Daniel A. Losada

*VP International Sales,
Hughes Networks Systems*

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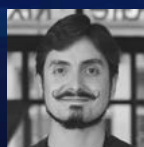
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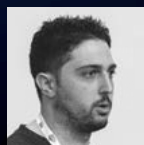
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Contents

37

40

Interviews

News

14

27

Article

Satellite Communications

...and much more

Editor's Note

Dear Reader,

Welcome to the latest edition of Teletimes International.

With the month of September, we look forward to IBC 2022 which is one of the largest global gatherings of satellite and content providers. Teletimes is a Supporting Media Partner and as always, I am looking forward to meeting our partners and contributors at the event.

This edition of Teletimes features an exclusive interview with Daniel Losada, VP of International Sales at Hughes Networks Systems. Daniel talks about the on-going trends in the satellite industry and how it's shaping up to better support different verticals. His take on the recent consolidations and the future of satellite communications is worth reading.

Another piece that I would definitely recommend is "When telecom fiber can sense" on page 32. The article talks about fiber optic sensing and how the telecommunications industry is leaving copper wires behind in favor of fiber optics.

As always, you will find the latest news and updates from all major players in the ICT and satellite space. If you are visiting IBC (Sep) and GITEX (Oct) and would like to set up a meeting or interview with our editorial team, please reach out to me on khalidathar@ teletimesinternational.com

Your feedback is welcome on info@teletimesinternationl.com

Enjoy Reading!

Khalid Athar
Chief Editor

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Interview: Khalid Athar

Hughes is pioneering satellite-enabled 5G service

It's a really interesting time in the satellite industry with new players and several mergers and acquisitions underway

Exclusive interview with
Daniel A. Losada
*VP International Sales,
Hughes Networks Systems*

Khalid Athar: What will be Hughes' focus at this year's IBC?

Daniel A. Losada: IBC is a show we like to attend to keep our finger on the pulse of what's happening across the satcom industry. While the "B" in IBC stands for broadcasting, this is an event that attracts a lot of the satellite industry including data communications which is Hughes focus. IBC presents a great opportunity to connect with customers, partners and industry thought leaders so we can prepare our networks and technology solution to meet the demands of our customers well into the future. Plus, it's thrilling to be able to meet with people in person again after not travelling during the height of the pandemic!

KA: How has 2022 been so far for Hughes? Would you like to share some major highlights?

DL: It's a really interesting time in the satellite industry with new players and several mergers and acquisitions underway. Yet for all the activity going on around us, we've stayed focused on what we do best at Hughes. That is, innovating and partnering with our customers to connect more people and businesses.

As one example, Hughes is pioneering

"In March, we earned a three-year contract from the U.S. Department of Defense to deploy a private 5G network at Naval Air Station Whidbey Island in Washington state".

"We continue to connect the unconnected around the world with managed satellite broadband services".

"We just celebrated the Hughes 50th anniversary last year – we certainly believe that before our next such milestone, we will operate in very different, completely connected universe".

satellite-enabled 5G service: we recently tested 5G satellite backhaul and interoperability with our JUPITER™ System ground platform. In March, we earned a three-year contract from the U.S. Department of Defense to deploy a private 5G network at Naval Air Station Whidbey Island in Washington state. There, we'll demonstrate how 5G infrastructure – including a packet processing core, radio access, edge cloud, security and network management – can power resilient networking for the military in a use case that can be replicated in the enterprize space. The standalone, standards-based configuration will connect seamlessly anywhere on the planet using both LEO and GEO satellite connectivity.

When it comes to LEO connectivity, we've seen a lot of activity this year with our partnership with OneWeb. We designed and are deploying the gateway electronics for the OneWeb worldwide ground system and also developed and manufacture the core module used in every user terminal. This year, we debuted our new electronically steerable, flat-panel antenna to support fixed and mobile applications with high-speed, low-latency connection and rapid handoffs from one satellite to the next. Gogo is the first customer to select our antenna solution, which they will employ for their business aviation service using OneWeb capacity. This year also, we announced a Distribution Partner agreement to provide OneWeb connectivity services across India through our joint venture with Bharti Airtel Limited.

Meanwhile, we continue to connect the unconnected around the world with managed satellite broadband services. Our flagship consumer internet service, HughesNet® earned accolades from U.S. News & World Report as the Best Satellite Internet Provider and the Best Rural Internet Provider of 2022. Across Latin America, Hughes has been selected by government agencies and mobile network operators to provide vital satellite connectivity to rural communities and schools in Brazil, Peru, Mexico and Colombia, among others. In Indonesia, PT

Pasifik Satelit Nusantara (PSN), the oldest private telecommunication and information service provider in the nation, selected our JUPITER System to enable services on the new Nusantara Lima very high-throughput satellite, which will bring internet access to people living outside the reach of terrestrial broadband in Indonesia and neighboring countries.

KA: How would you comment on the recent consolidation around the markets? Especially consolidations & partnerships to create LEO and GEO synergies?

DL: The future of satellite communications is multi-transport solutions that combine the low latency of LEO with the capacity density of GEO. I'll give you an example: a plane flying to the Canary Islands could use LEO service for onboard connectivity; however, when that same airplane flies to a busy airport hub like Frankfurt, a LEO system might lack the bandwidth to support that much demand – here, a GEO solution can better fulfill the need.

It comes as no surprise that companies are pursuing business arrangements that make these service offerings possible – we've been doing so for many years. We've been building LEO ground systems for nearly two decades – for customers like Iridium and GlobalStar. And we are the leading provider of GEO ground terminals with more than 50% global market share. Today, we're well positioned to deliver on this market shift as an investor, distributor and an engineering partner to OneWeb.

KA: Many of our readers would be interested in Hughes' 5G backhaul capacity. Would you like to share more about your capabilities and recent testing around interoperability?

DL: Our JUPITER System is 5G ready, today. We tested and proved the system's readiness by connecting 5G smartphones to the internet with JUPITER system infrastructure. This assures us and our customers that our system will interoperate with standards-based 5G systems anywhere in the world. This was a huge step forward

in validating our interoperability of 5G networks for cellular backhaul. It also paves the way for operators who choose the JUPITER System to backhaul 3G or 4G traffic to seamlessly support 5G backhaul when it's time to upgrade their systems. Our satellite backhaul capability will continue to serve as an efficient solution as the demand for 4G and LTE mobile connectivity grows globally, and we are proud to continue to partner with MNOs around the world to provide this vital service.

We have been talking a lot about connecting the unconnected in rural areas and remote communities.

KA. Where do we stand today as an industry in that aspect? How long until we can safely assume 99%+ connectivity with high-speed broadband on a global level?

DL: I wish I had a crystal ball! The International Telecommunications Union (ITU) estimates that 2.9 billion people remain unconnected. It's fair to say there is still a long distance to travel in getting the remainder of the global population online. The primary barriers, of course, are access and cost – and that's why satellite will continue to be instrumental in advancing the goal of universal connectivity. Satellite's inherent advantages – ease of deployment, affordability and reliability – make it an essential, and perhaps the most important, ingredient in meeting the needs of the remaining unconnected. The ITU/UNESCO Broadband Commission for Sustainable Development has several advocacy targets for universal connectivity, which include support for national broadband plans in every nation, making broadband more affordable and getting everyone online. Hughes is actively engaged in advancing these targets.

We currently work with many government programs around the world to help provide essential connectivity services, including managed satellite broadband and cellular backhaul to extend mobile networks. To address affordability, satellite-enabled Community Wi-Fi hotspots offer a low-cost model, that when subsidized by

these government programs, support free access in many places. Hughes equipment powers more than 50,000 community Wi-Fi hotspots worldwide, providing internet access to an estimated 25 million people.

Hughes also is adding satellite capacity in the western hemisphere with the upcoming launch of JUPITER 3, our ultra high density satellite, which will improve our ability to serve the underserved and unconnected in the U.S., Canada, Cuba, Brazil and other countries in South America. We are partners in OneWeb, the LEO operator that will help bring connectivity to the farthest reaches of the globe. And we continue to provide cellular backhaul through our JUPITER System to enable mobile network operators to extend their reach to more subscribers.

> **"The International Telecommunications Union (ITU) estimates that 2.9 billion people remain unconnected."**

Finally, we're proud to participate in the Partner2Connect Digital Coalition spearheaded by the ITU. This includes our commitment to work with regulators and together with the ITU to advocate for satellite solutions to bridge the digital divide, as well as a financial pledge to invest USD 2.2 million to deploy Hughes Express Wi-Fi in approximately 2,000 communities in Latin America by the end of 2024 (this is in addition to the 2,500 Express Wi-Fi hotspots already deployed across the region).

We just celebrated the Hughes 50th anniversary last year – we certainly believe that before our next such milestone, we will operate in very different, completely connected universe.

KA: What will be your focus moving forward? Which markets look most fruitful

for Hughes in the coming years? (Please talk about both verticals and geographical markets)

DL: No single type of transport, or constellation of satellites, can possibly meet the growing demand for connectivity. Hughes focus moving forward is the advancement of technologies and services that enable a multi-transport, multi-orbit future. As a business, we're committed to serving the entire communications ecosystem. Beyond our extraordinary engineering work to develop new underlying technologies, we also provide managed services that help networks operate at peak performance. And we're doing that in all sectors – certainly geostationary satellite, but also LEO, 5G and other wireless and even fiber. In one example, HughesNet, our consumer internet service, will soon deliver a multi-path option that combines the bandwidth of GEO satellite service with low-latency wireless technology to offer a seamless, faster experience to end users. In another, we're pioneering machine learning and artificial intelligence applications to optimize performance of enterprize networks. We foresee continued growth in enterprize, government and defense sectors. We are confident our JUPITER System will continue to set the global standard for ground systems, as the leading choice of satellite operators and MNOs worldwide.

With our unique ActiveComms Ecosystem or "ACE," we bring our customers the best mix of transports – whether GEO or LEO satellite or terrestrial options – smart, enabling technologies to optimize the transports, and a managed services approach to integrate all the transports, technologies and network services to best meet the specific customer objectives. While others may be able to offer a variety of transports or managed network services, no other managed services provider (MSP) or operator can bring every type of transport together the way Hughes can, with enterprize grade service and intelligent multi-path network routing, to help fulfill the promise of the connected future. ∎

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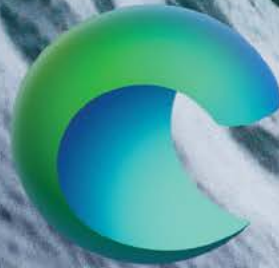
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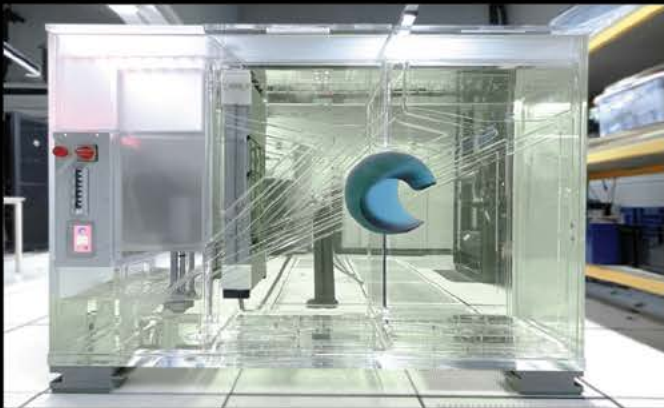
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Omantel drives 5G coverage toward new heights with populated areas in Muscat, Al Batinah governorates covered

Omantel has come a long way in leading the 5G deployment in Oman. In a breakthrough achievement, the company has now covered the populated areas in the governorates of Muscat, Al Batinah South and Al Batinah North with real 5G speeds.

"We have successfully rolled out a large number of new 5G sites in the populated areas of Muscat, Al Batinah North and Al Batinah South governorates. These new sites will serve home internet and mobile internet alike, and users will get an optimum speed even at the edge of the coverage range" said Aladdin Baitfadhil, Chief Commercial Officer at Omantel.

Similarly, Omantel has poured massive efforts into rolling 5G sites in the populated areas across the country. The city of Salalah is one among many other locations that the company has targeted due to the high demand for an ultra-fast internet connection.

"We managed to ensure a fast and steady connection everywhere within the coverage range, even for mobile users, through smaller 5G cells that connect to the main

tower," Baitfadhil explained.

Baitfadhil further said, "5G is an integral part of Omantel's ecosystem and we have the widest coverage of the network in Oman. We see 5G as the key enabler for Industry 4.0 technologies, like IoT, Cloud Computing, Big Data & Analytics, Augmented Reality and Artificial Intelligence, with its massive network capacity and ultra-low latency. Our role, at Omantel, is to lay the groundwork to help our partners in the public and private sectors to tap into the growing opportunities that arise as technology advances".

"Due to demographic and geographic factors, 5G is the way forward to ensure a high-speed and low-latency internet connection in Al Batinah North and Al-Batinah South governorates and other locations where "fiber" is technically challenging and financially unviable. Therefore, we are keen on enhancing our 5G footprint in Al-Batinah and elsewhere to build on our main role of connecting the society within Oman and with the world to the utmost level," he noted.

Omantel has taken its services well beyond

the traditional telecom offerings, and it is rapidly emerging as a youthful brand that adapts to people's lifestyle. 5G offers a seamless internet experience, and it takes home and mobile services to a whole new level of excellence. With the high throughput and ultra-low latency, customers can now experience immersive gaming, cloud gaming, Virtual Reality (VR), Augmented Reality (AR) capabilities and much more.

Omantel was the first operator in Oman to announce the commercial launch of 5G for fixed home broadband and mobile. Today, the company continuous to bolster its 5G's leadership in the country with enhanced network coverage, versatile offerings, and strong partnerships.

Omantel is the Sultanate's first and leading integrated telecommunications services provider, enabling the digital society to flourish, allowing new ways of doing business and delivering a world of information, news, and entertainment. While striving to ensure optimum customer satisfaction, Omantel plays a key social role to provide the required support and subsidy to all sectors of the Omani society.∎

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Boost for Middle East ICT talent as Huawei Seeds for the Future opens for 2022 season

Shunli Wang, Vice President of Huawei Middle East

It is now apparent ICT will play an increasingly important role in boosting regional economies, stimulating the development of innovative startups, and meeting the digital needs of all. The International Telecommunications Union says an increase of 10% in digitization results in 2.49% growth in GDP per capita.

In this digital economy landscape, ICT skills are vital to support long-term national plans for economic expansion and diversification. This calls for a long-term strategy to equip the youth with the capacity to make a difference while contributing to the socio-economic growth of nations. The Organization for Economic Cooperation and Development (OECD) cites digital literacy as a fundamental competency for future education.

Evolving this talent development model will require a shift in how we approach education. We must recognize the talent gaps that exist between classroom education and industry needs. Technology companies, which typically work with all stakeholders, are in an ideal position to help build a bridge between the institutions that produce talent and the organizations that need them.

Huawei was among the first global tech companies to leverage its technology and expertise to help plug the talent gap, launching what is today its flagship CSR initiative, Seeds for the Future, in 2008. The program supports the development of local ICT talent by enhancing international knowledge transfer amongst students, promoting a greater understanding of and interest in the technology field, and encouraging participation in the region's growing digital economy.

The program is more relevant than ever. Organizations are reluctant to adopt next-

generation technologies such as A.I., cloud, IoT, Big Data, 5G, etc., at scale without a clear picture of the digital skills landscape as the world faces a severe tech talent crunch. In a 2020 survey by PwC, 70% of Middle East business leaders said the shortage of essential digital skills is a business threat.

Huawei launched the 2022 edition of the Seeds for the Future in August across the region. During an intensive eight-day program, participants will receive entry-level and advanced courses on key technologies, including 5G, cloud computing and A.I. As a platform for also sharing cultural experiences, participants also have an opportunity to experience virtual tours of Chinese scenic spots or fast-growing companies. The experience includes a glimpse at Huawei's history and technological developments, including a virtual exploration of Huawei exhibition halls, campus and stores. Huawei experts, entrepreneurs, professors and scientists will also be at hand to share perspectives on a wide range of topics, from cybersecurity to the aerospace industry. The program culminates in a competition where young regional innovators can vie for prizes with the other technological projects created by their global peers.

Technology's true success is measured by its impact on society. This awareness inspired Huawei Tech4Good global competition held alongside Seeds for the Future again this year, inviting young people to explore how digital technologies can address social issues. Through group projects, Tech4Good wants to increase social entrepreneurship, build problem-solving and leadership skills through teamwork, and deepen a sense of social responsibility. As of August 2022, the Seeds for the Future program has been implemented in 137 countries and regions, reaching more than 12,000 students from over 500 universities and gaining endorsement from more than 180 heads of state and high-level government officials globally.

Seeds for the Future has garnered support from the highest echelons of government across the region. In Oman, for instance, the 2022 Seeds for the Future was launched in partnership with the Ministry of Higher Education, Scientific Research and Innovation, with the Minister, H.E. Prof. Rahma bint Ibrahim Al Mahrooqi in attendance.

ICT talent demand continues to rise and more skills development efforts are required. Besides Seeds for the Future, Huawei has set up 154 Huawei ICT Academies in the region through which the company holds the annual Huawei ICT Competition. Additionally, over 17,000 students have obtained Huawei certification. Overall, Huawei has trained over 100,000 ICT talents for the Middle East.

Today's trainees are tomorrow's public sectors and technology and business leaders. Investing in their growth now is the only path to a prosperous future. As a global technology provider, Huawei will continue to support partners, customers and nations to help build a fully connected, intelligent world. ∎

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CSIS pledges its support to UAE's initiative of creating a secure cyber environment

Market Solutions Events Management and Cybersecurity Innovation Series (CSIS) pledges its support to UAE's initiative on creating a safe and secure cyber environment. They will be hosting an initiative called the Cybersecurity Innovation Series (CSIS) – UAE Chapter Endorsed by the UAE Cyber Security Council which will take place in Dubai, UAE. This initiative will bring together IT and Cybersecurity professionals to exchange valuable expertise, ideas, and learnings on securing Enterprizes, Government, Public and Private Sector against the ever-evolving cyber threats.

Emerging technologies have always played a vital role in protecting our core digital infrastructure and the hyper connected landscape especially due to the convergence of Internet of Things (IOT), Big Data, Cloud Computing, AI and more. This initiative will be the perfect platform for industry leaders to gather and discuss the way forward in achieving maximum resilience and ensuring utmost security against the cyber threats in years to come.

This chapter will help educate delegates on the latest trends and strategies on Ransomware, Posture Management, Detecting Malicious Activities, Data Breach, Cloud, Application Security and to tackle

today's new and upcoming Cyber Threats. Along with that, our speakers and experts will help touch base upon the challenges faced by the whole IT and the cybersecurity community.

Jiawei Liu, Huawei UAE CEO said, "Huawei has been actively working with governments, customers, and partners through various channels to safeguard end-to-end cybersecurity and jointly tackle all its challenges. Cybersecurity is a shared responsibility and a challenge that cannot be addressed by one person, organization, or nation alone. That is why we are proud to be associated with the Cyber Security Innovation Series, UAE, event to help strengthen existing

partnerships with stakeholders such as the UAE's Cybersecurity Council and forge new ones, hence support to establish the UAE as a globally trusted and safe digital oasis and realize our vision of building a fully connected, intelligent world."

"The rising cost of data breaches means that it's more important for businesses to ensure that their security controls are effective. Simply installing tools and assuming that they provide ongoing protection against the latest threats is a risk that security teams cannot afford to take".

"Picus believes that security control validation is as essential as vulnerability management to improve organizations' security postures and has developed the most complete security control validation technology to help make this process safe, simple and continuous," says Hamdi Alper Memis, CEO, Picus.

"Cyber risk has become one of the top risks faced by organizations as the scale, sophistication, and frequency of cyber-attacks continues to grow at an alarming rate," said Sudeep Chatterjee, General Manager, Middle East and India, MetricStream. "We are thrilled to be participating in the 3rd CSIS Cyber Security Innovation Series to take forward the conversation on connected and integrated approach to cyber risk management". **T**

Jiawei Liu - *CEO, Huawei UAE*

Hamdi Alper Memis - *CEO, Picus*

Huawei addresses Cybersecurity Challenges of the future

Huawei will showcase its cybersecurity capabilities and thought leadership role at the third Cybersecurity Innovation Series (CSIS) UAE Chapter in Dubai on September 6-7. Endorsed by the UAE Cyber Security Council, CSIS brings together ICT industry leaders and cybersecurity professionals to explore steps organizations should take to remain resilient and adapt to the ever-evolving nature of cyber-attacks.

Huawei experts will participate in keynotes, discussions and panels throughout the event. Aloysius Cheang, Chief Security Officer, Huawei UAE, will recommend a "return to basics to address cybersecurity challenges of the future" in a keynote on the first day.

 Meanwhile, Ashraf Esmat Khalil, Head of Solution Architect, Huawei Cloud Middle East, will participate in a panel discussion titled, "Safe or unsafe? Why is cloud security important for business?" and Hulk Zhang, Principle Cybersecurity Engineer, Huawei UAE will participate in the panel discussion titled, "Future of Cyber Security: Challenges, best practices, and effective strategies to create Cyber-Safe Society."

Aloysius Cheang, Chief Security Officer, Huawei UAE, said, "Even in the era of advanced threats and highly sophisticated threat actors, going back to the basics and leveraging hard-wired technical capabilities and experience is often the difference between success and failure. The improved efficiency and accuracy acquired through practice and repetition help reduce the margin of error and streamline process and procedures in any cyber defense activity."

In his keynote, Aloysius highlighted the importance of recognizing cybersecurity as a critical business enabler and the need for cybersecurity professionals, especially the Chief Information Security Officer (CISO), to get it right. Cybersecurity professionals need to treasure the opportunity given

to the CISO in the new digital age where cloud computing heralds a new era and computing is entrenched as a basic utility. Further, IT is hitting the mainstream and IT and security experts are moving into executive management teams and the board as part of corporate strategic goals.

Therefore, building the necessary framework that will allow for solid capacity-building for the youth in the cybersecurity domain is a pre-requisite in today's digital world, as is upgrading and upskilling for

Aloysius Cheang - *CSO, Huawei UAE*

experienced hires or anyone considering a mid-career switch.

"We are committed to adopting open and verifiable security standards such as GSMA NESAS /3GPP SCAS for 5G Security, GSMA 5G Security Knowledge Base and OIC 5G Security Framework. We have in-depth experience collaborating with our customers on advanced tech and industry 4.0 solutions, including 5G, Cloud, AI, and IoT for major industry verticals. Our expertise and solutions are developed and delivered by observing security-by-design and privacy-by-design principles that will allow our customers to safeguard their digital future," Aloysius concluded.

Huawei believes that the cybersecurity challenge is complex and calls for broad collaboration as it is a shared responsibility that cannot be addressed by one person, organization or nation alone. Huawei is pleased to contribute its cybersecurity know-how and collaborate in an open, transparent approach targeted at shared success with all stakeholders in cyberspace to ensure end-to-end cybersecurity that will be critical for the company to realize its vision of building a fully connected, intelligent world. ∎

To Uplift its Digital Infrastructure Capabilities

stc boosts the 5G network capacity by over 60%

stc the leading Digital Enabler in the Kingdom has developed its 5G Infrastructure Capabilities through utilizing a new additional 5G spectrum to be the 1st Operator in MENA Region to enable 5G Carrier Aggregation technology. This is expected to boost the 5G network capacity up to 60% and improve download speeds for its subscribers.

This development plan utilizes 2.3GHz band for 5G on more than 1000 sites as an initial phase, through reuse of the spectrum resources initially used for 4G which affirms stc's strategic commitment to adopt cutting edge technologies and services. The use of 5G Carrier Aggregation technology is expected to aggregate the new 2.3GHz carrier to the main 5G carrier on 3.5GHz, to augment the overall 5G network capacity and elevate speeds into global-ranking levels.

Eng. Bader Alluhaib - stc Infrastructure VP has stated: "In stc – as per our leading position in strengthening the Kingdom's status in the global Telecom sector – we are restlessly working – with the support of our partners – to develop our infrastructure

Eng. Bader Alluhaib - *VP stc Infrastructure*

capabilities, and introducing the latest solutions and technologies to enrich our subscribers experience and improve the Kingdom's global ranking. As the leading Operator in the Kingdom, we are planning to adopt these advanced solutions in a larger scale throughout the upcoming years as an integral part of the 2030 Vision".

Eva Andrin – Deputy VP for Saudi and Egypt in Ericsson, stc's Technology Partner has stated: "Ericsson's 5G Carrier Aggregation solution - which employs Advanced Radio

Eva Andrin - *Deputy VP Saudi & Egypt in Ericsson*

Coordination technologies – provides a breakthrough change in enhancing 5G coverage, boosting capacity and improving 5G users experience. Ericsson is devoted to provide stc with such innovative solutions to uplift its network capabilities, to outreach new horizons towards the Kingdom Vision".

stc expects to conclude this development within this year, to act as a new step in stc journey to enrich its subscribers experience and spread 5G technology into larger scales in the Kingdom.∎

evision acquires exclusive MENA rights for the DP World Asia Cup 2022

evision, the entertainment streaming division of e& life (part of e&), has announced that they have acquired exclusive broadcast and media rights for the upcoming and highly anticipated DP World Asia Cup to be shown only on the CricLife MAX channel in the MENA region.

After four years and following a pandemic, the Asian Cricket Council's 2022 edition of the Men's Asia Cup returns with UAE as the host. It is a six-team tournament. Cricket fans in the UAE can get all the action exclusively on CricLife MAX channel

on eLife TV, Switch TV and in MENA via the new Sports bundle available on the STARZPLAY app.

Olivier Bramly, CEO, evision said: "We are excited to bring the DP World Asia Cup 2022 to all viewers on CricLife MAX after a four-year, pandemic hiatus. We have always been committed to delivering the best in sports and entertainment from local and international content providers. Avid cricket fans will be able to enjoy the games on our broadcast as well as digital platforms, giving them the flexibility to watch from anywhere and at any time."

CricLife channels are a one-stop for cricket that are currently available on Asiana and Sports packages on eLife and the OTT packages of Switch TV and STARZPLAY. Subscribers get an opportunity to watch all the best cricket content available from India, Pakistan, Bangladesh, West Indies, South Africa, New Zealand and Ireland, in addition to major events like the Asia Cup, ICC Cricket World Cups as well as the popular T20 leagues like Pakistan Super League (PSL) and Caribbean Premier League (CPL) on CricLife, CricLife2, CricLife3 and CricLife MAX channels..∎

stc collaborates with Teeela as part of its summer initiatives organized for kids

Kuwait Telecommunications Company – stc, a world-class digital leader providing innovative services and platforms to customers, enabling the digital transformation in Kuwait, collaborated with Teeela, a leading toy shop App in the GCC, to distribute gifts to children during the "Purple Island" event held at 360 Mall. The initiative was in line with the Company's corporate social responsibility initiative and served as an additional event stc has participated in as part of its summer activities for children.

The event was held from at 360 Mall where children were invited to participate in several competitive and fun activities for a chance to win one of the valuable prizes. Activities consisted of building competitions, spin the wheel, as well as other exciting games such as having 20 seconds to find prizes hidden in a large ball pen. Across the two days, a total of 800 prizes were distributed consisting of toys from Teeela as well as electronic devices from stc.

Danah AlJasem, General Manager of Corporate Communications at stc, said,

"We are proud to have participated in the successful "Purple Island" event held at 360 Mall, which welcomed a large number of families who came to enjoy the different games and activities. Our involvement in this initiative and collaboration with Teeela primarily focused on giving back to the community, especially families, in a unique and entertaining way. This event directly falls in line with our commitment to be

Danah AlJasem
GM, Corporate Communications, stc

socially responsible and spread joy within our society."

AlJasem thanked Teeela App for another successful collaboration, as well as 360 Mall Management Team for their support and all those who participated in the family fun activities that led to the successful outcome. She added that the two-day event serves as one of the several summer themed activities that stc participates in or organizes annually to provide families with educational or entertainment filled experiences.

AlJasem concluded, "stc firmly believes in the importance of engaging with members of the community through diverse experiences that aim to spread joy and bring the community together. The Company has consistently broadened and expanded its extensive corporate social responsibility program to incorporate a diverse selection of initiatives that focus on empowering the community. In line with its program, stc will continue to form strategic partnerships with local, regional or international entities that share the same views and objectives the Company holds when it comes to giving back to the community". ∎

ST Engineering iDirect and Türksat strengthen strategic partnership with contract for provision of ground systems for Türksat 5B

ST Engineering iDirect, a global leader in satellite communications, has signed a multi-million dollar contract with leading regional satellite operator, Türksat, for the ground systems required to run a variety of services over the Türksat 5B satellite. ST Engineering iDirect will provide multiple Dialog® XIF hubs and 5,000 remotes, enabling Türksat to augment services to various markets including government, enterprize, mobility and cellular backhaul across 30 beams, providing the best connectivity experience from low data rates all the way to very large throughputs of over 1 Gbps for the most demanding applications.

The new installations will ensure that Türksat can run its satellite networks more efficiently, easily and rapidly adapt their existing networks or build new ones through ST Engineering iDirect's Network Management System (NMS) that allows services, capacity, terminals and beams to be scaled in an instant, fully automated and orchestrated way. Based on the latest DVB-S2X technology and Mx-DMA® MRC technology, Türksat can also maximize the benefits of the powerful 5B HTS by leveraging the highest efficiencies and throughputs of the DVB-S2X waveform as well as optimize the return link with Mx-DMA MRC. Both platform and remotes can provide the flexibility, multi-service capability and scalability to cater to Türksat's HTS business today and as it expands in the future.

"The latest satellite of our fleet, Türksat 5B, will greatly increase our current coverage and bandwidth over Ka HTS," said Selman Demirel, Vice President of Satellite Operations at Türksat. "This will enable Türksat to extend broadband services over many regions including Middle East, Africa, as well as major maritime and

airtime routes. The partnership with ST Engineering iDirect in this expansion is very important for Türksat to provide seamless, cost-effective and flexible services to current and prospective customer needs in a very broad and rapidly improving market. The Dialog XIF Hub with flexibility, multi-service capability and scalability will be a key asset for Türksat for these active markets. Therefore, we truly appreciate this new contract to strengthen our strategic partnership."

"We are thrilled that our technology has once again been selected by Türksat to enable their expanding operations," said Tajani Bouqentar, Vice President, Middle East, ST Engineering iDirect. "The selection of our Dialog platform means that Türksat now operates their services over our full hub portfolio. With the multi-service,

futureproof nature of the Dialog hub platform and modem portfolio, Türksat can accommodate current and future business opportunities by providing the flexibility, multi-service capability and scalability required. We are dedicated to enabling Türksat's business development and supporting them as their capabilities evolve."

Launched in December 2021, the Türksat 5B satellite provides data communication and broadcasting services over a wide coverage area that reaches the entire Middle East, the Persian Gulf, the Red Sea, the Mediterranean, the Black Sea, North Africa, East Africa, South Africa and Nigeria. It also provides customized services to airlines and commercial ship operators around the world via its Ka-band beams. Commencement of the new services is expected in Q3 2022.∎

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E-waste will never be solved or even reduced without using new technologies

Serge Conesa - *Founder Chairman & CEO, Immersion4*

We are entering in an era where data can be considered as the 8th natural resource. However, data centers consume almost 15% of the world's electricity whilst data production implies heat generation. This is where all the laws of physics and effects mentioned above converge together defining the exchange rules.

Using the most efficient way, i.e. "liquid to liquid", Immersion4 DTMTM systems manage, collect, optimize and transport the digital dissipated heat dissipated so most of those calories. so most of the calories Energy can then be used to generate heat/cool electricity using any cooling/heating system, becoming a great complement to any renewable energy solution.

World volumes of end-of-life e-products is expected to rise by 33% over 5 year periods according to studies in the past such as Solving the E-Waste Problem (STEP) Initiative.

E-waste trends will continue to grow: Global E-waste Monitor 2020 reported that an estimated 53.6 million metric tonnes (Mt) of WEEE was generated in 2019. That represented a 21% jump in the five years since 2014 (with e-waste on a predicted course to 74 Mt by 2030).

China and the United States topped the world's totals in market volume of WEEE (Waste Electrical and Electronic Equipment), and e-waste however an e-waste per capita gives a different view on e-waste production with North America having an approximate 20.9kg per capita and China having approximately 7.2kg per

> *"Nothing will change as long as we are using air and water cooling. There is no Green Datacenter using such a solution for cooling!"*

> *"The way we cool off electronics in data centers may be generating the e-waste recycling problem as we know it".*

capita of e-waste.

There are some moral, economic and financial incentives to stop this explosive growth of e-waste. A lot of the electronic devices are IT and Telecommunications Equipment and are used by corporate consumers. As such, in a way, these corporate consumers are taking part in the explosive growth of e-waste.

"The way we cool off electronics in data centers may be generating the e-waste recycling problem as we know it".

"The problem is not related to the way we collect it and we scatter it. E-waste will never be solved or even reduced without using new technologies".

"The problem is not related to the way we collect it and we scatter it. E-waste will never be solved or even reduced without using new technologies".

E-waste is one of the biggest problems for our planet today and we are not even completely aware of the problem as a society.

We need to make companies & governments working together to build reverse supply chains that are sustainable, safe and responsible, and which ensure that materials do not flow into the informal sector whilst maximizing progress towards a circular economy for used and end of life information and communications technology, and electrical and electronic equipment.

"Nothing will change as long as we are using air and water cooling. There is no Green Datacenter using such a solution for cooling!"

DTMTM FULL immersion technology by Immersion4 can impact the whole supply chain, the movement and processing of materials and the value of the finished product. The need and the value of the raw materials will be mostly avoided to create a highly efficient / economical reverse supply chain model which is essential to achieving a circular economy.

This is not only about technology. This is about legislation and policy - all together national, regional and global, overseeing the associated standards, quality and boundaries, and the movement of materials which make up the reverse supply chain.

A regulatory framework will be required to support more sustainable and responsible stages of open and closed reverse supply chains in the electronics sector but its NOT what will make the change. The change will come from the consciousness of each of us and our awareness of what we leave behind for future generations. ∎
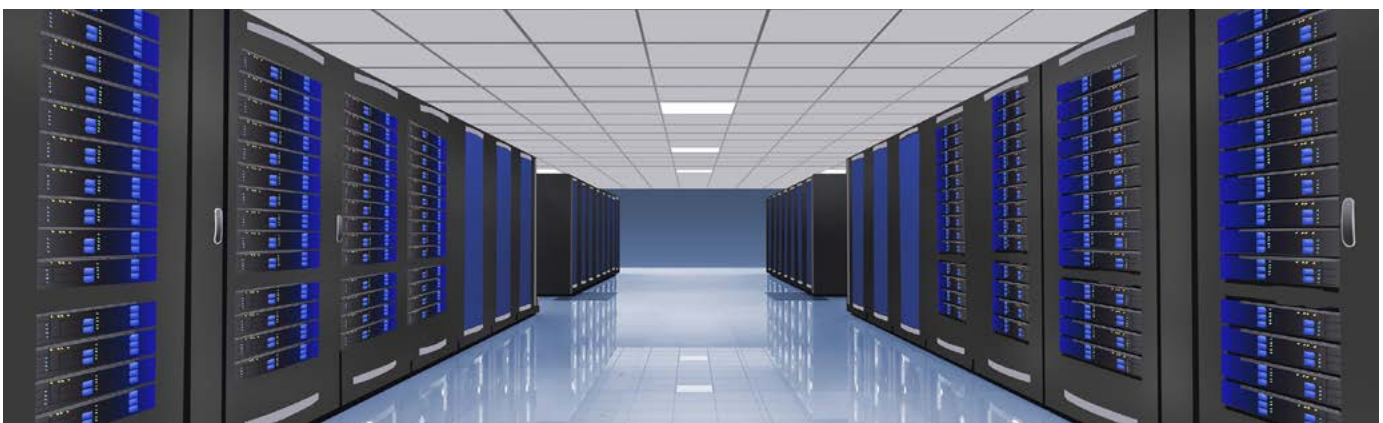
Data Centers and their cooling consume huge amounts of energy and also lead to e-waste. We need Data Centers and we need to do better at how we maintain them.

Android Digital Signage: Fast answers for your FAQs!

Nadav Avni, CMO at Radix Technologies

Digital billboards used to be expensive advertising tools that only big corporations could afford. Think of all the billboards lit up throughout New York City's Times Square or Tokyo's Shibuya Station. Smaller companies, however, had to settle with posting their printed billboards along major roads and highways. Thanks to Google's omnipresent operating system, companies of every size can now advertise their wares using Android digital signage devices.

Transport terminals, small shops, and other platforms can now continuously display digital posters and full videos. But where will the market go from here? From an estimated $18.55 billion in 2018, industry experts project that the digital billboard market will be worth $31.71 billion by 2025.

The Next Generation of Billboards

Setting up an Android digital signage system is a matter of running multiple display screens together on an Android TV. By setting the device on kiosk mode, companies can use their Android TV as a digital billboard to display important information. This includes running digital ads, short videos, announcements, and company schedules.

Teletimes: What exactly are Android Digital Signage Devices?

Nadav Avni: A traditional billboard is a rigid frame that displays a single printed image of an advertisement, message, or event announcement. To change the content of these billboards, companies have to manually pull down the original material and replace it with another printed advertisement.

In contrast, Android digital signage devices consist of multimedia displays powered by Android TV. These units contain enough processing power to function as smart devices themselves. However, digital signage operators lock each device so that it only performs a singular task: displaying ads. These Android digital signage units serve as dynamic billboards that are able to change display contents on command.

TT: Why are Android Digital Signage Devices better than Traditional Static Displays?

N.A: Android digital signage devices aren't just a new wave of outdoor billboards. They also work as revolutionary display devices in settings where digital content is preferred over static ads. For example, some hotel lobbies use large screen monitors to show their list of events for the day instead of using traditional marquee letterboxes. Hotels can also use these screens between schedule updates and announcements to highlight their amenities and entice their guests.

Imagine the hassle it would be for employees to change printed posters or

marquee letters every time their hotel wants to announce an update. This is why many companies are investing in Android digital signage devices for their advertising needs. Changing the Android display is simple: if you want to display new content stored on the device, just switch the screen, and you're good to go.

TT: Why Is Android TV Ideal for Digital Signages?

N.A: TVs and smart displays are relatively cheap and widely available. Pairing these powerful devices with Android TV makes

them an effective advertising tool. Android TV, an offshoot of the popular Android mobile OS, is a similarly inexpensive platform that offers features that make managing digital content easier and more secure. As a result, Android digital signage devices provide companies and advertisers with the most cost-effective way to present multimedia content across the board.

TT: Why Is Using Android TV More Cost-Effective?

N.A: Android and Android TV are popular

smart device systems for several reasons, chief amongst them cost. Google gives away its operating system to users with little to no licensing costs attached. In addition, many operators prefer using Android TV for their digital signage devices because the platform is reliable. Since it's an offshoot of the Android OS for mobile devices, the device is already more stable compared to proprietary systems developed by other manufacturers. This stability saves operators the time and money it would take to repair bugs and glitches found on other devices.

TT: How Does Android TV Compare To Other Digital Signage Systems?

N.A: Unlike other operating systems, Android TV doesn't require external devices to operate the display unit. The operating system resides in the display device. If a client wants to use a specific signage controller app, Android allows the operator to search for the app in the Google Play Store and download it. With the popularity of Google's operating system, the chances of having specific Android TV apps are higher than other systems. **T**

Open Broadcast Systems and CyanView partner

Open Broadcast Systems is partnering with CyanView to enable remote camera shading for remote production. It will be demonstrating the solution on its booth (1.A39c) at IBC. CyanView will also be showing remote camera shading workflows using OBE C-200 encoders and decoders on its booth (10.D31b).

Using the camera shading technology from CyanView, Open Broadcast Systems is able to ensure that the colour is matched when switching cameras during a remote production, enabling broadcasters to deliver a seamless experience to viewers. The CyanView RCP allows for shading a wide range of cameras from a powerful control panel.

Kieran Kunhya, Founder and CEO, Open

Broadcast Systems, commented: "With many cameras, the colour is not matched when switching between sources and this leads to inconsistencies. CyanView overcomes this with its remote camera shader, by far the most advanced solution for remote camera shading."

Xavier Deschuyteneer, Head of Business Development, added: "Partnering with Open Broadcast Systems enables us to ensure low Latency encoding and decoding with the highest quality for our customers, something which is vitally important for shading in remote production". **T**

AXESS Networks selects SpaceBridge to enable high-speed broadband connectivity in Ecuador

SpaceBridge Inc., a broadband satellite communications systems technology engineering leader, has announced that AXESS Networks, a global leading provider of encompassing connectivity solutions via satellite, selected SpaceBridge technology to provide a high-speed broadband trunk for community Internet access distribution in Santa Cruz Island in Galápagos, Ecuador.

The SpaceBridge SBM-90X extreme broadband high-speed modem was chosen for this mission as it provides unparalleled performance of Single Channel per Carrier (SCPC), for the implementation of a dedicated bandwidth. SpaceBridge provided its infrastructure to build a PTP SCPC link with the SBM-90X. This solution offers affordable traffic licenses and the highest spectral efficiency: DVB-S2X, 5% Roll-off, and 256APSK. Additionally, the link can grow up to 1.4Gbps of aggregated throughput.

"This implementation was a great challenge

David Gelerman
President and CEO of SpaceBridge

but also a great satisfaction. Being able to provide this service with stability, with a new design of the access mode and with wide operating margins, required all our experience and knowledge. From AXESS we hope that this new node will allow us to

continue growing and helping to connect in the Galapagos Islands." said German Perez, Product and Solution Design Director of AXESS Americas.

"We are pleased that Axess has selected the SpaceBridge High Throughput SCPC modems for implementation of highly visible and important communication between the Galapagos Islands and the rest of the world", said David Gelerman, President and CEO of SpaceBridge. He continued: "The challenging implementation of the link required the utilization of the full transponders' bandwidth with limited available power. Our SBM-90X modems were able to meet the availability challenge, providing the high throughput at the cost-effective price."

This project will provide a better internet service and connectivity to the hundreds of thousands of tourists who visit the islands every year, and reduce the digital gap for its population.∎

Aftab Raza Khan

Richard Mortellaro appointed as President and CEO of Eutelsat America Corp

Eutelsat has announced that Richard Mortellaro has been appointed to the position of President and CEO of Eutelsat America Corp. (EAC). He will succeed David Bair who is retiring.Eutelsat America Corp., a subsidiary of Eutelsat Communications, delivers communications services and solutions to US Government and Military customers around the globe in support of national security missions.

Richard joins EAC after an extensive career spanning 30 years in the satellite industry, leading global sales, marketing and business development activities of companies; first as a Broadcast Sales Director at Intelsat, and subsequently within Loral Skynet Group which merged with Telesat in 2007

in the positions of Global Sales VP and latterly International Sales VP. Prior to joining Eutelsat, Richard was Senior Vice President of Sales, Marketing and Fixed

Satellite Services Business Development Activities at EchoStar Satellite Services, LLC. He has an MA in Communications from the University of New Orleans and a BA in Communications from Loyola University (New Orleans).

Commenting on the appointment, Sidney E. Fuchs, Board Chair at EAC: "We are delighted to welcome Richard to Eutelsat America Corp. and are confident that his extensive skill-set and experience will be a great asset to us as we strengthen Eutelsat's development in the Americas region". Mortellaro noted: "I look forward to leading EAC during this exciting time in our industry as we execute Eutelsat's vision and strategy".∎

Galaxy 19: Audience Research reveals strong viewership in North America

North America has long been a hub to a diverse group of immigrant and multicultural communities who are looking to watch content from back home. A recent audience study shows these communities are continuing to grow in the United States, increasing the demand for multicultural and faith-based programming.

Intelsat's Galaxy 19 (G-19) video neighborhood is the largest independent TV and radio community in North America, with over 160 multicultural and faith-based channels bringing specialty content from 60 countries and 30 languages directly to viewers. The free-to-air platform is home to diverse ethnic bouquets from Globecast, STN and MX-1. This year, the content on G-19 has continued to grow.

By Andrew Haden
Product Commercialization Manager, Intelsat

Intelsat recently conducted several surveys to better understand the audiences for content on G-19. With programming in 30 languages available on the platform, speakers of each of those languages represent distinct potential audiences. We want to shine a spotlight on the results of two recent surveys, which reveal significant viewership among their respective communities: Arabic and African French speakers living in the U.S.

Arabic

Survey results revealed that 96% of Arabic-speaking households in the U.S. watch Arabic-language programming. Among that group, 40% use G-19 to view Arabic-language programming. In addition to the significant reach of G-19 into the Arabic-speaking community in the U.S., another compelling metric emerged: among the 40% of households using G-19, there is significant viewership among younger audiences:

•51% report at least one viewer aged 17 & under

•39% report at least one viewer aged 18-29

•65% report at least one viewer aged 30-39

African French

A survey of African French speakers (French speakers hailing from French-speaking African countries) revealed a similar story. Members of these communities maintain a strong cultural link to their ethnic roots, with 89% of households reporting that they watch African French programming. Among these households, 34% are using G-19 to watch African French programming. Galaxy 19 has significant reach into African French communities with strong overall viewership. Like Arabic language programming, there is also strong viewership in the key younger demographic groups. Among African French-speaking households who use G-19:

•42% report at least one viewer aged 17 & under

•45% report at least one viewer aged 18-29

•48% report at least one viewer aged 30-39

These metrics are important for multiple reasons. The overall size of audiences and the reach of programming into targeted markets is key in assessing the value of content. Galaxy 19 is performing well in these areas in the markets surveyed, with 40% and 34% of Arabic and African French-speaking households utilizing G-19 to access in-language programming, respectively.

Also critical is the question of who is watching. In a complicated media ecosystem dominated by news of the latest technologies and how they're disrupting the ways in which audiences access content, it is important to use data to answer this question. The data tells us that younger viewers are watching G-19. Despite the growth of over-the-top (OTT) platforms, Traditional TV still reigns supreme. Arabic and African French speakers in the U.S. report that Traditional TV is their method of choice for viewing video content, and that preference extends to younger members of these households. The presence of OTT platforms and new ways to watch content do not necessarily equate to a parallel decline in traditional viewership, even among younger audiences. This is evident in G-19 audience survey results. Stay tuned for the future release of the full survey findings.∎

Autonomous Networks: CSPs' new explorations for Service Quality Improvement and Revenue Growth

Digital transformation has been accelerating while the new technologies such as 5G, AI, big data, cloud etc. adopted globally. This definitely gives Communication Service Providers (CSPs') the opportunity to unblock at least $700 billion in new revenues from the verticals. As CSPs deployed the 5G networks widely and the number of connected devices will be increased from 13 billion to more than 30 billion by 2025 according to a survey report, the networks become more complex. If CSPs continue to use the manual and labor-intensive methods to operate the networks and services, they will be unable to maintain competitiveness and provide high-quality service for the customer.

Recognizing these challenges, TM Forum has proposed Autonomous Networks (AN) concept since 2019, providing a systematic approach of network automation for CSPs to simplify service deployment to deliver Zero-X (Zero-wait, Zero-trouble and Zero-touch) experience for customers.

"Currently, China Mobile Beijing has over 20 million mobile users, over 70 million IoT users, and more than 3 million wired broadband users as well as over 6 million 5G users. These have brought great challenges to network O&M (operation and maintenance) for China Mobile Beijing, for which the Autonomous Networks aim to overcome," stated Li Changkong, Deputy General Manager of China Mobile Beijing, in his presentation at "Digital Leadership Summit- Realize the Power of Autonomous Networks in Digital Transformation" hosted by TM Forum.

By following the China Mobile Group's strategic objective of reaching Autonomous Networks Level 4 by 2025, China Mobile Beijing has specified the objectives of achieving L3 by 2022, L3.5 by 2023 and L4 by 2025, and identified the three-step path from automation to quasi intelligence, and finally to full-intelligence:

• In 2022, focus on NMS (network management system) planning and capability aggregation;

• In 2023, focus on improved automatic O&M and AI promotion;

• In 2025, focus on enhanced intelligent O&M and open ecosystem operations.

Implementing Autonomous Networks is a systematic project. To this end, China Mobile Beijing follows the Group's "234

> *China Mobile Beijing has built the "NEST Premium Network" to provide the high-quality private line for the enterprize and government customer.*

system" by referring to TM Forum's AN architecture, which emphasizes two objectives, three closed-loops, and collaboration of four layers to build its own future-proof AN architecture.

While advancing Autonomous Networks into application, China Mobile Beijing actively carries out level evaluation based on the unified standards of AN levels developed by China Mobile Group, in which the maturity of AN is divided into six levels, from L0- L5. On top of the level evaluation system, China Mobile Beijing has built up the result-oriented effectiveness metrics system which can be used to evaluate the business benefits brought by AN. With these two systems, China Mobile Beijing can effectively and iteratively evolve to

high-level autonomy as a spiral model of "evaluate-improve-reevaluate", driven by the dual-drive of "process + result".

"China Mobile Beijing completed two rounds of level evaluation in 2021, with the result exceeded our annual target and reached L3 in key scenarios," said Li Changkong in his presentation.

China Mobile Beijing has achieved L3 in some scenarios, especially the experience improvement for mobile users, identification of poor-QoE (quality of experience) for home broadband services, and premium private lines for the 2B customer. That definitely benefits a lot for the customer.

By adopting AI speech recognition technology, China Mobile Beijing has improved the accuracy of user requirements identification which help to reduce the complaints by 80%. With the "1+2+N" poor-QoE standard system, which is, one objective, two leadings and N models for poor-QoE identification, China Mobile Beijing has increased the poor-QoE identification and demarcation accuracy to 90% and 95% respectively for the home broadband users.

China Mobile Beijing has built the "NEST Premium Network" to provide the high-quality private line for the enterprize and government customer. With the intelligent control and management platform deployed for network operation, China Mobile Beijing could be able to activate network services in minuets and locate the faults in seconds.

In the future, China Mobile Beijing will continue to collaborate with global industry partners to implement industry vision, carry out industry innovation and promote industry prosperity to achieve high-level Autonomous Networks to unblock the new growth from the verticals. ∎

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in the growth of the UAE's technology ecosystem as a pioneering driver of innovation and entrepreneurship globally. Further, it underscores G42's position as a highly respected technology company, committed to leadership in developing and delivering AI and digital transformation solutions that have a positive impact in helping businesses and governments responsibly and sustainably address their most pressing challenges and embrace their most compelling opportunities."

Leveraging its fundamental and applied AI research, together with its cloud computing capabilities, G42 develops high-impact technology solutions to solve the world's most complex problems through a robust business portfolio including Bayanat, G42 Healthcare, G42 Smart Nation, G42 Cloud, Injazat, Khazna, Presight, and more. G42 also partners with a growing global network of leading international organizations in its mission to democratize access to cutting-edge

Khalifa Al Suwaidi
ADG CEO and Member of the G42 Expansion Fund's Investment Committee

technology for every market in the world.

Recent partnerships and investments in key industries include G42 Healthcare's partnership with Oxford Nanopore Technologies, a UK-based DNA-sequencing specialist; G42's investment in Beyond Limits, a US-based industrial and enterprize-grade artificial intelligence

Egon Durban
Co-CEO and Managing Partner of Silver Lake and Board Member of G42

company; G42's partnership with Cerebras Systems, a US-based team of pioneering computer architects, deep learning researchers, and engineers who are building a new class of computer system specifically designed for AI; and FLYR Labs, a US-based company focused on delivering AI-powered revenue management applications for transportation leaders. ∎

etisalat by e& enables UAE PASS login on app and portal

etisalat by e&, has announced the integration of the UAE PASS login on the 'My Etisalat UAE' app and portal, enabling all subscribers to seamlessly log in with their secure national digital identity details.UAE PASS is the first secure national digital identity for citizens and residents, allowing users to access many online services across various sectors, sign and authenticate documents, perform transactions digitally and request a digital version of their official documents.

In partnership with etisalat by e&, all customers with a verified UAE PASS account can use the UAE PASS authentication to access accounts registered against their Emirates ID with this new login feature. This bolsters security and combats fraud for users, making it convenient and popular among subscribers. Additionally, etisalat by e& has made it possible for subscribers to register for the UAE PASS on its app and website without the need to go to any

physical outlet.

etisalat by e&'s continuous efforts to digitize customer journeys now offer a 'zero-touch' experience with a focus on enhancing digital channels such as apps, websites and social media, optimising contact centre performance with the introduction of virtual agents, and revamping and digitising its stores. This integration of the national identity across the digital channels is in line with

etisalat by e&'s main objective to combine the optimum mix of physical and digital channels and offer a truly omnichannel and digital-first experience.

A superior and differentiating customer experience is a foundational block in etisalat by e&'s transformation into a digital telco. The company is harnessing the power of analytics and AI to offer personalised experiences across all digital and physical channels. The digital experience of customers is enhanced through the 'My Etisalat UAE' app as they can fully view and make all their required transactions on the app, such as access and payment of bills, account management , plan changes, and contract – all these are now accessible via an easy log in with UAE PASS. Other features include buying devices, subscribing to new services or troubleshooting technical issues are also available using the self-care support modules on the app. ∎

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When telecom fiber can sense

Somewhere in the Circum-Pacific Belt, the ocean floor is rocked by a powerful earthquake. It triggers a giant tsunami that gathers speed, bearing down on populated islands, coastal towns and cities. Now imagine, the tremors being detected in milliseconds and the alert conveyed to an onshore monitoring center at the speed of light. The alarm is raised and the authorities swing into action, evacuating people from vulnerable locations in good time.

In such a scenario, one would be inclined to laud ocean-bottom seismometers (OBS) for saving the day but what if it was an entirely different system. As the world enters the digital age and the Internet becomes ubiquitous, a key facilitator of this transformative change remains hidden from our eyes. Buried in the seabed and in trenches or laid in ducts under city streets and buildings, by roads and railways, a web of fiber optic cables come together to form data superhighways, processing over 95 percent of global telecommunications.

Touted as the "backbone" of the Internet there are currently around 486 active or under-construction subsea cables with over 1,300 landings, stretching for more than a million kilometers. Their terrestrial counterparts boast even longer distances.

Optical fibers are the Internet's core and enable the immense communication of people, devices, and computers from just a few meters away like in data centers and campuses to massive distances spanning continents and oceans. However, the story does not end here. Subsea and terrestrial cables are emerging in a new avatar, bringing with it huge benefits across a range of applications.

Fiber optic sensing

The telecom sector is rapidly ditching copper wire in favour of fiber optic cables –

thin strands of pure glass - each no thicker than a human hair, that facilitates the transmission of light over long distances. Every piece of data that is sent or received on computers and almost every phone call we make is transmitted along fiber. Even mobile phone communications rely on it. Only the last few kilometers is carried through the air. For the past 60

Matteo Lonardi - *Research Engineer Nokia Bell Labs*

years engineers have been exploring the possibility of using fiber as sensors.

"Engineers and scientists have understood the extraordinary opportunity of optical fiber sensing since the early days. The first patent of fiber optic sensing dates to 1960, and for decades, the most imaginative minds have been exploring the many exciting possibilities that it has to offer," says Matteo Lonardi, Research Engineer at Nokia Bell Labs.

The most important technology driving fiber optic sensing is Distributed Acoustic Sensing (DAS) which allows for real time measurements along the full length of a cable. As opposed to conventional instruments which depend on sensors working at pre-determined points, distributed sensing leverages on the cable

itself to sense the environment.

To put it simply, a DAS interrogator connected to one end of the fiber sends out optical pulses and looks at the light that comes back from every single microscopic piece of the fiber, a process known as Rayleigh Backscatter. By gathering up these tiny pieces of light and watching how they

Dan Danskin - *Commercial Manager, DAS at Alcatel Submarine Networks (ASN)*

change thousands of times per second due to vibrations in the vicinity, the interrogator identifies unique signatures and marks each type of event.

DAS is a dedicated sensor that detects acoustic events around the fiber. It needs dedicated hardware and, sometimes, even dedicated fiber - not used for telecommunications. "DAS does not play an active role in data transmission or communications per se but can be positioned alongside the communication line or network to protect the fiber asset or localize cuts," says Dan Danskin, Commercial Manager – DAS at Alcatel Submarine Networks (ASN).

In addition to DAS, there are non-dedicated sensors carrying out a different task, but which retains the capability of intelligent

sensing. Combined with fiber, coherent transponders are the fundamental block of any modern optical transmission. They convert electrical signals into light and vice-versa, transmitting and receiving hundreds of gigabits per second, thanks to coherent modulation and digital signal processing. When receiving light signals, transponders will carry out several advanced algorithms to remove all the channel corruption added during transmission over fiber to reconstruct the original sent message.

Moreover, in current and future generations of transponders within Nokia 1830 PSS products, on top of transmitting and receiving hundreds of gigabits per second, the transponder will carry out advanced monitoring, sensing, and analytics based on all the light propagation information retrieved while performing digital signal processing. A coherent transponder does not have the sole purpose of sensing, yet it uses advancements in digital signal processing to extract sensing and monitoring information without needing dedicated hardware or fiber.

Sensing applications

Telecom fiber is both a critical infrastructure that needs to be constantly monitored and potentially a globally distributed sensor. Sensing the environment provides information that can be dual-purpose. It can help identify potential network threats or disruptions and provide information about an area where other sensors are sparce.

A notable benefit of fiber optic sensing is the monitoring of the cable which quite often runs through harsh terrain and shifting seabed. For instance, coherent transponders can help monitor the entire cable infrastructure, keeping it safe from any signs of failure and optimizing capacity. Adverse weather phenomenon like a storm, an earthquake or construction work that can disrupt the fiber can be sensed with dedicated tools or directly at the transponder. The result is faster restoration, increased uptime and superior service quality.

Repairing subsea cables is a dangerous

and expensive affair. Early and accurate detection of interference, faults or damage is crucial for seamless service continuity. Advanced cable monitoring systems can help direct personnel to the exact location of the event for timely intervention.

The cables also need to be protected from human activities such as trawling, anchoring and dredging. Sensors could detect the vibrations of fishing nets being dragged along the seabed. Trawling nets are a great threat to subsea cables, making up around 70 percent of all damage to the network. An early warning will give the cable operator time to radio the vessel and ask it to steer away from the cable.

Fiber can even be used for environmental and scientific monitoring of earthquakes and tsunamis. The existing mesh of submarine cables could effectively be transformed into giant array of sensors that once linked to seismometer-based networks can substantially boost global earthquake monitoring at an affordable cost. In addition to that, fiber optic can monitor various oceanographic conditions like ocean currents and rockslides and help tracking mammals as well.

When it comes to terrestrial cable sensing, DAS is widely used for monitoring of onshore pipelines including leak detection, external interference and ground movement monitoring. It can be employed for perimeter protection of critical assets and border control.

By using existing optical cable networks

in urban areas, DAS can provide sensing grids for high resolution traffic monitoring and road condition. Railway monitoring is another emerging area. With an optical cable along the track, DAS can supply information about moving trains, detect third party activity and locate rocks and landslides.

Opportunities and challenges

Having gauged the tremendous opportunities presented by fiber optic, one of the main challenges that the industry would need to address is that of managing data. Monitoring and sensing in modern optical networks can generate an unprecedented amount of information. The problem at hand would be to process the data deluge to extract meaningful signals.

Proper tools, for instance Artificial Intelligence and Machine Learning (AI/ML), could be used to remove noise in raw sensory data and automatically detect and track events of interest. It must work dynamically as new threats emerge and ensure rigorous adherence to established rules that govern the decision-making process.

Due to the massive proliferation of optical networks, monitoring and sensing can prove to be the next big thing. A technology that has a positive and meaningful impact, helping reduce and contain risks by early detection of fires, storms, and earthquakes. It could even play an active role in tackling the fallout of climate change by making communities smarter and safer.∎

Ethio Telecom selects HyperSense Fraud Management

Subex, a pioneer in driving AI-led Digital Trust, has announced that it has been selected by Ethio Telecom to deploy its Fraud Management solution. The solution, which is built on Subex's AI orchestration platform, HyperSense, will replace Ethio Telecom's existing legacy fraud management system, thereby enabling them to move from a traditional rules-based approach to an AI-first approach. This approach will, in-turn, enable them to detect new and unknown threats in real-time.

Ethio Telecom is Ethiopia's leading integrated telecommunications solutions provider, with over 50 million subscribers. The telecom operator has recently launched a pre-commercial 5G network within the country. In order to sustain its market leadership by providing high-quality, and innovative offerings, Ethio Telecom wanted to enhance and broaden its risk management strategy by having a holistic defense mechanism.

With Subex's AI-first Fraud Management system on HyperSense, which leverages AI in every step of the Fraud management process, Ethio Telecom will now be able to bring in enhanced accuracy, coverage, and time-to-detect. These capabilities will, in turn, enable the operator to adopt a proactive approach to combatting risks such as SIM Box, Spoofing, SMS frauds, roaming frauds, subscription frauds, device frauds, Mobile money risks, Credit Risk Management, etc. Furthermore, with its earlier deployment of Subex's Business Assurance, Ethio Telecom will now be able to consolidate its Revenue Assurance and Fraud Management approach to ensure the breaking down of silos and enhance operational efficiency.

With Subex's Fraud Management solution on HyperSense, Ethio Telecom will be able to:

•Improve fraud coverage across their various business lines

•Leverage Explainable AI capabilities to enhance customer experience

•Make quick data-driven decisions with advanced visualization and dashboarding capabilities

•Cater to new business requirements with the system's scalability and elasticity

•Benefit from rolling upgrades, i.e., eliminate long and expensive upgrade cycles

•Reduce TCO with open-source components and low hardware footprint

Commenting on the partnership extension Shankar Roddam, Whole-Time Director & Chief Operating Officer, Subex, said, "This win marks another chapter in our long-standing relationship with Ethio Telecom and it comes close on the heels of our recent Business Assurance deployment. With the implementation of our fraud management solution coupled with the existing Business Assurance solution, Ethio Telecom will now benefit from a holistic risk management approach as they gear up to provide 5G services. Today, our risk management portfolio sets itself apart by adopting an AI-first approach to mitigate threats accurately and faster.

Ethio Telecom has consistently been at the forefront of adopting proactive measures to combat telecom risks and safeguard their business and customers. Towards this, the operator recognizes the value of an approach which places AI at the core. We at Subex feel privileged to be working with Ethio Telecom to empower them in this fast-changing landscape".

Commenting on the solution from Subex, Tsegaye Emmanuel, Chief Information Security Officer, Ethio Telecom said, "For over two decades, Subex has been in the market leaders' group in the fraud management space. This fact, coupled with the success we have seen through the deployment of their Revenue Assurance (currently Business Assurance) solution have made them the ideal partner of choice in our fight against telecom risks. I believe that, in the future, as the threat landscape evolves, Subex's AI-first fraud management system will be vital in safeguarding our business and customers. We see this as a future-proof investment that aligns with our digital services initiatives". ∎

CyberKnight: Development of critical infrastructure vital for evolving cybersecurity landscape

Organizations in the Middle East and North Africa region should develop critical infrastructure that is more predictive and responsive to the changing cybersecurity landscape. This is according to Wael Jaber, Vice President of Technology, Services, and Channels at CyberKnight Technologies, a value-added distribution company for cybersecurity, based in Dubai, and the Diamond Sponsor of the upcoming MENAISC2022. He stated that organizations should utilize cyber threat intelligence to help define strategic goals to counter cyberattacks. Jaber highlighted the need for tactical actions that help increase electronic flexibility and activate technical intelligence to speed up threat detection and incident response.

"The Middle East is facing several challenges that threaten infrastructures. Firstly, current infrastructures are widely open from an access permission perspective. Organizations must invest more in managing the identity sprawl and ensure the least privilege concept is applied across the board. Secondly, organizations must build more restricted environments by implementing micro-segmentation and cross-domain technologies to control boundaries," Jaber said. The comments

Wael Jaber - *VP of Technology, Services, and Channels, CyberKnight Technologies*

come as the 10th edition of MENAISC2022 nears its launch in Riyadh.

Jaber went on to explain that the "alert fatigue" caused by an abundance of implemented security tools combined with a lack of cyber skills are worsening the threat detection and incident response rates. Organizations must look into unified visibility across all security controls, leverage artificial intelligence and machine learning to enhance threat detection, and apply automation to accelerate mitigation and incident response, he said.

Jaber said the oil and gas, energy, healthcare, banking, transportation, telecommunications, and food manufacturing sectors are the most vulnerable to cyberattacks just as they are vital to all citizens. Moreover, some CNIs are also more vulnerable due to the maturity level associated with the implemented cybersecurity controls.

"I think there is still work to be done in the healthcare, food manufacturing, and transportation industries. These three vital industries will directly impact people's lives if they suffer from a cyberattack. Such attacks could lead to food supply shortages, and disrupt and paralyze the

local transportation or aviation services; they may even cause death in cases where medical devices at hospitals fail to operate," he said.

Jaber predicted the cybersecurity market in the Middle East to grow at a compound annual growth rate of 11.7% to be valued at $13.78 billion by 2023.

"Saudi Arabia has the largest market share, with a cybersecurity market valued at $3.6 billion in 2020. The market is expected to grow at a compound annual growth rate of 17.98% to reach $9.8 billion by 2026, according to recent market research studies," he added.

He said that Saudi Arabia has made great strides in digital transformation. The Kingdom ranked second globally among the G20 countries in the 2021 Digital Competitiveness Report and 14th in the National Cybersecurity Index for 2022.

Jaber said that the escalating cyberattacks in the country are directly related to these leaps in digital transformation. "Therefore, digital transformation must go hand in hand with the implementation of cybersecurity controls that can protect against the growing cyber threats," he concluded. ∎

Huawei encourages developers to build socially impactful applications

Blind Assistant, a mobile app developed by a team of Tunisian engineers, helps the visually impaired and blind community to recognise objects, texts and colours around them using the integrated voice-over features in the app. The tech giant introduced a 'Best Social Impact' category as part of the Huawei Global App Innovation Contest (Apps UP), in order to facilitate the development of experiences such as Blind Assistant that positively impact communities.

According to the World Health Organization, approximately 2.2 billion people worldwide have near or far vision impairment. The differently-abled can have lower rates of workforce participation and productivity. The app's goal is to make visually impaired individuals more independent by assisting them in identifying objects, faces, colours, and texts with the tap of a button. A visually impaired person can use Blind Assistant to easily orient themselves, eliminating the need for a visual embossed print.

"We were inspired to work on the 'Blind Assistant' project once we learned about Apps UP in 2021. We worked on integrating with the HMS Ecosystem and were able to launch the app on time for the

competition," said the developers of Blind Assistant Kassis Bassem and Wajih Sakka. "Since its inception, Blind Assistant played an important role in assisting the visually impaired community by enhancing their communication abilities daily."

"Technology can play a significant role in positively influencing the community, and we are thrilled to see how mobile apps are benefiting consumers. Huawei's Apps

Lu Geng - *VP, Middle East and Africa, Huawei Consumer Business Group*

UP competition acts as a catalyst for the development of creative mobile apps, and Blind Assistant - the winner of the Best Social Impact App in 2021, is a testament to that fact. The app effectively demonstrates how mobile apps can promote inclusivity in the community and serve the underserved", said, Lu Geng, Vice President of the Middle East and Africa, Huawei Global Partnerships & Eco-Development, Huawei Consumer Business Group.

Blind Assistant, is available to download via AppGallery, the default application marketplace for Huawei smart devices. Apps UP 2022 has a cash prize pool of $230,000 for Middle Eastern and African developers, with individual prize amounts ranging from $5,000 to $15,000. Categories include the best HMS Innovation Award, Best App, Best Game, Best Social Impact App, All-Scenario Coverage Award, Tech Women's Award, Student Innovation Award, and the newly introduced Best Arabic App. The Tech Women's Award is open to teams with at least one female developer who is a pivotal team member or leader.

Developers can enter multiple categories and submit more than one app to boost their winning chances. ⊤

Dubai Customs opts for Dell Technologies' Data Protection Solutions to Drive Future Innovation

Dubai Customs, one of the leading customs administration departments globally, has implemented Dell Technologies suite of data protection solutions to accelerate its digital transformation agenda.

Dubai Customs chose a combination of Dell's next-generation data protection and backup solutions to meet the organization's constantly evolving data protection needs. The new solutions will enable Dubai Customs to save time and resources and allow staff to manage and use data insights to facilitate trade movement in Dubai while providing customer services.

The technologies in use include the Dell PowerProtect DP4400 which is an

Younis Othman - *Director of Information Technology Department at Dubai Customs*

integrated appliance that offers backup, replication, recovery, and cloud readiness. It also offers comprehensive data protection with broad application ecosystem support and seamless integration and automation across the entire protection stack. This makes it easy and cost-effective to scale up to protect more physical and virtual machines with high efficiency. The solution is also helping Dubai Customs to prevent end-user data loss, reduce operational overheads and allow more than 2,500 users in 17 Customs centers in Dubai, to operate in a secure, hybrid environment.

As the region's leading Customs administration and Dubai's first government department, Dubai Customs has been among the first entities to embrace digitization to promote ease of doing business. In 2020, according to Dubai Customs data, Dubai's foreign trade reached a total of 100 million tons of goods valued at AED 1.182 trillion, traded via air, sea, and land. These covered imports, exports, and re-exports through Dubai, including direct, free zone, and customs warehouse trade.

The Covid-19 pandemic propelled new ways of working that required rapid responses and transformation to deal with the situation. Dubai Customs was able to adapt quickly due to its technology adoption, including a virtual computing environment, data protection solutions, and backup solutions from Dell, which were used to

transfer users' data from computers located in the offices to their remote devices, through desktop virtualization, without any need for physical employee presence.

Facilitating global trade requires a robust digital infrastructure supported by a thorough understanding of the value of data. Its collection, storage and analysis will prove crucial in ensuring business growth and longevity.

> *Facilitating global trade requires a robust digital infrastructure supported by a thorough understanding of the value of data.*

"Dubai Customs' keenness to develop its capabilities and provide the best services by using the latest advanced IT applications enabled the department to respond quickly to the challenges imvposed by the pandemic and leverage integrated data protection," said Younis Othman, Director of Information Technology Department at Dubai Customs. ∎

Nokia and Safaricom complete Africa's first Fixed Wireless Access 5G slicing trial

Nokia has announced that it has successfully piloted its 4G and 5G Fixed Wireless Access (FWA) network slicing with mobile operator, Safaricom on its live commercial network. This is the first-time 4G/5G network slicing has been successfully achieved in Africa. The trial utilized a multi-vendor network environment and included RAN, transport and core as well as software upgrades to a range of Nokia's products and services.

The successful trial demonstrates that Safaricom is now poised to support new types of enterprize network services, including fast lane internet access and application slicing. In addition, Nokia is enabling secured FWA slice connectivity to enterprize locations, as well as to private or public application clouds.

The multi-vendor pilot which took place in Kenya's Western Region, strengthens the strategic partnership between the two companies, with Nokia already providing a wide variety of services and solutions. The pilot demonstrated a number of solutions including Nokia's AirScale 4G/5G base stations, the NetAct network management and assurance system and Nokia's FastMile 4G/5G CPE.

Network slicing enables operators the ability to divide a network into multiple virtual slices, which can be optimized for a specific target application or service. The end user of each network slice can then be serviced with different priorities, routing, levels of network performance and security capabilities. Slices can be managed and deployed in minutes, and each one has key performance indicators used for service assurance.

Nokia's 4G/5G slicing solution, which received a prestigious award from GTI 2021 in the 'Innovative Breakthrough in Mobile Technology' category, supports LTE, 5G NSA and 5G SA technologies with slice service continuity between the networks. This enables slicing services for all LTE and 5G devices.

James Maitai, Network Director, Safaricom, said: "We are proud to have hosted Africa's first successful pilot of 4G/5G FWA slicing on our network, and looking forward to tailoring our service offerings to individual customers and industries, to meet their needs for high-speed connectivity precisely and without unnecessary cost. Nokia's expertise has been key to this success, and we anticipate many more strategic wins in this area as our business expands."

Ramy Hashem, Head of Safaricom Customer Team at Nokia, said: "It is great to have successfully completed this pilot with Safaricom, which is a huge step forward in providing Safaricom with state-of-the-art connectivity. Early experience of new slicing technology is invaluable in understanding the new business opportunities it enables. Nokia was the first vendor to offer a slicing solution and we are looking forward to continuing our partnership with Safaricom in providing world-class 4G and 5G network slicing services to its customers". ∎

James Maitai - *Network Director, Safaricom*

Ramy Hashem - *Head of Safaricom Customer Team at Nokia*

Bristow Group selects Speedcast for Multi-Year Connectivity Agreement to enhance Technology and Future-Proof Network

Speedcast, a leading communications and IT services provider, has announced that the company has signed a multi-year contract with Bristow Group Inc. to deliver technology upgrades and future-proof more than 40 remote sites across the globe, including Australia, Europe, Nigeria, the United Kingdom, and North and South America. Houston-based Bristow Group is the global leader in innovative and sustainable vertical flight solutions and provides aviation and search and rescue (SAR) solutions to government and civil organizations, with 222 aircraft in its global fleet.

As part of the agreement, more than 40 onshore energy and search and rescue office bases will receive technology and system enhancements via Speedcast's Unified Global Platform (UGP) and its advanced, software-defined wide area network (SD-WAN) solution. Additionally, all sites will benefit from equipment upgrades.

Speedcast's SD-WAN seamlessly blends VSAT (very small aperture terminal), LEO and MEO solutions, cellular 4G/5G, wireless and MPLS technologies into a

Noel Malcaba
Chief Information Officer, Bristow

single optimized and secure WAN path that delivers the highest quality uptime — all the time. As a truly multi-path, multi-orbit connectivity solution, Speedcast's SD-WAN provides flexible, intelligent and secure network management, and ensures applications have the highest availability and performance.

This contract follows 10 years of connectivity partnership between the organizations, with Speedcast providing 24x7 secure network support for Bristow's operations, managing its WAN, LAN, voice, and back-up broadband services. The solution supports flight operations, managing a critical lifeline for aircraft to operate safely and efficiently, and enables Bristow personnel to access core enterprize systems and applications such as aircraft maintenance data transfer.

"At Bristow, our mission is to make every flight personal and assure safe, efficient and reliable solutions to deliver superior outcomes to our stakeholders," said

Bristow's Chief Information Officer, Noel Malcaba. "Speedcast has been our long-standing connectivity partner serving our fleet operations base stations across the globe. Because of the reliable service and advanced technology Speedcast delivers, our team can conduct their work and ensure flights continue to run seamlessly and stay connected, no matter the flight path or destination".

"As part of this agreement, Speedcast will be conducting technology enhancements and equipment upgrades at many critical base locations, ensuring Bristow benefits from the latest advancements in hybrid connectivity," said Richard Elson, Executive Vice President — Energy at Speedcast. "By future-proofing their network leveraging Speedcast's Unified Global Platform, we're confident Bristow will experience the highest quality connection and redundancy, keeping their operations running smoothly. We look forward to continuing to meet Bristow's requirements for safe and efficient operations". ∎

Saudi hosts high-level Preparatory Meetings for 2022 ITU Elections

International delegates met in Riyadh on August 28-31 and discussed the future of global digital communications ahead of ITU's 2022 Plenipotentiary Conference in Bucharest Romania during 26 September-14 October.

Hosted by Saudi Arabia's digital regulator, the Communications & Information Technology Commission (CITC), the Preparatory Meeting helped the ITU craft the next four years of its global agenda ahead of the 2022 elections.

"Riyadh is the ideal venue to bring together ICT and digital leaders from around the world to align on the next generation of sustainable ICT policies," said CITC Governor, Mohammed Altamimi.

Saudi Arabia is hosting two ITU preparatory meetings: Arab states and inter-regional. The first, a gathering of the league of Arab states (LAS) members of the ITU, will allow the region to better coordinate its digital policies and sustainable development goals.

The inter-regional meeting, chaired by Secretary-General, Houlin Zhao, will allow representatives from the ITU's six regions to identify common digital policies for the next four years. Saudi Arabia is positioned to act

as a convenor and mediator between the Arab world and the ITU's 193 members to forge the best global digital policies.

Given its historic commitment to the Union, Saudi Arabia is also submitting its candidacy to stay on the ITU Council from 2023-26. Joining in 1949, it has served on the Council since 1964. Saudi is now ranked 1st in MENA and 6th among G20 by the ITU for regulatory excellence; and 2nd in the Global Cybersecurity Index (GCI) by ITU and also in the digital competitiveness among G20 economies by WEF.

Powering this digital economy women represent 30% of the digital workforce (surpassing G20 and EU average). ∎

Mohammed Altamimi - *Governor, CITC*

21st ITCN Asia International Exhibition and Conference

Federal Minister for IT and Telecom, Government of Pakistan, Syed Amin ul Haq inaugurated 21st ITCN Asia International Exhibition and Conference at Karachi Expo Center on 24 August,2022.

AYRUS, the global leader in advanced surveillance and security solutions, has signed a distribution contract with STARCOM Technologies for the distribution of their products in Pakistan. The deal was signed during the 21st ITCN ASIA EXPO held in Karachi.

The best places to take your phone on holiday

The USA, the Netherlands and Italy

The index measured factors such as 4G availability and 5G speeds, cost of data, average mobile internet speed, number of Wi-Fi hotspots, local SIM card availability for tourists, number of Instagram posts, cybersecurity and censorship.

• The USA is a clear winner, scoring a total of 87 out of 110. It scores big for 4G availability – the highest amongst all 17 countries – SIM card availability, cybersecurity and number of free public Wi-Fi spots.

• Although in second place, The Netherlands trails considerably behind with a total score of 75. Its top scores include higher 5G speeds than any other country, great 4G availability and internet penetration rate, and promising online censorship scores.

• Italy is in third place with a score of 67, thanks to its low data costs and being the most popular country based on Instagram posts.

Hungary, Mexico and Greece do worst for travelling with your phone from the UK.

At the lower end of the scale are Hungary, Mexico and Greece.

• Hungary gets 44 out of 110 mostly due to low popularity on social media, low number of free Wi-Fi spots and a poor rate of contactless payments.

• Mexico scores 46 thanks to low 4G availability, few contactless payments, low cybersecurity measures.

• Greece also scores 46, with its low number of free Wi-F spots and a poor contactless payments rate.

Turkey is the best place to save cash on your data usage

Looking specifically at price and phone usage, Turkey is where it's cheapest to use your phone when considering the number of free Wi-Fi spots, costs of mobile data (based on 1GB of data) and mobile internet penetration rates. The top 5 holiday destinations for data usage are:

1. Turkey – low data rate at £0.54 per 1GB of data, 82% internet penetration, 278,376 free Wi-Fi spots.

2. United States – one of the highest data rates (£6.09/GB) but also the greatest number of free Wi-Fi spots (409,185).

3. Spain – high internet penetration rates (94%) and low cost of data (£1.37), low number of free Wi-Fi spots (93,225).

4. France – 93% internet penetration, low cost of data (£0.67), low number of free Wi-Fi spots (57,381).

5. United Kingdom – incredibly high internet penetration rates (98%), low data costs (£1.05), low number of free Wi-Fi spots (53,077).

6. Italy – lowest data costs across all 17 countries (£0.32), 84% internet penetration rate, low number of free Wi-Fi spots (72,680).

7. Thailand – decent internet penetration rates (77.8%), low cost of data (£0.93), low number of free Wi-Fi spots (121,978).

8. Denmark – incredibly high internet penetration rate (99%), very low data costs (£0.60), second-lowest number of free Wi-Fi spots (7,151).

9. Austria – high internet penetration rates (93%), low data costs (£0.82), low number of free Wi-Fi spots (10,616).

10. United Arab Emirates – incredibly high internet penetration rate (99%), comparatively high data costs (£2.87), low number of free Wi-Fi spots (68,930).

The Best Holiday Destinations for Your Phone index created by UK's retailer Currys can help you find great locations to do just that. ∎

AVEVA in world's first 50 companies to have Net-Zero Target validated by Science Based Targets initiative

AVEVA, has become one of the world's first companies in its sector to have its net-zero commitments validated by the Science Based Targets initiative (SBTi).

Issued in October 2021, the SBTi's Corporate Net-Zero Standard, sets out clear requirements for companies to ensure their goals align with the requirements of the international scientific community to decarbonize and limit global warming to 1.5°C.

AVEVA has committed to:

•Maintain at least 90% absolute scope 1 and 2 greenhouse gas (GHG) emission reductions post FY2030 and to reduce absolute scope 3 GHG emissions 90% by FY2050 (from a FY2020 base year)

•Increase annual sourcing of renewable electricity to 100% in the next eight years and reduce absolute scope 3 GHG emissions 50% by the same time frame

Peter Herweck, CEO of AVEVA, said: "I am proud that AVEVA is one of the first 50 companies globally to have our net-zero targets validated as being fully aligned with what climate science requires to fight climate change. It is important to lead by example on climate action. Our core business is software that helps global industries drive responsible use of the world's resources but how we do business also matters and we are committed to decarbonizing our entire value chain.

Luiz Amaral, Chief Executive Officer of the Science Based Targets initiative, said: "Climate science tells us that we need rapid and deep emissions cuts if we are to achieve global net-zero and prevent the most damaging effects of climate change. AVEVA's net-zero targets match the urgency

Peter Herweck - *CEO, AVEVA*

of the climate crisis and set a clear example that their peers must follow."

AVEVA's overall net-zero target, and new long-term greenhouse gas reduction targets build on the company's ambitious FY2030 targets, which have also been validated by SBTi as aligned with climate science. To keep a 1.5°C future in reach the company has moved quickly to ensure all AVEVA offices are powered by Renewable Energy as of FY2022, up from 1% in FY2020, and is scoping efficiency upgrades across top sites by energy consumption. The company has also committed to fully electrify its car fleet by FY2030.

To reduce downstream scope 3 emissions associated with the use of AVEVA software, the company is accelerating its cloud strategy in partnership with providers that have committed to 100% renewable energy sourcing. The company is also benchmarking the efficiency and

energy consumption of its software as a step toward building requirements into development processes and fostering green product design principles. Additionally, last year AVEVA joined the Green Software Foundation to contribute to an industry-wide reduction in carbon emissions through shared learnings and standards.

To address upstream scope 3 emissions, including from business travel, the company has made updates to its global travel policies and is collaborating with other companies to accelerate the development and delivery of the next generation of sustainable aviation fuels through the First Movers Coalition. AVEVA is working with its top strategic suppliers on emissions measurement and reduction through the CDP supply chain program, the gold standard of environmental reporting. And it is engaging all data center providers to ensure ongoing alignment with its climate goals and net-zero strategy. **T**

Telstra to launch the Next Generation of its Cutting-Edge IDN at IBC

Telstra Broadcast Services (TBS) is launching the next generation of its cutting-edge IDN (Internet Delivery Network), to cater to the specific needs of international broadcasters for major event delivery, at the IBC Show in Amsterdam.

The next generation IDN expands on the capabilities of this unique network, being based on internet standards and taking a web-first approach to delivery for broadcasters. The upgraded IDN features more automation for efficiency, greater network flexibility, higher bandwidth, and lower latency.

Broadcasters require robust, cost effective and flexible international delivery. They need networks that feature flexibility and different modes of delivery to ensure they can deliver more content to drive a greater number of viewers. Telstra's IDN is a software-defined, cloud-based platform enabling the transport of high-quality video content and live broadcast streams to any registered endpoint across shared networks like the public internet. The IDN features over 40 sites spread over EMEA, APAC and North America with these primary use cases:

1.Cost efficient delivery of live video media

(contribution or distribution) over the internet and for last mile delivery

2.Flexibility to deliver live video media leveraging the TBS core delivery networks such as the Global Media Network for global reach

3.Supporting extensive handoff options to cloud & permanent services

The IDN upgrade follows TBS joining the SRT Alliance, a collaborative community

Andreas Eriksson
Head of Telstra Broadcast Services

of industry leaders and developers striving to achieve lower latency internet video transport, last December. By collaborating with the SRT Alliance, TBS is able to more effectively provide broadcasters of any size with the most flexible, cost effective and robust ways to manage their content. For example, SRT (Secure Reliable Transport), is the fastest growing open source streaming project. SRT is a free open source video transport protocol and technology stack originally developed and pioneered by Haivision, which enables the delivery of high-quality and secure, low-latency video across the public Internet.

"Contemporary broadcasters are being charged with delivering more content, in order to increase the reach of existing and new audiences," says Andreas Eriksson, Head of Telstra Broadcast Services. "However, the increased demand for content distribution is often challenged by budgetary constraints. Our next generation IDN supports broadcasters and rights holders to achieve these goals reliably, flexibly and cost effectively with cutting edge features and workflows. IP is the only way forward for broadcasters to deliver more content and capture a great amount of the audience". **T**

Console Connect collaborates with Master Concept to deliver agile cloud networking solutions to businesses across Asia Pacific

Console Connect by PCCW Global has entered into a distribution agreement with Master Concept, an award-winning cloud technology advisor, to deliver agile cloud networking solutions to businesses across the Asia Pacific region.

Master Concept provides cloud strategy, implementation and integration support, as well as training and platform enhancements to thousands of businesses across Asia Pacific. By integrating the Console Connect Software Defined Interconnection® platform within its cloud solutions portfolio, Master Concept can deliver further value to major cloud platforms and SaaS providers worldwide with higher levels of network security and performance for its enterprize customers.

Through a single management portal, Master Concept can provision a range of cloud connectivity services for its customers, including direct Layer 2 connections to hyper-scale cloud providers,

such as AWS, Google Cloud and Microsoft Azure, and Layer 3 mesh connectivity between and among different cloud providers and cloud regions.

The platform, which can be integrated via API, is underpinned by PCCW Global's high-performance network, offering comprehensive end-to-end SLAs that make it suitable for accessing mission-critical and latency-sensitive applications and workloads.

Michael Glynn, Senior Vice President, Digital Automated Innovation, PCCW Global, said, "Secure and flexible connectivity is fundamental to any cloud transformation project. We are excited to be working alongside Master Concept to enhance their cloud solutions portfolio and make it easier for enterprizes to connect to the cloud across Asia Pacific and worldwide."

Dennis Wong, Director and Co-founder, Master Concept, said, "Through Console

Connect, we have been able to quickly bring new cloud connectivity solutions to market and help our enterprize customers get closer to the cloud. We look forward to growing our collaboration further through the new PartnerConnect program."

Derek Chan, Director and Co-founder, Master Concept, said, "We are delighted to be one of the launch partners for Console Connect's new global PartnerConnect program which enables Master Concept to deliver secure and agile cloud capabilities to our enterprize customers."

Console Connect's PartnerConnect program is designed to drive revenue growth and customer success through the Console Connect Network-as-a-Service (NaaS) platform. The program helps managed services providers, systems integrators, value added resellers, and application providers extend their service portfolio, and securely connect their customers, clouds, and applications worldwide. ∎

Sophos Reports: Active adversaries increasingly exploit stolen session cookies to bypass Multi-Factor Authentication and gain access to Corporate Resources

Sophos, has announced in the Sophos X-Ops report, "Cookie stealing: the new perimeter bypass," that active adversaries are increasingly exploiting stolen session cookies to bypass Multi-Factor Authentication (MFA) and gain access to corporate resources. In some cases, the cookie theft itself is a highly targeted attack, with adversaries scraping cookie data from compromised systems within a network and using legitimate executables to disguise the malicious activity. Once the attackers obtain access to corporate web-based and cloud resources using the cookies, they can use them for further exploitation such as business email compromise, social engineering to gain additional system access, and even modification of data or source code repositories.

"Over the past year, we've seen attackers increasingly turn to cookie theft to work around the growing adoption of MFA. Attackers are turning to new and improved versions of information stealing malware like Raccoon Stealer to simplify the process of obtaining authentication cookies, also known as access tokens," said Sean Gallagher, Principal Threat Researcher, Sophos. "If attackers have session cookies,

Sean Gallagher - *Principal Threat Researcher, Sophos*
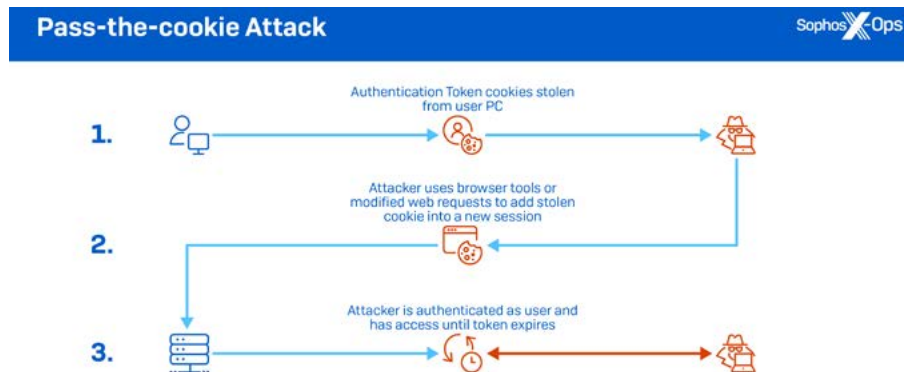
they can move freely around a network, impersonating legitimate users."

Session, or authentication, cookies are a particular type of cookie stored by a web browser when a user logs into web resources. If attackers obtain them, then they can conduct a "pass-the-cookie" attack whereby they inject the access token into a new web session, tricking the browser into believing it is the authenticated user and nullifying the need for authentication. Since a token is also created and stored on a web browser when using MFA, this same attack can be used to bypass this additional layer of authentication. Compounding the issue is that many legitimate web-based applications have long-lasting cookies that rarely or never expire; other cookies only expire if the user specifically logs out of the service.

Thanks to the malware-as-a-service industry, it's getting easier for entry-level attackers to get involved in credential theft. For example, all they need to do is buy a copy of an information-stealing Trojan like Raccoon Stealer to collect data like passwords and cookies in bulk and then sell them on criminal marketplaces, including Genesis. Other criminals on the attack chain, such as ransomware operators, can then buy this data and sift through it to leverage anything they deem useful for their attacks.

Conversely, in two of the recent incidents that Sophos investigated, attackers took a more targeted approach. In one case, the attackers spent months inside a target's network gathering cookies from the Microsoft Edge browser. The initial compromise occurred via an exploit kit, and then the attackers used a combination of Cobalt Strike and Meterpreter activity to abuse a legitimate compiler tool to scrape access tokens. In another case, the attackers used a legitimate Microsoft Visual Studio component to drop a malicious payload that scraped cookie files for a week.

"While historically we've seen bulk cookie theft, attackers are now taking a targeted and precise approach to cookie stealing. Because so much of the workplace has become web-based, there really is no end to the types of malicious activity attackers can carry out with stolen session cookies. They can tamper with cloud infrastructures, compromise business email, convince other employees to download malware or even rewrite code for products. The only limitation is their own creativity," said Gallagher. "Complicating matters is that there is no easy fix. For example, services can shorten the lifespan of cookies, but that means users must re-authenticate more often, and, as attackers turn to legitimate applications to scrape cookies, companies need to combine malware detection with behavioral analysis". ▮

Evertz showcases a powerful platform for Content Monetization at IBC

At IBC 2022, Evertz will be highlighting its evertz.io platform, a Software-as-a-Service (SaaS) solution that is helping live sports, live entertainment and linear channel customers launch new channels and monetize content across a wide range of Over-the-Top (OTT), Direct-to-Consumer (DTC), Connected TV and traditional Broadcast distribution/streaming applications.

This powerful platform, which will uses hyper-scalable serverless microservices to offer a level of agility and flexibility that is unique to the market. With evertz.io, customers can grow, scale and launch channels with complete confidence, knowing they will only pay for the services they use. This safeguards customers by reducing time to market and helping them avoid the costs and learning curves associated with leveraging cloud native playout, streaming and digital distribution technologies.

A key feature of the evertz.io platform is evertz.io Stream, a revolutionary streaming and playout SaaS service that meets the needs of OTT, DTC and Free Ad-Supported

Martin Whittaker - *Technical Product Director, MAM and Automation at Evertz*

TV (FAST) services by delivering flexible hourly, daily and monthly pricing models.

evertz.io Stream provides all the features found in enterprize class broadcast playout systems, including live inputs, video/audio mixing, comprehensive multi-language captioning and subtitling and full graphics and branding capabilities. evertz.io Stream also delivers pre-built recipes for delivery of OTT and FAST TV channels to services like Roku, Samsung TV+, YouTube TV, Tubi and more. The simplicity of the evertz.io Stream and its user interface means that, in the space of a few minutes, content owners and broadcast launch services can start monetizing live and archive content across a wide range of distribution platforms.

"Today's broadcasters need technology that allows them to quickly and easily distribute their content to any platform, anywhere in the world," says Martin Whittaker, Technical Product Director, MAM and Automation at Evertz. "This is precisely what the evertz. io platform and evertz.io Stream deliver. Customers choosing our cutting-edge

solutions can be much more creative with their distribution strategy because they have the freedom to take risks. Specialty, alternative and hyper-targeted channels that would previously have been too costly or too niche to launch can now be explored and monetized, enabling broadcasters and content creators to maximize their assets and increase revenues."

Designed and built by the team behind Evertz' Emmy® Award-winning playout technology, evertz.io Stream is the only streaming service that combines the specific technological and feature requirements of both Traditional Broadcast Channels and Conventional OTT Channels into a single platform. evertz.io Stream includes support for both file-based playback and advanced live events, a wide range of video streaming inputs and outputs including 4K UHD with HDR, as well as support for common transport protocols (RIST, SRT and Zixi). evertz.io Stream is ideal for 'Pop-Up' Channels, "Pay-Per-View events", limited duration Sporting Events and Disaster Recovery, among others. ∎

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