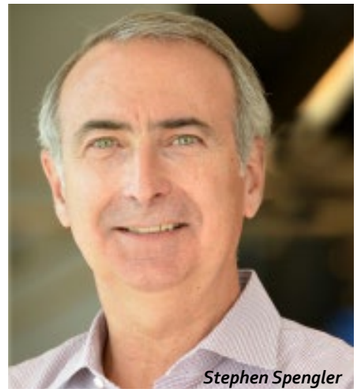


As Commissioner of the United Nations Broadband Commission for Sustainable Development, Intelsat CEO Stephen Spengler is committed to advocate the development of broadband infrastructure and services to ensure that the benefits of connectivity are realized in all countries. Spengler shared in a recent interview, "Only satellites can quickly and cost-effectively bring reliable connectivity to hundreds of Wi-Fi access points and cell sites – no matter how rural or hard-to-reach the location. Satellite network operators play a unique role in bringing voice and data services across vast geographic areas, and even entire countries or regions."

This is especially true for Africa, where satellites play a key role in extending internet and communications technologies and enable service providers to expand their network coverage. From low bandwidth needs (SMS/telephony/2G sites) to broadband (3G, 4G, and soon 5G), the possibilities and need for satellite services in the broadband sphere are endless. Intelsat has served Africa since 1965. Here are just a few of the ways it has been working with partners on the continent to support those efforts:

South Sudan

The internet penetration rate in South Sudan sits at only 8%, which is low compared to other countries in the eastern region of Africa. Mobile network coverage also is poor in most parts of South Sudan and almost non-existent in many rural areas. This means that approximately 80% of South Sudan's population – more than 9 million people – living in these areas have either no or poor access to the internet and



Stephen Spengler

mobile services.

To address these challenges and ensure improved internet service across the country, a leading mobile telecommunications group operating in South Sudan sought to improve its network capacity, providing enhanced connectivity to its enterprise customers, and expanding its mobile broadband coverage to communities in deep rural areas of the country.

In a new strategic partnership, the telecommunications group can access Intelsat's trusted, secure satellite telecom network to meet its goals for greater capacity and connectivity, and even future scalability.

Somalia

Many industries in the country such as banking, mining, oil and gas, and government organizations, as well as private and aid-oriented agencies depend on their ability to distribute information to, and gather information from, remote places.

Intelsat will also provide support in improving its team's technical skills through specialized satellite training courses as part of this new, multi-year agreement.

Zambia

A government entity in Zambia wanted to connect its most remote sites to its primary network and increase its reliability at critical locations to help drive improvements for the administration and enable mobile tax offices to better serve the taxpayers and traders.

Intelsat modernized the entity's current satellite network, providing a turn-key solution that includes satellite capacity, equipment, implementation services, training, and support services. The plan also bolstered the reliability of customer services through the addition of redundant capacity. T

Data Helps Accelerate Innovation on Path to Net Zero, Industry Leaders Say at AVEVA Sustainability Panel

AVEVA, a global leader in industrial software, driving digital transformation and sustainability, has joined companies across the technology and energy spectrum to underscore the multifaceted role of digitalization in helping to achieve net-zero carbon emissions across the ecosystem. Delegates at the recent landmark conference, AVEVA PI World, heard how data-led innovation can help unlock sustainability benefits at every level. The unanimous message was delivered by sustainability and environment leaders from Schneider Electric, Ørsted, Neste, Microsoft and AVEVA on a Sustainability Panel.



Lisa Johnston
Chief Marketing Officer and Chief Sustainability Officer at AVEVA

Nine in 10 companies expect to accelerate their sustainability activities over the coming year as businesses recognize their role in tackling climate change, an AVEVA-commissioned survey of over 850 c-suite and digital transformation experts shows. Four in five leading industries want to increase their digital investments to drive sustainable business models, demonstrating the enormous potential of advanced technologies such as smart data, artificial intelligence (AI) and cloud computing in enabling net zero and lower carbon industrial operations, explained Lisa Johnston, Chief Marketing Officer and Chief Sustainability Officer at AVEVA.

"Companies around the world have committed to reduce their environmental footprint. AVEVA believes the business community must now go further, by way of positive contributions to sustainability through our activities and partnerships – or in other words, our sustainability handprint. Given the nature of the capabilities AVEVA provides to our customers, our solutions make a constructive impact on environmental sustainability. Data infrastructure management solutions such as the AVEVA PI System, delivered in partnership with Microsoft's Azure Cloud, can help thousands of very different businesses find innovative routes to achieving their sustainability goals and becoming climate positive," Johnston added.

Digitalization strategies to achieve net-zero commitments

Data-led innovation plays a significant part in achieving net-zero goals, panelists said. Panel attendees learned actionable strategies towards building climate-positive organizations.

1. Incorporate sustainability into your KPIs: Olivier Blum, Chief Strategy & Sustainability Officer at Schneider Electric said, companies should develop sustainability strategies in the same way they have strategies for other areas, such as finance or human resources.

2. Use data to predict innovation: The application of predictive analytics to industrial data collected across the value chain can reveal new routes to innovation. Energy major Ørsted operates an extensive fleet of 1,000 offshore wind turbines. Continuous data monitoring means that fleet represents 1,000 different experiments providing feedback to produce future assets, said Jesper Skov Gretlund, Senior Manager, Numerical Competence Centre, Ørsted.

3. Extend your handprint with partnerships: Neste works with suppliers that share its sustainability commitments on its path to achieving carbon neutrality in production by 2035. The company uses data collected across its value chain to improve its operations and to help other companies reduce their emissions, said Salla Ahonen, Vice-President of Sustainability, Neste.

4. Measure everything for sustainability at scale: Thousands of companies are setting net-zero targets, but achieving them requires better measurement tools, said Lucas Joppa, Chief Environment Officer at Microsoft. The software leader has committed to becoming a carbon-negative company by 2030.
The panel concluded that industries are no longer forced to compromise competitiveness in the short term to pursue a more sustainable future. The thought leadership forum for AVEVA's partner executives was open to all registered delegates at AVEVA PI World. T

GLOBAL ICT, TELECOM & SATCOM EVENTS 2021

01 - 03 December 2021	**21 - 24 March 2022**	**13 - 14 June 2022**
bakutel	SATELLITE	CYBERTECH
Baku, Azerbaijan	Washington DC, USA	Dubai, UAE
03 - 06 December 2021	**28 - 31 March 2022**	**29 June - 01 July 2022**
ibc	capacity MIDDLE EAST 2022	MWC Shanghai
Amsterdam, Netherlands	Dubai, UAE	Shanghai, China
16 - 18 January 2022	**16 - 18 May 2022**	**9 - 13 October 2022**
intersec	BIG 5G EVENT	GITEX GLOBAL
Dubai, UAE	Austin, US	Dubai, UAE
28 Feb - 03 March 2022	**17 - 19 May 2022**	**18 - 20 October 2022**
MWC Barcelona	CABSAT	5G World
Barcelona, Spain	Dubai, UAE	Amsterdam, Netherland
15 - 17 March 2022	**24 - 25 May 2022**	**09 - 10 November 2022**
MEET ICT BAHRAIN / BITEX	TELECOMSWORLD Middle East	Global MilSatCom
Manama, Bahrain	Dubai, UAE	London, UK
21 - 23 March 2022	**08 - 10 June 2022**	**November 2022**
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