TELETIMES MEDIA LLC

INTERNATIONAL teletimes

Issue 178
August
2020

The latest in Telecom, ICT and SatCom sectors of the Middle East, Asia and Africa

Etisalat
Over four decades of evolution in the telecom sector

Hamad Obaid Al Mansoori
to Spearhead Digital Government in UAE

teletimes INTERNATIONAL

Vol: 15 Issue: 08 August 2020 ABC Certified

15th year of publication

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P.O. Box 239031,
Dubai - UAE

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	US$	AED	SAR	PKR	€	GBP
Price per copy	8	25	25	300	7	5
One year	80	250	250	3600	70	50

Recipient of
"Best IT & Telecoms News Outlet Award 2020"
"International Arch of Europe Award for Quality"
"Teradata ICT Execellence Award for Media"

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Legal Advisor - Hashmat Ali Habib
Marketing Coordinator - Imran Rasheed

Printer: Khursheed Printers (Pvt) Ltd.

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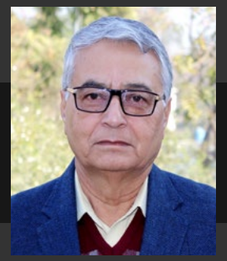

Dear Reader,

Welcome to the latest edition of Teletimes International!

Making the headlines at the moment is the appointment of H.E. Hamad Obaid Al Mansoori (previously the Director-General of TRA in UAE) as the Head of Digital Government in UAE. The appointment was made in a move to reshuffle the structure of various public sector institutions and the UAE's Cabinet. The motive behind this move was to ensure that the government makes quicker and effective decisions and to seize the new opportunities presented by the new phase in the country's history- the move to digital.

I believe Etisalat and its contributions to the national telecom sector cannot be ignored if we talk about the ICT space in the UAE. This edition of Teletimes, in fact, features a detailed piece on the initiatives and achievements of the Etisalat Group over the last four decades. The article written by Dr. Ahmed Bin Ali SVP, Corporate Communications at Etisalat Group highlights Etisalat's journey in transitioning to the digital era with an advanced network and technologies.

From an editorial perspective, I would also recommend reading "How information and communication technology (ICT), especially telecom industry will help in rebuilding the economy" by Saurabh Verma and Gourab Banik from Frost & Sullivan and "Preparing for the future by rethinking the campus network" by Alaa Bawab, VP for Enterprise Networking Business at Huawei ME.

As always, this edition includes the latest insights, news and opinions from major players across the industry. Your feedback is welcome on khalidathar@teletimesinternational.com

Enjoy Reading!

Khalid Athar
Chief Editor

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Over four decades of evolution in the telecom sector

Transitioning to the digital era with an advanced network and technologies

Dr. Ahmed Bin Ali
SVP, Corporate Communications, Etisalat Group

- 1976: Etisalat established as first national telecom provider
- 1982: First mobile network in the Middle East
- 1994: Introduces Middle East's first GSM service
- 1995: First rollout of commercial Internet services in the region
- 1999: Introduces first broadband internet service
- 2000: Launces E-Vision
- 2003: First 3G network in the Middle East
- 2008: Completes roll-out of fibre optic backbone in UAE
- 2011: First 4G LTE experience in the region
- 2014: First 5G trial in the region
- 2016: Launch of Etisalat Digital to drive digital transformation in the region
- 2017: UAE ranked first globally in Fiber Optic network
- 2017: Etisalat Open Innovation Centre, first of its kind in the region
- 2018: First launch of commercial 5G in the region
- 2018: First globally in Fiber Optic for 2nd year in a row
- 2019: First 5G smartphones in MENA
- 2019: First globally in Fiber Optic for 3rd year in a row
- 2019: Most Valuable Telecoms Brand, and Most Valuable Consumer Brand in MENA, Brand Finance.
- 2020: Fastest mobile internet network in the world, Ookla March Index

Today the UAE leads in the delivery of smart services and is one of the most competitive nations globally, as one of the pioneers in the telecom sector in the region and globally, Etisalat has played a significant role contributing to the digital advancement of the country and in achieving its digital ambitions. Etisalat's continuous investments in the most advanced network and next-generation technologies enabled futuristic technologies to become accessible to the youth and all other sectors of the society.

Etisalat's philosophy since its inception was about revolutionising the telecom sector in the UAE, which has encouraged us to explore new opportunities, focus on strengthening our core business while transitioning to the digital era and being well geared for the future. Our teams have worked on significant projects with the government in enabling a smart city and roll out smart services to citizens, residents and businesses. Digital transformation is at the center of this strategy and leveraging technologies that can help accelerate this transition to the new era. These achievements were only possible due to the long-term vision of the government enabling futuristic technologies in every sector of the society.

The telecom sector in the UAE has witnessed technological development over decades starting from the first telephone call in the 70s until the launch of the 5G network last year becoming the backbone for limitless connectivity for IoT and the fourth industrial revolution.

Etisalat on its part has continuously focused on innovation as part of its strategy 'Driving the digital future to empower societies' embedded within its DNA manifested across the business.

Dr Ahmed bin Ali, Group Senior Vice President, Corporate Communications, Etisalat takes us through the success journey and the evolution of connectivity over four decades

The beginning of the telecom revolution

In 1976, Etisalat began its journey on the formation of the UAE as the first national telecom provider and then launching the first mobile network. With technology evolution and as the needs of consumers evolved, in 1986, the first optic network was launched setting a path for next-generation services.

The year 1989 also witnessed the launch of the Etisalat University (now Khalifa University). This was in line with our overall digital vision and strategy that encouraged strategic learning in futuristic technologies and play an essential role in shaping the talent landscape and identifying the right skill for new technology.

The culture and collaboration within the organisation based on our core values have helped build future capabilities, skills bridging the gap between current and future digital requirements and accelerate digital learning expertise.

Transforming the network

With the beginning of the next decade, Etisalat has set global strides by diversifying its business, making a bigger impact with 5G technologies and laying the foundation for the next generation of technology.

This was all possible due to the solid groundwork by our predecessors in the 90s and leading the way in the regional and digital telecom sector. In 1994, Etisalat launched its first GSM network in the Middle East with the SMS service becoming a platform for various businesses and verticals to move away from traditional advertising platforms.
The 90s witnessed a revolution in the telecom sector, with Etisalat offering internet services for the first time in the region in 1995 and the first broadband internet service via ADSL technology in 1999. This laid the foundations for the future of digital services and solutions for generations to come.

With the launch of path-breaking services in the 90's there was no looking back, consumers for the first time experienced cable TV services, mobile data, MMS and 3G.

The year 2000 witnessed the launch of the first cable TV services from e-vision and Etisalat Academy a provider for telecom and technology training. In 2002, Etisalat consumers experienced mobile data on a GPRS (General Packet Radio Service) network enabling data transfers through cellular networks giving them an opportunity to use it for mobile internet, MMS and other data communications. The foundation of an advanced futuristic network was laid during the early 2000s with High-Speed Downlink Packet Access (HSDPA) technology that provided high-speed internet services through mobile phones and mobile data cards. It was part of the 3G evolution for mobile networks that followed the GSM/UMTS track. This was also a method to provide high-speed download to users.

Fostering innovation and innovators of tomorrow was always integral to our overall company philosophy of supporting the youth in leading digital innovations. Etisalat University became Khalifa University in 2007 providing a platform for future technology innovators and entrepreneurs. This was followed with the launch of the high-speed internet service (HSPA+) in the year 2010 for the first time in MENA.

Leading the way as a Telecom Brand and Operator

The year 2017 was significant with major successes in infrastructure and technology for Etisalat, it was the first time UAE was globally ranked as the widest FTTH network followed by the opening of a first of a kind 'Open Innovation Center' in Dubai and Etisalat being valued as the most valued telecom operator in the Middle East by Brand Finance. In the same year, we also enhanced our international connectivity to UAE with AAE-1 submarine cable system.

Today Fiber to the Home (FTTH) has reached 95.7 percent across UAE, maintaining the UAE's position as a global leader. This was only possible due to the efforts in building and investing in the infrastructure over the decades. In 2011, the foundation of success on the network was laid with the implementation of 4G making Abu Dhabi the first capital fully covered with fiber optic.

This was followed by a series of achievements in 2013 with cloud computing services provided to SMEs, first optic layer in 2016 connecting the region with fast internet providing IoT services and establishing an IoT centre.
Etisalat's partnership and investments have also given it a lead among competitors and in the region. The strategic partnership with

Microsoft to deliver the comprehensive and trusted cloud from their first data centre in the Middle East, Etisalat data centres acquiring PCI/DSS an international and global certification guaranteeing maximum safety of customer data at all times and for quality the prestigious TL9000 certification.

5G a reality for the next generation-Journey and Achievements

5G is a reality today in UAE with Etisalat's pioneering efforts in 5G to enable subscribers to enjoy and unleash highly connective technologies blending physical and digital realms from AR and VR to IoT, AI, autonomous vehicles, advanced robotics, 3D printing, wearable tech and more.

Our continuous investments and focus on enhancing and building one of the most advanced networks in the region have empowered digital transformation opening up opportunities to engage with our customers in new ways. Innovation was always at the core of our strategy and all our efforts on enabling connectivity based on speed and throughput, mobility, connected devices and IoT, energy efficiency, latency and reliability.

Etisalat embarked on its 5G journey in 2014 when it started construction of the network with a dedicated team of engineers and specialists to build one of the most advanced networks in the region.

In 2015, the first major 5G project was signed with Expo 2020 Dubai as part of the premier partnership with Etisalat Group to make it one of the fastest, smartest and best-connected places in the world during the global mega event.

In the same year, a number of strategic partnerships were signed with global technology companies to carry out trials and implement advanced technologies and solutions on the network. A series of tests were carried out in the infrastructure to gauge the extent of 5G readiness and get an insight into the upgrades required to launch the 5G network first in the region. The goal was to provide access to high data transfer speeds to get the network ready for data-heavy applications and content to be broadcasted across media platforms during the Expo 2020.

Another significant milestone in 2016 was the successful completion of the first live 5G experiment using millimetre waves (mmWave). This showcase was the first of its kind in the MENA region with Etisalat becoming the first telco globally to test speed at 36 Gbps on a 5G network. This was followed with another global milestone in 2017 with a speed showcase of 71Gbps setting a new global record in data transfer speed using e-band and massive MIMO technology.

Early in 2018, Etisalat set global benchmarks in 5G in technology and on the network. Etisalat successfully conducted a 5G trial with outdoor mobility. The trial demonstrated 5G capabilities in a real-world environment over a live network, including tests on speed, latency and beam steering. The 5G trial system used 800MHz of spectrum in the 15GHz band demonstrated over 20 times greater performance than what was currently used in 4G networks. The trial also achieved an aggregate site throughput of more than 24Gbps a significant improvement over current 4G networks.

This was also the year Expo 2020 was announced as the first major commercial customer to be connected and access 5G services in MEASA region. This supports Expo 2020's goal to be one of the most connected places on Earth, both physically and virtually.

Another major milestone for Etisalat and the telecom industry was the launch of the first commercial 5G wireless network in the UAE becoming the first telecom operator in the Middle East and North Africa (MENA) region to achieve this technological milestone and set an industry benchmark. Etisalat was the first operator to have a fully developed commercial 5G network available to provide gigabit internet services to its customers. The network will fuel enterprises digital transformation, IoT, smart cities and the fourth industrial revolution.

The foundation of this commercial launch was laid in 2017, where Etisalat was one of the operators to launch a pre-commercial 5G network in certain areas of the country demonstrating high-speed use cases in addition to the low latency of the 5G technology.

In the first phase of the 5G launch, fixed wireless services (fixed and internet services) was provided at selected locations in UAE, which was gradually expanded to other parts of the country depending on consumer demand and requirements. The commercial fixed devices and services were provided to consumers in this phase. Etisalat was aiming to achieve a download speed of 5Gbps for wireless access and more than 1.5Gbps for CPE (customer premises equipment) devices. At around 20 times faster than 4G and with ultra-low latency, 5G technology will enable users to stream live 4K resolution video anywhere at any time, with virtually no lag.

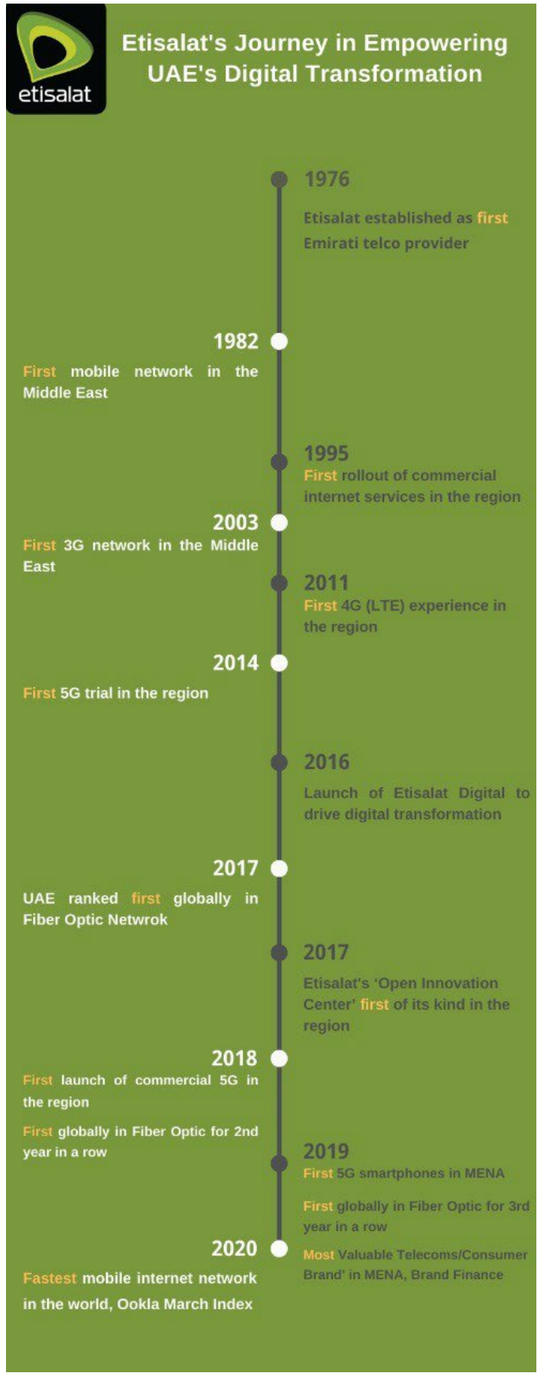
Etisalat Digital-Making digital aspirations a reality

The launch of Etisalat Digital was to actively contribute to the digital transformation market, which has a huge opportunity, especially in the UAE, for digital services. The government's push for innovation makes UAE an incredible destination for everything digital. The combination of Etisalat's vast experience in the field of connectivity with enhanced agility for digital innovation led to the formation of Etisalat Digital. The prime aim of the unit is to enable the digital transformation of enterprise and government customers.

There are several important projects the department has worked on in digital health, security and smart cities. Dubai Expo 2020 is one of these projects that supports the UAE's long-term strategy in becoming the most sought-after global destination for trade, business and development.

As the premier digital and telecommunications partner of Dubai Expo2020, we have delivered one of the fastest, smartest and best-connected places on earth during the global mega event. We have been involved in creating the infrastructure for the Expo site – enabling Expo 2020 Dubai to provide visitors and participants with a cutting edge, immersive digital experience that brings the Expo themes to life for the 25 million expected visitors.

Another project that has set a benchmark as one of the most successful projects in the entertainment space in the region is the delivery of the digital infrastructure for Dubai Parks and Resorts. This included digital channels, different smart services (such as smart parking, smart ticketing, connected transportation and connected food and beverage), in addition to other smart solutions around the park such as video surveillance-as-a-service, real-time marketing and analytics. Many of the other successful projects over the years included working on public transport projects with high-speed connectivity, remote health services for the first time in the private sector with American Hospital, enabling a series of digital initiatives to empower the region's education sector with Alef Education and protecting the lives of the UAE citizens with Ministry of Interior to provide the smart fire alarm solution 'Hassantuk'.



The bespoke solution for Federal Electricity and Water Authority (FEWA) hosted and powered by Etisalat's UAE based OneCloud a fully managed application enabled the authority to connect with their customer more effectively.

Other integral projects in the banking sector include the launch of a digital invoicing solution for SMEs with First Abu Dhabi Bank (FAB) and the development of the UAE Trade Connect (UTC) platform along with eight banks safeguarding the banking industry from potential fraud losses through advanced detection tools, allowing them to extend additional financing to their corporate clients.

Etisalat Digital is also actively working on several interesting projects and has engaged with industry experts as well as acquired digital assets and platforms including data centres, cloud, digital and mobile payment, Internet of Things, big data and analytics engines. By providing platforms to its customers, Etisalat Digital enables businesses to get access to several technologies through a service model, instead of having to invest in the whole platform.

Etisalat Digital brings its unique value by combining the scale, strength and robust network with the agility, skills and platforms of a digital player. The business unit has access to global skills and expertise, state-of-the-art digital assets such as data centers, cloud, cybersecurity, M2M and Internet of Things (IoT) platforms, analytics, big data engines and digital payment gateways. This is in addition to 24x7 Cloud, Security and IoT Command and Control Centers in Abu Dhabi and Dubai for fully managed solutions and proactive monitoring.

One of the key objectives of the business unit Etisalat Digital is giving young companies a platform to engage with our experts, have access to our robust network and utilise our digital technologies to build viable products and new revenue streams. Etisalat Digital's partnership with Dubai Future Accelerators, the world's largest government-supported accelerator, pair's top start-ups with the Dubai government entities allowing them to build, test and deploy solutions for 21st-century challenges.

Etisalat joined the programme in its second round and have launched several challenges focusing on futuristic technologies like AI and robotics. Selected start-ups get the chance to be on board in the Etisalat Scaleups program where they were given access to Etisalat Digital resources and experts, office space, and support to deliver pilot projects to effectively demonstrate the value and potential of the partnership and technology.

Another significant project for Etisalat Digital was the two-year Scale Abu Dhabi (AD) programme with the Abu Dhabi Digital Authority (ADDA) to help drive the emirate's digital transformation. Over this period, a design-led methodology and process will be empowered by the Etisalat Digital co-creation lab to develop innovative solutions as well as a hub to source global innovation to the emirate of Abu Dhabi. It will also enable ADDA with access to cutting-edge technology platforms such as IoT, blockchain, big data, video analytics and cloud. A co-branded space will be provided for ADDA to become a leading hub of innovation and creativity in the region.

With nurturing innovation as one of the key goals for Etisalat Digital, it introduced its programme called 'Future Now' to collaborate with startups, IoT developers, government entities, enterprises, and their end-users. Future Now has four key pillars: Scale-ups program, a Co-creation Lab, an IoT partner ecosystem and an Innovation Center. T

How information and communication technology (ICT), especially telecom industry will help in rebuilding the economy?

Saurabh Verma, Business Head, ICT and
Gourab Banik, Senior Research Analyst, ICT at Frost & Sullivan

The COVID-19 pandemic has been imposing unprecedented challenges for the humankind. In order to curb the spread of the virus, governments worldwide have undertaken strict containment measures like curfews, travel restrictions, closing down borders, prohibiting mass gatherings, mandatory quarantines, closure of education institutes, entertainment, leisure zones, and more. However, these containment measures have had a significant impact on economic activities, throwing several industries across the globe into an upheaval. Its impact on the economy has been more negative than anticipated during the first half of 2020, while, outlook for the rest of the year also remains bleak. According to IMF's latest world economic outlook, the global GDP is anticipated to contract by 4.9% in 2020, which is a further reduction of 1.9% from its earlier forecast. While every vertical industry has been facing their own unique challenges; tourism, real estate, and mobility are the worst hit by the pandemic.

Countries struggling to control the spread of the virus have extended the lockdown or imposed partial restrictions, taking additional toll on their economic activities. Meanwhile, things are gradually easing back to normal in countries where the peak level of infection cases has apparently passed. Countries with high recovery rates are gradually lifting restrictions and allowing people to get back to work steadily. On the other hand, some countries are still holding off on reopening their economy and waiting for the population to recover fully. Despite past several months of uncertainty and other healthcare challenges on hand, governments and central banks around the world has been persistently focusing on implementing fiscal and monetary measures aiming to rebuild their economies. IMF has projected a rebound of the global growth in 2021. One of major factor that will support the economic recovery is the ongoing restructuring of business models with an accelerated shift towards digitalization across industries globally.

How ICT is helping industries to accelerate growth:

From the way we work and interact, to the way we spend our leisure time, a massive change has been witnessed during the COVID-19 crisis. ICT have surfaced as one of the key sectors helping businesses as well as societies to navigate through this adverse situation. It has been the cornerstone for implementing business continuity solutions and at the same time helping individuals carrying out their day-to-day activities. Facilitating remote working, online meetings, online education, digital payments, e-commerce, and remote diagnostics – all have been made possible on the back of ICT infrastructure. Orchestration of hardware, network connectivity, applications, and security has been facilitating the development and implementation of innovative ICT products and services for several industry verticals:

• ***Healthcare:*** Traditional healthcare system lacked data and analytics for intelligent reporting. Moreover, data processing was manual, and databases were decentralized. Leveraging automation such as robotic process automation (RPA) and cloud-native applications, healthcare business processes has been improved and streamlined. This sector has been witnessing significant investments in technologies like telemedicine, remote diagnostics and monitoring, big data analytics, and artificial intelligence (AI). This is leading to the development of a smart healthcare ecosystem for dealing with the ongoing crisis, which will further help in mitigating future risk.

• ***Government:*** Government in partnership with technology providers has invested in development of several mobile applications for facilitating symptom reporting, tracing COVID-19 infected patients, and also for keeping a tab on the quarantined population. In addition, several app services have been launched for recording and verifying passengers' past travel history; and issue travel pass or allow them with the access of public transport and other public facilities accordingly. Continued focus of governments in monitoring the situation by leveraging technology will restrict future outbreaks which may further delay the economic recovery.

• ***Retail:*** The pandemic has boosted digital commerce activities significantly. Increasing number of retail businesses have set up their digital presence through online marketplaces, as well as online grocery and food delivery platforms. In addition to B2C, e-commerce is penetrating further and enabling several B2B scenarios. Apart from selling through third-party platforms, retail businesses are investing in setting up their own e-commerce platform for improving customer experience.

• ***Manufacturing:*** With limited workforce to comply with the social distancing norms, productivity of manufacturers has been hit significantly. However, digitalization leveraging technologies like internet of things (IoT), AI, virtual reality (VR) and augmented reality (AR) has enabled manufacturers to enhance automation of production processes, improve product quality, optimize remote control, and also drive innovative business models. Technology-driven manufacturers, investing in automating labor-intensive processes, will not only drive economic growth but will also be better resilient while facing events like COVID-19 in future.

From the way we work and interact, to the way we spend our leisure time, a massive change has been witnessed during the COVID-19 crisis. ICT have surfaced as one of the key sectors helping businesses as well as societies to navigate through this adverse situation.

Leveraging automation such as robotic process automation (RPA) and cloud-native applications, healthcare business processes has been improved and streamlined.

Telecom's role in economic recovery in the Middle East region:

The telecom sector has witnessed a significant upsurge in demand for connectivity during the pandemic.

Apart from regular communication requirements; consumers have relied heavily on telecom services for online transactions, online gaming, and other digital contents. Moreover, telecom has helped in creating public awareness and provided reliable connectivity for individuals to access medical and other essential services during social isolation.

As social distancing is expected to remain a norm going forward, telecom network lays the foundation in mitigating the negative impact of lockdown by enabling citizens to remain connected. While keeping the economy moving during the lockdown, telecom sector will continue to play a pivotal role in rebuilding the economy even after the pandemic. Key measures undertaken by telcos in the region include:

• ***Enabling remote working and online education:*** Video conferencing tools and online classroom platforms have been the lifeblood of several companies and educational institutes. With offices closed and travel restrictions imposed, online meetings have helped enterprises from falling apart and continue with their business activities. Minimizing lockdown's negative impact on businesses, telcos in the region have allocated additional bandwidth and provided free access to OTT applications for supporting business continuity solutions.

• ***Facilitating critical network connectivity:*** Telecom operators have rapidly provisioned temporary network connectivity for makeshift health facilities to fight the pandemic. Additionally, teclos have also scaled network investments in order to meet the additional surge in demand for reliable as well as secure connectivity for critical enterprise applications. Along with these services, telcos have also been managing networks for customers, and helping them to operate more efficiently.

• ***Promoting digital channels:*** A major push for digital channels like e-shop portals, facilitating customers to place order for telecom products and services

has been witnessed amid closure of retail stores. Moreover, operators have spurred investments in digital services like online bill payments, and mobile money transfers. Focusing on automating customer service and facilitating customers with self service, operators are also investing in AI powered voice agents and chatbots.

5G will play a key role in economic recovery post the pandemic:

Telecom operators in the region have been investing heavily in 5G network expansions. 5G supports high bandwidth broadband requirements from enterprises, and is also considered as a superior alternative to FTTx connectivity especially to underserved remote areas. In addition, the backbone of several IoT applications across industry verticals is 5G's low latency and massive machine type communication. While 5G network slicing is offering flexibility for enterprises by slicing the network into layers, and configuring them as per the end use requirement. Along with 5G, operators are also investing in multi-access edge computing (MEC); enabling distributed computing capabilities at the network edge and driving new growth opportunities.

5G and MEC will support several real-time services and use cases including autonomous vehicles, drones, robotics, AI based video surveillance, gaming, virtual reality and more. Major benefits that 5G offers to industries include optimized operations, enhanced productivity, and reduced operational cost among others. Also, 5G investments will generate new jobs which will further help in the economic recovery. However, effective government frameworks and appropriate regulation will be crucial for optimizing the benefits of 5G for consumers, businesses and the overall society.

Key areas that 5G can drive economic growth after the pandemic include:

• ***5G in healthcare:*** Digital healthcare will accelerate post pandemic with applications like remote diagnosis and remote surgery expanding rapidly. 5G will bring productivity benefits in healthcare segment and will accelerate new revenue models by empowering more advanced applications like robotic surgery, advancements in tele-health, and healthcare cloud computing.

• ***5G in smart cities:*** 5G has the potential to cater the advanced connectivity requirement of smart cities. It will empower solutions like smart lighting, intelligent traffic management, etc. It will be the key enabler for solutions like AI powered video surveillance, which can further improve public safety by offering first-responder services. Moreover, 5G will facilitate more efficient disaster management solutions and minimize the economic impact of disasters.

• ***5G in oil and gas:*** Oil & gas operators have digitalized several aspects of their critical routine tasks like remote operation, inspection of facilities, monitoring of leaks, servicing of equipments, etc. 5G will enable several emerging use cases like drone inspection, digital twins, etc., helping in achieving optimum performance, and improving productivity, while minimizing safety risks of digital oil fields.

• ***5G in ports:*** 5G will help transform traditional terminals into smart terminals. It will facilitate deployment of several innovative use cases, focusing on improving automation and operational efficiency. Driving efficiency of port operations, 5G will enable remote operations of critical high risk tasks, and data visualization for workforce training and efficient port construction.

• ***5G in manufacturing:*** 5G can be harnessed to empower IoT solutions for smart factories with a focus on cutting down outages and malfunctions; thereby increase productivity. Additionally, 5G can be leveraged to embed more sensors into machines and use the data collected these sensors for proactive fault prevention and process modification.

Conclusion and future outlook:

Like several other industries, telecom has also faced various challenges like disruption in equipment supply chain, decline in sales due to closure of stores, upheaval in customer service centers, difficulty in new services provisioning amid lack of resource availability, and congestion in network due to exponential surge in traffic among others. Despite these challenges, telecom sector have experienced a boom during the pandemic mainly attributed to increasing demand for greater bandwidth connectivity along with virtual private networks (VPN) and remote working solutions especially from enterprises.

The pandemic has provided telcos with a unique opportunity to accelerate economic growth by enabling a new digital society and launching new innovative solutions leveraging technologies like 5G, MEC, and cloud computing among others. There is no doubt that the world economy will be largely driven by digital technologies after the pandemic is over. However, along with the investment in digital technologies, enabling ICT policies and framework will also be critically important for accelerating economic recovery and improving telecom sector's contribution in the GDP. T

The pandemic has provided telcos with a unique opportunity to accelerate economic growth by enabling a new digital society and launching new innovative solutions leveraging technologies like 5G, MEC, and cloud computing.

Etisalat Group reports AED 4.6 Billion consolidated net profits for H1 2020

Board approval of interim dividend for the Q2 2020 of 15 fils per share bringing interim dividend for H1 2020 to 40 fils per share

Etisalat Group announced its consolidated financial results for H1 ending 30th June 2020.

H1 2020 Financial Highlights and Key Developments

- Etisalat Group subscriber base reached 146 million Subscriber.
- Consolidated revenues amounted to AED 25.6 billion and consolidated net profit after Federal Royalty amounted to AED 4.6 billion representing a year over year increase of 3% and resulting in a net profit margin of 18%.
- Consolidated EBITDA totaled AED 13.2 billion resulting in EBITDA margin of 52%.
- Etisalat named 'The Most Valuable Consumer Brand' and 'The Most Valuable Telecom Brand' in MEA region
- Credit Rating Agencies Standards & Poor's and Moody's affirmed Etisalat Group's high credit rating at AA-/Aa3 with stable outlook
- Etisalat partnered with Department of Health, the regulator of the healthcare sector in Abu Dhabi to launch the 'Digital Healthcare' Centre
- Etisalat launched first-of-its-kind telehealth service in the private sector as a continuation of its mission to provide clinical excellence to patients in need.
- Etisalat partnered with Alef Education to enable a series of digital initiatives to empower the region's education sector
- Etisalat unveiled the 5G-enabled smart patrol for Dubai Police, a first in the Middle East and North Africa region
- Etisalat in partnership with Ministry of Interior signs an MoU with Sheikh Zayed Housing Programme to provide villas with the smart fire alarm solution 'Hassantuk'
- Etisalat launched multiple initiatives to support 'Stay at Home' directive including but not limited to:
  - o Free internet to families to facilitate access to distance learning services
  - o More than 10 million Etisalat mobile subscribers enjoyed free browsing to over 800 websites related to education, health and safety
  - o Free access to apps and platforms for distance learning and for government services.
  - o Introducing new innovative applications and services to ensure seamless business continuity during work from home period.
  - o Launched enhanced offers for customers to upgrade their home and mobile plans at no extra charge
  - o Etisalat introduced a wide range of device bundles and free access to Etisalat's unified communication and collaboration platform CloudTalk Meeting to help businesses stay connected
  - o Etisalat deployed a dedicated task force to ensure business continuity, monitor the performance of basic applications and ensue smooth access to data locally and internationally
  - o Establishing command centres equipped with advanced tools to monitor the performance of services provided to government departments, businesses and customers 24/7
  - o Allocating extra network resources and services to the health sector
  - o Providing connectivity to quarantined and other critical areas in the health sector
  - o Conducted Stay-At-Home awareness campaign across multiple channels
- Etisalat partnered with Microsoft to enhance its public cloud first strategy infused with automation and AI
- Digital Financial Services, a joint venture of Etisalat and Noor Bank, partnered with MoneyGram to offer international remittance services in the UAE
- Etisalat completed the acquisition of Help AG, a privately held regional company specialising in the delivery of cyber security solutions and services.
- Etisalat expands 'SmartHub' presence with a Tier 3 data centre facility at two new locations in UAE
- Etisalat successfully launched open virtual Radio Access Network (Open vRAN), becoming the first operator in MENA to achieve this technological feat
- Etisalat launched 'Business Edge', a new comprehensive platform offering a wide range of services and solutions that cater to Small and Medium Business (SMB) customers
- Etisalat launched 'Easy Prepaid' enabling business customers to enjoy prepaid features on existing postpaid plans

H.E. Obaid Humaid Al Tayer, Chairman of Etisalat Group

"Etisalat Group has delivered a good performance in the first half of 2020 considering the circumstances; the world is voyaging through unchartered waters and COVID-19 has affected all industries including the telecom sector. Etisalat managed to adapt, respond and demonstrate resilience as we ensured the delivery of uninterrupted services to our customers and had the privilege of supporting our society through various initiatives.

"We are witnessing an opportunity to fast track digital transformation. The unconventional conditions have spurred the adoption of digital services, bridging a divide by changing customers' behaviour towards digital channels. Etisalat's innovative solutions have catered for the social distancing era, it has enabled remote working and education, it minimised human interactions and increased the pace of automation. Our infrastructure has accommodated the surge in requirements and is ready for more acceleration in digital adoption.

"I would like to thank the UAE leadership for positioning the country as one of the most competitive nations globally. Despite the headwinds posed by today's extraordinary times we continue to pursue our digital goals to meet the distinctive needs of all customers. I would also like to extend appreciation to our shareholders and loyal customers for their sustained confidence during this period."

> "Today the digital revolution is in full force with businesses looking at every window of opportunity to transform their services and solutions. At Etisalat our focus to realise the vision and strategy of 'Driving the digital future to empower societies'."
> *Hatem Dowidar*

Hatem Dowidar, Acting CEO, Etisalat Group & CEO, Etisalat International

"As we conclude the first half of the year, we pride ourselves with our ability to sustain shareholder value while ensuring the safety of our employees , the welfare of our customers, and the continues support to the community. The group's financial performance is a testimony of the strong foundations Etisalat was built on and a reflection of a robust network playing a pivotal role in harnessing solutions and services enabling governments, industries and communities to accelerate digital transformation.

"Today the digital revolution is in full force with businesses looking at every window of opportunity to transform their services and solutions. At Etisalat our focus to realise the vision and strategy of 'Driving the digital future to empower societies' supported customers during these unprecedented times by providing them a plethora of new innovative services and emerging technologies backed with resilient connectivity to mitigate the exponential spikes in the network.

"Despite the global economic pressure, Etisalat is confidently moving forward and progressing positively in enabling societies across its operations. We will continue to focus on capitalising opportunities and enhancing overall customer experience while delivering long-term value for all our shareholders."

Subscribers

- In the UAE the subscriber base reached 11.8 million subscribers in H1 of 2020, while aggregate subscriber base reached 146 million, representing a year over year increase of 2%

Revenue & Net Profit

- Consolidated revenues amounted to AED 25.6 billion and consolidated net profit after Federal Royalty amounted to AED 4.6 billion representing a year over year increase of 3% and resulting in a net profit margin of 18%.

EBITDA:

- Consolidated EBITDA totaled AED 13.2 billion, resulting in EBITDA margin of 52%. T

H.E. Hamad Obaid Al Mansoori
Head of Digital Government - UAE

TRA Chief appointed as Head of Digital Government in UAE

H.H. Sheikh Mohammed merged ministries in a cabinet reshuffle

H.H. Sheikh Mohammed bin Rashid Al Maktoom, Vice President and Prime Minister of UAE and the Ruler of Dubai has appointed H.E. Hamad Obaid Al Mansoori as the Head of Digital Government in a Cabinet reshuffle in a drive to create a more agile government in the UAE. Hamad was previously holding the position of Director-General at Telecom Regulatory Authority (TRA) of the UAE. He has now been assigned to create a centralized portal for all government services in a complete digital Turnaround.

The appointment was made in a move to reshuffle the structure of various public sector institutions and the UAE's Cabinet. The motive behind this move was to ensure that the government makes quicker and effective decisions and to seize the new opportunities presented by the new phase in the country's history- the move to digital.

"The goal is one digital window for the government and a comprehensive and a complete digital transformation. Recent changes have proven that digital government is an indispensable strategic choice and economic security for business continuity in any circumstances," said Sheikh Mohammed.

It may be recalled that H. E. Hamad Obaid Al Mansoori has been awarded the Prime Minister's Medal for Distinguished Director-General in the Fifth Cycle of Mohammed bin Rashid Government Excellence Award. This honor is the culmination of a journey full of awards, achievements and responsibilities on many national levels.

Prior to this appointment, H.E. Al Mansoori was the TRA Director-General, mandated by Federal Law by Decree No. 3 of 2003 and its amendments to regulate the telecommunications sector in the UAE and to ensure fair competitiveness environment in the UAE's market. Al Mansoori is holding this position since the beginning of 2015, as per the Federal Law by Decree No. 14. Moreover, he is a member of the high-level Broadband Commission for Digital Development, which is one of the joint committees between the International Telecommunication Union (ITU) and the UNESCO and is concerned with the worldwide achievement of goals related to digital development.

Since July 2015, Al Mansoori has been the Chairman of Board of Directors of Mohammed Bin Rashid Space Center, the first of its kind in the region, established to achieve the UAE's leading position among major countries in space science by 2021. H.E.'s appointment for this position is another great addition to a career full of expertise, achievements and outstanding contributions in the management of numerous strategic projects at local and national levels. His Excellency, and from this position, supervised the launch of the first Emirati astronaut, Hazza Al Mansouri, to the International Space Station, with close follow-up from the UAE leadership.

Moreover, H.E. Al Mansoori supervised the manufacturing and launching of the satellite (KhalifaSat), setting the foundation of a new era in the national space sector, as KhalifaSat is the first satellite built entirely by Emirati engineers in the UAE. H.E. headed the team that launched the satellite from Tanegashima Space Center in Japan on 29 October 2018. H.E Hamad Al Mansoori is also Vice Chairman of the Emirates Space Agency.

Previously, Al Mansoori held the position of Director-General of the UAE mGovernment since April 2014, in addition to being the Deputy Director-General for Information and eGovernment Sector at TRA from May 2013 to 2015. He contributed towards the management and implementation of several important national projects and initiatives, which played a major role in the provision of various eServices to the customers of different government entities and enhancement of the UAE's position locally and globally in this field.

Al Mansoori is amongst the eminent Emirati figures who is endowed with the trust of the wise leadership and which is illustrated in the nature of responsibilities entrusted to him.

Throughout his career, Al Mansoori has held several advisory positions with many government entities. He was Advisor to the General Commander of Dubai Police for IT Affairs, Technical Advisor to the General Directorate of Residency and Foreigners Affairs, Advisor to the Awqaf and Minors Affairs Foundation for IT Affairs. He was also the Advisor to Dubai Government Public Prosecution for IT affairs from 2008 to 2010.

Moreover, Al Mansoori is the Chairman of the Board of Directors of Emirates Institution for Advanced Science and Technology (EIAST), Board Member of Emaratech for Technology solutions, Member of the UAE Artificial Intelligence Council, Member of the UAE Fourth Industrial Revolution Council. He Held other prominent national positions such as Director-General of Mohammed Bin Rashid Smart Learning Program Pilot Project and UAE Portals' Programs Manager. In addition, he was a member of the Supreme Committee for Information Systems in the Ministry of Labour where he headed the eLinking project along with many other national projects. T

stc Sustainability Report:

Market Value for Entrepreneurship Projects reaches 300 Million and 18% Energy Savings

In its efforts to adopt the best responsible practices and raise the bar in the ICT sector, stc announced the publication of its first Sustainability Report, promoting its strategic role as a digital transformation enabler in S audi Arabia and the region to maximize its ESG impact.

The report unveiled some interesting figures at the sustainability front, including an 18% decrease in power consumption compared to 2018 for buildings and internal transportation and the active contribution to giving over 3 million houses access to optical fiber technology (by installing 217,000 kilometers of new fibers in 2019 in a 23% increase) as well as innovative digital solutions such as the launch of "stc pay", the largest e-wallet service in the region and the provision of all company services through "my stc" app.

The report also addressed support offered to Saudi entrepreneurs through the InspireU program, which incubated 28 startups to support ICT, contributing to the creation of approximately 160,000 full-time and part-time job opportunities, with a market value of SAR 300 million for projects supported by the incubator. In addition, the company undertook to establish 22 medical centers across Saudi Arabia thanks to investments of up to SAR 100 million in collaboration with the Ministry of Health.

The company's sustainability framework includes the provision of high-quality digital communication services and products, enhancement of communication by promoting innovative digital opportunities, and provision of access to significant technologies at affordable prices by developing and adopting the best digital and communication infrastructure.

Through its sustainability strategy, the company will help people build their capacities, enrich their lives, and increase proposed value for stc's key stakeholders, including clients, regulators, suppliers, business partners, investors, and shareholders, through community development, business development, and environmental protection initiatives.

The stc sustainability framework follows a unified vision that benefits its key partners both in Saudi Arabia and throughout the world. Designed to be in line with the aspirations of national strategies, global development plans, and the UN sustainable development principles, the framework sets to maximize the company's positive impact in its business processes and the communication sector as a whole.

By strategically focusing its framework on sustainability, stc can significantly contribute to a sustainable future in fields such as doing business with integrity, maximizing economic impact, enriching life and experiences, expanding access to technology and communications, promoting innovative digital opportunities, caring for the environment, and empowering human resources.

The program falls in line with stc's DARE strategy and new brand identity, reflecting its digital aspirations and focusing on its ESG responsibility. Through DARE, stc seeks to focus all areas of work on preserving its key principles of digitization, asset development, customer experience improvement, and expansion of the company's size and scope, through its three values of dynamism, Drive, Devotions. T

stc announces revenue for Q2 and H1 of 2020

stc's revenue for Q2 and first half of 2020 compared to the comparable quarter and first half of last year increased by 9.67% & 6.91% (respectively), and it distributes SR 1 per share dividends for the 2nd quarter.

stc has announced the company's preliminary financial results for the period ending on 30 June 2020.

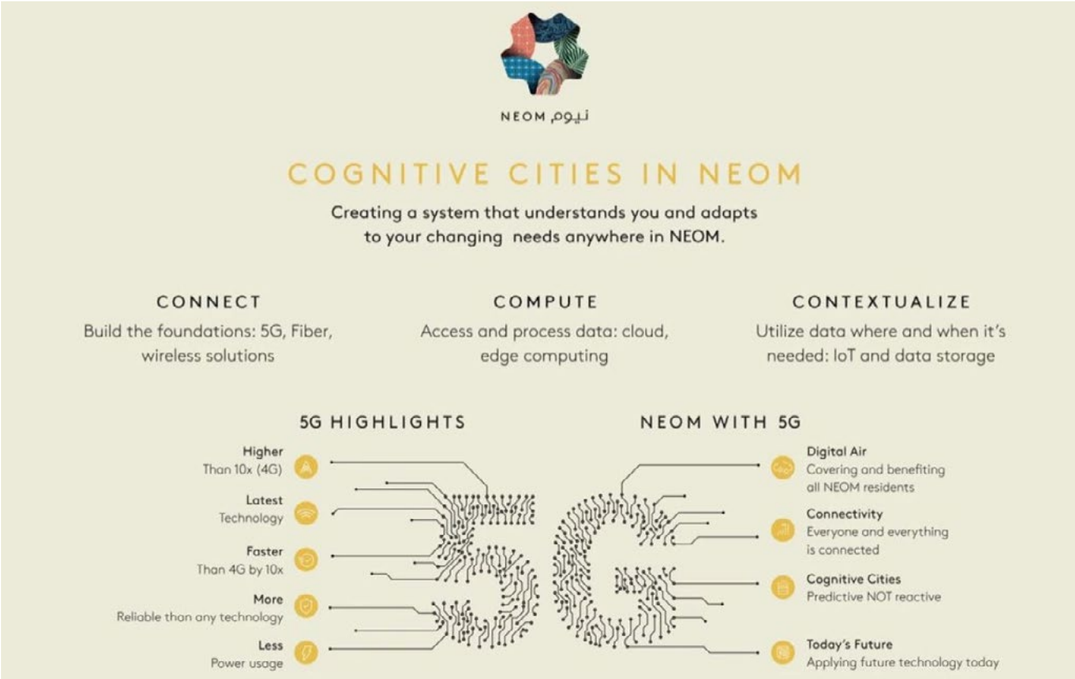
- **Revenues for the 2nd quarter reached SR 14,920m with an increase of 9.67% compared to the corresponding quarter last year. For the first half of 2020, the revenues reached SR 28,855m an increase of 6.91%.**
- **Gross Profit for the 2nd quarter reached SR 8,341m with an increase of 1.63% compared to the corresponding quarter last year. For the first half of 2020, the Gross Profit reached SR 16,537m with an increase of 2.64%.**
- **Operating Profit for the 2nd quarter reached SR 3,062m with a decrease of (11.94%) compared to the corresponding quarter last year. For the first half of 2020, the Operating Profit reached SR 6,066m with a decrease of (10.17%).**
- **Earnings before Interest, Taxes, Zakat, Depreciation and Amortization (EBITDA) for the 2nd quarter reached SR 5,342m with a decrease of (5.55%) compared to the corresponding quarter last year. For the first half of 2020, the Earnings before Interest, Taxes, Zakat, Depreciation and Amortization (EBITDA) reached SR 10,671m with a decrease of (3.35%).**
- **Net Income for the 2nd quarter reached SR 2,724m with a decrease of (4.35%) compared to the corresponding quarter last year. For the first half of 2020, the Net Income reached SR 5,637m with an increase of 0.70%.**

In accordance with the approved dividend policy for three years starting from the 4th quarter 2018, which was announced on 16 December 2018, and has been ratified during the Extra Ordinary General Assembly Meeting on April 24th 2019, stc will distribute a total of SR 2,000 million in cash dividend for Q2 2020, representing SR 1 per share. The eligibility of dividends shall be for the shareholders at the close of trading on Tuesday 28/07/2020 corresponding to 07/12/1441 H and as per the registered shareholders in the register of The Securities Depository Center Company at the end of the 2nd trading day following the eligibility date. Dividend distribution date will be on 25/08/2020 corresponding to 06/01/1442H.

Commenting on these results, Eng. Nasser bin Sulaiman Al-Nasser, stc Group CEO, indicated: the company, despite the emerging epidemic conditions of the Corona Virus (COVID-19), was able to grow its top line by 9.7% in the current quarter compared to the same quarter of the previous year, mainly due to the increase in Enterprise and stc's subsidiaries revenues. This was achieved in spite of the challenges that the group faced due to the decrease in revenues from roaming and Umrah & tourist visitors along with the increase in provisions for doubtful debts as a consequence of Coronavirus Pandemic.

Further, during the same period, we were able to increase the fiber optic customers' base by 21% and broadband by 2.9%. In addition, data revenue increased by 8.6%. As a testimony to stc's leading position, and according to Forbes magazine, stc topped the telecom companies in the MENA region and was ranked the first among telecom companies, fifth among all companies listed in the stock markets, and 335th globally. stc is also recognized as the most effective brand according to the MENA Effie Awards.

stc has been at the forefront of technological innovation in the kingdom. It has always invested in future technologies to ensure that it meets the growing needs of its customers by providing advanced technologies such as 4G and 5G. stc has been focusing its investment in 4G network over the last few years; which resulted in delivering the best service in terms of both coverage and quality, that meets customers' expectation. stc has also embarked on the mission of being the pioneer in 5G technology, through the continuous deployment of 5G in the kingdom. Moreover, in a move that can transform the way consumers use smartphones and devices across Saudi Arabia, stc is localizing the platform for E-SIM for the first time in the Kingdom by obtaining international accreditation for rolling out E-SIM technology. T



NEOM launches infrastructure work for the world's leading cognitive cities in an agreement with stc

NEOM Co. announced its first step to createing the world's leading cognitive cities that rely on leading technology for digital services after signing a contract with stc group to establish a 5G network infrastructure that will accelerate NEOM's digital ambitions. In addition to the one-year contract to develop the network, the partnership also includes the development of an innovation center in NEOM to explore new 5G opportunities.

NEOM's next-generation cognitive cities will support its cutting-edge urban environments, improving the lives of residents and businesses far beyond the capabilities of today's smart cities. NEOM will use the advanced 5G technology in the world, to enable the proactive exchange and analysis of data between NEOM residents and city infrastructure.

stc will build a wireless 5G network enabling present and future 5G applications across NEOM. With speed and capacity 10 times higher than standard 4G networks, 5G in NEOM will enable numerous segments such as Internet of Things (IoT), data analytics, virtual reality, augmented reality, smart homes, and autonomous vehicles. It will also provide the public safety network for NEOM security services.

Commenting on the agreement, NEOM CEO Nadhmi Al Nasr said: "We are glad to form this partnership with a leading national digital enabler such as stc to support our ambition and goal to be an accelerator of human progress and to create the world's leading digitally sustainable, cognitive cities. NEOM's infrastructure will utilize AI, robotics, and human-machine fusion to deliver greater predictive intelligence and enable faster decision making across all NEOM sectors. The procurement and deployment of a future-proof wireless network is a critical first for NEOM in realising our goal of driving innovation in the future digital economy."

The CEO of stc Group, Eng. Nasser bin Sulaiman Al Nasser, added: "This agreement reflects stc's commitment to enabling digital transformation and providing digital solutions across the Kingdom. We are proud to have been chosen to build the infrastructure for the 5G network and an innovation centre in NEOM - the land of the future and a model for sustainability, innovation, development, and prosperity. This agreement comes in line with stc's vision as a digital enabler to develop infrastructure and provide the latest technologies that will enrich the experience of societies and foster innovation, which in turn will contribute to improving the customer experience and moving the digital transformation forward.

NEOM will also trial and test 5G solutions that will allow it to lead in fast-growing, future-focused sectors such as robotics, Artificial Intelligence (AI), and Autonomous Vehicles. Leveraging such technology will open up the enormous potential of NEOM as a new economic driver across a range of industry sectors for the Kingdom. T

stc's Chairman congratulate the Custodian of the Two Holy Mosques on success of the Hajj Season

HRH Prince Mohammed Bin Khalid Al Abdullah Al Faisal, Chairman of stc's Board of Directors, and CEO of stc Group, Eng. Nasser Bin Suleiman Al Nasser, congratulated the Custodian of the Two Holy Mosques, HRH King Salman Bin Abdulaziz Al Saud, and HRH Prince Mohammed Bin Salman, Crown Prince, Deputy Prime Minister, and Minister of Defense, on the success of the extraordinary pilgrimage season 1441H, which was universally appreciated and praised, especially in terms of the level of professional organization and commitment to safety measures and distance between pilgrims.

Nasser noted that stc has kept abreast of the latest technologies and solutions in the telecommunications and information technology industry in terms of services provided to pilgrims and pilgrimage-related government sectors this year. 5G coverage was for instance raised by 119% in the Holy Sites compared to last year.

stc also provided its services online to pilgrims via the company's "my stc" platform and made dozens of maintenance centers, technical emergency teams, service centers, and retail outlets available and equipped with 24/7 online recharge services to meet the needs of pilgrims. T

3 Governmental entities use 4,765 critical communication devices at the Holy Places

The number of critical communications devices used by Ministries of "Health" and "Hajj and Umrah" and Water Company for communication on the Holy Places amounted to 4,765 devices designated for emergency and sensitive services. Specialized Company indicated that it dedicated all its technical and human capabilities to serve the Pilgrims and ensure the success of the pilgrimage season, under the current extraordinary circumstances, by providing a distinctive package of "critical communications" dedicated to emergency and sensitive services to secure providing the best services to the relevant sectors.

stc affiliate also provides coverage networks for Tetra services as well as (press and talk) service, which is the next generation of critical communications for facilities that require immediate communication with reliability and safety through broadband technology, and other services in Makkah region. stc constructed, developed and expanded several sites, alongside with the Holy Places. It established other networks in critical areas of the Kingdom, e.g. most airports and ports of the Kingdom and the Industrial Zone. There is a plan to cover all major cities and critical regions in the Kingdom.

Critical communications can accommodate huge working groups, in addition to its high security and high encryption level for calls, and its 99.99% dynamic operation in emergencies. Ordinary communication networks are not able to handle call traffic in emergencies, especially in crowded places, such as the Holy Places, where more than 2 million communicating users meet in one place. T

Preparing for the future by rethinking the campus network

Alaa Bawab
VP for Enterprise Networking Business at Huawei ME

New technologies are needed to better handle the vast amounts of data that will be generated in the coming years. By 2025, we anticipate a world with 100 billion connections, in which 85% of enterprise applications are on the cloud and global data reaches as much as 180ZB. With that in mind, we recently welcomed network technology experts from around the Middle East to participate in the Huawei Middle East IP Club Carnival 2020 to discuss the rapid pace of digital transformation and how connectivity is accelerating in the world around us.

One of the key focus points was rethinking the modern campus network. Campuses already play an important role in people's work and life. By leveraging emerging ICT technologies, such as cloud computing, the Internet of Things, big data, and artificial intelligence, smarter campus solutions can address challenges such as low management efficiency, poor service experience, serious energy waste, weak comprehensive security, and high operational costs. Today's solutions are already addressing the increasing demand for latency-sensitive and bandwidth-hungry applications on campus networks by guaranteeing the quality of key services, enough bandwidth per user, and other requirements so that enterprises can experience seamless connectivity within their campus.

From government to academia, healthcare, and many other sectors, all areas of our society will be able to benefit from developments in campus technology. It is also becoming increasingly easier—and faster—for enterprises to build fully wireless, secure workplaces, and campus networks based on next-generation technologies to meet future digitalization demands.

This is seen most clearly in the acceleration of the WiFi 6 ecosystem. WiFi 5 was fine for the connectivity needs of yesterday, but tomorrow's world needs the advanced abilities of WiFi 6. The increasing popularity of WiFi 6 amongst global organizations was noted in a report by Dell'Oro Group which examined 2019 – the first year that WiFi 6 went into commercial use. According to the report, the overall revenue of the global WiFi 6 market grew explosively in the first three quarters of 2019, growing to 30 times that of 2018, while revenues for WiFi 4 and WiFi 5 decreased slightly.

While current WiFi standards will remain relevant for the quantities of data generated by most home users for the time being, areas of intense connectivity – offices, entertainment and sports venues, airports, educational institutions, hotels and so on – will undoubtedly benefit from WiFi 6. With the ability to support four times higher network bandwidth and user concurrency than WiFi 5, WiFi 6 is the solution to providing a heightened user experience and empowering corporate connectivity. It has already been adopted by a growing number of enterprises, schools, hospitals and other pioneers to connect everything on their campus networks. These early adopters use WiFi 6 to deploy innovative applications such as 4K/8K HD video conferencing, virtual and augmented reality (VR and AR) interactive teaching, telemedicine, and intelligent robots.

It has thus been important for us to spearhead the shift to WiFi 6 by helping enterprises to build networks without coverage holes, provide services with no waiting time, and achieve no packet loss during roaming. Moreover, solutions like Huawei's AirEngine WiFi 6 is unique in its ability to slash network latency from 30ms down to just 10ms, as a result of built-in 5G-powered antenna and algorithm technologies. With such low latency, wireless 4K HD conferences are conducted with seamless connectivity. It also eliminates any dizziness from the VR/AR experience and results in zero packet loss during AGV roaming.

In today's world, with more people working from home than we have ever experienced before, WiFi 6 can power remote collaborative offices that are able to support up to 400 concurrent users, and enable seamless anytime working via mobile apps. But even when things return to whatever our new normal may be, WiFi networks will remain central to not only the efficiency and connectivity abilities of offices, schools, hotels and more, but to their digital transformation.

The truth is that our world is constantly changing. Many businesses in the region are still being challenged to fully utilize connectivity and digitization to their benefit. That must start by rethinking the cloud campus, and looking to solutions like reliable, data-capable WiFi 6 networks to deliver faster speeds, lower latency, and higher stability along their digital transformation. T

1.https://www.huawei.com/minisite/giv/Files/whitepaper_en_2018.pdf

Huawei Rotating Chairman highlights practices and prospects of 5G in Digital Transformation for Industries at GSMA Thrive

During the recent virtual GSMA Thrive event hosted by GSMA, Huawei executives delivered keynote speeches, shedding light on how industries are leveraging 5G to embrace digital transformation in a faster and more efficient manner. The online event brought together industry leaders to discuss technologies like 5G, AI, IoT, and Digital Transformation and how they are influencing every part of our lives, society and businesses.

Huawei's Rotating Chairman Guo Ping delivered a speech titled "5G in a post-pandemic world: Countdown to the digital blastoff". In this speech, Ping discussed the social value of ICT in combating COVID-19, as well as the practices and prospects of applying 5G in digital transformation for industries.

"With the help of 5G, industries are going digital at a faster pace. Next, we will work with our partners on industry applications to help our customers unleash the potential of 5G, generating the first round of dividends from major 5G applications," Ping said.

He pointed out that during the pandemic, the social value of ICT applications developed based on 5G, AI, cloud, and big data has been greater than ever.

Ping confirmed that Huawei will continuously support open and collaborative standards and industry organizations in their efforts to safeguard a unified global communications industry. Global collaboration is critical to successfully beating the virus, no matter whether it is in the medical or communications sector.

He also expressed his belief that ICT is extending to every industry on a large scale, becoming a key enabler of social development and generating multiple waves of technology dividends for all industries.

In another keynote speech entitled "5G Brings Five Opportunities with New Value", Mr. Gan Bin, Chief Marketing Officer for Huawei's Wireless Network Solutions elaborated why 5G is the digital foundation of new infrastructure to upgrade connectivity, AI, cloud, computing, and industrial applications and inject new vitality into economic development.

"5G significantly improves the experience of connectivity, expanding 4G's people-centered connections with smartphones to a full range of scenarios that span not only smartphones, but also smart wearables and homes. This will add greater convenience to daily lives," Gan said.

5G eliminates data upload limitations, meaning that a massive amount of data can be transferred from hundreds of millions of devices to cloud servers to provide AI operations with tremendous data, which will greatly reduce the training period. It enables devices to make the best of the powerful computing in the cloud to relax requirements on local computing, reducing device costs. Furthermore, 5G enables the transfer of AI operation results to devices to greatly expand the availability of AI-based functionality.

Constrained by insufficient local capabilities, less than 2% of the nearly 40 ZB data generated in 2019 was saved. 5G stimulates the demand for huge storage worldwide, offering a new option to implement cloud storage to save the massive data.

Furthermore, limited by current technology, less than 10% of all data has been analyzed and applied so far. 5G stimulates the demand for enormous computing power, enabling devices to leverage powerful cloud computing capabilities anytime, anywhere.

"While 4G has changed lives, 5G is set to change society. 5G has proven an indispensable enabler for business digitalization and will greatly improve the operational efficiency across industries," Gan concluded.

For her part, Zhu Huimin, Director of Marketing Execution Dept of Huawei Wireless Network Product Line, delivered a keynote speech titled "AI for 5G — Network Automation Empowers the Intelligent 5G Era. One of the most significant driving forces for future mobile service innovation and development is the automated operations capability of mobile networks based on AI. T

Huawei unveils CloudCampus 2.0 solution

Network technology experts from around the Middle East participated in the Huawei Middle East IP Club Carnival 2020, to discuss the rapid pace of digital transformation and how connectivity is accelerating in the world around us, completely transforming the way we live and work. The two-day event was held online on July 13 and 14 under the theme 'Rethink IP: New Connection, New Dimension'.

During the virtual event, Huawei took a step further in campus networking by unveiling CloudCampus 2.0, its latest campus network solution. Standing out with intelligent upgrades in connectivity, experience, and O&M, this future-proof solution helps enterprises of all sizes to build gigabit fully-wireless smart campus networks and accelerate the connectivity of everything in enterprise campuses.

CloudCampus 2.0 addresses the increasing demand of latency-sensitive and bandwidth-hungry applications on campus networks, by guaranteeing quality of key services, enough bandwidth per user, and other requirements so that enterprises can experience seamless connectivity within their campus. Within the CloudCampus 2.0 range is a full line-up of all-new, high-bandwidth, high-performance wired and wireless network devices, able to accelerate digital transformation for enterprises of any kind.

New CloudCampus 2.0 products include Huawei AirEngine 8760, the industry's only Wi-Fi 6 AP to support 16 spatial streams and delivery 10.75 Gbps throughput; Huawei's all-new CloudEngine S series multi-GE switches (CloudEngine S5732-H), which provides up to 48 ports capable of GE, 2.5GE, 5GE, and 10GE speeds and allow on-demand rate upgrades through software, and Huawei CloudEngine S12700E, which provides 40-port 25GE line cards with a large buffer of 4 GB and combines these advantages with HQoS to ensure uncompromised experience of key users and applications.

The Huawei Middle East IP Club is an initiative aimed at building an open, cooperative and sharing platform and comprising network technology experts from around the region. During the interactive Carnival 2020 online


Dr. Li Xing

event, members had the opportunity to share discussions with global and regional experts on the latest wireless campus technology trends, and how enterprises can build fully wireless, secure workplaces and campus networks based on next generation Wi-Fi 6 technologies to meet future digitalization demands.

Dr. Li Xing, President of the Campus Network Domain, Data Communication Product Line, Huawei said: "The Huawei Middle East IP Club Carnival 2020 is an essential event to share knowledge and experiences, and discuss the most pressing matters in the digitization journey today. Our world is constantly changing as a result of rapid advances in technology, and many businesses still do not understand how to fully utilize connectivity and digitization to their benefit. By bringing together the region's foremost minds in IP, we are able to create strong platforms for dialogue that will see exciting new pathways opening up for businesses and individuals across the region to take advantage of the best practices."

During a panel discussion, 'How can enterprises accelerate digital transformation based on the next-generation all-wireless campus network,' the online event witnessed industry leaders sharing use cases and presenting how challenges were overcome in their enterprise campus networks, as well as success stories in campus digital transformation in an ever-changing business scenario. Panelists included Bill Menezes, Director Analyst, Gartner; Eng. Saad AlMasradi AlQahtani, Assistant Deputy Minister, Digital Technologies at Ministry of Health Saudi Arabia; Saud Al Salmi, Network Department Director, Oman Royal Court Affairs; Dr. Li Xing, President of the Campus Network Domain, Data Communication Product Line, Huawei; Dr. Osama Aboul-Magd, Chair of IEEE 802.11ax, Chair of IEEE 802.11 HEW SG, Chair of IEEE 802.11ac, Huawei, and Faisal Malik, CTO, Enterprise Group, Huawei Middle East.

"Wi-Fi6 has been a true enabler for our digital transformation, and has helped us to overcome the challenges of the current situation. We have been able to provide advanced patient-centric healthcare services, from remote collaboration to telemedicine & patient monitoring, eventually easing patients' lives." commented Eng. Saad AlMasradi AlQahtani, Assistant Deputy Minister, Digital Technologies at Ministry of Health Saudi Arabia.

"Huawei's all-wireless campus technology, such as Wi-Fi6 has enabled us to adopt various government services in a wireless environment and has helped us a lot by providing benefits such as much better network coverage, improved capacity & more efficient video broadcasting for 4K and 8K video, ultimately enhancing overall user experience." added Saud Al Salmi, Network department director, Oman Royal Court Affairs.

Event participants also took a virtual tour of the Huawei Data Communications Network Innovation Lab and the Songshan Lake campus in China, to see how the company leverages cutting-edge network technologies for its own digital transformation.

"Businesses are going digital faster than ever before," Dr. Li Xing added. "During this process, demand will continue to grow for intelligent IP networks that provide super capacity, intelligent experience, and autonomous driving. Moving forward, we will continue to invest in innovation, and innovate together with our customers and partners, to maintain a lead in intelligent IP networks and help relevant standards mature." T

Huawei launches latest cutting-edge productivity tool IdeaHub which creates an all-scenario smart office

Huawei has officially launched its IdeaHub series product in the Middle East that can create an all-scenario smart office for the cloud era, and boost production efficiency for enterprises.

Huawei IdeaHub is an innovative productivity tool that integrates multiple functions to create an intelligent endpoint for users. Features include intelligent handwriting, 4K wireless projection, video conferencing, and the open Android AppGallery, making it an ideal addition for collaborative spaces, such as meeting rooms, executive offices, and more.

Differentiated from other Interactive Flat Panel Displays, Huawei IdeaHub cares most about user experience. By featuring the 35ms lowest writing latency and intelligent recognition capability, it enables the smoothest writing experience. AI technology is comprehensively adopted to develop features such as virtual Acoustic Baffle, auto-framing, and voice tracking. Therefore with 20 kHz full band audio, and an array of 12 microphones embedded, it picks up human voices during a video conference in a radius of 8 meters crystal clear and accurately locate the source of the speaker with precision of half degree.

"Collaborative smart ecosystems are essential in a modern, connected office," said Pan Yong, Vice President, Intelligent Vision and Collaboration Technical Sales, Huawei Cloud and AI Business Group. "Huawei IdeaHub leverages cloud and AI capabilities to deliver a seamless, user-centric experience, designed to enhance the way teams work together, wherever they may be in the office. This is a key component of our new 1+3+X strategy, which will guide Huawei's innovation in the years to come as we seek to deliver superior products to our customers, enabling them to take full advantage of our increasingly digital world."

The increasing demand for more efficient communication and the emergence of technologies such as 5G, cloud, and AI have led to a new era of smart offices, where work is possible anytime, anywhere. Huawei Intelligent Collaboration combines more than 20 years of expertise in audio-visual R&D with its powerful cloud and 5G technologies, to develop the "1 + 3 + X" strategy, in turn enabling widespread use of 4K video and AI in combination with productivity tools — establishing all-scenario smart offices.

1 indicates the office digitization and enterprise reconstruction based on WeLink, an intelligent work platform provided by HUAWEI CLOUD. **3** indicates three types of intelligent collaboration devices: the video conferencing series for work conference scenarios, the IdeaHub series for team collaboration, and the intelligent desktop series for home offices. X represents open cooperation and ecosystems for software and hardware, where Huawei works with ecosystem partners to provide services for enterprise users across diverse industries. The 1 + 3 + X strategy will bring the digital world to every conference room, office, boardroom, and home. T

First-of-its-kind

SAMENA Council Leaders' Summit 2020 unveils cross-industrial 5G readiness and lays out transformative priorities for the decision-makers and change-makers across the public and private sectors for the next decade

SAMENA Telecommunications Council conducted its annual Leaders' Summit 2020 on July 9th as the world's first-of-its-kind digital remote-collaboration experience among global and regional industry leaders and decision-makers, spanning multiple geographies and time zones.

Global bodies of renown, including special ICT development agencies of the United Nations, international financial institutions and inter-governmental economic cooperation organizations were among the most prominent thought-leadership contributors in the leadership congregation, virtually attended by hundreds of participants across the globe.

The SAMENA Council Leaders' Summit 2020 also witnessed an exceptional

representation of 15 members of the UN Broadband Commission for Sustainable Development.

Conducted from Dubai with the patronage and support of Telecommunication Regulatory Authority (TRA) of the UAE and a special guest-of-honour address by the UAE Minister of Tolerance & Co-existence, Sheikh Nahyan bin Mubarak Al Nahyan, the Leaders' Summit 2020 was 5G-powered in strategic collaboration with Huawei Technologies Middle East. Leaders and experts representing various industries ensured their remote participation through SAMENA Council's digital remote-collaboration platform.

The Summit brought to light ways and means by which 5G adoption could be accelerated, and how 5G networks can support investments in various sectors such as transportation, health care, education, utilities, financial services, energy and others while creating a new socio-economic momentum in all aspects of social and business environments in a meaningfully digitized, integrated, smart, and useful manner.

Synergistic and successful use of 5G across various industries, as well as the provision of public- sector services, require understanding some key benefits and real-life use-cases of 5G, with some having been lately tested in emergency situations in the wake of COVID-19. Many of these use cases for both consumers and enterprises were showcased during the Leaders' Summit 2020 via a live 5G exhibition, courtesy of Huawei. In so doing, the Leaders' Summit's focus, steered under the theme "5G + X: Harnessing 5G Across Industries for Investment Revival", was achieved not only through knowledge exchange but through physical demonstrations, backed by expert analyses on how 5G business models can and need to change to accommodate new digital adoption trends catalyzed by the COVID-19 pandemic, and how regulation must too evolve from traditional mindsets to new-age approaches.

The SAMENA Council Leaders' Summit 2020 proved that, in the Year 2020, amidst the COVID-19 crisis situation, global and regional leaders' collaboration is more crucial than ever before. Moreover, understanding 5G's necessity and capabilities now require quick decision-making and action in achieving the next-generation of digital connectivity.

The presence of decision-makers and stakeholders, ranging from heads of state, heads of global bodies, leaders from the regional policy and regulatory circles, and CEOs from telecom and non-telecom private sectors joining into the conversations from across the world in the one-day remote leadership congregation demonstrated will among top decision-makers to collaborate and address requirements of the post-COVID world, having already entered the

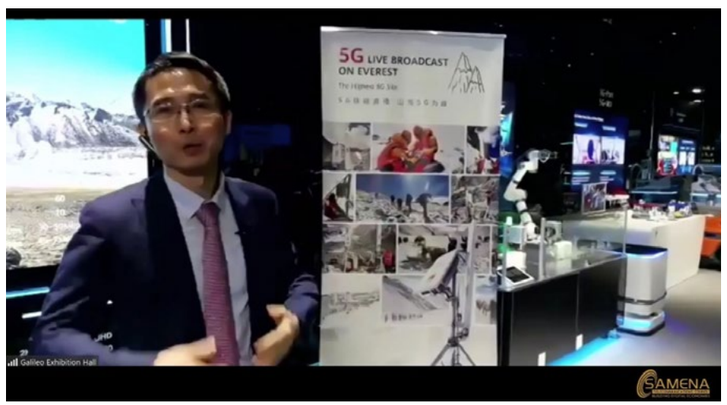
4th industrial revolution. To this effect, the discuss agenda of the Leaders' Summit was highly relevant to global aspirations and globally agreed ICT developmental goals, regional trends and transforming socio-economic trends, innovations in technology, and shifting business processes and models. The Summit also reflected on the role of the Telecom Operators with decisive, timely, and resilient measures taken to control the pandemic, and it was agreed that, had 5G was already in place at the required scale, the response to pandemic management would have certainly been different and much stronger.

Keynotes from leaders emphasized industry issues that are more societal in nature than business, but which are integral to the industry dialogue, and SDGs. Each of the speakers focused on a unique perspective, including on the priorities for the next decade; child protect ion online; developing markets and their ambitions and challenges in digital transformation, among others. Queen Silvia of Sweden's address, in particular, recognized the heroic role of Telecom Operators providing connectivity, and urged the Industry to recognize that not only do the industry players need to directly help combat COVID,

but to also help mitigate its numerous hidden consequences, including dangers that lurk in the digital space for children and young people.

Heads of regulatory authorities recognized that despite its drastic impacts, the prevailing pandemic has played a significant role in accelerating the understanding of the 4th Industrial Revolution, which requires 5G and allied technologies, such as artificial intelligence (AI) and their use be leveraged in providing unconventional solutions across all walks of human life and business activities.

As a routine part of its agenda, the Leaders' Summit 2020 also included diverse discussion panels and a dedicated Huawei 5G Ecosystem Conference, held for the third consecutive year during the Summit under the theme "Unleash 5G potential, build a better world".



Participants reviewed 5G ecosystem cooperation in the Middle East, and how 5G paired with complementary technologies such as cloud, AI, and AI-driven autonomous and BVLOS commercial drone applications, can inspire new vertical industry applications. Today that ranges from improving SME competitiveness to the digitization of oil & gas operations in the Middle East and globally, all of which boost economic potential by enhancing industrial processes and productivity.

Bocar-SAMENA-Leaders-SummitBocar BA, CEO & and Board Member, following an overwhelming response from the Industry on the timeliness, agenda, and mode of execution of the SAMENA Council Leaders' Summit, has stated: "In the wake of acceleration in 5G readiness as we witnessed during the Summit and new innovative developments that are already happening, and given the anticipated role 5G will play in advancing other industries and new growth streams, thereby catalyzing new economic development opportunities across established and nascent market segments around the globe, SAMENA Council's Leaders' Summit 2020 has served as the new destination for the digital space players and decision-makers to make accelerated progress in digital cooperation-building and digitization for the next decade. I present my gratitude to each leader for their gracious presence and inspirational messages, and to each speaker and moderator for their invaluable contributions. The contributions made during this Leaders' Summit by each global body, by each regional entity, and by every individual active in our thriving ICT Industry will be essential for our future success."

This year, as the world's first virtual congregation of its kind, centered on and powered by 5G and allied technologies, the SAMENA Council Leaders' Summit 2020 served as a true representation of the world's most developed and developing digital economies.

Leaders' Summit demonstrated both global and regional ICT stakeholders' commitment to work together and diverse market representation, with leaders representing the UAE, Saudi Arabia, China, UK, USA, Sweden, Pakistan, Egypt, Russia, Turkey, Malaysia, Switzerland, Kuwait, France, Oman, Bahrain, Belgium, Ireland, Colombia, South Korea, Ireland, among other nations, sharing their experiences and expertise as well as future visions for realizing 5G+X, where "X" stands for all infrastructure and cloud-based allied technologies and all industries and sectors that will be crucial to creating a sustainable 5G ecosystem and, in turn, for revitalizing the economies as well as catalyzing new financing models and investments. T

SAMENA Council's Leaders' Summit 2020

Al-Nasser urges for 5G adoption across industries to revive the economy and renew investments plans

stc group CEO and Chairman SAMENA Council, Nasser Al-Nasser calls CITC leaders to work closely together on addressing present-day challenges and to make full use of future opportunities while staying safe, and remaining optimistic about the future, while facing challenges in the industry.

He confirmed that 5G adoption across various sectors and industries to revive the economy and renew investment planning, "adopting 5G is an opportunity to reap is timely benefits across all industries that are at the forefront of our socio-economic recovery efforts, following the debilitating effects of the pandemic". He said, in his keynote speech among the public and private-sector leaders, congregated by SAMENA Council, in SAMENA Council's Leaders' Summit 2020, under the title: "5G + X: Harnessing 5G across Industries for Investment Revival".

"This certainly is a new digital communication experience for all of us, and I, as Chairman of SAMENA Council, hope that this would prove to be a worthwhile effort, given the complexity of this leadership event, which is being held with the esteemed patronage of the TRA UAE". Al-Nasser Said.

In addition to the many challenges COVID-19 has presented, Al-Nasser reaffirmed that CITC industry leaders need to accelerated cooperation-building, which require an unprecedented level of mutual engagement, participation, collective wisdom, and exchange of expertise.

The COVID-19 pandemic has shown clearly what the availability of telecom networks does to contribute to better managing and living through the tough times. Apart from quick reactionary responses and measures are taken by Telecom Operators with respect to ensuring connectivity and quality-of-service, COVID-19 applications to track & trace new infections have been very helpful.

"Emergency decisions taken over the past six months have indeed laid a foundation for a 5G Cultural Shift, with all necessary mindsets, practices, capabilities, attitudes required to be in place for treading the next decade of connectivity and connectedness, until we fulfill the Connect 2030 global agenda."

Nasser Al Nasser

Chairman of SAMENA Council, Nasser Al-Nasser Added: "emergency decisions taken over the past six months have indeed laid a foundation for a 5G Cultural Shift, with all necessary mindsets, practices, capabilities, attitudes required to be in place for treading the next decade of connectivity and connectedness, until we fulfill the Connect 2030 global agenda.

The new 5G networks promise a multitude of life-changing smart solutions across a spectra of tasks and roles. It is therefore essential to understand how 5G and various allied technologies, including, AI, Big Data Analytics, Cloud, IoT, among others, can impact and change our societies and how they can be meaningfully and constructively introduced to benefit all stakeholders inclusively.

The collaboration required between CITC leaders include well- responses among Operators and Regulators, including the release of additional spectrum on temporary bases to ensure sufficient network capacity. He explained: "The implementation of extensions of deadlines on a temporary basis and the facilitation of license renewals for vital digital service providers; temporary loosening of traffic management rules and prioritization of critical digital services over the non-critical content , clearly demonstrate". T

Experts say expanding 5G will boost regional economies during COVID-19 recovery

Public and private sector leaders discussed accelerating 5G connectivity at recent SAMENA Telecommunication Council Leaders' Summit

A dedicated Huawei 5G Ecosystem Conference was held for the third consecutive year under the theme "Unleash 5G potential, build a better world"

Telecommunications leaders and experts from the region and across the world recently gathered at the SAMENA Telecommunication Council Leaders' Summit to review plans for unleashing the potential of 5G networks to boost economies and societies in a post COVID-19 environment. Held virtually for the first time due to social-distancing requirements, the Summit was hosted by Huawei for the seventh consecutive year.

This year, the SAMENA Telecommunications Council Leaders' Summit welcomed H.M. Queen Silvia of Sweden, Founder of World Childhood Foundation; H.E. Houlin Zhao, Secretary General of the ITU; Mats Granryd, Director-General GSMA; Isabelle Mauro, Head of Telecommunications at the World Economic Forum in the USA; Mark Spelman, Head of Thought Leadership at the World Economic Forum in Switzerland; Dr. Boutheina Guermazi, Director - Digital Development at The World Bank Group in the USA; Dr. Sanguchul Lee, Chief Advisor of LG Uplus and LG Group; and Mr. Kamarul A. Muhamed, Founder & Group CEO of Aerodyne Group.

Charles Yang,
President of Huawei Middle East

Ryan Ding
President of CNBG Group at Huawei

Summit attendees also included senior executives from telecommunications service providers, local regulatory authorities, global NGOs, and other ICT industry professionals representing decision makers for different verticals and government entities in countries from across South Asia, the Middle East, North Africa, Asia, Europe, and beyond.

The Summit was held under the theme "5G-X: Harnessing 5G Across Industries for Investment Revival" and highlighted how technology and ICT infrastructure play a significant role in our societies and economies.

The COVID-19 pandemic demonstrated the need to strengthen digital infrastructure to better prepare societies for future crises and to make systems more resilient and sustainable, guaranteeing a better and more effective outcome.

A shift to cloud, IoT, and better integration of AI into the public health response was also spotlighted, in addition to harnessing of other technologies for smart service delivery, which should be a key priority moving forward.

SAMENA Telecommunications Council Leaders' Summit stressed on topics which are more societal in nature than business-focused, but are essential to industry dialogue. Attending speakers shed light on the impacts of collaborative efforts when deploying technology in the Middle East region to overcome digital transformation challenges. The Summit also explored how ICT stakeholders can work together with industry verticals to turn their vision into reality at the local and regional level.

Summit highlights included a dedicated Huawei 5G Ecosystem Conference held for the third consecutive year under the theme "Unleash 5G potential, build a better world". Participants reviewed 5G ecosystem cooperation in the Middle East, and how 5G paired with complementary technologies such as cloud, AI, and AI-driven autonomous and BVLOS commercial drone applications, can inspire new vertical industry applications. Today that ranges from improving SME competitiveness to the digitization of oil & gas operations in the Middle East and globally, all of which boost economic potential by enhancing industrial processes and productivity.

The conference was led by You Qianwen, VP of Huawei Middle East, and Wang Su, VP of Carrier Network Business Group Marketing at Huawei Middle East. The conference was attended by industry experts including Ahmed Al Sharif, General Manager – Network at STC Kuwait, Cesar Andres Lopez, CEO of Datumcom, and Kamarul A Muhamed, Founder and Group CEO of Aerodyne Group.

With more economies becoming digital today, the Summit also explored business resilience strategies in a hyper-connected world. Andy Purdy, Chief Security Officer for Huawei USA, was one of the experts leading the discussion on what regulatory frameworks will be needed to help vertical industries as well as governments to leverage cloud environments for future efficiency.

Ryan Ding, Executive Director of the Board and President of Carrier Network Business Group at Huawei, noted: "Despite the unprecedented challenges we are facing, governments, regulators, and operators across the globe have spared no effort to maintain social stability, protecting peoples' livelihoods and helping the entire society fight against COVID-19. The applications of 5G will speed up enterprise digitalization in the Middle East and greatly stimulate the economy. The Middle East in particular is already expected to become a reference in 5G commercialization around the world, and together, we have ensured the normal utilization of network services during the pandemic. Looking ahead, Huawei has the responsibility and confidence to work with operators, partners, and vertical industries to achieve 5G business success—promoting the development of the 5G ecosystem to help enterprises to improve their competitiveness."

Charles Yang, President of Huawei Middle East delivered the opening keynote of the summit commenting: "Although the pandemic has brought uncertainty to our lives, the advantages of 5G infrastructure are increasingly clear. The outbreak has led to increased demand for ICT solutions specifically in areas like 5G amid a boost in network usage and 5G 2B innovations. Meeting that demand will require new forms of public-private partnerships based on open collaboration, supporting strong industry policies that will enable social value, economic development, and provide enhanced service experiences to consumers across the region."

Anjian, President of Carrier Networks Business Group at Huawei Middle East, added: "The ICT industry is the foundation and cornerstone of socio-economic restoration today. Quite simply, 5G brings agility, productivity, security, and intelligence to all industries. Moving forward, stakeholders should work on five different aspects to realize 5G momentum for consumers, enterprises, and governments. This includes a focus on technology innovation, ecosystem amplification, standards unification, business exploration, and growth-oriented collaborative policy. In the post-pandemic era, multi-level collaboration will be the only way to navigate through tough times." T

Huawei has released its 2019 Sustainability Report. The report explains the progress that Huawei made in supporting network stability and security, reducing emissions, responding to climate change, implementing its TECH4ALL digital inclusion action plan, and supporting the UN's Sustainable Development Goals (SDGs) over the past year.

Supporting network stability remains a major part of Huawei's social responsibility and mission. During emergencies like earthquakes, typhoons, tsunamis, and even armed conflicts, Huawei employees remain in the heart of the crisis to restore communications networks and support smooth network operations. In 2019, Huawei maintained network availability during more than 200 major events and natural disasters.

"Over the past year, we faced challenges the likes of which we have never seen. And we stood strong," said Liang Hua, Chairman of Huawei. "We have worked day and night to patch the holes in this beleaguered business of ours, ensuring business continuity and the timely delivery of products and services to our customers. We have helped roll out networks worth hundreds of billions of dollars in more than 170 countries. Ensuring the stable operations of these networks and providing people with the best available technology is not only our purpose, it is the central tenet of our social responsibility."
Huawei also disclosed its mid- and long-term targets for carbon emissions reduction, circular economy, and renewable energy, as well as its progress in 2019.

Working towards emissions reduction, the energy efficiency of Huawei's main products was improved by up to 22%. In 2019, Huawei used 1.25 billion kWh of clean energy, which is equivalent to reducing 570,000 tons of CO_2.

To contribute to a circular economy, Huawei is committed to maximizing the utilization of resources throughout the product lifecycle. For example, 86% of the products returned to the company were reused, and only 1.24% of its e-waste was landfilled.

Huawei is also working to use more renewables. The photovoltaic (PV) plants built on Huawei campuses have a combined capacity of 19.35 MW, and generated 13.57 million kWh of electricity in 2019. The company is also applying its smart PV solution on a larger scale, such as at the 300 MW PV plant in Argentina's Jujuy Province. This PV plant generates 660 million kWh of electricity annually, which is enough to power 160,000 homes.
Huawei is committed to furthering digital inclusion and making digital technology accessible to all. In 2019, Huawei launched the RuralStar Lite solution, which greatly reduces site construction costs and connects more than 40 million people in remote places. The solution offers connectivity across all types of terrain such as plains, hilly regions, deserts, and island chains. Huawei has also worked with its partners to build the DigiTruck mobile digital classroom, which has provided digital skills training for nearly 800 Kenyans living in remote regions. In September 2019, Huawei signed an MoU with the UNESCO Regional Office for Eastern Africa. The two parties will work together to take the DigiTruck to more countries and make digital skills accessible to all Africans.

Huawei said in the report that ICT will play a critical role in achieving the UN's SDGs and called on the whole industry to work together to promote socio-economic development, environmental protection, and the well-being of humanity.

"Huawei believes in openness and collaboration for shared success. We are working with industry partners, such as our suppliers, to build a thriving industry ecosystem," said Tao Jingwen, a board member and Chairman of the CSD Committee of Huawei. "We are fully confident that we can overcome these challenges. We will stay the course and continue creating value for our customers and the broader global community." T

Media Roundtable

Huawei Middle East President: Huawei remains focused on 5G advancements in the Middle East

As nations across the Middle East are rapidly leveraging technological advancements to re-ignite growth following the COVID-19 pandemic, Huawei's regional leadership sees clear opportunities to support local government, societies, and businesses alike. Charles Yang, President of Huawei Middle East, recently explored such opportunities in an open media roundtable hosted virtually across ten countries in the region.

"In the Middle East, we were in fact in the first wave of 5G commercial launches globally."

The executive's comments centered on the development of 5G networks and the associated benefits for other vertical industries. "Today, ICT companies in the region have a critical role to play in the evolution of digital economies working alongside governments, NGOs, and local communities to harness technologies like 5G to spur industrial innovation and investment," contends Yang.

"The outbreak has led to increased demand

for ICT solutions, specifically in areas like 5G amidst a boost in network usage. There is simply a huge amount of data traffic now being generated for personal and business use, and 5G is the best option to ease such network pressure."\

Several countries in the Middle East were, in fact, in the first wave of 5G commercial launches globally. Many regulators took a collaborative approach to 5G spectrum allocation and licensing, with large-scale rollouts beginning as early as 2018.

"The use cases for 5G are practically unlimited, although certain sectors can stand to benefit more in current circumstances, such as healthcare, education, transportation, and energy, to mention a few," notes Yang. "But transitioning towards a smarter society, in general, requires strong partnerships between the public and private sectors. The need to develop the 5G ecosystem, including the talent ecosystem, is clearer than ever."

"Security and privacy protection to remain a top priority for Huawei."

One area that collaboration is being seen is in the concept of 5G+X; the combination of 5G connectivity with other advanced AI, IoT, and cloud technologies. In last year's GSMA report "The Mobile Economy Middle East & North Africa", the telecom industry body estimated that there would be around 45 million 5G connections across the region by 2025, with the contribution of mobile technology and services to the MENA region reaching more than $220 billion in value by 2023.

The 5G+X approach is also an area where Huawei feels it brings a competitive edge to the market. "We are in a unique position to bring together Huawei's expertise in 5G with other areas like AI, the cloud, and smart devices. No other company offers the end-to-end solutions that embody this concept of 5G+X," says Yang.

"We are in a unique position to bring together Huawei's expertise in 5G with other areas like AI, the cloud, and smart devices. No other company offers the end-to-end solutions that embody this concept of 5G+X."

Indeed, a focus on R&D has helped the company to become a clear leader in the global commercial deployment of 5G. It has worked with carriers and industry partners worldwide to explore the application of 5G in more than 300 projects, established 5G joint innovation centers in places like Europe, and is an active member of more than 400 standards organizations.

"It's with long-term R&D investment that we have been able to lead the pack in multiple technology domains, and continue to earn the respect and trust of our customers despite significant external pressure," maintains Yang, who cites close cooperation with external bodies as instrumental to its success in the Middle East. "We're continuing to work closely with governments, customers, and partners to provide services that help them to pursue digital transformation and realize national development visions."

Security and privacy protection do remain a top priority for Huawei, according to Yang. The executive believes that Huawei now has a "proven track record" in that field. He cites that over 700 cities and 228 Fortune Global 500 companies — including 58 in the top 100 — have chosen Huawei as their digital transformation partner.

"We work with governments, industries, and our customers in an open, transparent, and constructive way to maximize the benefits of ICT infrastructure while improving its security. We are fully aware of our responsibilities as a global ICT supplier," commented Yang.

Over the past 30 years, Huawei has worked with carriers to build more than 1,500 networks, providing network services to over 3 billion people in more than 170 countries and regions. Its customers include mainstream carriers, Fortune 500 companies, and hundreds of millions of consumers.

"We have put in place a comprehensive cyber security assurance system, and have a proven track record in that field. Our cyber security practices have won the trust of partners across the global value chain. Huawei's 5G products have passed multiple third-party security certifications, and Huawei has become the first company to gain the CC EAL4+ certificate."

The company's local growth is also encouraged by Huawei's support for local talent in the Middle East. Huawei has worked for years with local government authorities and academic institutions to develop home-grown talent that can lead the industry forward. That mission is becoming all the more important as economies are affected by COVID-19 and governments place an even greater emphasis on local job creation.

"The key to a mutually-beneficial ecosystem is to enable everyone to use their own strengths to create a whole that is greater than the sum of its parts," concludes Yang. "It is only through cooperation that we can bring digital to more homes, offices, and communities in the Middle East." T

EITC announces its Q2 and H1 2020 financial results

Emirates Integrated Telecommunications Company PJSC ("EITC") published its financial results for the second quarter of 2020. EITC reported for the first half of the year (H1 2020) Revenues of AED 5.66 billion and a Net Income of AED 570 million.

The Board of Directors approved the distribution to shareholders of an interim dividend of AED 589 million, equivalent to an interim dividend per share of 0.13 AED.

Q2 and H1 2020 Financial Results Analysis

Due to the general lockdown of activity in the UAE during Q2 2020, EITC's financial performance was negatively impacted from the limitation of sales activity, the change in customer behaviour and the strong reduction of tourism and trade activities.

EITC reported in H1 2020 total revenues of AED 5.66 billion driven by a contraction in mobile revenues and other revenues, partially offset by the continued growth in fixed revenues.

Q2 2020 mobile revenues were under pressure due to the movement restrictions across the country, which led to an erosion of the base as a result of lower gross additions and lagged churn and a shift in customer behaviour from prepaid mobile usage to fixed usage as companies implemented work from home initiatives. Therefore, H1 mobile revenues declined to AED 2.81 billion, coming mainly from the significant reduction in the prepaid customer base and prepaid usage.

H1 2020 fixed revenues continued to grow at a rate of 4.8% year-on-year to AED 1.29 billion, reflecting a healthy increase in the subscriber base fuelled by the higher home connectivity needs during the quarter.

To sustain the increase in data traffic across the country and the company's deployment plans, EITC invested in Q2 2020 AED 509 million, equivalent to 19.1% of revenues. In addition to investments in capacity upgrades and network maintenance, Capex were also allocated to 5G network rollout and the


Johan Dennelind

implementation of digital transformation initiatives, in line with the company's plans to drive long-term value creation.

H1 2020 EBITDA was down to AED 2.32 billion, impacted by the decline in mobile revenues, the increase in spending to optimise customer offering during the second quarter, and the inelasticity of certain costs to revenue decline. Consequently, net income declined in H1 2020 to AED 570 million.

During the quarter, EITC implemented a cost efficiency program that should allow, with the start of the market recovery in Q3, to contain the erosion in EBITDA and net income. The cost efficiency program includes initiatives related to optimisation of resources, a reduction in marketing spend and renegotiation of supplier contracts.

EITC's mobile subscriber base was 6.42 million at the end of Q2 2020, down from last year, mainly due to the combination of lower sales due to movement restrictions and the churn lag.

Fixed customer base continued to increase at a healthy pace, reaching at the end of in Q2 2020 226 thousand subscribers, up by 6.8% from Q2 2019.

Commenting on the results, Johan Dennelind, CEO of EITC said: "During Q2 2020 we focused our efforts on managing the impact of the Covid-19 crisis by ensuring the provision of uninterrupted connectivity and service for all our customers across the country, while protecting the health and safety of our employees and customers. We refined our contingency plans to cope with the evolution of the situation and to prepare the company for the gradual ramp-up of the economic activity as lockdown restrictions are being eased across the country.

With the benefit of a robust digital infrastructure, we seamlessly transitioned more than 95% of our employees to work from home during the second quarter of the year. For our employees who operate on the ground, such as our store employees and technical teams, we implemented additional health and safety measures to ensure their and our customers safety. I want to extend a warm thanks to all our people for being so strong in tough times. For our customers, we upgraded our network capacity to accommodate the shift and increase in data traffic, and provided more online services to ensure business continuity across all sectors, including education.

Financially, we have seen, as expected, a severe negative impact on our business coming mainly from mobile revenues, as we are structurally more exposed to the prepaid sector and from "other revenues" due to the lockdown and travel restrictions. However, our fixed business continued to grow, boosted by the increase in demand for home connectivity. Consequently, for the first half of the year, we reported revenues of AED 5.66 billion and a net income of AED 570 million, down year on year, reflecting the unprecedented market conditions and the significant contraction in the economic activity.

Going forward, we expect to see a stabilisation and a gradual pick-up in economic activity in H2 2020, particularly as movement restrictions are being eased across the country, more and more people are returning to the office and tourists are starting to come back." T

INFINET wireless

Infinet Online Conference 2020

Infinet Wireless organized its Online Conference to hear about its latest product developments, company news and its plans for the future. It was an excellent opportunity for the company to connect with industry leaders and experts to keep them updated on its progress during these challenging times. The interactive event, which enabled media as well to participate and ask questions through the virtual chat, was just part of its commitment to keeping the conversation alive with concerned people.

Infinet received a lot of questions during the conference and it was promised to provide the written answers to each and every one of them.

During this event, Infinet Wireless presented its Quanta family of solutions, including the Quanta 5, its Point-to-Point solution with a record-breaking spectral efficiency in the 5 GHz bands, as well as highlighted some of its recent and successful deployments around the world. Quanta 6, the newer family member for the 6 GHz frequency bands, a solution which has inherited many of its features from the Quanta 5 was also introduced. This new PTP family also includes the Quanta 70, enabling the customers to connect their VIP customers in big cities and providing them with fiber-like service.

News about Axion 28 was also shared, which is company's next generation point-to-multipoint platform in the 28GHz bands, ideally suited for Wireless Internet Service Providers as an excellent way to counter the emergence of the 5G alternative and ensure customer retention.

Dmitry Okorokov
CEO - InfiNet Wireless

Participants also heard more about new developments for the company's 5 GHz InfiMAN point-to-multipoint solution, and its planned successor, the InfiMAN Evolution.

This latest technological platform will allow customers to smoothly migrate their legacy wireless infrastructures to a brand new one, ensuring full backward-compatibility along the way.

Updates to the Infinet Wireless ecosystem – including tools and solutions to give the customers a holistic service and experience – were also shared during the conference. This included InfiPLANNER tool, management platform InfiMONITOR, excellent Technical Support and growing IW Academy. T

Nokia new OS and tools for data center will give cloud builders unprecedented ability to adapt, automate and scale

Nokia has redefined data center fabrics with the launch of a new and modern Network Operating System (NOS) and a declarative, intent-based automation and operations toolkit. This will allow cloud and data center builders to scale and adapt operations in the face of year-over-year exponential traffic growth and constant change brought on from technology shifts like 5G and Industry 4.0. The new Nokia Service Router Linux® (SR Linux) NOS and Nokia Fabric Service Platform (FSP) were co-developed with leading global webscale companies, including Apple, who is deploying the technology at its data centers.

Facing massive growth in demand for cloud-based applications and use of new technologies like AI, machine learning and AR/VR, today's large and growing community of cloud builders require an unprecedented level of customization and flexibility from networking components to operate and monitor sprawling data centers.

Network Operating Systems have not kept up. Though evolving, traditional systems are restrictive and difficult to customize, integrate and automate. For example, today's leading systems expose limited functions for customization and even then require cumbersome integrations.

Often this means rudimentary applications that require re-compiling each time the NOS vendor upgrades releases. Newer open systems attempts are nascent, challenging to operationalize and generally unproven at scale.

Nokia SR Linux is a genuine architectural step forward as it is the first fully modern microservices-based NOS, and the SR Linux NDK (NetOps development kit) exposes a complete and rich set of programming capabilities. Applications are easily integrated through modern tools like gRPC (remote procedure call) and protobuf, with no recompiling, no language limitations and no dependencies. SR Linux also inherits Nokia's battle-tested Internet protocols from the service router operating system (SROS), which is the trademark of the huge installed base of Nokia carrier-grade routers. SR Linux is in effect the industry's first flexible and open network application development environment.

Nokia FSP provides the set of tools cloud builders need to implement intent and policy-based operation of the network. Well beyond a node-centric management system, FSP was designed to build, deploy and monitor the entire data center network with powerful network level constructs. Finally, the FSP includes technologies that were only available to the largest cloud builders, such as a real-time state-correct virtual digital twin for validation and troubleshooting.

The combined solution provides the openness, flexibility, robustness and automation to make data center and cloud environments easier to scale, adapt and operate.

Neil McRae, BT Group Chief Architect, said: "As one of the world's leading communications services companies offering security, cloud and networking services to consumers and businesses, we consider data center automation as a foundational technology for our telco cloud model. Nokia's new data center fabric solution promises to provide full programmability with deep telemetry, along with a modern operational toolkit to drive the extreme automation and scaling of our telco cloud, which is critical to drive future 5G services."

Basil Alwan, President of IP and Optical Networks at Nokia, said: "With decades of experience serving the world's telecom operators, we understand the engineering challenges of building and operating business and mission-critical IP networks on a global scale. However, today's massive data centers have their own unique operational challenges. The SR Linux project was the proverbial 'clean-sheet' rethink, drawing from our partnership with Apple and others. The resulting design is impressive in its depth and strikes the needed balance for the future." T

clear LOS?

A: It depends on your capacity and availability targets, but generally the cell range is at least 5 km.

Q: Does Axion 28 support Instant DFS?

A: 28 GHz is a licensed frequency band, so Instant DFS is not applicable.

Q: How many subscribers can be added to your P2MP base station with how much bandwidth will be on base stations?

A: Axion 28 provides up to 1.2 Gbps of aggregated usable throughput per a base station sector and up to 127 subscribers can be connected to the sector unit at the same time.

Q: Are you going to provide PTP solutions at 28 GHz or just PMP?

A: Currently, we only plan to offer PMP solutions at 28 GHz band at the point.
If you are looking for a PTP system operating at this band, please share your requirements with us.

InfiMAN Evolution

Q: Are your 5 GHz products capable of connecting to existing devices without extensive upgrading and the same time providing optimum result?

A: InfiMAN Evolution series is backwards compatible with InfiMAN 2x2, so you can use it to upgrade your existing wireless network.

Q: What are the antenna options available in 5 GHz PTMP Subscriber station radios for example 60,90,120 degree and does it also have an connectorized model?

A: InfiMAN Evolution subscriber terminals are fitted with directional antennas with 18 and 23 dBi gain or 2x N-type RF connectors to use an external antenna. Base station sector units are available with 90 deg integrated antenna or 2x N-type RF connectors if you need to connect 60 or 120 deg antenna, etc.

Q: What product do you suggest for long distance point-to-multipoint coverage around 7 km to 8 km with good MCS?

A: Our 5 and 6 GHz PtMP solutions would ideally suite for such distances.
Please use our online InfiPLANNER tool to estimate coverage in various scenarios.

Q: Regarding the InfiLINK 2x2 PTP series, is there any new series or model expected any soon?

A: InfiLINK 2x2 series will be replaced with InfiLINK Evolution, which offer backward compatibility.

IW Ecosystem

Q: Can upload configurations to BS sector units and subscriber terminals and draw the topology of the PtMP network with InfiMONITOR?

A: InfiMONITOR allows you to create the network diagram. Configuration management will be supported by InfiMONITOR NEXT.

Q: How accurate are InfiPLANNER estimated results?

A: InfiPLANNER uses accurate data related Infinet systems, i.e. throughput, sensitivity, antenna gains, etc. as well as rather advanced propagation models. However, because this tool is free, it uses limited accuracy geographical data (but you can add obstacles manually) and it doesn't have actual knowledge of interference in the area (you can specify it manually too). With these assumptions the results are normally quite accurate for clear LOS and near-LOS estimations.

Q: What is the maximum number of radio units that can be managed through InfiMONITOR?

A: There are deployments with more than 5000 units managed by a single InfiMONITOR server.

Other Questions

Q: Are antennas needed to deploy Infinet equipment?

A: Infinet provides a comprehensive range of products. Most of our units are fitted with an integrated antenna, but for your custom needs such as very long range deployments, etc. we also provide connectorized units, so you can use your specific antenna.

Q: Are INFINET fixed wireless solutions competitive to 5G?

A: We definitely have 5G in mind while defining and designing our latest wireless solutions and keep our customers fully competitive as 5G era looms.

Q: What the difference between point-to-point communication and point-to-multipoint one?

A: Point-to-point system consists of two similar units connected to each other, which are typically fitted with directional narrow-beam antennas. Point-to-multipoint system typically consists of a multi-sectored base station (there are normally from three to six sector units co-located at the same site covering up to 360 degrees) and a number of subscriber terminals connected to the sector units. Typically, one multi-sectored base station connects tens or even hundreds of subscriber terminals in the area.

Q: Can your solutions be used in health care where connection reliability and low latency are critically important?

A: Yes, our solutions have been used successfully in health care and telemedicine for more than 15 years in a number of countries around the globe.

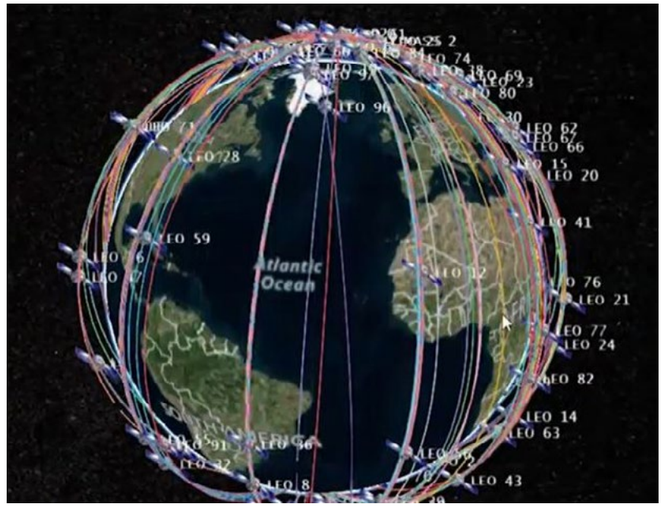
Q: Is 6 GHz frequency band licensed or unlicensed?

A: Regulators are opening 6 GHz band on a different basis in different countries including unlicensed, lightly licensed or fully licensed basis.

Q: As most of the spectrum within 5 GHz will be under IMT frequency for 5G deployment, what will be the future bands for P2P and P2MP solution for fixed wireless ISPs other than 5 GHZ bands?

A: We see no signs of re-farming 5 GHz spectrum for 5G in any country. However, there are some initiatives to use this unlicensed spectrum for 5G in certain scenarios on non-exclusive basis sharing it with Wi-Fi as well as fixed wireless systems, etc. As the unlicensed spectrum gets crowded, regulators in various countries allocate additional spectrum which can be used by wireless ISPs on unlicensed, lightly licensed or licensed basis. We in Infinet suggest to consider 6, 27.5-29.5 and 71-76 GHz spectrum as alternatives to 5 GHz and check with your local regulator. T

Beam Budget ready for LEO and flat panel antennas



Nowadays, the Broadcasting and Telecommunications Industry is witnessing a new era, due to the arrival of LEO, MEO, and flat-panel antennas. The new goal of the market is to look for solutions to achieve the effective use of the spectrum and provide higher bandwidth for matching the demand with reliable network technology.

Flat-panel antennas are designed to fit in more types of platforms with its low profile and its flat surface, installations can become easier and faster. The greatest advantage of flat panel antennas is the ability to create Multibeams, which are able to point different constellations.

At this part is where LEO satellites come on stage, the complexity of this communication system lies in their orbital movements which enables them to reduce the latency between devices. Therefore, flat panel antennas would be ideal to make this connection happen, as they can point to multiple satellites simultaneously. For instance, Connected Car is an application that will drive the flat panel antennas to a privileged position within the industry.

Regarding the development experienced by the industry, the calculation of Link Budget becomes harder with LEO satellites and it was impossible to find tools that were able to control these new antennas and these satellite networks to be placed around the Planet Earth. Integrasys created Beam Budget, the unique and only technology solution that enables us to accurately calculate Link Budgets supporting LEO constellation and flat panel antennas.

Beam Budget has the availability for any frequency band, including Q and V whose high frequencies are more affected by atmospheric events. Thanks to Beam Budget small satellites constellations can design better, easier, and more effectively their networks for their constellations, and service providers can compare constellations and services before they choose the right partner.

Integrasys has been innovating for the last 30 years on making satellite a simpler solution for markets to adopt it. The goal is to simplify the newest constellations as well as antennas. T

Ooredoo Group announced Revenue of QAR 14 billion and Net Profit of QAR 818 million in H1 2020

Ooredoo Q.P.S.C. ("Ooredoo") - Ticker: ORDS has announced its financial results for the half year ended 30 June 2020.

Financial Highlights:

• Revenue declined by 3% year-on-year to QAR 14.1 billion due to the COVID-19 impact. A reduction in handset sales and roaming business, as well as macroeconomic weakness in some of our markets, was partially offset by robust growth in Indonesia, Tunisia and Myanmar.

• EBITDA declined by 5% year-on-year to QAR 6.0 billion, impacted by movement restrictions to contain the spread of COVID-19 in our markets as well as challenging market conditions in Algeria, Kuwait, Iraq and Oman.

• Group Net Profit attributable to Ooredoo shareholders declined by 3% to QAR 818 million in H1 2020, compared to the same period last year, due to the reduction in EBITDA which was partially offset by a more favorable Foreign Exchange environment compared to the same period last year.

• Data revenues account for more than 50% of total revenue driven by our data leadership and digital transformation initiatives across the countries we operate in.

• Ooredoo Group has healthy cash reserve and liquidity levels to be able to absorb the impact of COVID-19 for the year 2020.

Operational highlights:

• COVID 19 response: Ooredoo Group remained sharply focused on mitigating the impact of COVID-19 during Q2 2020. Measures included enhancing health and safety and work from home initiatives for employees, continuing to provide uninterrupted connectivity and services for customers, optimised data traffic flows across our fixed and mobile networks, relief to communities that need it the most and targeted CSR campaigns and donations.

• Ooredoo Group enabled more people to work, study and socialize from home, with its customer base increasing by 2% to 117 million customers, boosted by additions in Myanmar and Qatar during H1 2020.

• Ooredoo Group continued to demonstrate its global leadership in 5G commercial deployment, with Ooredoo Oman being the latest to launch 5G Home Internet, enabling customers to experience connectivity up to 10 times faster than current home internet services and bringing high speed internet access to new areas of the country.
• In Qatar, Ooredoo reached a milestone of half a million mobile postpaid customers, while its 5G plans, launched in December 2019, have attracted more than 200,000 customers.

• Ooredoo Group maintained its world ranking in the 2020 edition of the Telecoms 300 report, as one of the top 50 global telecommunications brands for the fourth year in a row, with a brand value worth over USD 3.5 billion. It also maintained its Brand Rating status of AA+ for the second consecutive year.

• Ooredoo Group launched a Ramadan campaign under the theme "In a time when we can't be together, at least we can still be close," showcasing the power of technology to bring families and friends together during the traditional Holy Month, and to enable communities around the world to overcome the current disruptions in their daily lives.

Commenting on the results, Sheikh Faisal Bin Thani Al Thani, Chairman of Ooredoo, said: "Ooredoo Group, with its strong balance sheet and geographically diversified operations, has built a resilient business to successfully navigate the COVID-19 pandemic. Due to our strong digital capabilities, and innovative technology, Ooredoo Group was able to partially contain the erosion in its bottom line, despite the decline in revenues. Consequently, Ooredoo Group reported Net Profits of QAR 818 million for the first half of 2020, which were slightly down compared to the same period last year.

The COVID-19 pandemic has disrupted our world in an unprecedented manner and has impacted every aspect of our lives. Throughout this period, our priorities at Ooredoo Group have been clear: the health and safety of our employees and customers; the continued provision of uninterrupted services to keep our customers connected at all times, and the empowerment of frontline workers and disadvantaged communities through CSR activities and donations. For our customers, we provided more value with free data offers, upgrades and bundles, free access to educational and health resources online and increased convenience with access to fully digital services.

Digital transformation and technology continue to be a driving force for Ooredoo Group and our early investments in this area have enabled us to seamlessly respond to the new operating environment and serve our customers in a safe and convenient way. To accommodate the steep growth in data traffic during the pandemic, we are continuously optimising data traffic flows across our fixed and mobile networks. Additionally, experience sharing and cross-OpCo collaboration activities were implemented to help reduce the required resources and time to market.

These efforts have enabled us to stay true to our mission of enriching the digital lives of our customers, which is now more important than ever, and therefore, we have managed to accelerate our digital transformation plans across all markets. We now offer 5G speeds in three of our markets, with Ooredoo Oman being the latest to launch 5G Home Internet plans in Q2 2020 and 5G trials are ongoing in Indonesia, Myanmar and Maldives."

Also commenting on the results, Sheikh Saud bin Nasser Al Thani, Group Chief Executive Officer of Ooredoo said: "Ooredoo Group reported revenues of QAR 14.1 billion in H1 2020, down 3% year-on-year due to movement restrictions designed to contain the spread of the pandemic, reductions in handset sales and macroeconomic weakness in some of our other markets. This was partially offset by strong performances in Indonesia, Tunisia and Myanmar. Indosat Ooredoo's revenues increased 6%, driven by its refreshed strategy and Ooredoo Tunisia's value creation plan supported a 6% rise in its revenues. Strong demand for data supported an 8% increase in Ooredoo Myanmar's revenue during the period.

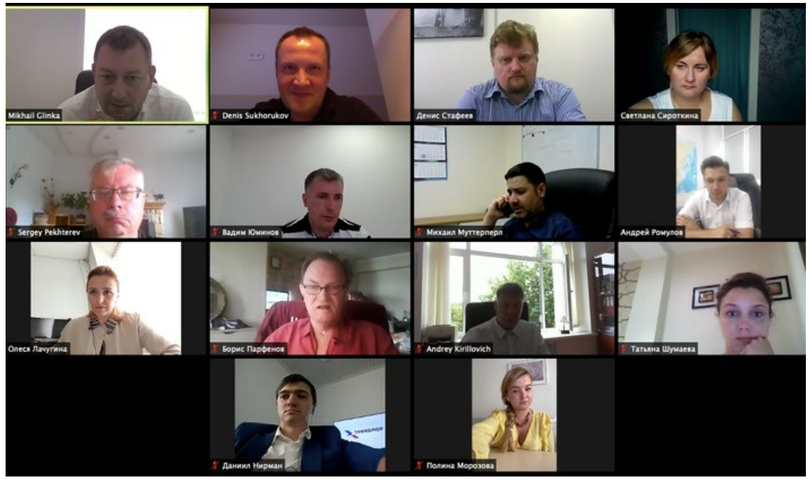
Group EBITDA declined 5% to QAR 6.0 billion during H1 2020, compared to the same period last year, due to declining revenue and challenging market conditions in Algeria, Kuwait, Iraq and Oman. Across all our OpCos we remain committed to carefully optimising costs and driving operational efficiencies.

In our home market of Qatar, our post-paid customer base crossed the half a million mark and the 5G plans launched in December attracted over 200,000 customers already.

In Kuwait and Oman, we have partnered with the respective Ministry of Education to launch e-learning platforms from home for the upcoming school year 2020–2021. With digitalization at our core, we continue to invest in new products and services to power the future of connectivity.

In Oman we launched 5G Home Internet which enables customers to experience connectivity up to 10 times faster than the current home internet services, while bringing high speed internet access to new areas of the country, and in Algeria we continue to operate the fastest 4G network in the country spanning all 48 Wilayas. T

RSCC organized an online round table on topical issues of promoting satellite Broadband services in Russia



RSCC in cooperation with KA-BAND.INFO, the Internet portal about satellite Internet in Russia, organized and held a round table on topical issues of promoting Satellite Broadband Access services in Russia. The round table continued the series of online events "Business Dialogue. Satellite Internet."

The experts discussed the features of promoting Broadband services in various regions of Russia, including remote areas, as well as the search for the most effective communication channels with potential and existing customers.

Mikhail Glinka, RSCC Director of Department for Sales of Operator and Corporate Solutions; Andrey Romulov, Director-General of Strizh LLC; Daniil Nirman, Head of Satellite Internet Direction, National Satellite Company (Tricolor); Svetlana Sirotkina, Director-General of Ka-Internet JSC and Denis Stafeev, Director-General of Gilat Satellite Networks (Eurasia) LLC participated in the round table. Olesya Lachugina, Marketing Director of BIA Technologies, author of a professional blog on B2B / B2C marketing, was a special guest of the webinar and made a presentation on the topic "Promoting high-tech products using classic sales channels and brand digital communications".

Olesya Lachugina presented the results of a study of the success factors of the satellite operators' marketing strategy. She also noted that social networks are not the only method of promotion for a satellite communication service provider, and their effectiveness is questionable, and the most important thing is to keep a balance between classic sales channels and online methods.

In his speech Andrey Romulov emphasized that the Strizh operator successfully combines TV advertising (classic channel) with targeted advertising in the main search browsers. The reason is that today the operator's main target audience is subscribers who already have Internet, but they have a weak signal and 2G coverage. Andrey also emphasized other targeted user groups - subscribers with broadband demand as a backup channel, using satellite channels for additional services (CCTV, etc.), as well as "seasonal" subscribers who connect to satellite Internet for a certain period.

Svetlana Sirotkina noted that digital sales channels are appropriate for the specifics of broadband promotion in remote regions, while Ka-Internet combines this method with a developed partner network and relies on collective access. If in 2017-2018 collective access was an unpopular solution for the segment of users with a low level of paying capacity, then in 2019-2020 the company records a multiple growth of interest from users and partners for this service.

Daniil Nirman, on the other hand, said in his speech that Tricolor is investing in the classic method of promotion - TV advertising. Now the company broadcasts commercials on more than 50 channels. Talking about segmentation by geographic distribution of users, Daniel noted three large groups of subscribers: summer residents from large cities, residents of southern regions living in the private sector and having incomes above the national average, and residents of the Far North. Logistics is also very important when selling satellite internet kits, Daniil said.

In his remark Denis Stafeev, as a representative of the equipment vendor, said that Gilat does not cooperate with the end consumer directly, but operates exclusively in the B2B segment, where personal communication is still valuable.

The participants in the discussion thanked the RSCC for the event and noted the practical benefits of the series of online round tables "Business-Dialog. Satellite Internet." Satellite Internet." T

nexign

Nexign announces annual record 2019 results

Nexign (part of ICS Holding), a Business Support System (BSS) and IoT solutions provider for telecommunications service providers, today announced its results of 2019 fiscal year and published its official Annual Report for 2019.

Financial Results

• Nexign delivered $217 million in total revenue – 3% growth year-over-year (YoY)
• Revenue from new business, including international projects, reached $37 million, which is 38% more than in 2018
• Net profit reached an unprecedented $92 million, an increase of 22% over 2018

"2019 was extremely successful for Nexign, due to substantial growth of new business and continuous development of Nexign's product portfolio. We have strong positions in our target markets in Middle East and Africa, and we are also expanding to the Southeast Asian market. Meanwhile, we became a part of ICS Holding, one of the largest IT groups in Russia and CIS, which enabled us to find new opportunities for development," said Igor Gorkov, CEO at Nexign.

Customers

• In 2019 Nexign continued to develop a large-scale project for MegaFon. With Nexign, MegaFon replaced seven billing systems with a unified BSS for convergent rating and billing to maintain high levels of availability and reliability and handle peak loads from a 76-million subscriber base.

• Nexign implemented the analytical reporting system for Rostelecom, which analyses data from inter-operator B2O (Business-to-Operator) accounts. The system makes effective use of big data technology and will enable Rostelecom to control voice traffic volumes and monitor the performance of its pricing policy.

• The implementation of the Partner Relationship Management System for Tele2 has been completed. This solution supports integration between telecom providers and partner networks, and allows Tele2 to create new models for digital partnerships in the mobile communications and other

industries.

• Nexign continued to implement solutions for global customers. For example, Chinguitel (Mauritania) increased its revenues by 10% thanks to Nexign's BSS system and Nexign Network Monetization Suite.

"We have more leverage in the market than ever before because Nexign makes business operations more efficient," said Radi Abdalla Ali Almamoun, Chief Technical Officer at Chinguitel. "The Nexign team implemented our new billing system and migrated our subscribers in record time—just over seven months—while Nexign's competitors said they needed up to 18 months to complete the project. Finishing faster let us improve subscriber services faster."

Product Updates

In 2019 Nexign continued to develop its solutions portfolio to address critical needs of telecom operators, such as support of new business models, better user experience and faster launch of new products and services.

"Nexign has a highly competitive portfolio comprising Nexign Network Monetisation Suite, Nexign Digital BSS, and Nexign IoT Platform," said John Abraham, Principal Analyst at Analysis Mason in the report: "Monetisation platforms: worldwide market shares", 2018, published on 16 August 2019. "The company positions itself as a leader in creating optimally cost-efficient solutions, offering telecom operators digital products with the lowest TCO of all market vendors."

• Nexign Digital BSS now has wider functionality in the areas of order management, process visualisation, flexible pricing, and billing in convergent networks. Also, functions to make product catalogue management more convenient were added.

• Nexign Network Monetisation Suite now includes modules for direct integration with service providers (SCEF) and managing con¬gested networks (RCAF). Nexign Network Monetisation Suite's bal¬ance management capabilities have made it possible to launch financial products (for example, debit and credit cards linked to personal account balances at MegaFon) and support operator service factories (for example, Rostelecom).

• Nexign IoT Platform has benefitted from an updated user-friendly graphic interface, support for the NB-IoT standard thanks to integra¬tion with the SCEF, network function vir¬tualisation capability, and expanded fraud identification functionality based on device behaviour analysis.

Industry recognition

In 2019 Nexign was named finalist for the TM Forum Excellence Awards, the Global Telecom Awards and the Telecoms World Awards. Nexign also scooped a prize at the 2019 RUSSOFT Awards in the "Greatest 2018 Business Growth" category.

"Nexign currently occupies a sustainable position on both the Russian and international markets. Entering 2020, we will continue to focus on growth, efficiency and simplification of the digital transformation process for our customers, helping them to cope with the challenges of 5G, eSIM and the Internet of Things monetization, - says Igor Gorkov, Nexign CEO.

Nexign expands international presence with new office in Latin America

Nexign has expanded its international presence to Latin America by opening a new office in Santo Domingo, Dominican Republic. This initiative will enable Nexign to strengthen its positions in emerging markets by offering LATAM customers solutions to drive digital transformation efforts.

According to the GSMA report, the data traffic in LATAM will grow more than sixfold by 2024. Also, GSMA expects the mobile penetration rate to reach 73% by 2025.

Nexign aims to use its 28 years of engineering excellence to help local telecom operators consolidate their systems and provide customers with better connectivity, uninterrupted internet access and other services.

The office in Dominican Republic will focus on business development initiatives for the entire LATAM and providing operators with modular, truly convergent solutions to enable stress-free modernization and sustainable performance.

"During the past three years, Nexign has grown significantly. As a maturing company we are taking the next step in our international expansion strategy and establishing our corporate presence in Latin America. We believe that understanding of the local market specifics is critical for smooth digital transformation of local CSPs. We will leverage our market knowledge and industry expertise to support operators in the region and speed up the modernization process for them. With Nexign's BSS solutions, they will be able to meet local customer demands and bring added value to business," said Igor Gorkov, CEO at Nexign.

"LATAM is an emerging market with great potential. Operators in the region realize that they need up-to-date BSS solutions to keep up with customer needs. As a result, they are ready to embrace new development opportunities and find new ways to monetize traffic. We are happy to support local operators and offer them solutions that can enable them achieve their business goals and deliver superior services to subscribers," said Andrey Moldovan, Regional Director, LATAM.

Connecting every corner with satellite backhaul

Semir Hassanaly, Market Director Cellular Backhaul and Trunking, ST Engineering iDirect

Fuelled by the growing public appetite for new services and applications, the mobile data boom has placed huge demands on wireless networks, prompting a change in performance and capacity. As a result, mobile operators have invested in new technologies, building out their networks to fulfil the growing demand.

"As worldwide demand for greater data connectivity increases with the rise of 5G, it is clear that satellite cellular backhaul will have a huge part to play in future networks."

However, according to the International Telecommunication Union (ITU), almost half of the world's population lacks access to the internet entirely, especially in emerging regions. This means the next challenge for Mobile Network Operators (MNOs) is to expand data capabilities into less accessible corners of the developed world or in the unconnected rural areas. With its ability to provide instant wide coverage at an efficient price point, satellite-based cellular backhaul is perfectly suited to achieve this goal and is gaining rapid pace in the market. Furthermore, as worldwide demand for greater data connectivity increases with the rise of 5G, it is clear that satellite cellular backhaul will have a huge part to play in future networks.

The digital bridge

Mobile operators in emerging markets are under increasing pressure to extend their services in rural areas. For example, there are 775 million citizens that remain unconnected across Asia, often in isolated communities and living below the poverty

line with lack of access to many basic and critical services such as healthcare, education and connectivity. Research shows that connectivity can have life-changing impacts for unconnected remote communities. The World Bank estimates that for every 10 percent increase in high-speed Internet connections, a country's gross domestic product rises approximately by 1.4 percent.

Consequently, MNOs are looking for solutions which offer improved efficiency, performance, flexibility and scalability. In remote regions, rolling out individual backhaul networks is something operators cannot easily do. In most of the African countries for example, rural Middle populations are very sparsely spread, and expenditure would be several times the amount than in urban areas.

But cellular backhaul over satellite can offer a compelling business case, allowing people to remain connected and keep pace with the fast-developing technology landscape. With the majority of people accessing the internet via a mobile phone or tablet, rather than desktop computers or laptops, this technology is also easily accessible, allowing people to get online quickly and easily.

Changing lives

Satellite-based backhaul solutions provide the answer to bridging the digital divide. To give an example, broadband satellite operator Kacific selected the Newtec Dialog® VSAT multiservice platform for its new High Throughput Satellite, Kacific1 to provide access to high demand applications, such as community internet access and mobile backhaul, to help stimulate socio-economic activity throughout the region.

Carrying out installations in remote areas can be a time consuming and expensive operation. In this case, Kacific implemented the Dialog Hub System, which comes in various different configurations. This allows the operator to run a shared bandwidth platform spanning multiple satellites, depending on customers' specific needs.

As a result of the new service, Kacific can now offer access to a wealth of information and services that will empower communities and enable development. The social benefits of a broadband connection cannot be underestimated. It brings the ability to educate, to use telemedicine, to develop small businesses and to give access to financial services and potentially life-saving weather reports.

"In order to ensure MNOs serve their customers in an efficient way, they should consider migrating their operations to one multiservice platform to allow them to serve numerous markets at the same time and grow their network with their business."

In Africa, the Dialog platform is also being used by Liquid Telecom to make bandwidth more affordable to businesses and consumers. As a result, Liquid Telecom has provided African enterprises with cost-effective bandwidth for big-data applications.

A new era

However, bridging the digital divide in the outmost rural corners of the world requires more than just technology. A continued partnership between satellite and MNOs is also key to create opportunities and change the landscape of the cellular connectivity market for the better. With satellite at their disposal, MNOs have more room to extend the reach of their services and address new use cases, such as Over-the-Top (OTT) content distribution, and critical connectivity for disaster response efforts. The popularity of mobile banking and finance is also an extremely popular application and is only set to grow further.

High Throughput Satellites (HTS) and ground equipment with the ability to support hundreds of Mbps of capacity for backhaul, along with attractive price points, are also crucial in enabling service providers, telcos and MNOs to not only connect the unconnected but also bridge the bandwidth gap between urban and unserved and underserved areas. As we enter the 5G era, satellite connectivity is particularly crucial for the next stage of the evolution for MNOs. In fact, NSR estimates that 5G-differentiated applications — such as 5G backhaul and hybrid networks — will generate close to one-third of net satellite capacity revenue growth in backhaul over the next 10 years. Satellite and terrestrial will work in a complementary way to unlock many use cases. This is due, in part, to the fact that 5G backhaul capacity demand will consume four to five times the bandwidth of a 4G site, according to NSR. Satellite technology has already proved itself as being highly adaptable for mobile backhaul purposes.

Connecting every corner

The dynamic nature of mobile network traffic requires a dynamic solution. The development of flexible, affordable and efficient satellite backhaul can help to meet the connectivity demands of not just today but also tomorrow. By utilizing satellites with cellular backhaul services to replace or supplement existing telecoms infrastructures in rural areas, operators can achieve greater coverage and remain competitive.

In order to ensure they efficiently serve their customers, operators should consider migrating their operations to one multiservice platform to allow them to serve numerous markets at the same time and grow their network with their business. More so, by connecting the unconnected users in remote, rural areas will have the same opportunities that are available in more developed regions and communities, creating connectivity for all. T

Pakistan IT Minister visits National Incubation Centre

Syed Amin Ul Haque, Federal Minister for IT & Telecommunications visited National Incubation Center Islamabad, funded and set up by Ignite under the auspices of Ministry of IT & Telecom. NIC Islamabad is being managed by TeamUp in collaboration with Jazz.

During the visit IT Minister met with the startups incubated in the center. He said, the entrepreneurial ecosystem is on the rise.

"The ultimate idea is to instill an entrepreneurial mindset across the country so that youth is self-employed besides creating job opportunities."

He said that youth are our future and asset. The Federal Minister said that youth of Pakistan have great talent and Ministry of IT is focusing on the uplift of youth.

He said that Ministry of IT is committed to equip youth with digital skills. He said that the projects of startups are laudable.

The Federal Minister for IT said that the recent inclusion of numerous innovations hubs, incubation centers and venture capital funds are helping the startup community to grow in Pakistan. These incubation spaces will help us built a knowledge-based economy and help build a progressive and Digital Pakistan. The startups are creating jobs, empowering the underprivileged communities and making Pakistan technologically-enabled, he said.

Syed Amin Ul Haque, Minister for IT & Telecom visited NIC Islamabad. NIC Islamabad and Jazz management presented the souvenir to the Minister. Syed Junaid Imam CEO Ignite is also accompanying the Minister.

Speaking at the occasion Syed Junaid Imam, CEO Ignite said, over 60% of our population comprise of youth. They are the future. Ease of doing business, developing makers spaces, giving them access to international venture capitalists (VCs) will help them accelerate their ideas. He said, the ultimate idea is to instill an entrepreneurial mindset across the country so that youth is self-employed besides creating job opportunities.

Earlier in his welcome address Mr. Parvez Abbasi, Director NIC Islamabad said, NIC Program is providing a platform to the young aspiring startups and enabling them to address the major socio-economic challenges facing Pakistan. All the stakeholders including the academia, corporate, media, government and the startup world need to collaborate in order to further strengthen the entrepreneurial ecosystem initiated by Ignite.

Mr. Jawad Azfar, GM Projects Ignite and Mr. Amir Ijaz Chief Digital Officer Jazz were also present at the occasion. T

PTCL posts Rs 2.7 Billion profit in the Half-Year 2020

Pakistan Telecommunication Company Limited (PTCL), a subsidiary of Etisalat Group, has announced its financial results for the six months ended June 30, 2020 at its Board of Directors' meeting held in Islamabad on July 15, 2020.

After the onset of Covid-19 pandemic earlier this year, the country is witnessing a gradual come back to a new 'normal' in which the economic activities are carefully being resumed while adhering to due counter measures for containing the effects of the pandemic. With its extensive network footprint, PTCL has successfully played its role as the communication backbone of the country in these testing times. Our dedicated frontline workers, who have been continuously on the ground despite the pandemic and our diligent customer care teams have ensured uninterrupted service delivery for our valued customers.

PTCL Group's revenue of Rs 62.9 Billion for the half-year is lower by 5% as compared to the same period of last year. If normalized for the impact of Covid-19 and certain regulatory changes affecting Ufone, PTCL Group's revenue is 2.5% higher than 2019 on a like-for-like basis. U Bank, a microfinance banking subsidiary of PTCL, continued its growth momentum and has achieved a 45% growth in its revenue over last year. The Group's operating profit and bottom line have been impacted by the Covid-19 pandemic and rupee devaluation.

PTCL's revenue of Rs 35.3 Billion for the half-year is 1% lower than last year. If normalized for the impact of Covid-19, the like-for-like revenue is stable and slightly higher than the same period of last year.

PTCL witnessed an exponential growth in the internet traffic during the pandemic which was facilitated through timely expansion at Content Delivery Network (CDN) domain to improve customer experience and optimize international bandwidth. As the pandemic still continues to be a challenge for Pakistan, PTCL ensured connectivity for more people with its wireline and wireless products during this quarter which has resulted in improved Charji revenues, along with addition of more than 15 thousand fixed broadband customers in Q2, 2020.

PTCL was able to curtail the churn rate, convert more customers to digital payments and resolve more than 50% complaints on spot through its efficient Customer Services by focusing on customer experience and engagement. To enhance the overall customer experience, PTCL has taken various customer-centric initiatives during this year. These include the adoption of Nokia Service Management Platform for effective service delivery, improved line stability through dynamic line management, enhanced customer communications and reduction in overall fault resolution time. During the second quarter of 2020, the Company's mean time to resolve the customer complaints was well above 90% of the service level i.e. to resolve the complaints within 24 hrs.

Corporate and Wholesale businesses continued their growth momentum and have achieved an 8% overall revenue growth YoY. This has been possible through PTCL's leading market position in IP Bandwidth and its strong presence in Managed Services, Cloud and other ICT services segments. Similarly, international revenue has also shown 6% growth as compared to the same period last year.

PTCL's Operating Profit of Rs 1.4 billion and Net Profit After Tax of Rs 2.7 billion for the half-year have declined as compared to last year due to effects of Covid-19 pandemic, increase in operating costs and higher depreciation on fixed assets as a result of significant capital expenditure on network upgrade in the last year. However, increase in non-operating income on account of disposal of obsolete assets that had become redundant due to upgrade of legacy exchanges and fiberization of access network, has helped lessen the gap at the bottom-line level with comparative period.

PTCL has undertaken a comprehensive Covid-19 relief and support effort to help people in these difficult times. In addition to assisting customers with reduced tariffs, free access to government helplines and digital awareness campaigns, PTCL Group donated Rs 100 million and PTCL employees have contributed their two days' salary to the Prime Minister's Covid-19 Relief Fund.

PTCL has provided support to Shaukat Khanum Research Center, collaborated with Pakistan Red Crescent Society and provided Personal Protective Equipment (PPE) to the National Disaster Management Authority (NDMA). Seven thousand deserving families, all across Pakistan, were facilitated with monthly ration in Ramzan. PTCL has taken all necessary measures to ensure the health and safety of its employees through the provision of protective gears, etc. PTCL Razaakar Trust continues to assist its non-management staff, infected with the Coronavirus, with a month's worth of ration items.

The management and employees of PTCL remain committed to providing quality services, through concerted efforts, to our valued customers. T

For telcos the stakes are high in the battle for the edge

John D. Rockefeller famously claimed that large-scale business goes by 'survival of the fittest.'

As Telcos and webscalers square up before the onset of Edge Computing, Rockefeller's statement has never seemed more relevant. Google, Microsoft, Amazon – apex predators of international business – are setting sights on the telecommunications ecosystem.

Established telcos are bracing for the oncoming impact. Alliances have been forged overnight to safeguard Edge computing: The Bridge Alliance's global MEC Task Force, 5G Future Forum, and Telco Edge Platform, have entered the scene in recent months. This is a clear indication that longstanding brand names could be facing extinction if drastic action isn't taken quickly.

As the internet continues to swell in size, Gartner estimates that by 2022, more than 50% of enterprise-generated data will be located at the Edge.

You read that right. 50% of enterprise data over the next two years. This isn't just everyday competition; it's a struggle to determine the future shape of telecommunications.

But when the showdown gets tense, one side reveals its Edge. Traditional telecom providers have the advantage of owning superior infrastructure and technological facilities. In the fight for survival, telcos have a convenient lifeline.

Why Edge Matters

Whilst Cloud computing won't go away, time-sensitive computing will be overwhelmingly serviced by Edge computing, which is a model of distributed computing infrastructure that deploys closer to the sources of data, and the end user devices through which they operate.

The Edge starts and stops where different user devices interconnect. This includes Mobile, Broadband, and Satellite, among others. The importance of this space is simple: as the Internet of Things grows, a greater amount of information processing will happen at the Edge. It's totally fair to think of this shift as an evolutionary transition within IT at large.

So far, so good.

Except, from a business perspective, things won't be so easy-going. The prominence of the Edge will confer great power on those who grasp it first. It will become an online kingmaker: seize the Edge, and you will own the future of connectivity.

Enter the Webscalers

If contending with telecom rivals wasn't bad enough, webscalers have thrown their hats in the ring.

Eager to expand and capture a new part of the market, tech behemoths have implemented their own projects in anticipation of the Edge. Google, Microsoft and Amazon have actioned telecom initiatives such as Google Global Mobile Edge Cloud, Amazon Wavelength, and Microsoft Azure Edge Zones. Across the pacific, Japan's Rakuten is knocking the eastern telecom sector off-balance through its endeavours. Elon Musk's SpaceX is launching "Starlink", a LEO (Low Earth Orbit) satellite service to compete with 5G. Amazon is also launching a LEO initiative called Project Kuiper to compete with 5G.

This would be cause for concern at any usual stage of business. But with Edge computing predicted to be worth $54B by 2024, the situation has gone critical. Make no mistake, these aggressively competitive newcomers could spell an endgame apocalypse for established telecom operators.

When they go high, go higher

But telcos shouldn't despair just yet.
They have the know-how, technical capabilities, and material infrastructure that is essential for the correct functioning of Edge computing and 5G.

The fact is, Edge computing systems will have to successfully cope with the mass expansion of data brought on by 5G. In simple terms, an increasingly massive amount of data will be produced at the Edge. Low latency and high bandwidth capabilities are what's needed to make this work. Sluggish, low-capacity systems won't be up to the cut.

Telecom operators have an advantage in providing deterministic low latency. Real-time applications will rely on a communication path without jitter (delay variance), packet loss, and congestion. Telecom operators have

Vijai Karthigesu, CEO of Swarmio

the unique ability to engineer and control the end to end communication path to deliver the deterministic connectivity/communication. It is practically impossible to provide deterministic connectivity with less than 20ms latency from a data center outside of the telecom operator's core. When the application traffic leaves the telecom operator's core network, it loses integrity, manageability and control.

As they stand, Content Delivery Networks (CDN) are not optimized for processing large amounts of data received from the end devices. Hence, there is a need for a new type of inverted Edge CDN solution that can receive large amounts of data from the end devices whilst retaining the processing power to perform computations at the Edge. From what I can see, Telecom operators are best placed to implement this required Edge solution. By having the right infrastructure and expertise, telcos can fend off the webscaler menace in the clash for the Edge.

Fighting for Breath

Good business strategy dictates that a company should never take its advantages for granted.
Telcos have what it takes to stay ahead, but they will rely on the AI and computing means to hold their ground. Updated technology will be needed to complement telco's existing advantages.

The struggle for survival does two things: it scoops out losers from the game; simultaneously, it elevates the victors' place in the hierarchy. Edge computing is an opportunity for telcos to become guardians of the internet gateway. If telcos are prepared to make the right choices, move quickly, and build on what they have, the Edge is theirs to claim. T

Airbus solutions being rolled-out in Kuwaiti government entities to reinforce mission-critical communication system

With the Kuwaiti Government fast transitioning from narrowband to broadband networks, Airbus has shown strong support for the move through increased deployment in the country of its secure communication and collaboration solutions, specifically Tactilon Agnet 900 and Tactilon Dabat.

Agnet 900 and Tactilon Dabat are currently being rolled-out across local public safety entities in Kuwait to help strengthen their mission-critical communication systems. Concerned authorities will benefit from

Airbus TETRA network and infrastructure by using their advanced multimedia capabilities such as photo and video services to boost collaborative efforts.

Agnet 900 is a reliable collaboration platform that enables rapid communication among teams wherever they are and whatever devices they use.

Kuwaiti officials can fully maximize Agnet 900's protected voice, multimedia

messaging, video and real-time location tracking and reporting services for more systematic and seamless coordination.

Tactilon Dabat, a smartphone and a TETRA radio in one, is for Kuwaiti personnel who require high security in their communication. It operates on both TETRA and LTE/4G networks. Users can optimize the device's video, text, voice data and location tracking and reporting features to connect with their team members anytime, anywhere. The weatherproof Tactilon Dabat also allows multitasking on its big and bright screen.

During the current coronavirus disease (COVID-19) pandemic, the solutions give local authorities mobility and access to key features, including group tracking and team management, from anywhere as long as internet connection is available.

This makes team efforts during these unprecedented times more sound and solid as the government battles the still raging global health crisis.

Andrew Forbes, Head of Middle East and North Africa region for Secure Land Communications at Airbus, said: "Kuwait is steadily moving ahead with its digital transformation initiatives as part of its development plan. One of the efforts is intensified adoption of secure communication platforms based on broadband technology as the government steadily moves away from the traditional system."

"In terms of national defense, public security and emergency management, a digital communication system will help reinforce quick coordination among concerned bodies, most especially during critical moments. Airbus solutions are capable of guaranteeing a smoother connection and facilitating better communication structure for public organizations whose mission-critical mandate is to maintain safety and security," Forbes added. T

Keeping Data Protected as Businesses in the Middle East Embark on Remote Working Journey

By: Claude Schuck, Regional Manager at Veeam Middle East

Over the last few months, we've seen many organizations in the Middle East have arranged for employees to work from home. Living in the golden age of Digital Transformation means that we are connected at all times. Consequently, the workplace today has evolved significantly to allow individuals to communicate seamlessly and connect from anywhere through mobile devices, digital tools, cloud services and many more. But what does this mean for organizations and the protection of its data?

With many employees working from home, businesses can expect a huge spike of personal file storing coming in from external sources. This is the perfect opportunity for malicious malware to make their way into servers, potentially corrupting a network of data.

According to a recent news report in The National newspaper, the UAE has been revealed as the leading target of cybercriminals in the region, accounting for more than half of the examples of malicious online and theme-driven behavior detected in the Gulf. Trend Micro, an international cybersecurity and defense firm, said it had detected 1,541 attacks in the UAE in the past months, including 775 malware threats, 621 email spam attacks and 145 URL attacks during March. Across the GCC countries, the figure was 3,067 over the same period.

Here are some of the necessary steps businesses should be taking to protect their data and IT architecture:

3 layers in the circle of defense
Businesses need to be aware of how they manage data between cloud and consider tools that will give them an advantage. Today, businesses are continuously backing up and replicating applications and we can only expect this to increase over the next few years as others learn the significance of data that are easily recoverable.

They need to understand the different roles that are needed for consideration when optimizing their systems for backup and replication. This can be easily summed up into the 3 layers of defense in data protection.

Perimeter: Firstly, businesses must consider the situation at hand – in this instance, it is remote working or working from home. Protection must be made available for employees to be able to access the cloud and in turn, ensure that these data can be backed up.
Mid: Next, businesses need to note that with an increase in the number of people working from home, measures must be put in place so that the systems are still able to run smoothly and efficiently. To counter this, it is highly recommended that servers be optimized for different groups of networks to tap into.
Base: It goes without saying that having more people accessing the servers from an external network will also result in an increase in the number of personal files coming in. Businesses need to ensure that they are able to mitigate any malware that might make its way through.

Data backup and protection
There are many unforeseen circumstances that businesses need to prepare for. Therefore, it is important for them be highly adaptable. Having data that is easily accessible is part of the solution to be ready for remote working. Over the next few years, businesses can expect to see an increase in the number of tools that can allow them to continuously back up their data and perform recovery in a matter of minutes. With these tools, they will be insured with more than just backed up data – they will also have access to insights that will allow them to make informed decisions in their digital transformation journey.

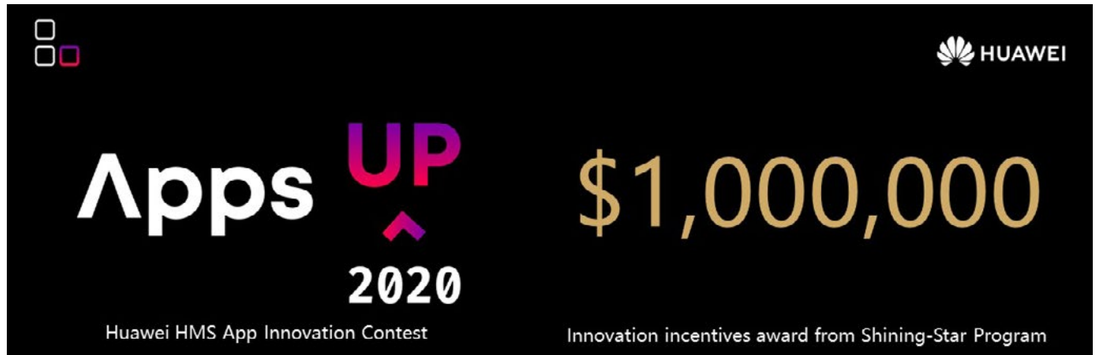
Apart from that, it is also important for businesses to protect their data – as seen with the recent increase of data breach.

Cloud Data Management is expected to see an increase in mobility and portability over the next few years. With added security measures, businesses will have access to data easily outside of their workplace with a peace of mind.

Prevention of cyberattacks
One of the essential steps businesses need to take is to minimize administrative access to platforms and servers and increasing rules of operation. Not everyone needs to be able to access all the systems in place.

It is also vital for organizations to educate their employees – often, ransomware finds its way through a system because of an individual's mistake. It is important for businesses to remind employees on best practices, especially in times when telecommuting is an option for everyone. They need to understand that being connected to a network outside of the company's system exposes the servers to potential malware.

To sum it all up, businesses in the Middle East need to always prepare ahead for any disruption that might have an impact in the way they work. Especially in an era where remote working is a step forward, organizations need to ensure that their systems are ready and fully protected so that their employees can remain efficient and productive. T



Innovate For All, HUAWEI HMS App Innovation Contest Goes Global

Top developers across five regions including Middle East invited to create innovative apps by integrating with HMS Core, a full suite of Huawei's Chipset-Device-Cloud capabilities

Developers around the world are being invited to put their skills to the test on a global stage with the launch of HUAWEI HMS App Innovation Contest, Apps UP, launching on 13th of July till 30th of August

The inaugural contest will see entrants compete against other experienced developers to create innovative apps that improve and help navigate everyday life. Apps UP contest provides a platform for developers in each of the five competition regions: Europe, Asia Pacific, Middle East & Africa, Latin America and China to showcase their skills and innovation.

HMS Core integrates Huawei's Chipset-Device-Cloud capabilities, providing core capabilities to developers such as Machine Learning Kit, HiAI, AR Engine and more. Developers can easily achieve direct access and global all-scenario intelligence distribution across all devices by integrating their apps with HMS Core.

With AppGallery's continued growth and position as one of the top three global app marketplace, winners of the Apps UP contest will get the chance to have their apps promoted on HUAWEI AppGallery, making them accessible to hundreds of millions of Huawei and HONOR users from more than 170 countries and regions, combined with the benefits of AppGallery Connect, providing one-stop service open platform for mobile apps, which help developers innovate and carry out efficient operations.

Prizes and wider benefits also include:

- USD$200k total funded by the Shining-Star Program, in cash prizes in the following categories: Best App, Best Game, Best Social Impact App, Most Popular App, Honourable Mention
- Opportunity to compete on a global stage and showcase technical ability using leading HMS Core
- Discussion with industry experts and Apps UP expert judging panel
- Free access to Huawei Developers events, courses and certifications

Commenting on the launch of the HUAWEI HMS App Innovation Contest, Apps UP, Zhang Ping'an, President of Consumer Cloud Service, Huawei Consumer Business

Group, said: "The number of talented developers of HMS ecosystem is growing. The work that developers do is integral to so much of our daily life. Through the apps they create, they empower us to seamlessly navigate the world around us. At Huawei, we want to invite developers to join us in building a better future and turn their ideas into reality using HMS Core offered by Huawei Mobile Services." T

Zain Group joins 'The Valuable 500' to unlock opportunities for people with disabilities

Through its WE ABLE initiative, Zain is pioneering diversity and inclusion across the region

Zain Group announces its inclusion in The Valuable 500, an international initiative striving to put disability on the leadership agenda within corporates. Zain already has a well-defined and proactive diversity and inclusion program, WE ABLE, aimed at integrating people with disabilities within the company as well as improving their business social and economic prospects. The company's participation in The Valuable 500 will further amplify its efforts. Entrepreneur Caroline Casey launched The Valuable 500 at the World Economic Forum's Annual Meeting in Davos in January 2019, creating a global movement focused on disability leadership in business and celebrating those who commit to inclusion.

The initiative's aim is to unite 500 business leaders representing global corporations to serve as role models and ignite social change by shining the light on people living with disabilities and showcasing how people in these communities remain a significant and contributing sector of society.

Zain is the first corporation from the GCC to join the initiative along with 285 other leading global corporates such as Coca Cola European Partners, Citi Group, Microsoft, Omnicom Group, Virgin, Shell and SKY, to name a few, with the list being added to all the time.

Embedding sustainability and meaningful connectivity in every aspect of its business, Zain is dedicated to its digital strategy of consistently working towards developing the mobile telecommunications ecosystem centered on a vision of inclusive development that leads to socio-economic growth, aligning to the UN's Sustainable Development Goals of leaving no one behind.

Bader Al-Kharafi, Zain Vice Chairman and Group CEO, commented, "It is our duty to ensure we are a diverse and inclusive workplace and by positioning Diversity and Inclusion on the board agenda, we are clearly and proudly committing to our priorities. Our WE ABLE program pledges disability inclusion by 2022 and together with The Valuable 500, a global community with shared values and aspirations, we can foster an inclusive culture."

Al-Kharafi continued, "At the World Economic Forum's Annual Meeting, The Valuable 500 made history by putting disability on the main stage for the first time. The one billion people with disabilities worldwide also hold a disposable income of $8 trillion a year, equating to an opportunity that businesses cannot afford to ignore, and that's why we have signed up to The Valuable 500. Now is the time."

Caroline Casey, Founder of The Valuable 500 said, "We have seen an impressive list of global telecoms companies join and put disability inclusion on their board agenda, and we are delighted that Zain, our first company from the Gulf has signed up. With 49.5 million customers, it is fantastic to ensure those with disabilities are included in having the ability to stay connected."

Casey continued, "The global telecoms industry has proven vital during the last few months in ensuring everyone is able to stay connected during the lockdown caused by the pandemic. It is essential these services are accessible to everyone, throughout the whole supply chain."

On Zain's part, the company's dedication to the support of people with disabilities is extensive. Under its WE ABLE disability inclusion initiative that was launched in July 2019, Zain is working to become a disability inclusive organization by 2022 across all its operations. WE ABLE has four main targets:

1. Increase employment of people with disabilities
2. Ensure all training programs are disability inclusive
3. Ensure all operating locations are accessible
4. Identify and implement assistive technologies that will enable employees with disabilities to independently complete their work

As a member of The Valuable 500, Zain Group has pledged the following:

COMMIT: Table disability on our Board agenda from 2020 and make ONE commitment to action

COMMUNICATE: Share our commitment to The Valuable 500 both internally and externally

CONNECT: Take part in the sharing of information and expertise across The Valuable 500 community.

> **"The one billion people with disabilities worldwide hold a disposable income of US$8 trillion a year, equating to an opportunity that businesses cannot afford to ignore. Now is the time."**
>
> *Bader Al Kharafi*

Automation that Matters and Eliminates Errors

By: Hesham Elsherif, Principal System Engineer at A10

Operators consider network complexity to be the greatest threat for the next three years, according to a research survey by 451 Research. At 61 percent of respondents, this ranks higher than competition from cloud providers or concerns about the pressure on service margins and lower operating costs.

Greatest Threat for the Next Three Years
- Network complexity 61%
- Competition from cloud service providers 49%
- Inability to adopt agile service delivery models 35%
- Regulatory constraints on spectrum 29%
- Inability to lower operating expenses 25%
- Increased pressure on service margins 25%

This concern was echoed by analyst, Patrick Donegan of HardenStance, from an interview with an A10 customer who pointed to complex and unwieldy manual operations as the primary security challenge for operators scaling out their networks with more 5G devices and elements.

For example, "fat finger" errors by operations personnel can cause configuration issues and potential disruption when new devices are brought online. Manual application for security patches is also prone to error or inconsistent updating, leaving network devices vulnerable. With a variety of individuals implementing different configurations at different times along with the growing number of devices, it becomes difficult to compare configurations and patch updates to see if the correct one is in place.

The automation of simple tasks and discrete but complex processes are the first steps to better consistency. Automation, even in small steps, can provide big rewards to operators in reducing costs and enabling faster, more secure rollouts of 5G use cases such as fixed wireless access (FWA).

Operators are caught between needing to automate and reduce costs while still managing older, multi-generational and hybrid technologies of 3G, 4G, 5G and fixed broadband. The automation of deployment, configuration, update and upgrade processes can substantially ease the pain of this transition and support operator goals of lower cost, stronger security and better customer experience.

Service providers operating both mobile and fixed networks, such as the one interviewed in the HardenStance brief, are focused on FWA with 5G to improve the volume and quality of their video services, to further enable the convergence of the mobile and fixed infrastructure and to reduce costs. This operator wants to provide consistent services for fixed broadband users, even when connecting via 5G FWA, and to extend broadband coverage to underserved areas such as rural populations.

Globally, the FWA market is surging worldwide with over 100 million households now using fixed wireless access. Overall, the mobile industry sees fixed wireless access with 5G and 4G as providing a cost-efficient way to connect underserved populations. Broadband deployment has been particularly slow in developing and underdeveloped countries where as many as 1 billion families are estimated to be without any fixed broadband access at all.

The operators' opportunity for fixed wireless access services (both 4G and 5G) is huge. 5G for fixed wireless access provides up to 100x more capacity than 4G and eliminates the need to deploy costly fixed wireline or fibre infrastructure, which requires digging trenches, laying cable and securing the right

of way.

At A10 Networks we believe a comprehensive set of API scripts that allow operators to automate multiple tasks and simplify complex processes and meet network transition business goals. A10 approach is we only require no more than a handful of API calls to execute many changes, which may require a thousand API calls from other vendors. This greatly simplifies the management of ever-expanding network nodes. Furthermore, clustering functions and licensing options allow for the flexibility to increase capacity across different nodes, regardless of location and without service interruption in just 20 minutes.

The automation of seemingly simple tasks and processes and elastic scalability help optimise investment per site and enable operators to more easily build out mobile edge computing and to converge mobile and fixed technologies while ensuring a uniform subscriber experience. T

The Diplomatic Quarter General Authority in Riyadh inks first of its kind strategic deal with TAWAL

The Diplomatic Quarter General Authority has recently partnered with the leading integrated ICT Infrastructure service provider in the Kingdom, TAWAL, for the development of the area's telecommunication infrastructure. The strategic partnership is first of its kind in Saudi Arabia through which TAWAL will be managing the ICT infrastructure and dealing with the mobile network operators in fulfilling the Diplomatic Quarter's requirements. The agreement was signed by the CEO of the Diplomatic Quarter General Authority Dr. Fahad bin Hussein Bin Mushayt and the CEO of TAWAL Eng. Mohammed bin Abdulaziz Alhakbani. The partnership witnessed the attendance of officials and company executives according to agreed-upon precautionary health procedures.

Dr. Fahad bin Hussein Bin Mushayt, CEO of the Diplomatic Quarter General Authority, stressed the importance of this strategic agreement in activating the communications services in the Diplomatic Quarter, as an important step that will enable the Authority to achieve its goals in developing the DQ into a model city that provides all modern technologies and smart services, indicating that the agreement comes as a result of the authority's constant keenness to improve the services and facilities available to the neighborhood's residents and visitors. Dr. bin Mushayt also expressed optimism about this partnership with TAWAL, stating that this agreement is part of a comprehensive development plan that the Authority has initiated in order to achieve its role in representing the Kingdom amongst the most important regional and international commissions and organizations and in reflecting the best image of the Diplomatic Quarter in particular and the Kingdom in general.

Eng. Mohammed Alhakbani, CEO of TAWAL, also clarified and said: "We are optimistic to be joining hands with the General Authority in the development of the Diplomatic Quarter and its transformation into a smart city and the role this project will have to pave the way for similar mega projects in the Kingdom. This is a promising partnership and it will lead to a digital revamp of the area to become an ideal role model for the development of smart future cities, using the best technologies and smart services that rely on 5G technology. We are proud of this strategic partnership and the General Authority's trust in TAWAL's capabilities to deliver the best innovative solutions that would cater to its needs. The agreement is firm proof of TAWAL's leadership in the industry in providing the best ICT infrastructure services and solutions and in supporting the Kingdom's 2030 vision aimed at achieving digital transformation."

The agreement is a 10-year contract that is up for renewal. It serves the purpose of managing the DQ's telecommunication tower services, inclusive of the installation of stations and networking solutions. TAWAL will be working on securing a wide mobile network coverage according to the highest global standards. TAWAL will also be building advanced and environmentally friendly telecommunication towers that will be shared in a smooth manner that considers the importance of preserving the splendor and beauty of the Diplomatic Quarter's landscape. TAWAL will also be responsible for the operational and maintenance aspect of the grid in accordance with all service providers. This, in turn, will help centralize a strong network in the Diplomatic Quarter with 5G coverage to be expanded as required by the General Authority.

This agreement is part of a bundle of agreements and memoranda of understanding recently signed by the Diplomatic Quarter General Authority for the development of the area's infrastructure and the provision of all ICT services to benefit all residents and visitors. These projects complement the Diplomatic Quarter's path to become an exemplary model for future and modern residential neighborhoods. T

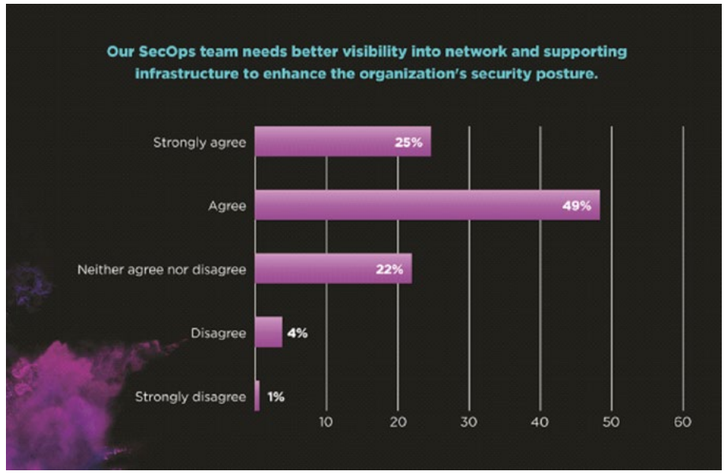
Surge in remote work propels network visibility to top concern for both NetOps and SecOps

VIAVI Solutions has released the results of its 13th annual State of the Network global study of enterprise networking and security challenges. The study shows that IT teams critically require better visibility into the network driven by a number of factors, including tremendous disruption from the COVID-19 pandemic, relentless technological advances, remote working reaching an all-time high and the expanding security threatscape. Indeed, 73 percent of respondents said security professionals need comprehensive visibility into network infrastructure to enhance cybersecurity efforts and speed remediation.

During the global pandemic, infosec professionals are reporting a rise in cyberthreats. And as enterprises increase connectivity, networks are even more exposed to vulnerabilities. More than half of respondents (54 percent) have already deployed IoT devices. While another 24 percent of respondents plan to do so in the next 12 months, only 57 percent of them have a mechanism in place to monitor those devices.

In an age of dynamic disruption, IT is increasingly challenged to maintain optimal service delivery, while implementing remote working at an unprecedented scale. It's not surprising, then, that nearly 60 percent of study respondents cite the need for greater visibility into remote user experiences. For the first time in 13 years of the State of the Network study, the top challenge for troubleshooting applications is the ability to understand end-user experience (nearly 47 percent).

"As remote working becomes the new norm, IT teams are challenged to find and adapt technologies, such as flow-based reporting to manage bandwidth consumption, VPN oversubscription



and troubleshooting applications. To guarantee the best performance and reduce cybersecurity threats, increasing network visibility is now a must for all businesses," said Charles Thompson, Senior Director, Enterprise and Cloud, VIAVI. "By empowering NetOps, as well as application and security teams with network visibility, IT can mitigate the impact of disruptive migrations, incidents and new technologies like SD-WAN to achieve consistent operational excellence. This year's State of the Network study clearly demonstrates an increasing awareness of this fact among all IT stakeholders."

Key Takeaways

- A surge in remote users is challenging network and security teams, as evidenced by nearly 60 percent seeking more visibility
- Roughly three out of four respondents agree or strongly agree that SecOps teams need better visibility into network infrastructure to enhance cybersecurity efforts, suggesting that effective collaboration between NetOps and SecOps leads to stronger security posture and faster incident response

- The top troubleshooting challenge that IT network teams now face is understanding end-user experience (nearly 47 percent)
- Among organizations of all sizes, the most used KPI for assessing end-user experience is packet-based metrics (45 percent) followed closely by user-satisfaction metrics (41 percent)

- More than half of survey respondents (54 percent) have already deployed IoT devices, yet only 57 percent of those have a mechanism in place to monitor those devices, leaving their networks exposed to vulnerabilities

- SD-WAN has gone mainstream, with the primary motivations for deployment being cost savings (58 percent) and business continuity (50 percent). T

Key business it priorities needed to embrace opportunities at the edge

By: Morten Illum, VP EMEA, HPE Aruba

Organisations across every industry sector are currently experiencing change on an unprecedented scale as they look to digitally transform operations, through the implementation of digital devices, smart technologies, and an ever-expanding network, in the search for a competitive advantage. However, in order to leverage and evolve how we use data collected though digital transformation, it's increasingly clear every business should be looking to the edge of their network. Where data and processing power were once concentrated in the back-office, now they live at the Edge, near the people who are using it – as both employees and customers.

A book, 'Opportunity at the Edge' from Fast Future, in collaboration with Aruba, demonstrates that Edge technologies have the potential to overhaul business models, transform user experiences, and even create entirely new industries.

Edge computing is defined as products that facilitate data processing at or near the source of data generation, delivers far speedier results than traditional architectures. At the Edge, enterprises can deploy technology, from the mobiles that customers use to connect to service, to the sensors that can track activity, and the Artificial Intelligence (AI) that can analyse the data collected in real time, to create user experiences that are faster, more dynamic and personalised to individual needs. Edge computing technologies —This makes it possible for every organisation to provide a radically improved level of service.

According to Gartner, edge computing will be a necessary requirement for all digital businesses by 2022. But with business and technical hurdles to overcome, how can CIOs manage the business strategy of implementing their network at the edge? With potentially trillions of dollars being invested in the hope of generating huge economic returns, the argument for paying attention to the Edge opportunity is clear and the window for learning and action is narrowing.

Leadership

In order to truly embrace the Edge, you have to start at the top. Senior-level management must develop a deep understanding of the shifts taking place in the marketplace, and the opportunities and challenges posed by adopting the edge as a cornerstone of business strategy. What's more, leaders need to understand how the technologies will enable their business to create these new opportunities and recognising that it transcends the realm of IT, opening up new avenues of business. For instance, in the hospitality sector, Edge solutions can help create more personalised experiences for guests. Interaction between the guest's intelligent assistant and the hotel can ensure that the mini-bar is stocked only with what is in their approved diet, and digital restaurant menus can automatically update using the same information, such as removing any high sugar content dishes. But with change comes challenge – the c-suite needs to have a full understanding of the challenges when making the transition and learn from other companies who have embarked on both successful and failed digital transformation efforts.

In order to succeed, managers need to prioritise objectives, ensuring that both IT and wider business resources are not spread too thinly across multiple projects. Senior leadership's key role will be to provide the resources and direction to ensure projects stay focused on their goals and can deliver meaningful results. Stakeholder engagement is critical here – the scale of the opportunity, the size of the transformation, and the commercial risks of inaction need to be communicated clearly to critical stakeholders from employees and managers to shareholders and the board.

Develop and Evolve the Business Case

From the outset, it is important to understand that the business case for deploying edge technologies is likely to evolve over time. While assumptions will need to be made at the start of the process, in order to give the project direction, this will likely change and evolve once businesses gain more practical experience implementing edge-based solutions and are in a better place to understand the true benefits for customers and the organisation.

The key factor in evolving business cases will be responding to feedback from the end user or employees. While enterprises may have to adjust the solution as they hit technological barriers or come up against an unwillingness to invest from senior stakeholders, the biggest success factor in delivering on the business case will be understanding and responding to any adverse consumer and employee reactions over how these technologies might be used and how they might impact personal privacy. Trust and transparency are going to be key to implementation.

Security and Risk Management

As with any large-scale transformation, adopting edge-based strategies has inherent security challenges and risks, and many have raised concerns about the potential invasion of privacy and misuse of customer data. Operationally, the critical risk here is not investing enough in mind-set change, digital literacy across the business, and the capability of IT to lead and deliver edge strategies.

According to Fast Future's book, the most voted for security fear is that Edge solutions could potentially create thousands of points of risk exposure across the network for hackers to take advantage of (82%). Every enterprise that moves towards the Edge must act to pre-empt the security threats inherent to a network newly flooded with connected devices. Fundamental to these opportunities is the need for robust, centrally-managed network infrastructure – one that provides visibility and control in an increasingly complex, and potentially vulnerable, enterprise environment. Enterprises must also work on the basis of an open technology ecosystem that leaves them with the room to adapt and evolve over time, as priorities change. Businesses will have to show stakeholders that the benefits of edge technologies far outweigh any privacy fears, and that any data captured will only be used to evolve and improve their experiences.

It's clear that, if implemented correctly, Edge is going to be key to evolving businesses and getting a digital advantage over competitors. fast becoming the single most important trend for enterprises in the coming years, which will be able to contend with the quickly evolving expectations of consumers for more seamless, customised and on-demand services. But in order to implement these solutions effectively, enterprises must take heed of both the benefits and challenges such an extensive implementation may cause and pre-empt them ahead of time. Companies need to focus not just on installing technology, but upgrading the institutional mindset towards a more experimental approach, and improving digital literacy across the board

Those that lay the foundation now from a technical and structural standpoint, will be best placed to take advantage of the Edge potential. T

Digital Financial Services partners with MoneyGram to offer eWallet services in UAE

Digital Financial Services LLC, a joint venture of Etisalat and Noor Bank, acquired earlier this year by Dubai Islamic Bank, has partnered with MoneyGram, a global leader in cross-border P2P payments and money transfers, to offer international remittance services in the UAE.

With this partnership, eWallet customers can make international money transfers in real-time to friends and family in over 200 countries and territories worldwide through an expansive network of mobile wallet operators, bank account deposit services, and over 350,000 walk-in locations.

Regulated and licensed by the Central Bank of the UAE, eWallet is a revolutionary digital payment service aimed at empowering the UAE residents with safe, convenient and flexible payment solutions through an easy-to-use eWallet mobile app.

Ahmed Al Awadi

Unlike other mobile wallets and payment apps, a unique feature of eWallet is that there is no need to have a bank account, credit or debit card to do digital payments. Customers need a valid Emirates ID and a UAE mobile number to open an eWallet account. Once registered, users can instantly top-up their wallet balance and start sending and receiving money between mobile phones, transfer to own or third-party bank accounts, and do merchant payments, bill payments, and mobile recharges. In addition to sending money globally through MoneyGram, users can also withdraw cash from their wallets by visiting the nearest MoneyGram agent location.

Commenting on the partnership, Ahmed Al Awadi, Chairman of Digital Payment Services, said: "eWallet continues to be an innovative solution that uplifts the way UAE residents conduct financial transactions today. Our partnership with MoneyGram will further enrich our consumers with the state-of-the-art customer service experience which MoneyGram is renowned for and will boost our future expansion plans." T

stc pay and Visa to launch a digital payment solution

stc pay, digital wallet and subsidiary of stc Telecom Company, and Visa entered into an exclusive strategic partnership to launch customer-centric financial services and digital payment solutions to stc pay customers. The strategic partnership, involving a multi-year agreement, was signed via videoconference by Ahmed Alenazi, CEO of stc pay, and Ali Bailoun, Visa's GM for Saudi Arabia.

The new agreement – Visa's first fintech partnership in Saudi - further builds on stc pay and Visa's partnership from 2018, and will involve issuance of Visa payment credentials to millions of stc pay customers enabling them to use their stc pay digital wallet for contactless, scan-to-pay (QR-based) and eCommerce transactions, and international remittances via stc pay digital wallet.

Ahmed Alenazi, CEO of stc pay, said: "This global partnership agreement with Visa is significant for stc pay, especially following the granting of our e-money license. This partnership helps us move steadily towards our ambition of offering new, secure and frictionless financial services and payment solutions to merchants and consumers in the Kingdom and beyond. We are excited to be working with Visa to drive this shared goal of offering innovative solutions to resolve unmet gaps in financial services and digital payments."

The partnership with stc pay also underlines Visa's long-term commitment towards supporting the growth and development of fintechs globally. And this includes delivering innovative technologies for consumers and for small and medium enterprises (SMEs) and global enterprises. T

Envistacom partners with NOVELSAT to deliver a virtualized commercial multi-access waveform for satellite connectivity

NOVELSAT has announced that it will incorporate its high-performance satellite access waveforms into Envistacom's Transport Virtualization Ecosystem (TVE).

Envistacom will deliver an open-architecture ecosystem which will enable virtualized applications such as advanced communications waveforms, encryption, data analytics, and other real-time continuous processing applications to reside in common off-the-shelf (COTS) hardware. The Envistacom/NOVELSAT partnership allows commercial and Department of Defense customers to benefit from the ability to download NOVELSAT's Multi-Access Waveform as an application to be operated on non-proprietary COTS High-Performance Computers (HPCs) acting as a Virtual Modem in Envistacom's Transport Virtualization Ecosystem. Envistacom's ecosystem (TVE) will provide DoD customers with greater cost savings through the use of COTS hardware, faster time to market (TTM), more configurable/adaptable solutions, mix and match capabilities to achieve the best results, and easier sustainment and enhancement efforts providing portability between hardware generations without re-engineering legacy technology.

"NOVELSAT is proud to work with Envistacom to enable the delivery of a virtualized commercial multi-access waveform through Envistacom's Transport Virtualization Ecosystem for easy customer adoption," said Aviv Ronai, VP Marketing and Product at NOVELSAT. "Incorporating our proven waveform performance, robustness, and system resiliency into Envistacom's Transport Virtualization Ecosystem will yield an exceptional solution for mission critical communications."

The combination of NOVELSAT systems waveforms with Envistacom's virtualization ecosystem will provide resilient, high-performance, and ubiquitous connectivity for mission-critical applications.

"Envistacom is pleased that NOVELSAT has elected to bring its commercial waveforms to our Transport Virtualization Ecosystem in order to enhance the future of resilient satellite connectivity," said Michael Young, Envistacom's Senior Director of Business Development for Advanced Technology. "Adjacent markets have already adopted the notion of virtualization to lighten the logistical and operational burdens of the user. Envistacom looks forward to our partnership with NOVELSAT and their thought leadership in the satellite arena." T

Thuraya and Ground Control expand satcom connectivity options for the US Market

Thuraya has signed partnership agreement with the US-based Ground Control Systems Inc. owned by Wireless Innovations Ltd, to distribute its products and services within the country and the rest of the world.

Thuraya is already a well-established brand in the United States, working closely with leading enterprises such as Hughes, Boeing, Viasat and SRT Wireless. The new partnership not only helps Ground Control customers benefit from Thuraya's award-winning technology but also gives them access to its satellite communications services in more than 160 countries across Europe, Asia, Africa and Australasia.

Shawkat Ahmed, Thuraya's Chief commercial Officer said, "We are delighted to expand the parameters of our relationship with Ground Control to include distribution of products and services. This alliance is important to us as it will broaden our reach within specific verticals. Ground Control has a wealth of experience and understanding of the US market, which coupled with the strength and reliability of our services, will enhance the connectivity experience for customers in the region."

For over 18 years, Ground Control has provided specialized, end-to-end satellite communications solutions to government, energy, maritime and leisure sectors.

Jeff Staples, Chief Executive Officer of Ground Control Systems Inc. stated, "We have been working with Thuraya for many years now and share the same ethos and consulting approach to help our customers find the right satellite solution that works best for them. Our partnership with Thuraya will concentrate on offering broadband and voice products and services to the US customers operating within Thuraya coverage as well to International customers through our UK-based affiliates - Wireless Innovation, Rock7 and YB Tracking." T

RSCC's Express-80 and Express-103 communications and broadcasting satellites in target orbit now

On July 31, 2020, two spacecrafts, Express-80 and Express-103, ordered by the Russian Satellite Communications Company (RSCC), were launched from the Baikonur cosmodrome. The new satellites were put into the target geo-transfer orbit and later will be placed in the geostationary orbit at 80° and 96.5° E. The spacecrafts are intended to provide fixed and mobile services; digital TV and radio broadcasting; high-speed Internet access, as well as data transmission across the Russian Federation and abroad. The full-scale functioning is scheduled to commence in January and February 2021.

"With two newly-launched satellites, Express-80 and Express-103, the throughput of our constellation are now up by a quarter," said Yuri Prokhorov, RSCC acting Director-General. "It is crucial for RSCC that these spacecrafts in orbital slots centered over the Russian Federation are already demanded by our customers. This will allow telecom operators to transfer their networks from foreign spacecraft and provide domestic subscribers with the most advanced digital communications and broadcasting services, including Internet access for maritime and aerial customers."

The vehicles were manufactured by Russia's leading aerospace enterprise, JSC ISS Reshetnev, in collaboration with its European partner, Thales Alenia Space.

Today, with a fleet of 10 geostationary satellites operating in the C-, Ku-, Ka- and L-bands, RSCC boasts Russia's largest orbital constellation. Advantageously located on an arc of a geostationary orbit from 14° W to 140° E, this orbital constellation enables RSCC to provide services to clients in 58 countries on all continents. T

SES launches free-to-air satellite channel to fight spread of COVID-19

Millions of households across Africa, Europe, and Asia-Pacific will be able to access a free-to-air TV channel via SES satellites dedicated to delivering reliable, informative content about COVID-19. The channel — Fight COVID-19 — broadcasts content that is aimed at providing underserved and rural communities with critical information about how to limit the spread of the virus.

The content is provided by trusted organisations such as UNICEF and AFP as well as global EdTech social enterprise Potential.com. The content aims to impartially inform TV viewers about identifying COVID-19 symptoms, the recovery process, and how to manage the effects of a global pandemic and social distancing, such as managing a household, children, or mental health. SES welcomes additional content providers from international and regional organisations to contribute to the COVID-19 channel.

The channel is broadcast free-to-air from SES's satellite fleet and is available in the following regions:

- ASTRA 4A at 5 degrees East for Sub-Saharan Africa and Ukraine
- ASTRA 2F at 28.2 degrees East for West Africa
- NSS-12 at 57 degrees East for Ethiopia and adjacent countries
- SES-9 at 108.2 degrees East for the Philippines

"Our lives have been disrupted by COVID-19 in the last few months, and unfortunately, it doesn't seem to be going away anytime soon. Through the global reach of satellite, we are in a position to contribute our resources wisely to help provide important information to vulnerable communities," said Steve Collar, CEO of SES. T

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