

APSCC Monthly e-Newsletter

SEPTEMBER 2019

The **Asia-Pacific Satellite Communications Council (APSCC) e-Newsletter** is produced on a monthly basis as part of APSCC's information services for members and professionals in the satellite industry. Subscribe to the APSCC monthly newsletter and be updated with the latest satellite industry news as well as APSCC activities! To renew your subscription, please visit www.apsccl.or.kr. To unsubscribe, send an email to info@apsccl.or.kr with a title "Unsubscribe."

News in this issue has been collected from August 1 to August 31.

INSIDE APSCC

Mark Your Calendar for APSCC 2019 on Nov 19 – 21 in Bangkok, Thailand! **Intercontinental Hotel Bangkok, Thailand**

APSCC is pleased to announce that the APSCC 2019 Satellite Conference & Exhibition will be held in Bangkok, Thailand on 19th – 21st November 2019. For the first time held in November as Asia's must-attend executive event for the satellite and space industry, APSCC 2019 will incorporate industry veterans and new players through the 3-day of in-depth conference program to a broader audience. For more information please visit www.apscclsat.com

APSCC Shares Innovations with Industry Experts at New Space Pitch Competition

APSCC is pleased to announce The 1st Annual New Space Pitch Competition will be held in Intercontinental Hotel Bangkok, Thailand on November 21, 2019. It aims to encourage New Space startups to share their thoughts on developing/growing the New Space economy in Asia with established satellite operators, manufacturers, and investors. Join us to share your innovations with industry experts. For more information please visit <https://apscclsat.com/newspace-competition/>

NEW MEMBERS

APSCC Welcomes Datacom System International Ltd. as a Regular Member

Datacom is a Hong Kong based international company with 30 year experiences in supplying satellite communication equipment, broadcast equipment, TV studio, headend equipment and system integration service in various countries. The company has certified in-house GD/Vertex antenna supervisors who are capable of building large size antennas and installing 950/980/990 series ACU, and providing complete turnkey solutions worldwide. Moreover, with experienced engineering staffs, the company is able to perform challenging R&D projects, custom designs, and network implementation. Datacom is a customer focused, results-oriented and market leader in the Broadcast & Satellite communication industry. <https://datacom.com.hk/>

APSCC Welcomes Skyreach as a Regular Member

Indonesia fastest growing satellite-based service provider, established in 2012, Skyreach has complete experience in providing various satellite-based services for rural areas, media uplink, maritime, land-mobility satcom, government and military operations. "thereach", Skyreach owned neutral teleport & datacentre, is hosting & operating various systems such as c-band/Ku-band VSAT uplink, media uplink, HTS gateway and interconnection for various local & international operators. <http://skyreach.id/>

SATELLITE BUSINESS

Speedcast Wins Multi-Year Contract with Sasol for Fully-Managed Communications Solutions and IT Support in Mozambique

August 1, 2019 - Speedcast International has been awarded a new multi-year contract to provide communications and onsite IT support services at four operations camps for Sasol's oil & gas exploration and well delivery camps operating in Mozambique. This contract marks Speedcast's first project for this

South African-based customer and the sixth project in Mozambique, where Speedcast was the first to market in the establishment of a local entity, Speedcast Mozambique Lda. Under this entity, Speedcast will deliver a wide range of fully-managed services to Sasol's four base camps housing crew working on exploration and well delivery projects in-country. The solution is set up to account for potential harsh weather with C-band VSAT connectivity as well as terrestrial fiber optic backhaul, satellite phones and a terrestrial radio infrastructure including mobile data backup and portable radio over IP using Inmarsat BGAN. Value-added solutions include internal and external voice services, Wi-Fi and crew welfare communications to each site. Speedcast will provide 24/7 onsite IT support managing internet, firewalls, document storage, printing, VoIP and teleconferencing.

SES Pioneers Cloud-Based Network Automation and Service Orchestration

August 5, 2019 - SES will create an open, standards-based network automation and service orchestration platform, built on Open Network Automation Platform (ONAP) and powered by Amdocs' network functions virtualization (NFV) technology. With today's announcement, SES is the first satellite network solutions provider to adopt ONAP, an open software platform designed for orchestrating the creation and delivery of new services in an automated operational environment. SES is implementing ONAP with Amdocs on Microsoft Azure, the industry's scalable and flexible cloud services platform supported by Microsoft's expansive global network. With ONAP operating on Azure, SES can extend network services and activate virtualised network functions quickly and at scale, accelerating time-to-market and improving service agility for customers anywhere on the globe. In addition, SES is partnering with Amdocs, a leader in developing and integrating ONAP solutions on Microsoft Azure. Together, Amdocs and Microsoft represent best-in-class ecosystem partners to deploy open, cloud-based network automation and orchestration.

Gilat to Provide Aero Antennas to a Tier-1 Business Aviation Service Provider

August 5, 2019 - Gilat Satellite Networks Ltd. will provide aero antennas with an initial agreement for tens of millions of dollars to a Tier-1 business aviation service provider. This expands Gilat's aero offering into the business aviation market with a leading tail-mount antenna for business jets. The high-speed satellite-based global connectivity service being developed will be enabled by Gilat's aero terminal which includes a 12" tail-mount Ku band antenna, and Gilat's industry proven Taurus aero modem. Gilat's solution is designed to provide the user experience this demanding market requires. The service for business aviation will be provided over one of the largest aero networks operating worldwide.

Capella Space Partners with Addvalue and Inmarsat for Real-time Tasking

August 5, 2019 - Capella Space entered into an agreement with Addvalue, a one-stop digital, wireless and broadband communications technology products innovator, for use of its Inter-Satellite Data Relay System (IDRS™) via Inmarsat's global L-Band satellite communications network. The Inmarsat network provides satellite uplink and downlink services, which enable Capella to task any satellite in its constellation in any location in the world in real-time. Through its agreement with Addvalue, Capella will have a significant market lead as the only Synthetic Aperture Radar (SAR) provider with real-time tasking capability. This unique partnership will position Capella as the only SAR operator capable of real-time responsiveness. Lightweight Addvalue terminals on Capella satellites will drastically reduce the time required to order and deliver high-resolution imagery from anywhere in the world. Addvalue's IDRS will keep Capella's constellation of 36 SAR micro-satellites in constant contact with Inmarsat's award-winning global L-Band network, enabling two-way, secure and fast IP-based connectivity. Unlike traditional time-consuming ordering processes that rely on legacy systems such as fax machines, Capella customers will use a web application to instantly log and verify tasking requests routed through the Inmarsat network.

RBC Signals Introduces Xpress X-band Downlink Service

August 5, 2019 - RBC Signals announced the all-new RBC Signals Xpress product, an X-band downlink service intended for Earth Observation satellite operators. Designed as an affordable means for downlinking large data volumes, RBC Signals Xpress employs the robust and highly efficient RBC Signals global ground station network to deliver its service with game changing pricing notably lower than any other provider. RBC Signals provides space communication infrastructure as a service to low earth orbit (LEO), medium earth orbit (MEO) and geostationary orbit (GEO) satellite operators. The company's rapidly expanding global network includes over 65 antennas in more than 40 strategic locations, supporting all major frequency bands. With shared multi-mission systems as well as mission-dedicated antennas, RBC Signals improves latency, resiliency, flexibility and data download capacity.

CPI to Acquire Satellite Antenna Systems Business of General Dynamics

August 5, 2019 - Communications & Power Industries (CPI) has entered into an agreement to purchase SATCOM Technologies, the antenna systems business of General Dynamics Mission Systems, a business unit of General Dynamics. SATCOM Technologies designs, manufactures and installs satellite communications antenna systems used in commercial, defense and scientific applications, as well as provides related radio frequency products and electronics, including feed components, amplifiers, converters, antenna control systems, and engineering and installation services. This business will complement CPI's existing portfolio of communications products for government, military and commercial applications. The acquisition is expected to close before the end of calendar year 2019, subject to customary closing conditions.

SES Selects Amdocs NFV for Network Automation and to Move to the Cloud on Microsoft Azure

August 5, 2019 - A leading software and services provider to communications and media companies Amdocs announced that it will provide SES with its Amdocs Network Function Virtualization (NFV) solution to modernize and automate its network platforms in the cloud, in an open, software-centric way. This will enable SES to more rapidly build network solutions that are powered by its fleet of Medium Earth Orbit (MEO) and Geostationary Earth Orbit (GEO) satellites, and extensive ground infrastructure to provide seamless scalable connectivity services to underserved markets, including rural areas, out at sea or in the skies, as well as to areas affected by disasters. Amdocs is also today announcing an expanded strategic agreement with Microsoft to help CSPs modernize, automate and digitize as they grow beyond connectivity to industry accelerators such as IoT, artificial intelligence and media and entertainment. This builds on Amdocs and Microsoft's existing collaborative agreement to enable ONAP on Microsoft Azure. SES is the first customer to use Amdocs NFV for SD-WAN on Azure.

Cobham Releases Radiation-hardened Onboard Computing Reference Design

August 5, 2019 - Cobham Advanced Electronic Solutions (CAES), announced the availability of a radiation-hardened Onboard Computing (OBC) reference design to speed the development of space computing platforms including CubeSats. Historically used in low-orbit Earth for applications such as remote sensing or communications, CubeSats are being increasingly deployed for interplanetary missions due to their numerous benefits such as standardization, affordability and their small form factor. CubeSats have traditionally been based on commercial off-the-shelf (COTS) electronics, however, Cobham's OBC Reference Design offers a path to significantly higher reliability and enables system architects to easily develop a computing platform that is ready for space flight.

Speedcast Awarded Contract for Fully-Managed Communications

August 7, 2019 - Speedcast has been awarded a new multi-year communications and IT solutions contract on the West Bollsta semi-submersible rig, a new build operated by Seadrill off the coast of Norway. Seadrill is a world leader in offshore drilling with one of the youngest, most modern fleets employing highly trained and proficient crew. They operate in shallow to ultra-deep water, in both harsh and benign environments. As the operator of the new semi-submersible drilling rig, the West Bollsta (owned by Northern Drilling), Seadrill's requirements for its connectivity solution onboard extends way beyond a basic VSAT connection. They also needed an innovative way to provide crew with communications and welfare services using some of the most efficient, modernized technology options available in the market. The fully-managed communications solution developed by Speedcast for the West Bollsta includes a dual-redundant C/Ku-band VSAT system, coupled with LAN/WiFi/Industrial WiFi and WAN services, and PABX service. It combines some of Speedcast's core technologies and new developments to deliver a personalized solution that fits the reliability needs of Seadrill's onboard operations.

Viasat's In-flight Connectivity System Selected to Power JetBlue's Fly-Fi internet Service

August 7, 2019 - Viasat announced JetBlue has selected the Viasat in-flight connectivity (IFC) system for the airline's new fleet of 70 Airbus A220-300 aircraft – for delivery beginning in 2020, with the option for 50 additional aircraft. JetBlue and Viasat have maintained a long-lasting partnership, first launching the Viasat-powered Fly-Fi in-flight Wi-Fi service in December 2013. Since the initial introduction, the two companies have received numerous accolades for bringing free, high-speed, high-quality in-flight Wi-Fi to every seat onboard, with JetBlue being further recognized as the only airline to offer free, fast and full in-flight Wi-Fi capabilities – from streaming, web browsing and more – across the airline's entire fleet. JetBlue's new Airbus A220-300 aircraft will be outfitted with Viasat's latest Ka-band IFC kit, and is compatible with Viasat's complete fleet of satellites, including Viasat's first-generation spacecraft – ViaSat-

1, WildBlue-1 and Anik F2, its jointly-owned European satellite, KA-SAT; its second-generation spacecraft ViaSat-2, and the forthcoming ViaSat-3 class of satellites, which is expected to offer near global coverage and nearly eight times more capacity than Viasat's current fleet which means even more enhanced connectivity and streaming services across JetBlue's flight routes.

OneWeb Secures Global Spectrum Rights

August 7, 2019 - OneWeb, whose mission is to connect everyone everywhere, is pleased to announce it has succeeded in bringing into use its spectrum rights in the Ku- and Ka-band spectrum. To achieve this milestone, OneWeb's satellites have been transmitting at the designated frequencies in the correct orbit for more than 90 days, enabling OneWeb to meet the requirements to secure spectrum bands over which it has priority rights under ITU rules and regulations. These rights will now be confirmed as the UK administration, which has filed our satellite system with the ITU, will complete the required Notification and Registration process of the company's LEO network. By meeting the requirements of the ITU regulations, OneWeb is well on its way to securing spectrum rights to high priority Ku-band spectrum for service links, and Ka-band for its global gateways. It will now have access to over 6 GHz of spectrum that will enable it to deliver its high-speed, low latency connectivity. This achievement is the latest in a string of major milestones charting OneWeb's progress towards commercial service and full global coverage by 2021, including the successful launch of its first 6 satellites in February, the opening of its state-of-the-art Florida manufacturing facility earlier this month, and proving its ability to deliver low latency, high-speed services through its recent full HD streaming tests.

PSN Selects Kratos for Unified Monitoring Solution for Region's First VHTS

August 8, 2019 - Kratos Defense & Security Solutions was selected by the PSN Consortium, led by Indonesian satellite operator Pasifik Satelit Nusantara (PSN) to deliver a unified ground station monitoring solution to support the first Very High-Throughput Satellite (VHTS) in the region. PSN will deploy and operate the highest broadband satellite in Asia on behalf of Indonesia's Ministry of Communication and Information Technology to bring Internet access to unreached parts of the nation's islands. The VHTS is expected to launch in 2022 and will carry more than 150 gigabits per second over the entire Indonesian territory to connect thousands of schools, hospitals and public buildings across the Indonesian archipelago. To help PSN assure the highest level of Quality of Service (QoS) for customers and to track Service Level Agreements (SLAs), Kratos is providing a unified management platform in the Network Operations Center (NOC) that will display trends, analytics and key performance indicators across the ground station to help reduce costs and optimize operations. Unlike traditional siloed approaches, the platform will collect and consolidate metrics from its RF, network management and VSAT monitoring modules to enable correlation and analysis of the data providing PSN operators with a much more holistic view of service health and to track SLA compliance.

Intelsat and Stratosat Power Business Expansion and Enable International Commerce across Central Africa

August 13, 2019 - Intelsat S.A. announced an agreement with Stratosat Datacom that provides for the delivery of high-speed broadband services to sites across Central Africa by integrating managed connectivity from Intelsat's high throughput global network with valued-added engineering and management services from Stratosat. Together, the companies will bring internet and Virtual Private Networking (VPN) connectivity to markets across the region that have traditionally lacked access to reliable communications capabilities. The Stratosat NextGen managed service – powered by Intelsat's FlexEnterprise – can be rapidly deployed and will dramatically improve the reach and performance of networks for small, medium, and large businesses in the region, including schools, hospitals, financial firms, mining, and agriculture companies. Stratosat NextGen will also enable multi-national enterprises to engage and connect with their partners and customers throughout the region, driving business and overall economic growth.

Optus Business and Myriota Form First-of-its-Kind Agreement to Bolster Remote IoT Coverage

August 20, 2019 - Optus Business has entered into an agreement with Myriota, the global leader in nanosatellite Internet of Things (IoT), with a view to providing remote and regional connectivity for IoT devices and applications. An Australian first, the major telco-nanosatellite provider agreement will bring together Optus' premium national networks and digital enablement capabilities with Myriota's direct-to-orbit technology to allow for massive scale, low-cost communications for IoT devices across remote Australian geographies. The arrangement will offer low-cost, long battery life connectivity for millions of

devices across multiple industries. The devices will allow companies to track assets across Australia, even in the most remote areas. The two companies have a shared history, with 2018 seeing Myriota secure US\$15 million in Series A funding from companies including Singtel Innov8; the venture capital arm of Optus' parent company Singtel.

Hughes Partners with VNC to Create Solutions for Extending LTE Coverage Using Helicopters, UAVs

August 20, 2019 - Hughes Network Systems, in partnership with Virtual Network Communications (VNC), announced new joint solutions to extend mobile network connectivity using an integrated combination of VNC's deployable LTE technology with Hughes JUPITER and HM satellite systems. The new solutions support various global applications for government, militaries, first responders, and commercial Mobile Network Operators (MNOs). Designed to provide wireless coverage for soldiers or first responders, the new Hughes HeloCell Solution integrates VNC's LTE technology with the Hughes HeloSat Solution, which provides Beyond Line of Sight (BLoS) communications on rotary-wing aircraft. For military and emergency applications, the Hughes and VNC technologies combine to form an "airborne cell tower" when installed aboard a helicopter or an Unmanned Aerial Vehicle (UAV). The solution provides an extended cellular coverage radius of tens of kilometers, with the satellite terminal backhauling the mobile traffic to and from the network core. The solution can also scale to support more than 100 simultaneous active users on a single, layered system architecture. The VNC LTE technology can also be integrated with the JUPITER System to backhaul mobile traffic, enabling MNOs to quickly and cost-effectively provide 4G access to people in areas unserved or underserved by terrestrial connectivity – especially in remote and hard-to-reach areas. In tests, the integrated solution sent 4G LTE traffic to the core network at speeds of 200 Mbps.

Indonesian Space Agency Cements Plans to Work with Ecometrica on Deforestation Data

August 22, 2019 - Downstream space and sustainability company Ecometrica has made a long-term commitment to collaborate with Indonesian National Institute of Aeronautics and Space (LAPAN) and Bogor Agricultural University (IPB) beyond the Forests 2020 project, by signing a memorandum of understanding. The agreement will ensure the company's continued involvement in Indonesia and its role in supporting sustainable forest management and the conservation of tropical forests. The UK-based firm, whose advanced platform allows data from satellites, such as the Sentinel constellations, to be used to track changes of forests, has been helping to monitor the effects of palm oil plantation and other agricultural sectors on Indonesia's tropical rainforests, while guiding efforts to reverse deforestation through the UK Space Agency-funded Forests 2020 initiative. Its MoU, signed at a conference in Saarbrücken, Germany with LAPAN and IPB, means that these two Indonesian organisations will work with Ecometrica for many years beyond 2020.

AsiaSat Shareholders Approve Privatisation Proposal

August 23, 2019 - Bowenvale Limited and Asia Satellite Telecommunications Holdings Limited jointly announced that the proposal for the privatisation of AsiaSat by way of a scheme of arrangement ("Scheme") has been approved at the Court Meeting. Approximately 99.98 percent of the shares held by the shareholders of the Company other than Bowenvale (the "Scheme Shareholders") that were voted in person or by proxy at the Court Meeting were voted in favour of the privatisation and a majority of the shareholders voting in person or by proxy on a headcount basis also voted in favour of the privatisation. Subject to the Scheme becoming effective, the Scheme Shareholders will receive a cancellation price of HK\$10.22 per share in cash. Proceeding to the next step of the privatisation, AsiaSat will seek the sanction of the Scheme at the court hearing of the petition on 30 August 2019 (Bermuda time). Assuming the Scheme is approved by the court, it is expected that the Scheme will become effective on 3 September 2019 (Bermuda time), whereupon AsiaSat will become a private wholly-owned subsidiary of Bowenvale, and the listing of the shares in AsiaSat on The Stock Exchange of Hong Kong Limited will be withdrawn on 5 September 2019.

EM Solutions Selected by Thales for Supply of Satcom Radio Subsystems

August 26, 2019 - EM Solutions has been awarded a AUD\$ 6.5M contract by global prime contractor Thales for the supply of satellite radio systems to support a major connectivity project. EM Solutions' ability to make timely modifications to their commercial off-the-shelf products to suit Thales' specific customer requirements was a key factor in determining the contract award. In 2016 a framework agreement was signed between the two companies to streamline ordering, and in 2018, EM Solutions' work was again recognised when they took out Thales Australia's Supplier of the Year award for Export

Achievement. Thales and EM Solutions have been collaborating through the work of the Thales Global Supply Chain team. Similar products to those supplied are also in use in several of EM Solutions' own on-the-move satellite terminals for a range of land and maritime applications, including the Cobra X/Ka tri-band Maritime Satellite Terminal which is now operational on a number of different classes of Navy vessels both in Australia and internationally. Thanks to its collaboration with Thales, EM Solutions is positioning to win further global business and extend its reach into other projects.

Kacific Taps ABS Ground Infrastructure for its Gateway Services to the Philippines and the Greater Pacific Region.

August 27, 2019 - As Kacific plans for the launch of its Kacific1 satellite later in the year, it has selected ABS for its ground infrastructure. ABS teleport in Subic Bay, the Philippines, will host, operate and provide first level support for its gateway hub. Kacific1 will be a pioneering High Throughput Satellite (HTS) to be located over Asia-Pacific using Ka-band spot beams for extremely cost-efficient broadband delivery. Its 56 powerful high throughput beams will cover select areas over the Pacific Islands and South East Asia, with six beams covering The Philippines archipelago and a further 21 beams covering Indonesia, Timor-Leste and Malaysia. ABS has its primary space operations center for its entire fleet of six satellites in Subic Bay. Its teleport facilities operate with extremely high availability, with triple redundant power supply and fiber connectivity to Tier-1 IP international peering points. In keeping with Ka-band operating norms for tropical regions, ABS has arranged a diversity site to be located nearby at the Clark Freeport Zone. The teleports will operate on an active diversity basis using state-of-the-art connectivity via a dedicated fiber route to directly optically connect the two gateway hubs. This ensures that commercial traffic would have a reliable transmission from one of the sites if, for example, rain degradation was impairing the functionality of the other. ABS Philippines teleport is equipped with the latest technologies and platforms. It serves as one of the major satellite hubs over the Asia-Pacific region, hosting more than 50 antennas. As satellites provide a complementary role to 5G connectivity, the Subic facility is poised to be a gateway for future 5G services especially to remote areas. The facility is managed by professional personnel and experienced engineers providing round-the-clock services, 24 x 7 customer support and a dedicated customer program management team.

Axesat to Offer Hughes Satellite Services to Enterprise Customers in Colombia

August 27, 2019 - Hughes Network Systems, LLC announced that Axesat, a leader in satellite connectivity and telecommunications in Latin America, has chosen to offer Hughes satellite connectivity to enterprise customers throughout Colombia. The Ka-band service will be delivered using capacity on the Hughes 63 West satellite, which provides coverage across 96% of the population of Colombia. Along with Hughes satellite connectivity, Axesat offers enterprise customers a suite of managed network services to make the most of their multisite networks. In addition to selling enterprise service plans from Hughes in Colombia, Axesat is also an authorized reseller of HughesNet® satellite Internet service for consumers and small businesses in Colombia, Ecuador, Peru and Chile.

Viasat Completed NATO UHF Satellite Communications Control Station Upgrade

August 28, 2019 - Viasat today announced it has successfully upgraded the North Atlantic Treaty Organization's (NATO) Ultra High Frequency (UHF) satellite communications (SATCOM) control stations to comply with the new Integrated Waveform (IW) baseline. Using Viasat's Visual Integrated Satellite communications Information, Operation and Networking (VISION) software platform, NATO gains greater communications interoperability, scalability and flexibility across legacy and next-generation platforms, which it expects will significantly enhance warfighters' situational awareness and operational insights on the battlespace. Viasat's VISION platform is the first commercially-available software package to simultaneously support all 25-kHz legacy Demand-Assigned Multiple-Access (DAMA) and next-generation IW networks and services. The Viasat VISION platform provides a single, user-friendly network management interface for legacy DAMA and IW services, inclusive of the ability to locally or remotely manage and control ground station networks, monitor status and system performance, track event/alarm management situations and add/remove services when missions change. By enabling interoperability between DAMA and IW platforms, NATO can double its channel efficiency without additional investment in the UHF space segment. This optimization doubles the number of users, giving more warfighters access to reliable, high-quality, resilient voice and data communications.

RigNet Selected to Exclusively Provide Managed Communications by Borr Drilling

August 28, 2019 - RigNet announced that it has signed a multi-year agreement with Borr Drilling, a global

offshore drilling contractor, to exclusively provide enhanced managed communication services on any band (C, Ku or Ka) on all of their new premium jack-up rigs anywhere on the planet. Borr Drilling owns and operates jack-up rigs of modern and high specification designs and provides services focused on the shallow water segment of the offshore oil and gas industry worldwide. Borr Drilling's requirements are to support their initial steps on their digital transformation journey and RigNet's communications services will provide voice and video, enable critical corporate applications, deliver real-time data, and enhance crew communications over a private, secure network. In addition, RigNet is also providing additional crew welfare services with its CrewConnect portfolio, providing improved crew morale in remote locations, enhancing operational efficiency through reduced employee turnover and increased productivity. CrewConnect provides dedicated crew internet access with Crew Hotspot, with the option to access CrewFlix, RigNet's Video-On-Demand service.

Intelsat and Africa Mobile Networks Reach Milestone, Continue Aggressive Path to Connect Rural Communities in Sub-Saharan Africa

August 29, 2019 - Intelsat and Africa Mobile Networks (AMN), an integrator of mobile network infrastructure, announced that a milestone in bringing mobile connectivity to unserved communities in sub-Saharan Africa has been reached. Building upon a partnership announced in the fall of 2018, in less than a year, approximately 525 remote cell sites have been connected, with the goal of expanding mobile coverage to other parts of the region by the end of 2019. Until now, the cost of expansion and geographic complexities in remote rural areas of Africa has made establishing connectivity for the communities, individuals, and businesses in these regions extremely difficult. AMN has developed a low-cost solution, powered by a highly reliable small cell solar-based system that can be rapidly deployed in less than six hours. Combined with the power, performance and efficiency delivered by the three high-throughput Intelsat EpicNG satellites, as well as the 23 additional satellites covering the African continent, AMN and Intelsat are delivering a mobile network infrastructure that is fast, cost-effective, reliable and able to easily scale to meet emerging data demands.

BROADCAST

The Philippines' Cignal TV Expands Playout Capabilities with Imagine Communications

August 23, 2019 - Cignal TV, the leading satellite broadcaster in the Philippines, has expanded its playout capacity using the fully integrated Versio™ modular playout solution from Imagine Communications. Cignal TV broadcasts premium content on both television and radio to more than two million subscribers across the country. To meet the expectations of its audience, Cignal TV continually adds high-quality content and channels. The new playout system gives the broadcaster increased scalability and speed to market with a future-proofed, software-based solution. Imagine Communications worked with systems integrator Composite Technology Inc. on the geo-dispersed Versio solution, which expands the system to 4+1 channels, providing redundancy on every channel. The channels have the capability of live broadcasting, switching via Cignal's existing Platinum™ VX router. Imagine's market-proven ADC™ automation system ensures reliable, flexible and efficient operations across the entire workflow.

Globecast Partners with Eutelsat for Launch of New HOTBIRD Platform with Deutsche Welle HD

August 27, 2019 - Globecast, the global solutions provider for media, is expanding its partnership with Eutelsat Communications to create a new HOTBIRD platform in order to satisfy the growing move from SD to HD in the market. In addition to expanded HOTBIRD capacity, the platform also includes ground segment services with connectivity to Globecast's fibre network, Globecast Backbone Network, as well as its media management capabilities. German international public broadcaster Deutsche Welle (DW) is the first customer to take advantage, launching its flagship English language HD TV channel via this new Globecast service. This includes end-to-end channel contribution from DW's facilities in Berlin to Globecast in Paris and uplinking from there. Globecast has worked with DW for many years, distributing their channels in both Asia and the Middle East.

TRK Ukraine Chooses VSN for Complete Media Management and News Production

August 27, 2019 - Media industry software company VSN has announced that its flexible, scalable, open standards-based solution has been chosen by TRK Ukraine for its complete media management and news production requirements. The project was implemented by Comtel, VSN's local distributor and a leading system integrator of television technologies in the Ukrainian market. TRK Ukraine is Ukraine's most

popular national television channel, broadcasting a range of content types from documentaries through game shows and talk shows to football and news. It is part of Media Group Ukraine, which owns and operates a number of TV channels in the country. In common with many similar organisations looking to upgrade and improve their news production workflow, TRK Ukraine needed to replace its MAM system and to harmonise a number of disparate, legacy systems in order to deliver greater interavailability of content and, more importantly, to create a single, unified interface that would simplify and speed workflows.

LAUNCH / SPACE

China Plans to Build Homeport for Seaborne Rocket Launch

August 1, 2019 - China plans to start the construction of a homeport for seaborne rocket launches in Yantai, east China's Shandong Province this year, according to the China Aerospace Science and Technology Corporation (CASC). The project aims to make seaborne rocket launches a frequent occurrence, said CASC. Relying on the favorable geographical location and conditions of Yantai, the project will include construction of R&D and manufacturing centers for rockets, satellite payloads and offshore launch platforms, as well as a satellite data application and development center. The project is also expected to push forward the development of intelligent manufacturing, logistics, new aerospace materials and aerospace-themed tourism, said CASC. China successfully launched a Long March-11 rocket from a mobile launch platform in the Yellow Sea off Shandong Province on June 5. It was China's first space launch from a sea-based platform.

China Successfully Tests Accurate Landing of Rocket Debris

August 2, 2019 - China has successfully tested the technology that can accurately control the landing site of falling rocket parts, making progress toward reusable launch vehicles in the future. The test was carried out following a Long March-2C rocket launched on Friday, and focused on grid fins which are like "wings" on rocket core part to increase precision in control of its landing location. The success of the test is of great significance for improving China's inland rocket landing safety, minimizing the inconvenience to the local people, as well as promoting the follow-up development of carrier rockets' controllable recovery, soft landing and reuse, according to CASC. (source: China Space News)

Arianespace's "GO-1" Mission to Provide Small Satellites with a Direct Flight to Geostationary Orbit

August 5, 2019 - Arianespace to introduce an innovative service providing fast-track access to Geosynchronous Equatorial Orbit (also known as geostationary orbit, or GEO) for the new generation of small satellites, offering a first flight opportunity with more than 4,500 kg. of such payloads on its "GO-1" mission in the first half of 2022. This rideshare flight from the Guiana Space Center will utilize the Ariane 64 version of Europe's future heavy-lift launcher. The GO-1 mission will inaugurate a regular, frequent path to direct geostationary orbit for small satellites. Configured with the Multi-Launch Service carrying system (MLS), Ariane 6 can accommodate a full range of small-sized satellites, from cubesats to microsats or larger. Customers taking advantage of the GO-1 mission will benefit from a short ride to orbit: from liftoff to separation, the duration will be shorter than commercial jetliner flight from New York to Paris. The new service also will involve user-friendly launch service agreements and simplified mission preparation procedures. As close to six months before liftoff, customers will be able to purchase one or several slots on the GO-1 mission.

Arianespace Successfully Orbits Communications Satellites for Intelsat and Airbus

August 6, 2019 - Arianespace has successfully orbited two geostationary telecommunications satellites: Intelsat 39 for the international operator Intelsat, and EDRS-C for Airbus, as part of a public-private partnership with the European Space Agency (ESA). The launch took place on August 6, 2019 at 4:30 p.m. (local time) from the Guiana Space Center (CSG), Europe's Spaceport in French Guiana (South America). The Intelsat 39 telecommunications satellite offers high-power, steerable, wide spotbeams to meet the needs of broadband network, video and government customers across Africa, Asia, Europe, the Middle East and the Indian Ocean region. Steerable spotbeams ensure payload flexibility, enabling customers to quickly and efficiently respond to changing geographic or application requirements. The satellite features both C- and Ku-band capabilities to provide additional scale for Intelsat's Flex managed services and enhance mobile flexibility for aeronautical, maritime and government users in these regions. Intelsat 39 was built by Maxar in Palo Alto, California. It is the 57th satellite launched by Arianespace using a Maxar

platform. The EDRS-C satellite is the second node in the SpaceDataHighway network. Based on state-of-the-art laser technology, EDRS, the SpaceDataHighway is the first fiber-optic network in space. Supported by a public-private partnership between Airbus and ESA, it will help improve environmental monitoring and security services, disaster response and crisis management. The European commission will be a key customer of the EDRS system at the benefit of the Copernicus program.

Spaceflight Purchases and Fully Manifests First-ever Commercial SSLV Mission from NewSpace India Limited (NSIL)

August 6, 2019 - Spaceflight announced it has purchased the first commercial launch of the Small Satellite Launch Vehicle (SSLV) from NewSpace India Limited (NSIL) scheduled for launch from the Satish Dhawan Space Center in Sriharikota, India later this year. Spaceflight has already sold-out the entire manifest for this secured SSLV-D2 launch with spacecraft from an undisclosed U.S.-based satellite constellation customer. Spaceflight will aggregate the mission, delivering a single point of contact for the customer, handling all aspects of integration and mission management for the launch. The Indian Space Research Organization (ISRO) developed the SSLV with a payload capacity of 500 kg to mid-inclination Low Earth Orbit (LEO) and 300 kg to Sun Synchronous Orbit (SSO) making it ideally suited for launching small satellites. By comparison, the larger Polar Satellite Launch Vehicle (PSLV) from ISRO is capable of launching 1100 – 1600 kg capacity payload into SSO.

Successful Launch of Intelsat 39

August 6, 2019 - Intelsat announced the successful launch of Intelsat 39, which will provide video distribution and connectivity services for mobile network operators, enterprises, governmental entities, as well as aeronautical and maritime service providers operating in Africa, Asia, Europe and the Middle East. Manufactured by Maxar Technologies and launched aboard an Arianespace Ariane 5 launch vehicle from the Guiana Space Center in Kourou, French Guiana. The satellite's C- and Ku-band capabilities will add scale to our Intelsat Flex managed services, enhancing mobile connectivity for aeronautical, maritime, enterprise, and government customers operating across these geographies. Intelsat 39 will replace Intelsat 902 at the 62°E orbital location. Intelsat 39 will host both C- and Ku-band satellite services for Myanmarsat-2 which will enable the Ministry of Transport and Communications (MOTC) of Myanmar to significantly enhance its existing network. By integrating satellite solutions into its own network, the MOTC will be able to dramatically increase its overall network bandwidth, speed and reliability as it expands 3G and 4G services into the more remote areas of Myanmar. It will also ensure that communities have access to a broad range of government services, including healthcare and education. The satellite will provide critical e-banking services as well as distribute informative and entertaining content to viewers throughout Myanmar.

Rocket Lab Announces Reusability Plans for Electron Rocket

August 6, 2019 - Rocket Lab has revealed plans to recover and re-fly the first stage of its Electron launch vehicle. The move aims to enable Rocket Lab to further increase launch frequency by eliminating the need to build a new first stage for every mission. Work on Rocket Lab's Electron first stage reuse program began in late 2018, at the end of the company's first year of orbital launches. The plan to reuse Electron's first stage will be implemented in two phases. The first phase will see Rocket Lab attempt to recover a full Electron first stage from the ocean downrange of Launch Complex 1 and have it shipped back to Rocket Lab's Production Complex for refurbishment. The second phase will see Electron's first stage captured mid-air by helicopter, before the stage is transported back to Launch Complex 1 for refurbishment and relaunch. Rocket Lab plans to begin first stage recovery attempts in the coming year. A major step towards Rocket Lab's reusability plans was completed on the company's most recent launch, the Make It Rain mission, which launched on 29 June from Launch Complex 1. The first stage on this mission carried critical instrumentation and experiments that provided data to inform future recovery efforts. The next Electron mission, scheduled for launch in August, will also carry recovery instrumentation.

HawkEye 360 Secures Funding for Full Constellation

August 6, 2019 - HawkEye 360, the first commercial company to use formation flying satellites to create a new class of radio frequency (RF) data and data analytic products, today announced that it has secured \$70 million in Series B financing. This financing capitalizes the company's business plan to include buildout and launch of the HawkEye 360 commercial satellite constellation and development of the company's line of RF analytic products by 2021. Round participants include new investors Airbus and Esri, existing investors Razor's Edge Ventures, Allied Minds, and Shield Capital Partners, and additional

undisclosed parties. With this Series B financing, HawkEye 360 will focus on scaling its business to provide the fastest and most relevant RF analytics in the market to support rapidly growing customer demand. Today, HawkEye 360 is delivering products to customers using its first cluster of three formation flying satellites and fabricating a second satellite cluster for launch in early 2020. This financing supports the development and launch of four additional clusters, forming a fully operational constellation of 18 highly capable satellites with rapid global revisit.

AMOS-17 Communication Satellite Successfully Launched

August 7, 2019 - Spacecom, operator of the AMOS satellite fleet, confirmed the successful launch of its AMOS-17 satellite from Cape Canaveral, FL. AMOS-17 soared upward aboard a SpaceX Falcon-9 launch vehicle on August 6, 2019 (UTC time). Manufactured by Boeing Satellite Systems International, AMOS-17 is 6.5-ton high-power, HTS, satellite designed specifically to meet Africa's fast-growing communication demands. AMOS-17's advanced digital payload will provide extensive C-Band HTS, Ka-band and Ku-band capabilities, enabling the combination of broad regional beams and high throughput spot beams to maximize throughput and spectral efficiency. It will offer connectivity between Africa, the Middle East, Europe, India, China and as far west as Brazil. Following a sequence of In-Orbit Tests that are expected to take approximately three months, AMOS-17 is scheduled to begin commercial operations at the 17°E orbital position later in 2019.

HYLAS 3 Satellite Launches into Orbit

August 7, 2019 - Avanti's latest high-throughput satellite will provide flexible and quick-to-deploy Ka-band communications across EMEA. Launched at 20:30 GMT on 6th August 2019 from the Guiana Space Centre in French Guiana, HYLAS 3 is Avanti Communications Group's latest satellite deployment, and one of its most ambitious to date. With over 4GHz capacity of steerable beam technology in a unique steerable user and gateway beam combination – which allows coverage to be quickly allocated where it is needed – HYLAS 3 extends Avanti's satellite connectivity across EMEA creating a comprehensive and flexible communications network in that region. HYLAS 3 has been carefully constructed in partnership with the European Space Agency (ESA), MDA, Airbus and OHB. It shares a platform with EDRS-C, a data relay mission for low earth orbiting satellites. HYLAS 3 has a multi-beam steerable cluster, enabling mobile and broadband coverage to be moved to where it is needed within minutes. For example, on Avanti's HYLAS 4, one of the steerable beams was deployed in less than 24 hours to assist humanitarian aid relief in Mozambique following Cyclone IDAI in April 2019.

Orbex and Innovative Space Logistics Sign European Space Launch Agreement

August 7, 2019 - Innovative Space Logistics (ISL) and UK-based orbital launch services provider Orbex signed a wide-ranging Cooperation Agreement. The co-operation will include technical launch services including launch manifest coordination and payload integration. As part of the agreement, ISL will also procure orbital space launches from Orbex for a number of its smallsat customer missions. Netherlands-based company ISL is one of the world's leading players in smallsat launches, having executed or supported the launch of over 350 CubeSats into orbit over the past decade. ISL is focused on the provision of regular launches for CubeSats, nanosatellites and microsatellites and provides launch brokering services, technical consultancy, launch adapters and dispensers, flight certification testing and launch insurance services to a broad range of customers. With \$40 million in project financing, Orbex is the best-funded European private launch provider. In February 2019, Orbex publicly unveiled the engineering prototype of the Stage 2 of its reusable Prime launch vehicle, a dedicated smallsat launcher, which is up to 30 percent lighter and 20 percent more efficient than any other vehicle in the micro launcher category. Orbex Prime utilizes bio-propane, a clean-burning, renewable fuel that cuts carbon emissions by 90 percent compared to traditional hydrocarbon fuels. On August 1, 2019, Orbex's partner, Highlands and Islands Enterprise (HIE) confirmed that it had signed a 75-year lease option with landowners, the Melness Crofters Estate, to build and operate a spaceport on its land.

ULA Launches Communications Satellite for the U.S. Air Force Space and Missile Systems Center

August 8, 2019 - A United Launch Alliance (ULA) Atlas V rocket carrying the fifth Advanced Extremely High Frequency (AEHF) communications satellite for the U.S. Air Force Space and Missile Systems Center lifted off from Space Launch Complex-41 on August 8. This marked the 80th successful launch of an Atlas V rocket, which has successfully launched and precisely delivered the entire AEHF constellation on orbit. ULA has a track record of 100 percent mission success with 134 successful launches. The AEHF system, developed by Lockheed Martin, provides vastly improved global, survivable, protected communications

capabilities for strategic command and tactical warfighters. This mission launched aboard an Atlas V 551 configuration vehicle, including a 5-meter large Payload Fairing (PLF) and standing at 197 ft. tall. The Atlas booster for this mission was powered by the RD AMROSS RD-180 engine. Aerojet Rocketdyne provided the five AJ-60A solid rocket boosters (SRBs) and RL10C-1 engine for the Centaur upper stage. ULA's next launch is the GPS III SV02 mission for the U.S. Air Force Space and Missile Systems Center aboard the final Delta IV Medium rocket. The launch is scheduled for August 22 at Space Launch Complex-37 at Cape Canaveral Air Force Station, Fla.

SNC Selects ULA for Dream Chaser Spacecraft Launches

August 14, 2019 - Sierra Nevada Corporation (SNC), owned by Chairwoman and President Eren Ozmen and CEO Fatih Ozmen, selected United Launch Alliance (ULA) as the launch vehicle provider for the Dream Chaser® spacecraft's six NASA missions to the International Space Station. The Dream Chaser will launch aboard ULA's Vulcan Centaur rockets for its cargo resupply and return services to the space station, starting in 2021. Under NASA's Commercial Resupply Services 2 (CRS-2) contract, the Dream Chaser will deliver more than 12,000 pounds of pressurized and unpressurized cargo to the space station and remains attached for up to 75 days as an orbiting laboratory. Once the mated mission is complete, the Dream Chaser disposes about 7,000 pounds of space station trash and returns large quantities of critical science, accessible within minutes after a gentle runway landing. SNC's Louisville, Colorado-based Space Systems division is partnering with Centennial, Colorado's ULA, boosting the already strong aerospace economic footprint in the state.

Chinese Space Startup to Send Heavy Satellite

August 14, 2019 - China's Smart Dragon-1 rocket will carry a heavy satellite developed by a commercial Chinese space company in its upcoming launch, the Beijing Daily reported. The satellite, which weighs 65 kg, was manufactured by Beijing Qiansheng Exploration Technology Co., Ltd. founded in 2017 with a license to develop microsattelites and satellite data applications. With remote sensing and communication functions, the satellite will provide soil moisture monitoring for a pilot site. The data and images captured by the satellite will have wide use in many sectors, the newspaper said. The Smart Dragon-1 is China's first carrier rocket for commercial use. Produced by the China Academy of Launch Vehicle Technology, the rocket is scheduled to make its maiden flight this year. The satellite will be sent into the solar synchronous orbit at an altitude of 540 km, according to the newspaper, citing a statement of the company.

Speedcast and Australian Space Agency to Collaborate on Growth and Transformation of Australian Space Industry

August 16, 2019 - Speedcast and the Australian Space Agency signed a statement of cooperation outlining Speedcast's intentions to support the agency's ambitious goal of tripling the nation's space sector in size and creating 20,000 new jobs by 2030. Referring to the Australian Civil Space Strategy 2019-2028, the statement identifies key fields in which Australia will concentrate on its development of the space sector, including communications; position, navigation, and timing; space situational awareness and debris monitoring; leapfrog R&D; Earth observation; robotics and automation on Earth and in space; and access to space. Speedcast is investing in the Australian space sector to accelerate satellite research and development into new areas for driving growth, including world-leading satellite managed services in support of sovereign and international satellite operators; advanced Internet of Things (IoT) capabilities and space connectivity applications for key economic sectors; new products, software, and services that leverage the company's leadership position in maritime and mobility connectivity; and value-added services in collaboration with partners and suppliers.

Rocket Lab Successfully Launches Eighth Electron Mission

August 20, 2019 - A Rocket Lab Electron launch vehicle successfully lifted off from Launch Complex 1 on New Zealand's Māhia Peninsula on 20 August 2019. The mission, named 'Look Ma, No Hands,' included the first satellite in a new maritime surveillance constellation for UNSEENLABS. The launch also saw satellites deployed for rideshare provider Spaceflight, including the BlackSky Global-4 satellite and two United States Air Force technology demonstrators. At approximately 54 minutes after lift-off, all payloads were successfully deployed by Electron's Kick Stage to a 540 x 540 km orbit at a 45-degree inclination. The mission was Rocket Lab's eighth launch overall and the company's fourth launch for 2019, taking the total number of satellites deployed by the company to 39. The launch also continues Rocket Lab's track record of 100% mission success for customers, further cementing the company's status as the global leader in dedicated small satellite launch. The launch vehicle also carried critical instrumentation to inform

development efforts for Rocket Lab's recently announced plans to recover and re-use of Electron's first stage.

Second Lockheed Martin-built GPS III Satellite Responding to Commands, under Self-propulsion

August 22, 2019 - The U.S. Air Force's second next-generation GPS III satellite, built by Lockheed Martin, is responding to commands, under control and now using its own internal propulsion system to get to orbit following its successful launch by United Launch Alliance (ULA) Delta IV rocket. GPS III SV02 is now climbing towards its operational orbit about 12,550 miles above the earth under the power of its own Liquid Apogee engines. Engineers at Lockheed Martin Space's Waterton, Colorado facility are commanding the satellite using elements of the GPS Next Generation Operational Control System (OCX) Block 0. GPS III SV02 is the second GPS III satellite designed and built by Lockheed Martin to help the Air Force modernize today's Global Positioning System (GPS) constellation with new technology and capabilities. GPS III satellites provide 3x greater accuracy and up to 8x improved anti-jamming capabilities. GPS III also provides a new L1C civil signal, compatible with other international global navigation satellite systems, like Europe's Galileo.

Arianespace to Launch the Ovzon-3 Satellite for Ovzon

August 26, 2019 - Arianespace announced the signature of a launch services contract with Ovzon for the company's first geostationary-orbiting telecommunications satellite: Ovizon-3. With offices in Sweden and the United States, Ovzon is dedicated to meeting the demand for increased mobile broadband connectivity in underserved regions. Ovizon-3 will have a mass at liftoff of approximately 1,500 kg. and will be placed in geostationary transfer orbit by an Ariane 5 launch vehicle in 2021 from the Guiana Space Center – Europe's Spaceport in French Guiana (South America). As an innovative small geostationary satellite, Ovizon-3 will feature multiple high-performance steerable beams to meet challenging communication requirements. In addition, the proprietary on-board processor developed by Ovzon enables such new functionalities as single-hop communications between very small terminals, reduced latency and more efficient use of the bandwidth. The next generation Ovizon service is based on complete end-to-end proprietary components and patented technology. Ovizon-3 will significantly increase service performance, lead to new types of services, enable the use of even smaller terminals, expand coverage areas and increase the amount of available bandwidth. As a result, Ovzon is to offer a revolutionary mobile broadband service via satellite that combines high bandwidth satellite communications services with highly mobile terminals. Ovzon selected Maxar Technologies to build the satellite, using Maxar's mid-size SSL-500 spacecraft platform.

Maxar Awarded Four-Year Global EGD Contract by the U.S. Government

August 27, 2019 - Maxar Technologies has been awarded a new, four-year contract with the U.S. National Geospatial-Intelligence Agency (NGA) for the Global Enhanced GEOINT Delivery (Global EGD) program. The contract, which begins September 1, 2019, is valued at \$44 million for the base year and includes three option years at the same value that would extend the contract through August 2023. The new contract will allow Maxar to continue providing more than a quarter million U.S. Government users with online and offline, on-demand access to the world's highest resolution commercial imagery. Since 2011, the Global EGD program has allowed warfighters, first responders, intelligence analysts and civil government users to tap into Maxar's 100-petabyte historical imagery library and daily imagery collections for time sensitive, mission-critical planning and operations.

EXECUTIVE MOVES

OneWeb Announces Head of Commercial Aviation

August 6, 2019 - OneWeb, the global communications company whose mission is to connect everyone, everywhere, announced that Ben Griffin has been appointed to the role of Vice President for Commercial Aviation, leading its newly formed Commercial Aviation team. In his new role, based at OneWeb's White City, London HQ, Ben is responsible for delivering in-flight connectivity solutions, harnessing the power of Low Earth Orbit satellites with unprecedented speed and low latency, to the airline fraternity. Ben brings 20 years' aviation experience to OneWeb, the last 15 of which were spent in the aircraft connectivity sector, most recently with Inmarsat for eight years. He will bring deep experience of the connected aircraft world to OneWeb.

OneWeb Names Mikhail Kaigorodov as Commercial Director for Russia

August 7, 2019 – OneWeb announced that Mikhail Kaigorodov was appointed Commercial Director for Russia effective July 16, 2019. Mikhail is based in Moscow and will lead market development activities in Russia. Mr. Kaigorodov will be working with existing and potential OneWeb partners and customers to anticipate their needs and evaluate opportunities in Russia. Mikhail Kaigorodov joins OneWeb after previously serving as General Director of ISAT Global Express LLC. Prior to that, he served as Deputy Director of the Department of Infrastructure Projects of the Ministry of Telecom and Mass Communications of the Russian Federation. Kaigorodov also worked at VimpelCom, MTS, Nokia, and Tele2 among other companies.

GTMaritime Adds Regional Expertise to Drive Growth in Asia-Pacific

August 15, 2019 - Keng Teen (KT) brings more than 15 years' experience of delivering satellite communications and maritime software platform solutions to clients across Asia Pacific Region to GTMaritime, accumulated across terrestrial and maritime segments. Beginning his career as a provider of internet backbone solutions combining satellite and terrestrial pipes to serve remote regions in Asia, he went on to join Marlink Singapore. Initially tasked with identifying opportunities for expanding Marlink's mobile satellite services to local and regional broadcasters, Keng Teen gained his first exposure to the maritime sector by promoting Inmarsat fleet services to Singaporean luxury yacht owners. From that point on, the shipping and offshore energy sectors became one of the key focuses for Keng Teen's career. He became Regional Sales Manager for a maritime software platform designed to optimise ship-shore data transmissions, building a deep understanding of the issues and challenges of connectivity at sea, before taking up a senior role at Eutelsat and drive efforts to develop business across Asia in both maritime and terrestrial verticals. The appointment at GTMaritime coincides with escalating demand for effective cyber-security solutions and a mounting regional maritime appetite for digitalisation and data-centric vessel operation, according to GTMaritime Sales & Marketing Director Mike McNally.

Speedcast International Ltd Board and Management Changes

August 27, 2019 - Speedcast International Limited provides the following update on its Board renewal process and management changes. Russell Reynolds was appointed by the Board of Speedcast in July 2019 to undertake a formal global search process for additional non-executive Directors as part of Speedcast's Board renewal process. As part of this process, the Company has determined that two current non-executive Directors would resign and four new non-executive Directors would be appointed. In line with this approach, the Company announces the following initial changes to its Board. John Mackay has resigned as Chairman, effective immediately but will remain on the Board as a non-executive Director until 30 September 2019 to ensure an orderly transition to the new Chairman. Stephe Wilks has been appointed to the Board and elected Chairman, effective immediately. In addition to the Board changes, Speedcast also advises that Clive Cuthell, the Company's Chief Financial Officer, has resigned by way of mutual agreement. Cuthell will continue as CFO until the end of this year to allow for the orderly transition to a new CFO.

SatADSL Appoints Serge Van Herck as President of its Board of Directors

August 27, 2019 - SatADSL, a provider of professional VSAT services, has announced the completion of its capital increase and the appointment of Serge Van Herck as President of its Board of Directors. Serge Van Herck, a veteran of the satellite industry for several decades, has held positions as CEO and as board member at multiple companies and industry organizations. Serge Van Herck was CEO at Newtec between 2006 and 2016 and, before this, worked for seven years as Head of Satellite Services at Belgacom. He served as a board member of the World Teleport Association (WTA), European Satellite Operator Association (ESOA) and Eutelsat. He also served as a board member at Flanders' Chamber of Commerce and Industry (VOKA) and Belgium's largest employers' organization and trade association, Agoria.

REPORTS

Euroconsult Research Projects Smallsat Market to Nearly Quadruple over Next Decade

August 5, 2019 - According to Euroconsult's newly released research, *Prospects for the Small Satellite Market*, the market for small satellite (smallsat) manufacturing and launch will grow from \$12.6 billion in 2009-2018 to \$42.8 billion in the coming decade from 2019-2028, nearly quadrupling in size. While the growth is led by large constellations such as OneWeb, SpaceX's Starlink and Amazon's Project Kuiper, the findings show that the smallsat industry is highly diverse, with demand from a variety of operators, start-

ups, universities, and countries.

NSR Forecasts Energy Sector to Rebound in Cumulative Retail Revenue from 2018 – 2028

August 20, 2019 - NSR's *Energy SATCOM Markets, 8th Edition (ESM8)* report forecasts retail revenues for key energy markets (Onshore and Offshore Oil & Gas, Midstream pipeline distribution, Mining, and Electrical Utilities) to yield nearly \$10 Billion in cumulative revenues from 2018 – 2028. With growing demand for broadband data connectivity across nearly all segments, growth is right around the corner for the Energy SATCOM Markets, after years of stagnation and declines. With over 80 transponders of FSS Capacity, and 75 Gbps of HTS capacity in GEO and Non-GEO projected by 2028, capacity consumption continues to rise. While Retail Revenue growth remains in the low single-digits growth over the next ten years – the market continues to have bright spots and opportunities for those service providers willing to find them.

NSR: Satellite M2M/IoT a \$11.6 Billion Market over Next Decade

August 27, 2019 - NSR's *M2M and IoT via Satellite, 10th Edition (M2M/IoT10)* report forecasts \$11.6 billion in revenues will be generated over the next 10 years. All M2M and IoT applications will grow, with total retail revenues to rise at 6.6% CAGR over the coming decade, with a 14% CAGR for in-service M2M/IoT units during this same period. And, while significant attention is paid to emerging IoT smallsat constellations, NSR found MSS and VSAT offerings continue to play a solid role in the M2M/IoT growth story. Transport & Cargo has been the main M2M/IoT market driver traditionally; however, a change in the mix of applications driving revenue will occur as new technologies, such as Iridium Certus, new flat panel antennas, and most crucially small satellite constellations, enter the market. Agriculture and Construction market segments see the strongest increases driven by partnerships with heavy machinery makers, but other segments, like Energy and Maritime, will also contribute to the future revenue pie.

UPCOMING EVENTS

World Satellite Business Week, September 9-13, Paris, France, <http://www.satellite-business.com/en>

IBC 2019, September 13-17, Amsterdam, the Netherlands, <https://show.ibc.org/>

IAC 2019, October 21-25, Washington DC, USA, www.iac2019.org

37th International Communications Satellite Systems Conference (ICSSC), October 29 – November 1, Okinawa, Japan, <http://www.kaconf.org/call4papers/ICSSC.php>

China Satellite 2019, October 30 – November 1, Beijing, China, www.china-satellite.org

Asia Video Summit 2019, November 4-6, Hong Kong, <https://asiavia.org/insight/events/>

Global MilSatCom 2019, November 5-7, London, UK, <https://www.smi-online.co.uk/defence/uk/global-milsatcom>

APSCC 2019 Satellite Conference & Exhibition, November 19-21, Bangkok, Thailand, <http://apccsat.com>

APSCC 2019 Youth Development Workshop, November 21, Bangkok, Thailand, <https://apccsat.com/workshop/>

Broadband India Forum, November 27-28, New Delhi, India, www.broadbandindiaforum.com

Broadband India Forum is organizing 5th International Summit - India SatCom 2019 on 27 & 28 November, 2019 at New Delhi. The conference would deliberate on Policy and Regulatory measures required to facilitate rapid and barrier free deployment of Next Gen Satellite communications technologies to achieve the objectives of Govt's flagship programme on Digital India.

PTC'20: Vision2020 and Beyond, January 19-22, Honolulu, Hawaii, USA, www.ptc.org

PTC's Annual Conference is a strategic springboard for the global communications industry, providing all



attendees with a three-day platform to focus on planning, networking, and discovering what lies ahead for the ICT industry. Start the new year off right at PTC'20: Vision 2020 and Beyond, 19-22 January 2020. See you in Honolulu!

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About APSCC

APSCC is a non-profit, international organization representing all sectors of satellite and space-related industries. The aim of the organization is to exchange views and ideas on satellite technologies, systems, policies and outer space activities in general along with satellite communications including broadcasting for the betterment of the Asia-Pacific region. Conferences, forums, workshops, and exhibitions are organized through regional coordination with its members in order to promote new services and businesses via satellite as well as outer space activities. APSCC membership is open to any government body, public or private organization, association, or corporation that is involved in satellite services, risk management or associate fields such as data-casting, informatics, multi-media, telecommunications and other outer-space related activities with interests in the Asia-Pacific region. More information is available at www.apscc.or.kr.