

# APSCC Monthly e-Newsletter

## JULY 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](http://www.apsccl.or.kr). To unsubscribe, send an email to [info@apsccl.or.kr](mailto:info@apsccl.or.kr) with a title "Unsubscribe."

*News in this issue has been collected from June 1 to June 30.*

### 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](http://www.apscclsat.com)

### SATELLITE BUSINESS

#### **ABS and INTERSAT Jointly Hosts Seminar for Empowering Satellites in Africa to its Customers**

June 3, 2019 - ABS, a global satellite operator and its partner INTERSAT, held a Customer Seminar on 13 May 2019 in Nairobi to forge closer partnerships with its customers and re-sellers in Africa. The full day workshop provided an opportunity to exchange views on satellite-enabled services to customers and communities across the continent. The forum included presentations of technologies as well as issues and challenges from operating in Africa, along with customer case studies. Vendor demonstrations were showcased as to how to best serve customers. Customers from Kenya, Uganda, Tanzania, Somalia, Ethiopia, DRC, South Africa and other African countries attended this event. With the growing trend to localize content, ABS has partnered with INTERSAT to set up teleport infrastructure in Nairobi to offer data and video services on ABS-3A satellite over both Ku and C-band beams across Sub Saharan Africa.

#### **NGMN Alliance and ESOA Sign Co-operation Agreement**

June 3, 2019 - The EMEA Satellite Operators Associations (ESOA) and the Next Generation Mobile Networks (NGMN) Alliance have joined forces to strengthen their relationship and to foster a closer co-operation in the area of integration of satellite solutions in the 5G ecosystem. This co-operation agreement brings together two widely recognized industry organizations in the field of 5G cellular and satellite networks, respectively. Conscious of the need to expand the benefits of connectivity to as many potential citizens as possible, NGMN and ESOA wish to explore synergies between satellite and terrestrial technologies. This will allow mobile and satellite operators to assess the benefits of new business models that will extend connectivity and potentially unleash new markets and growth for both sectors.

#### **Qantas Calls on the ACMA to Protect Inflight Wi-Fi from 5G Services**

June 3, 2019 - Qantas has made a rare foray into the telecommunications regulatory arena and called on the Australian Communications and Media Authority to protect its inflight Wi-Fi services from potential interference from future 5G networks. Qantas provides satellite-powered Wi-Fi services to its domestic passengers in partnership with Viasat and NBN Co's Sky Muster satellite service using spectrum on the 28 GHz band. The ACMA has recently commenced a re-planning inquiry for 28 GHz, with a number of satellite players concerned about potential interference if parts of the band are opened up to other providers such as mobile operators.

#### **Intellian Doubles Down with Advanced New 1 Meter Dual-band Maritime VSAT Antenna**

June 4, 2019 - Intellian, the global leader of mobile satellite communication antenna systems, announced the unveiling of the v100NX, the all-new 1m Ku- to Ka-band convertible maritime VSAT terminal.

Intellian's latest NX series antenna is designed to simplify and streamline the entire VSAT lifecycle, enabling access to multiple global satellite communication services, providing the crucial connectivity required to leverage new efficiency and welfare enhancing digital applications. The Intellian v100NX is a cutting-edge 1m dual-band convertible antenna, future-proof through its GEO (Geostationary Earth Orbit), MEO (Medium Earth Orbit) and LEO (Low Earth Orbit) constellation tracking capabilities. It also features an optimized reflector and radome designed to perform efficiently across 2.5GHz wideband Ka network services in the future.

### **Speedcast Introduces ECDIS Charts Distribution Service**

June 5, 2019 - Speedcast International Limited announced that Delta FLEET will be available to Speedcast's global Maritime customers. Delta FLEET, which includes chart updates, publications and notices to mariners, is available for L-band transmission to customers with Inmarsat's FleetBroadband service. The solution is based on SRH Marine's chart distribution platform, which includes the SRH Pilot and SRH Plug. All chart updates are distributed automatically to the ECDIS Stations for a flat fee, making it a seamless and cost-effective Electronic Navigational Charts (ENC) solution for safer route planning. Over the past few decades, ships have relied on Electronic Chart Display and Information System (ECDIS) updates that come through physical media, such as USB sticks and CDs. This method has proven to be both resource intensive and costly, with dispatches regularly missing their targeted vessels. With Delta FLEET, ships receive automatic and secure encrypted updates directly to their ECDIS stations via a secure VPN. The Delta FLEET service runs over a dedicated channel powered by FleetBroadband that operates independently from primary crew and business traffic.

### **Mitsubishi Electric US, Inc. Launches Space & Sensing Systems Division**

June 5, 2019 - Mitsubishi Electric US, Inc. has launched a Space & Sensing Systems division at its Cypress, CA headquarters. The new division will sell satellite on-board equipment, including solar array panels, lithium-ion batteries, and RF equipment. The division will also sell the company's Mobile Mapping System (MMS) and centimeter-level high-accuracy positioning receiver (AQLOC). MMS uses car-mounted GPS antennas, laser scanners and cameras to gather 3D positioning data for road assets with high-level accuracy, creating the comprehensive 3D maps needed to support autonomous driving. The satellite and MMS equipment will be manufactured by the company's ultimate parent corporation in Japan, Mitsubishi Electric Corporation. Mitsubishi Electric Corporation is a leading manufacturer contributing to space research and development since the 1960s, having participated in the production of more than 500 Japanese and international satellites as the prime contractor or major subcontractor. Mitsubishi Electric Corporation developed the first-ever Japanese-made standard satellite platform, the DS2000. Each satellite has a different role with distinctive performance requirements, and is typically made-to-order on this standard platform. Mitsubishi Electric Corporation has the flexibility to respond to the ever-changing needs of its global satellite customers.

### **Inmarsat, MTI and RINA Join Shipping's Autonomous Shipping Alliance**

June 5, 2019 - Three of the leading influencers in the international maritime sector have joined One Sea, the industry alliance that brings together leading exponents of autonomous ship technology. Global satellite group Inmarsat and NYK Group research subsidiary MTI (Monohakobi Technology Institute) have joined One Sea as full members, while the Royal Institution of Naval Architects (RINA) has signed a Memorandum of Understanding to become a One Sea associate member. One Sea members ABB, Kongsberg Maritime and Wärtsilä ran separate autonomous ship trials off the Finnish and Norwegian coasts at the end of 2018. Finnish regulators have authorized One Sea to oversee future trials in Jaakonmeri off western Finland - the first dedicated test zone worldwide. NYK and its Group companies MTI Co., Ltd. and Japan Marine Science Inc. (JMS) have already been working with nautical instrument manufacturers to develop highly automated ship navigation technologies, with a tugboat test for NYK company Wing Maritime Service Corporation scheduled for H2 2019. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) envisages autonomous ships operating in Japan by 2025. One Sea has also set 2025 as its target for an autonomous shipping infrastructure, including a full set of safety rules and technology standards.

### **Speedcast Launches the Cobham SAILOR 800 HP for Maritime and Offshore Customers**

June 6, 2019 - Speedcast International Limited has successfully included the new, innovative Cobham 800 HP VSAT terminal as part of their Maritime and Offshore VSAT portfolio. To celebrate this exclusive new terminal launch, Speedcast is introducing a new Cobham dual system promotion for commercial maritime

vessels, adventure cruise ships, and offshore supply vessels. Cobham's new SAILOR 800 HP provides equal or higher throughput as many leading 100cm wide terminals with a smaller onboard footprint and three times the power as the previous 80cm antenna. The new SAILOR 800 HP offers higher speeds across Speedcast's global Ku-band network and is ideal for customers where onboard space is limited but where there is a demand for high speed connectivity. With the new Speedcast unique Cobham SAILOR 800 HP dual system promotion, Speedcast customers can enjoy a low introductory price when they combine the SAILOR 800 HP antenna with the SAILOR 4300 Iridium Certus terminal as a companion to VSAT to ensure continuous high speed global connectivity.

### **Orbital Insight Expands Asia Presence with New Singapore Office**

June 9, 2019 - Orbital Insight announced the opening of its Singapore office. This is the company's seventh office location and the second dedicated sales office to open in Asia in the past 16 months as the company seeks to further its strategic expansion in the Asian markets following its Tokyo opening in February 2018 and to capitalize on the launch of its commercial geospatial analytics product, GO, last month. From its Singapore office, Orbital Insight will expand its business to key markets in Singapore, Hong Kong and Australia to locally serve a wide range of financial investors, corporates and governments. Orbital Insight's Asia Pacific customers are already using the company's leading geospatial data and analytics services for use in the commercial and catastrophe insurance sector, commodities monitoring for oil, palm oil, steel and coal, as well as many other sectors to help drive better, more timely business and policy decisions. The office is led by Laura Ryan, Orbital Insight's Director of Sales - South Asia and General Manager - Singapore.

### **Satlink Chooses Hispasat to Provide Maritime Connectivity Services in Europe and Latin America**

June 10, 2019 - Telecommunications company Satlink, which specialises in products and services intended for the maritime sector, has chosen HISPASAT, the Spanish satellite telecommunications operator, to strengthen its satellite connectivity solutions (VSAT) portfolio in Europe and Latin America. This new solutions will be provided through the operator's platforms in Bogotá (Colombia) and Arganda del Rey (Spain). Using Ku band VSAT (Very Small Aperture Terminal, small satellite connection antennas) terminals pointed to HISPASAT's satellites located at 30<sup>o</sup> West orbital position, merchant vessels, ferries, yachts and fishing boat companies will be able to enjoy high-capacity connectivity on their ships. This will allow them to offer applications such as Internet access for the crew and passengers, high quality links to receive television, emergency services and telephone solutions, all tailored to the needs of each individual client.

### **Viasat Partners with CfAT and IBA to Build Real-time Earth Ground Station in Australia**

June 10, 2019 - Building on its existing presence in Australia, Viasat announced its plans to launch a Real-Time Earth (RTE) facility in Alice Springs, Australia. Viasat has partnered with the Centre for Appropriate Technology Ltd (CfAT), an Aboriginal not-for-profit science and technology company based in Alice Springs, which will build and own the facility through its wholly-owned commercial subsidiary CfAT Satellite Enterprises Pty Ltd, and Indigenous Business Australia (IBA), an Australian Commonwealth commercially-focused government authority, which will help finance the project and provide related commercial advice and support. This multi-million dollar investment in Alice Springs will enable Central Australia to be a key player in the burgeoning global satellite and space industry, and Indigenous Australians to be leading participants in the sector. The investment is also strongly aligned with the priorities for the Australian Space Agency which is seeking to increase opportunities within Australia's space industry and develop world-leading core satellite infrastructure. The Viasat RTE system will be a hybrid space and ground network that is expected to bring affordability and reduced latency to earth observation and remote sensing applications. The Viasat RTE network is typically used by low earth orbit (LEO) satellite operators to bring end-users – environmental, shipping, oil and gas, government among other industries – access to data on demand without the need to invest in a dedicated antenna system.

### **Comtech to Present Strategies to Simplify 5G Transition for Mobile Network Operators**

June 11, 2019 - Comtech Telecommunications Corp., a world leader in secure and highly reliable location, navigation and communication technology, announced during the 5G World 2019 its Enterprise Technologies group, which is part of Comtech's Commercial Solutions segment, is showcasing its latest virtualized location solutions available to global mobile network operators, enterprises and IoT developers. The presentation and exhibit is taking place June 11th -13th at the ExCel Convention center in London. Comtech will demonstrate how current LTE network capabilities can be extended to support the

transition to 5G. Among the driving forces behind 5G is the promise of new applications built on networks capable of delivering high throughput and connection densities, along with ultra-high reliability and low latencies. Built using Network Function Virtualization (NFV) and Software Defined Networks (SDN) concepts, this newest generation of mobile networks will be of great significance to mobile network operators looking to build new revenue streams from various industry verticals. An important part of the new network's capabilities is high-accuracy positioning that not only enables operators to meet specific regulatory requirements but also enhances many revenue-generating applications and services.

#### **GigaSat and Inmarsat Deliver Multiband Terminals to Canada's DND in Record Time**

June 11, 2019 - GigaSat, part of Ultra Electronics Communications & Integrated Systems (CIS), in partnership with Inmarsat, has successfully delivered 16 satellite multiband earth ground station terminals to Canada's Department of National Defence (DND) in record time. Through Inmarsat, Shared Services Canada (SSC), an initiative of the Canadian Government to provide information technology services to the various Canadian governmental agencies has successfully fulfilled requirements to provide the Canadian Armed Forces with medium and large multiband satellite terminals. The terminals are designed to be deployed globally to access worldwide global satcom (WGS) military communications, as well as commercial satellite network operators. The Inmarsat type-approved terminals will allow Canada's Department of National Defence (DND) to access mission critical voice and data networks across the world. With the Wideband Ka capabilities, the terminals enable DND to also access Inmarsat's Global Xpress (GX) military or commercial Ka-band, High-Capacity Payload (HCP) to augment their own WGS capacity, providing a fully redundant and secure alternative. The provision of multiband earth ground station terminals to DND marks start of a new relationship between GigaSat and Inmarsat.

#### **CETel Acquires Cobbett Hill Earth Station**

June 11, 2019 - CETel has announced the acquisition of UK-based Cobbett Hill Earth Station Limited in terms of an asset purchase transaction for an undisclosed amount. This acquisition is a further milestone in CETel's growth and diversification strategy alongside its continuing customer base expansion. The acquisition further strengthens CETel's position as a leading global end-to-end communications solutions provider. Alongside CETel's strong presence in the mining, energy and oil & gas markets, this acquisition will now significantly increase CETel's presence and activities in the marine and broadcast markets. Cobbett Hill offers an extensive range of satellite communication services to both marine and terrestrial clients in the corporate, media, oil & gas, NGO, military and government sectors. Core service provisions include, but are not limited to Internet, voice, data, broadcast, DTH, enterprise, TV & radio, iDirect, SCPC, network design, network management, co-location, data centre, occasional use and bandwidth.

#### **ND SatCom Ranked in Top 10 Among Space Tech Solution Providers by CIO Applications magazine**

12 June 2019 - ND SatCom added a big feather to its cap when CIO Applications magazine selected it to the Top 10 List of Space Tech Solution Providers for 2019. This annual list, curated by a panel of experts ranging from CEOs to industry analysts to the magazine's own editorial board, highlights the leading players in space technologies. The magazine also honored ND SatCom by featuring its innovative satellite communication technology and business strategy as the lead story for the June issue with CEO Alexander Mueller-Gastell on the cover. This recognition acknowledges the tremendous effort ND SatCom has put forth toward a stronger commercial orientation across diverse industries from military to broadcasting while maintaining its excellence in delivering highly secure, tailor-engineered solutions for satellite networks and systems.

#### **OneWeb to Create More than 150 New Jobs in its London Headquarters**

June 13, 2019 - OneWeb, the global communications company on a mission to connect the unconnected, announced the deepening of its commitment to the UK, with the creation of more than 150 new jobs through the expansion of its Global Operations Center in White City, London. Using state-of-the-art technology, these critical positions will add additional support for OneWeb to manage, monitor and control its satellite network from a single location. The increase of OneWeb's team at its London Headquarters is a clear demonstration of its long-term commitment to the UK, which has been home to its global headquarters since 2017. The new roles will help power OneWeb's ongoing launch program, which commenced in February 2019 and is now driving the commercialization of the business. With customers coming on board and launches planned each month, OneWeb is on target to provide high speed global internet coverage by 2021.

### **SES Networks Enables EMSA's Environmental Protection Service in Iceland**

June 17, 2019 – SES announced that Icelandic maritime authorities are utilising the European Maritime Safety Agency's (EMSA) Remotely Piloted Aircraft System (RPAS) portfolio enabled by SES Networks' managed connectivity services to support the country's requirements for environmental protection and fisheries control. The connected ELBIT HERMES 900 RPAS will perform maritime surveillance tasks in areas extending as far as 200 nautical miles from the shoreline, covering important areas of the Icelandic Exclusive Economic Zone, with missions lasting as long as 12 hours. SES Networks' connectivity is utilised for this Medium Altitude Long Endurance (MALE) RPAS to empower multiple Icelandic authorities – such as the Icelandic coast guard, the fisheries directorate, the environment agency, the customs directorate, and the search and rescue association – to remotely follow the missions via a dedicated data centre and to ensure timely decision-making. Under a framework agreement, SES Networks will deliver managed satellite communications (SATCOM) connectivity services for EMSA missions, including secure end-to-end satellite and terrestrial links, capacity and teleport infrastructure, as well as distribution of the RPAS data via satellite internet services to end-users.

### **Avionica to Offer Cost-Effective Aircraft Terminal for Inmarsat's Operational and Safety Services**

June 17, 2019 - Inmarsat announced that Avionica, part of GE Aviation, will develop a new cost-effective, lightweight terminal for Inmarsat's award-winning SB-S aircraft operations and safety platform. The new terminal will be available next year and has been designed for the retrofit market, providing an affordable option for airlines seeking to equip their existing aircraft fleets with IP connectivity to unlock new efficiencies for operations and safety. Inmarsat's SB-S platform is the world's first and only global broadband solution for aircraft operational and safety communications, driving digital transformation in the airline industry. Combining cutting-edge satellite technology with secure IP connectivity, it provides airlines with capabilities and benefits no other satellite communications provider can deliver. Avionica's wireless data collection and transmission technology enables advanced data analytics by accessing important flight information, such as engine and aircraft health data, wherever the aircraft is operating around the world.

### **AirspaceIX Launches Saturn Satellite Networks Inc.**

June 17, 2019 - Airspace Internet Exchange Inc. (AirspaceIX) wireless technology company, founded by Thomas Choi, which launched Curvalux, the world's most affordable and power efficient wireless broadband platform announces the establishment and launch of Saturn Satellite Networks Inc. (Saturn), a US Delaware Corporation that is building the world's first space qualified small GEO satellite platform named Nationsat. Built entirely in the USA with heritage-based payload and bus components, Nationsat features an innovative, full-digital payload and 2.5 kW BUS design that enables complete frequency agility and bandwidth channelization for its users, demanding wide-beam C and Ku-band capacity as well as a HTS version that provides over 80 Gbps. Saturn is led by one of the most senior and experienced team of satellite engineers; who have amongst the top three members of the executive team, boasts over 100 years of experience, and have manufactured over 60 GEO satellites at Boeing, Hughes, Lockheed Martin and Intelsat. The Nationsat satellites are designed to be low cost and highly flexible, enabling users to save over 70 to 80% off of current market pricing for bent pipe GEO satellites, and its HTS models will cost less than \$1M per Gbps delivered in orbit.

### **Hughes JUPITER System Chosen by Five Service Providers to Power Satellite Broadband Services throughout Indonesia**

June 18, 2019 - Hughes Network Systems announced that its JUPITER System platform has been selected by five service providers to help bridge the digital divide across Indonesia. The service providers – including Lintasarta, Pasifik Satelit Nusantara (PSN), Teleglobal and Telkom/TelkomSat – won the tender bids from BAKTI, a division of the Indonesian Ministry of Communications and Information, to deploy 8,000 cellular backhaul and Internet access sites using over 7 GHz of satellite capacity across multiple satellites. Each service provider independently chose the JUPITER System as part of its winning solution to extend cellular services to Indonesians in areas outside the reach of terrestrial (fiber or microwave) networks and to connect government offices and community centers to the Internet. BAKTI required that the winning bidders employ High-Throughput Satellite (HTS) capacity, necessitating a flexible ground system solution that readily accommodates HTS spot-beams. Moreover, the latest JUPITER technology incorporates Layer 2 functionality to seamlessly integrate high traffic terrestrial and satellite traffic – supporting the acceleration of 16,000 TCP sessions – an essential feature for applications with many simultaneous users, such as cellular backhaul. Designed with advanced DVB-S2X, the JUPITER System

employs 16APSK return channels to deliver more bits per Hertz, which, combined with reduced spacing of the return channel, yields higher bandwidth efficiency and lower service cost for operators.

### **Newtec Collaborates with QinetiQ, Marking Move into Space Sector**

June 18, 2019 - Newtec, a specialist in the design, development and manufacture of equipment for satellite communications, announced it is working with QinetiQ on two key projects as it enters the Belgian space market. QinetiQ – a leading science and engineering company operating primarily in the defense, security, space and air markets – has chosen Newtec’s Manufacturing Competence Center (MCC), in Erpe-Mere, Belgium, to provide the soldering of on-board electronics for two projects. The work will contribute towards Newtec’s European Space Agency (ESA) certification which the company hopes to complete by 2020. Under the agreement, Newtec will work on two initiatives – the International Berthing and Docking Mechanism (IBDM) and the development of onboard computers for the next generation of satellites QinetiQ is planning to build. The IBDM, which is being developed together with ESA, will enable vehicles carrying cargo or passengers to dock softly at any space station with less force.

### **AsiaSat Releases White Papers on 5G Interference Rejection Bandpass Filter**

June 18, 2019 - AsiaSat has released a new White Paper detailing their new product – bandpass filter to be installed on C-band receiving antennas to reject interfering signals from adjacent 5G base stations, its features and performance in the field tests. Since early 2019, the ground mobile network operators (MNO) have initiated the testing and mass deployment of 5G cellular base stations in China and many other countries around the world. The spectrum used by 5G macro cells however overlaps with the extended C-band (3.4-3.7 GHz) which has long been used for the satellite communication services. In some countries, the 5G spectrum even partially or entirely overlaps with the standard C-band (3.7-4.2 GHz) which is also used for Fixed Satellite Service (FSS). AsiaSat has a significant C-band user base over the Asia-Pacific region, and these users may suffer from the widespread deployment of the ground 5G systems in the coming years. In response to the potential interferences from 5G deployment and to better service our customers, AsiaSat, with its 30 years of experience in satellite user requirement, has collaborated with experienced vendors and launched new models of microwave bandpass filters (BPF) to mitigate the impact from 5G. The BPF can be installed on C-band receiving antennas to reject interfering signals from the adjacent 5G base stations. This paper describes the features of the BPF and its performance in the field tests.

### **Samoa’s Pacific Satellite Connectivity Project and Kacific**

June 18, 2019 - The Hon. Minister of Communications & Information Technology, Afioga Afamasaga Lepuia’i Rico Tupai, and the Office of the Regulator (OOTR), the Itu o Tane College Staff & Students and the Matautu District officially opened the Pacific Satellite Connectivity Project on 13th June 2019. The Pacific Satellite Connectivity Project is made possible with the assistance from International Telecommunication Union (ITU) for engineering capacity building and negotiation, the satellite equipment and the internet access was provided by Kacific Broadband Satellite Company (Kacific) and the OOTR will provide technical assistant. All 5 schools can use the link to access the internet for FREE for a period of 12 months. Before 12 months is over the Regulator will send a report to ITU and Kacific for their review. Furthermore, OOTR will continue to work with ITU and Kacific to make sure sustainable mechanisms are built into every process so that it is easier for key stakeholders to maintain, with the intension to expand the VSAT operation as the next phase. The project was signed between ITU and the Samoan Government in 2014 as part of the Small Island Developing States meeting, but have only been realised just now. The teachers and the students will continue to utilise these opportunities while ITU and Kacific continue working for the sustainability of these useful and very important projects for Samoa.

### **Thuraya Unveils Smart Satellite Solutions for Mobility, Big Data and Analytics**

June 18, 2019 - Thuraya Telecommunications Company announced it is unveiling its newest smart solutions for the fast growing APAC market. The role of mobile satellite communications in shaping a connected future is certainly not miniscule. By combining the power of L-band with the dexterity of GSM and the global reach of Ku, Thuraya provides users unrivalled access to voice, broadband and Machine-to-Machine (M2M) communications on a plethora of platforms and networks – multiplicity, being a key enabler of smart, connected technologies. Providing in-depth coverage across Asia and the Oceania, Thuraya has an outstanding, 2-decade old record of fulfilling its commitments to governments, MNOs, energy and maritime corporations. The company is therefore, well positioned to meet the burgeoning needs of its APAC customers.

### **New iDirect Remote Expands Applications for Satellite-Cellular Networks**

June 18, 2019 - VT iDirect announced that it is launching the iQ LTE, a unique hybrid satellite and wireless remote that will enable more flexible and resilient communications to support critical functions. The iQ LTE combines iDirect's next-generation DVB-S2/DVB-S2X satellite technology, based on the iQ 200, with a high-performance Long-Term Evolution (LTE) modem developed by Cradlepoint. Packaged in a single box solution for ease of deployment, provisioning and operation, the solution opens new opportunities for service providers to support a wider range of enterprise applications that require software-defined routing for least-cost or hybrid connectivity. As enterprise applications become more complex, Software-Defined Wide Area Networks (SD-WANs) are emerging to offer high-efficiency connectivity, automatically routing traffic over the best performing and lowest cost networks. The iQ LTE remote brings together WAN affinity for satellite, LTE and WiFi, which are all essential elements in SD-WAN networking. It supports internet protocol (IP) traffic across both satellite and LTE networks, choosing the appropriate path based on criteria such as application, cost and congestion.

### **Intellian's New GX100NX Fleet Xpress Terminal Obtains Inmarsat Type Approval**

June 19, 2019 - Intellian has received Inmarsat Type Approval for the new GX100NX antenna, authorizing its use on the Global Xpress satellite network and for the Inmarsat Fleet Xpress service. Launched in May 2019, the GX100NX unlocks the full potential of Fleet Xpress, the world's fastest growing Maritime VSAT service, empowering maritime customers with maximized RF performance and 10W high power BUC option to ensure high availability of Ka-band connectivity. The GX100NX is a new addition to Intellian's expanding NX series, a new generation of faster, lighter and stronger antennas delivering high performance on all major satellite networks. The product features a single cable design, which along with new AptusNX software, enables fast installation and maintenance. The focus on streamlining installation delivers cost efficiencies, without compromise on link performance. More savings come from the NX platform's modular design, enabling spare part stocks to be reduced by up to 40%. Further, the GX100NX Below Deck Unit integrates the Antenna Control Unit, GX modem and mediator function for dual antenna configuration in a single box, contributing further to reducing the time and costs of installation and commissioning. The GX100NX will be commercially available in July 2019.

### **TRG and Wavestream Collaborate with Teleglobal to Provide Satellite Communication to the Indonesian Market**

June 19, 2019 - Wavestream Group, a worldwide leader in satellite networking technology, solutions and services, announced that, along with TRG, it collaborated with Teleglobal to provide satellite communication to the Indonesian market. Further to the partnership, a multi-million US dollar project was secured with a leading tier-1 Indonesian mobile network operator for 4G cellular backhaul over satellite. This strategic partnership was formed to deliver on the mission of providing essential communication requirements to the people of Indonesia. This will enable enterprises to accelerate infrastructure deployment in the country. The roll-out of this 4G cellular backhaul over satellite for the tier-1 MNO is the first step in the strategic collaboration. The partnership will take on additional projects and address additional domains of the enterprise segment including mining and banking. Wavestream Group's globally proven multi-service single platform and versatile VSAT equipment perfectly supports the large scope and potential of satellite connectivity in Indonesia for multiple market segments.

### **mu Space to Participate in the Qualcomm Smart Cities Accelerator Program**

June 19, 2019 - Satellite and space technology company mu Space announced its participation in the Qualcomm Smart Cities Accelerator Program from Qualcomm Technologies, Inc. The program, which Qualcomm Technologies launched in April, aims to connect cities, government agencies and enterprises with service providers offering Qualcomm Technologies-based smart city solutions. mu Space is the first Thai company to participate in the program. Aside from space and satellite technology, mu Space is also focusing on developing Internet of Things (IoT) solutions. Founded in 2017, the company has so far disclosed its plan to include two IoT devices – a smart apparel and a smart tracker – in their product line up. In 2018, mu Space has first started developing the design of its own smart apparel that is capable of controlling internal temperature and equipped with a health monitoring system. In January this year, mu Space unveiled another IoT product, a smart tracker, can provide a more accurate real-time location to track the whereabouts of a person, to find lost valuables or to monitor the movement of assets.

### **NorthTelecom Announces Fleet Xpress Distributor Partnership with Inmarsat**

June 19, 2019 - NorthTelecom has entered into a strategic distribution partnership with Inmarsat, the

world's leading global, mobile satellite communications company, for its Fleet Xpress service to support its strategy of providing global connectivity using latest industry technology. This partnership agreement will allow NorthTelecom to create additional value for its existing and future clients from the Energy and Maritime industries, who are looking for high-speed cutting-edge, secure satellite communication and seamless mobility services. With this partnership NorthTelecom is preparing to expand globally in the core markets of Energy and Maritime by selling Inmarsat's Fleet Xpress service. This partnership is expected to further enhance NorthTelecom's mobility solution and services in the Middle East, Africa and Asia region.

### **Speedcast and XipLink Announce Strategic Partnership**

June 19, 2019 - Speedcast International Limited and XipLink announced a strategic partnership to develop comprehensive technologies to maximize efficiencies in data transfer across wide area networks (WAN). As the technology convergence between the network and application layers speeds up, Speedcast and XipLink both see the importance in developing next-generation solutions that are flexible and scalable across different environments. The partnership is focused on the two leading companies' strengths across three main areas: Speedcast will integrate XipLink into cellular backhaul solutions to improve network efficiencies, which will be especially important in the 5G era. XipLink will be hosted on Speedcast's award-winning SIGMA Gateway network management device with the capability to be activated remotely as a Virtual Machine (VM). Speedcast and XipLink operational and software personnel will integrate network management interfaces and leverage machine-driven analytics to simplify operational processes, increase network visibility and enhance customer experience.

### **S. Korea's KT and KT SAT Showcase 5G and Satellite to the World**

June 19, 2019 - KT is the first provider in the world to offer unlimited data plans without a speed cap and a time period for its next-generation network services, allowing customers to get the best of 5G's super-fast and ultra-low latency connectivity. 5G is up to 20 times faster than the current LTE or 4G networks, offering extremely low latency and connecting more devices at once. KT's truly unlimited data plan is vital for 5G users to enjoy immersive media such as cloud-based streaming games, AR/VR and other key services such as autonomous driving. The South Korean government has pledged to support the completion of the full nationwide 5G network by 2022 and raise more than 30 trillion won to invest in the world's best 5G ecosystem. KT SAT Unveils 3 Growth Engines with 5G, Blockchain, and Quantum Cryptography. At CommunicAsia 2019, KT SAT officially announced three new growth engines for its future businesses for the first time – Satellite-5G connection, blockchain-based satellite service and quantum satellite communication – to cope with the so-called Fourth Industrial Revolution.

### **Hughes Selected by KBZ Gateway to Extend Mobile Connectivity Services throughout Myanmar**

June 21, 2019 - Hughes Network Systems, LLC announced that KBZ Gateway Company Limited (KBZ Gateway), the fastest growing VSAT and Teleport Service Provider in Myanmar, has chosen the Hughes JUPITER™ System to expand the cellular network reach of its customer, a leading Mobile Network Operator (MNO) in Myanmar and internationally. The JUPITER System enables a satellite backhaul solution for the MNO to extend services cost-effectively across hundreds of cell site locations outside the reach of terrestrial fixed networks, bringing connectivity to millions of Myanmar nationals. It also lays the foundation for 4G implementations as well as enhanced enterprise network offerings throughout the nation. The Hughes JUPITER System has the packet processing capability to support speeds up to 300 Mbps and acceleration of 16,000 TCP sessions, both of which are essential features for powering applications with multiple users, such as cellular backhaul. The ability to achieve reduced spacing as well as 8PSK and 16APSK modulation on the return channel yields higher bandwidth efficiency and lower service cost for operators. Moreover, the system is designed with 4G backhaul in mind, accelerating traffic to yield reductions in recurring operational costs.

### **NEC and Samsung Enhance Global Sales Structure for 5G Solutions**

June 25, 2019 - NEC Corporation and Samsung Electronics Co., Ltd. has announced enhancements to their sales systems for accelerating the provision of 5G solutions to global markets. In October 2018, the companies began collaborating to provide 5G solutions that combine IT solutions with leadership in 5G technology. With these new enhancements, both companies will jointly establish a global sales system to strengthen their activities for proposing 5G solutions on a global scale. Specifically, both companies will launch a joint marketing team. The team members are equipped with specialized skills, including sales and radio technology knowhow of NEC's global sales bases and Samsung's 5G commercial experience and

technology leadership to strengthen sales of 5G products and related IT services to telecommunications carriers. The team will first prepare joint proposals for 5G products for European and Asia Pacific markets, and will begin offering proposals to several operators within this year. Both companies are also developing products jointly, and plan to begin shipping the products in Japan by the end of the fiscal year 2019. In addition, the companies are studying the sharing of portfolios that leverage their strengths, and are working to jointly create services that utilize technologies such as AI and others, and to provide solutions that enable more efficient operations for communications services.

### **Viasat, Teledyne Partner to Deliver Connected Flight Deck Services to Commercial Aviation Customers**

June 25, 2019 - Viasat Inc. and Teledyne Controls LLC announced a partnership to bring real-time connected flight deck services to commercial airlines. Designed for Viasat in-flight connectivity (IFC) customers, this partnership allows commercial airlines to decrease operational costs by eliminating expensive manual data off-loading processes; make better use of data mid-flight with improved data analysis and relevancy; and reduce data loss through preventative maintenance and the immediate access of flight deck information. As data becomes increasingly critical in aviation operations, commercial airlines are looking to leverage analytics to identify actionable insights that will help streamline operational efficiencies, reduce costs and increase safety. Using Viasat's IFC system paired with Teledyne's Aircraft Interface Device (AID), airlines can off-load Quick Access Recorder (QAR) data and reliably stream Aircraft Communications Addressing and Reporting System (ACARS) messages in real-time from the flight deck. Additionally, airlines can augment flight operations and maintenance quality assurance programs by immediately identifying and responding to maintenance issues, reducing aircraft on ground (AOG) timelines.

### **Speedcast Achieves Advanced Consulting Partner Status in the AWS Partner Network**

June 26, 2019 - Speedcast International Limited has achieved Advanced Consulting Partner status in the Amazon Web Services (AWS) Partner Network (APN). This achievement demonstrates Speedcast's ability to deliver proven customer solutions leveraging cloud-based technologies on AWS that seamlessly interoperate with its global satellite and terrestrial infrastructure. Speedcast is the first satellite services provider to achieve APN Advanced Consulting Partner status. As a part of the AWS Direct Connect program, Speedcast provides customers with dedicated, direct connectivity to the cloud from both Speedcast's and its customers' data centers. Customers can leverage Speedcast's software solutions as well as the Speedcast cloud team's expertise to help them design, implement, migrate and maintain cloud-based solutions. Speedcast has already provided multiple customers with AWS cloud consulting and managed services support, including using AWS as enablement technology for Tempo, Speedcast's Software as a Service (SaaS) enterprise communication and distance learning media solution, delivering connectivity to the cloud via AWS Direct Connect and leveraging AWS to host data platforms for service management tools.

### **SatADSL Launches Flagship Platform-as-a-Service Offering in Asia**

June 27, 2019 - SatADSL has successfully launched a new Point of Presence (PoP) in Singapore as it continues to expand its global footprint. The additional PoP will replicate SatADSL's European and African model, giving operators access to SatADSL's Cloud-based Service Delivery Platform (C-SDP) – which enables operators to offer satellite services via the cloud – without adding extra latency on top of the inherent latency of geostationary satellite communications. The Singapore PoP follows SatADSL's first appearance at CommunicAsia, where it showcased its innovative cloud-based satellite communication solution, the C-SDP. SatADSL's C-SDP is a complete OSS/BSS, carrier-grade, fully redundant platform in the cloud which allows operators to easily outsource satellite services with no upfront investment.

### **VT iDirect Changes Name to ST Engineering iDirect**

June 27, 2019 - Effective July 1, VT iDirect, Inc. will officially change its name to ST Engineering iDirect to better reflect its global affiliation with parent company, ST Engineering. This brand harmonization allows VT iDirect to incorporate ST Engineering's name recognition in its world-wide business activities and reflects a stronger integration of all the ST Engineering technology companies under one name. However, under the new master branding, the company will continue to promote its product brands under the iDirect name and logo. No other aspect of the iDirect structure such as ownership, management, website address or account management will change. However, the new company name and corporate brand will naturally be reflected on all company stationery, media and collateral materials, effective on July 1, 2019.

### **Northrop Grumman to Supply Australia with Specialised T6 Radios for Air Traffic Communication Expansion**

June 27, 2019 - Northrop Grumman Corporation's U.K.-based air traffic communications subsidiary, Park Air Systems Limited, has signed a "Deed of Standing Offer" to provide its T6 radio to Airservices Australia. The internet protocol- (IP) capable, very high frequency (VHF) ground-to-air equipment will be provided for a period of five years. The T6 VHF radios will accommodate a number of upcoming air traffic communication service expansions, network changes and relocations. They will also integrate with Airservices OneSKY Australia program, one of the most complex transformations of air traffic management in aviation history, to align civil and military aviation needs. The primary demand for the project is to migrate to an IP-based network structure, supporting voice over internet protocol (VoIP) to the ED137 standard. Ideal for the varied and immense Australian environment, Park Air successfully offered the T6 VHF equipment from its Sapphire portfolio, providing powerful IP capability, small form factor and low maintenance requirements. As one of the largest countries in the world, Australia has some very remote locations, which can take up to three days to reach by car. By installing the R4 remote control and monitoring system and MARC server from the Park Air portfolio, Airservices Australia will be able to focus resources where they are needed most. Built to enable alerts and intelligence to a network configuration, as well as diagnostics, the MARC server provides important assurance when dealing with a nationwide installation.

### **Singtel Accelerates 5G Innovation to Drive Enterprise Transformation in Manufacturing and Maritime**

June 27, 2019 - Singtel announced two initiatives to boost Singapore's 5G innovation ecosystem and advance Singapore's Smart Nation vision. Leveraging the capabilities of 5G, both initiatives, announced at Smart Nation Innovations Week, will accelerate business innovation and digital transformation in the maritime and manufacturing industries. Singtel, the Agency for Science, Technology and Research's (ASTAR) Advanced Remanufacturing and Technology Centre (ARTC), and JTC have inked a Memorandum Of Understanding to deploy 5G at the ARTC in the Jurong Innovation District. Enterprises can leverage the ARTC to explore how 5G can enable digital technologies such as the Internet-of-Things (IoT), analytics, artificial intelligence and robotics, to create next-generation manufacturing solutions that can help them operate efficiently. Singtel was awarded the 5G Technology Call by PSA and IMDA to develop 5G use cases at the Pasir Panjang Terminal. The trials, expected to progressively be conducted from the third quarter of 2019 lasting about 18 months, will include the use of 5G to support PSA's mission-critical, all-weather maritime operations such as its connectivity needs, the use of drones, remote tele-operations of port equipment, crane automation and enhancements to AGV operations. These two 5G initiatives add momentum to Singtel's progressive introduction of the new technology to help enterprises transform digitally. In July 2018, Singtel launched Singapore's first 5G pilot network at the science, business and IT hub at one-north. This was followed by the launch of 5G Garage, Singapore's first live 5G facility, at Singapore Polytechnic. The facility serves as a training centre, test bed and ideation lab to develop Singapore's 5G ecosystem and drive the adoption of 5G by enterprises in their digital transformations.

### **Inmarsat Fleet One Exceeds 5,000 Installations**

June 28, 2019 - Inmarsat's Fleet One satellite connectivity solution for the leisure and fishing markets has surpassed the 5,000-installation landmark as the rate of service uptake continues to increase. Reflecting a growing demand from leisure boat owners for Fleet One's flexible and reliable connectivity anywhere on the world's oceans, the 5,000-boat milestone has been achieved just three years after the launch of the Global service plan.

## **BROADCAST**

### **SES and Broadcasting Center Europe (BCE) Partner to Broadcast Asteroid Day 2019 Globally in HD**

June 6, 2019 - Viewers around the world will receive a month of programming in celebration of Asteroid Day, the official United Nations day of education and awareness about asteroids, thanks to a partnership between SES and BCE. The broadcast will feature pre-recorded and live High Definition (HD) content from Asteroid Day's global programmes and events throughout June 2019, building to June 30 with coverage of over 2,000 events occurring in 190 countries. As partners in the Asteroid Day initiative SES and BCE have teamed up to bring a month-long global broadcast of the related events to audiences around the world. BCE will produce the 6 hour live production out of Cercle Cité in Luxembourg city and provide all the

playout services from its media centre in RTL City, for HD distribution over satellite as well as IP networks. The online distribution will be taken care of using BCE's Freecaster Live Streaming solution, which will enable both live and VOD viewing on social networks and websites. For the satellite distribution, SES will broadcast the programming on five satellites to create a truly global footprint for Asteroid Day, a testament to the reach of SES. In Europe, Africa, and Asia the programming will be delivered Free-to-Air via satellite to Direct-to-Home (DTH) viewers, while in Latin and North America it will be integrated into the packages of multichannel video programming distributors (MVPDs) via satellite.

#### **Rikei Corporation and UHP Networks Achieve Milestone in Satellite Broadcast Networks in Japan**

June 6, 2019 - Rikei Corporation and UHP Networks Inc. have announced that they have reached an important milestone in the roll-out of advanced VSAT solutions in Japan. The partners have installed their 100<sup>th</sup> remote terminal in the Japanese VSAT networks for broadcast and news gathering applications. These networks are operated by several leading media organizations throughout the country. The Rikei/UHP solution is tailored for critical applications with high Quality of Service (QoS) as required in the Japanese market. The solution benefits from the high-availability and low-latency afforded by the UHP Hubless Mesh MF-TDMA network architecture. In addition, each remote station can instantaneously switch profile and transmit high-throughput DVB carrier in emergency mode if needed. The system has a high bandwidth efficiency due to a remarkably low TDMA overhead (4%), fast frequency hopping across multiple carriers and 5% spectrum roll-off.

#### **Datacom and VO Sign System Integrator Partner Agreement for APAC**

June 11, 2019 - Viaccess-Orca (VO), a global leader providing OTT and TV platforms, content protection, and advanced data solutions, announced that Datacom is the first company to sign under VO's new system integration partnership program. An international supplier of satellite communications equipment based in Hong Kong, with strong pay TV and SI skills, Datacom will play a crucial role in bringing VO's world-class content protection and TV platform solutions to Asia-Pacific (APAC) countries, including Hong Kong, Macau, Mongolia, Malaysia, Pakistan, Australia, China, Vietnam, and the Philippines. Datacom has more than 20 years of experience in system integration services, with a staff of around 200 people and offices in Hong Kong, China, Malaysia, and Congo, along with distributors throughout the Asian region. VO's global network of system integrators is designed to deliver the best OTT and TV experience to operators through the company's end-to-end, cloud-based TV Platform as a Service TVaaS, secure video player, anti-piracy protection services, and other solutions.

#### **From India to Asia Pacific, MEASAT and Travelxp Team up for 4K Asian Distribution**

June 17, 2019 - MEASAT Satellite Systems Sdn. Bhd. (MEASAT) announced an agreement with Celebrities Management Private Limited (CMPL) to distribute the Travelxp 4K HDR channel across the Asia Pacific. The international travel channel will join MEASAT's leading UHD video neighbourhood at 91.5°E, where it will be distributed to television platforms and operators in more than 100 countries across Asia. Based in India, Travelxp 4K is India's first 4K / UHD channel and the world's first 4K/UHD HDR travel channel. It offers hundreds of hours of world-class travel programs from all over the world. Filmed in breath-taking imagery, Travelxp 4K brings the experience and excitement of travel closer to the viewer than ever before. It is produced by CMPL. The 91.5°E prime video hot slot is home to the MEASAT-3, MEASAT-3a and MEASAT-3b satellites, forming the region's strongest video neighbourhood. From 91.5°E, MEASAT supports broadcasters and DTH operators to distribute UHD, HD and SD channels to audiences across Asia, Australia, East Africa and South Eastern Europe.

#### **WarnerMedia Chooses AsiaSat as Strategic Partner for HD Channels Distribution in Asia Pacific**

June 18, 2019 - Asia Satellite Telecommunications Company Limited (AsiaSat) has been selected by WarnerMedia as a strategic partner for distributing regional HD services of CNN International, Cartoon Network, Boomerang and Warner TV, as well as HBO HD in South Asia, via AsiaSat 7 in the Asia-Pacific. AsiaSat has been distributing a total of five WarnerMedia SD channels on AsiaSat 7 (previously on AsiaSat 3S) since 1999. Since transmission, these channels have gained access to hundreds of rebroadcast networks and hotel networks across the region. To allow a smooth migration to HD service for its rebroadcast affiliates including pay TV platforms and hotel networks across Asia Pacific, and for audiences to enjoy a more compelling viewing experience, WarnerMedia will migrate its HD services and consolidate them into its existing SD platform on AsiaSat 7. From September, AsiaSat 7 will carry a total of eight HD and three SD channels of content from news, entertainment, to children, movies and drama. With migration of service to HD completed in the next few months, viewers across the region will be able to

enjoy high-quality TV benefiting from the high penetration of AsiaSat 7 at 105.5°E, the world's most watched orbital slot.

### **Sky Deutschland and MX1 Expand Collaboration**

June 18, 2019 - MX1, an SES subsidiary and global solutions provider of media services, announced that Sky Deutschland has agreed to a new service agreement extension with the company, which will see the German broadcaster's customers receive perfect audio and video signals under any conditions. In particular, the scope of MX1's contingency service will be expanded to include Sky Deutschland's over-the-top (OTT) signals as well as its main broadcasts. The MX1 Broadcast Centre will simultaneously receive all essential data and video transmission material from Sky Deutschland's main channels. In the unlikely event that a natural or other catastrophe impacts Sky Deutschland's media centre, its broadcast or OTT signal will be rapidly restored via MX1's Broadcasting Centre in Unterföhring, Germany. The agreement includes content management, playout, and uplink services for the main signal, as well as encoding and distribution for OTT delivery.

### **New Sersat and SES Satellite TV Platform to Enable Easy Content Delivery across Latin America**

June 20, 2019 - Pay TV operators, content owners and broadcasters will now be able to deliver their video content on a newly-developed platform on the SES-14 satellite to reach more than 33 million TV homes across Latin America. The C-band platform is developed by Sersat, a Datco Group company and a leading telecom company in Argentina for video solutions and services, and hosted via SES's new video position for the Americas via 47.5 degrees West. Local and international content operators and owners who want to broadcast over Latin America will be able to enjoy the benefits of instantly reaching millions of households that are currently served by the satellite via the platform hosted at the Sersat teleport in Buenos Aires. SES-14 reaches 33.3 million TV homes directly in the region. In addition, its channels are being picked up by other direct-to-home platforms which serve another 29.3 million homes, bringing the total number of TV households it serves to 62.6 million.

### **Globecast Introduces Virtual Networking for High Bandwidth IP-Over-Satellite Connectivity for the Enterprise Market**

June 26, 2019 - Globecast announced Globecast Virtual Networking (GCVN), a new service offering that brings two-way, high bandwidth, IP-over-satellite connectivity to the enterprise market. It provides fast, reliable IP connectivity anywhere and anytime where terrestrial networks fail or are inconsistent. With GCVN, media event producers and content creators in the B2B space can easily deliver streaming, file transfers, Wi-Fi, 4K, 8K and 360-degree live content using native IP-based satellite transmission from remote locations via a premium quality, guaranteed high-bandwidth solution. It's ideal for corporate productions, events with high attendance where cell service bandwidth is scarce, and many situations where Internet connectivity is uncertain. In addition, GCVN is deployable for disaster recovery/disaster avoidance. It's useful for when a potential customer needs to quickly deploy additional IP connectivity or augment a network with additional bandwidth to avoid any issues, without having to spend the time and money to change their full-time configuration. There is a growing need for temporary, premium quality, two-way IP networks for special projects. The global service is initially available in the US, via connectivity with Globecast's Culver City Media Center.

### **Brazil's Channels Delivered via SES's new Ku-band Free-to-Air Satellite Solution**

June 27, 2019 - TV viewers across Brazil can now receive some of the country's most popular channels such as TV Cultura via SES's new Ku-band free-to-air solution on the SES-10 satellite located at 67 degrees West. To ensure that TV viewers can easily access these channels, broadcasters can send their content to SES's teleport in the city of Hortolândia and uplink to the satellite's Ku-band capacity. Regional channel affiliates and TV viewers will only need to buy an easily available DVB-S2 compatible set top box to receive the signals from SES-10 and can use more affordable and easier-to-install 60cm to 75cm antennas. TV Cultura, among other channels and content owners, have been testing SES's newest Ku-band uplink and are reaping the benefits of getting to market faster and being able to broadcast to millions of viewers at a lower investment cost. Broadcasters and radio operators will also be able to leverage the Ku-band distribution solution.

### **Nevion and Sony Establish a Strategic Partnership to Provide Enhanced IP Broadcast Production Solutions**

June 27, 2019 - Nevion, award-winning provider of virtualized media production solutions, announced

that it has agreed with Sony Imaging Products & Solutions Inc. (“Sony”) to establish a strategic partnership in the area of IP-based solutions for broadcasters and other industries. To reinforce this partnership, Sony will also become a leading investor in Nevia by acquiring a minority stake in the company through a share purchase agreement. In recent years, Nevia has established itself as a leading provider of IP media network solutions for the real-time transport, processing, monitoring and management of the video, audio and data signals that are used in production. This partnership with Sony will allow customers to benefit from more advanced, fully integrated and standards-based media production solutions that combine outstanding media network technology with world-leading equipment such as cameras and switchers. These solutions will make it easier for customers to move to IP in their facilities and in remote production, as well as improve their ability to create content – for example through better sharing of resources.

## LAUNCH / SPACE

### **Proton-M Successfully Delivers the Russian Communications Satellite Yamal 601 into Orbit**

June 3, 2019 - The Proton M / Breeze M integrated launch vehicle was launched from the Baikonur Cosmodrome on May 30, 2019 and successfully injected the Yamal-601 telecommunication satellite into orbit for the Russian satellite operator JSC Gazprom Space Systems. The customer has taken control of the new satellite. The Yamal-601 project is part of the Targeted Federal Program for the Development of Television and Radio Broadcasting in the Russian Federation. Yamal-601 is now the most powerful communication satellite in the Russian satellite constellation. Liftoff and flight of the launch vehicle and upper stage were completed with no issues. The spacecraft separated from the upper stage today, May 31, at the designated time -approximately 9 hours after liftoff. The launch mass of the spacecraft, that was manufactured by the French division of Thales Alenia Space (TASF), was over five tons. Yamal-601 will replace the Yamal-202 satellite in orbit at 49 degrees East and provide C-band fixed-line communication and data services for a large part of Russia, as well as the CIS, Europe, the Middle East and Southeast Asia. In addition, Yamal-601 will provide users in Russia with Ka-band communication services and high-speed Internet access.

### **BlackSky Begins Commercial Operations**

June 3, 2019 - BlackSky announced it has signed an agreement with HawkEye 360, the first commercial company to use formation-flying satellites to create a new class of radio frequency (RF) data analytics. As part of the agreement, HawkEye 360 will provide API access to selected RF data for customers interested in global spectrum monitoring. BlackSky intends to integrate data from HawkEye 360’s RF satellites into the BlackSky geospatial platform and resell it to its customers as part of its analytical services. BlackSky officially began its commercial operations in early May, after successfully completing several significant on-orbit milestones of its first two Earth-imaging spacecraft, Global-1 and -2. All within the BlackSky web-based platform, customers can easily task and acquire imagery from the smallsats to track and monitor changes at locations of interest. The company is scheduled to launch Global-3 and Global-4 in the coming months and plans to launch four more satellites later this year.

### **Success of China’s First-ever Sea Launch Is Achieved by CZ-11 WEY**

June 5, 2019 - CZ-11 Solid-fuel Space Launch Vehicle (CZ-11 WEY), jointly named by CASC and a corporate brand, sees its first sea launch on the Yellow Sea, successfully sending seven commercial satellites into a circular orbit of about 600 kilometers, including Bufeng No.1 A/B Satellite, China125 No. 1 A/B Satellite, Jilin No. 1 High-definition 03A Satellite, Tianqi No. 3 Satellite and Xiaoxiang No. 1 04 Satellite. This launch has not only filled the gap in the sea launch of Chinese launch vehicles, but also provided a new safer, more flexible, economical and efficient launch mode for China’s rapid entry into the space, and further expanded China’s aerospace transportation system. CZ-11 Space Launch Vehicle is the first and only type of solid-fuel launch vehicles in the CZ Launch Vehicle Family. It is nearly 21 meters long and 58 tons weigh. Boasting a take-off thrust of 120 tons, it can carry up to 500 kg of payloads into the sun-synchronous orbit at a height of 500 km. Up to now, CZ-11 Space Launch Vehicle has completed seven launches on the land and sea, and succeeded in the maiden launch and consecutive launch. Boasting no problem on products mounted on the launch vehicle, no delay of launch plan and no failure of flight process for consecutive seven times, and CZ-11 Space Launch Vehicle has demonstrated outstanding performance and reliability.

### **Virgin Orbit Announces Partnership with ANA Holdings to Launch Small Satellites from Japan**

June 6, 2019 - Virgin Orbit has signed an agreement with ANA HOLDINGS, parent company of All Nippon

Airways (ANA), Japan's largest airline, to bring the company's LauncherOne service to Japan. Subject to U.S. Government regulatory approvals, Virgin Orbit's unique and responsive system – which uses a 747 widebody jet as a 'flying launch pad' for its rocket – will complement existing Japanese ground launch vehicles, enabling near-term access to space by the private sector, helping to grow the country's burgeoning small satellite ecosystem, and helping to elevate Japan as the premier space transport hub in Asia. The Memorandum of Understanding (MOU) charts out a long-term partnership between ANA HD and Virgin Orbit, further strengthening ties between the U.S. and Japan for cooperative, peaceful space activities. Under the terms of the agreement, ANA, which maintains the largest airline fleet in Japan, will evaluate the capabilities to provide aircraft and ground support equipment maintenance and potentially additional aircraft to support Virgin Orbit's local launch operations, as well as logistics and transport services for Virgin Orbit's broader launch operations across Asia. ANA HD and Virgin Orbit will also partner with Space Port Japan to select and stand-up an ideal launch site to host LauncherOne operations in Japan.

### **MDA Announces Successful Launch of Canada's RADARSAT Constellation Mission**

June 12, 2019 - MDA announced that the three RADARSAT Constellation Mission (RCM) satellites developed by MDA for the Canadian Space Agency are performing according to plan. The satellites launched aboard a SpaceX Falcon 9 rocket from the Vandenberg Air Force Base in California, and began sending and receiving signals from space. The satellites will now go through a series of in-orbit manoeuvres and tests before entering service later this year. MDA is the prime contractor for the project and was responsible for the engineering design, construction and testing of the three satellites, the ground segment and operations development. Launch was provided by MDA subcontractor SpaceX. MDA is also providing mission operations services for the first year on orbit, supporting the integration of RCM into mission-critical activities across the Canadian government. RCM represents a major enhancement of Canada's RADARSAT program, following the successes of RADARSAT-1 and RADARSAT-2. Each spacecraft payload consists of a Synthetic Aperture Radar (SAR) sensor integrated with an Automated Identification System (AIS) sensor. RCM will provide the Government of Canada with enhanced surveillance, monitoring and management of Canada's coastal and Arctic regions, fisheries, icy waterways, agricultural lands, natural resources, climate and fragile ecosystems, as well as to support highly operational defence capabilities and global disaster relief efforts. The three-satellite constellation is capable of scanning the Earth day or night and in any weather conditions, allowing for daily coverage over Canada's vast territory and maritime approaches.

### **Arianespace and ESA Announce the JUICE Launch Contract**

June 17, 2019 - Arianespace and the European Space Agency (ESA) announced the signature of a launch services contract with an Ariane launch vehicle for JUICE (JUper ICy moons Explorer). JUICE the JUper ICy moons Explorer – is the first large-class mission in ESA's Cosmic Vision 2015-2025 programme. Its mission is devoted to complete a unique tour of the Jupiter system. JUICE will spend at least three years making detailed observations of the giant gaseous planet Jupiter and in-depth studies of three of its largest moons as well as the potentially ocean-bearing satellites, Ganymede, Europa and Callisto. The JUICE mission will utilize an Ariane 5 or an Ariane 64 launch vehicle, with the launch period starting in mid-2022 – depending of the final launch slot from the Guiana Space Center, Europe's Spaceport in French Guiana (South America). With the currently-nominal launch window in May 2022 the mission would end in June 2033. The satellite will have a mass at liftoff of approximately six tons and will be placed in an Earth escape orbit toward Jupiter initiating a journey of 600 million kilometers. After a 7.5-year cruise toward Jupiter – which includes gravitational assists from Earth, Venus and Mars – the spacecraft will enter orbit around the giant planet in October 2029. Airbus Defence and Space is developing and building the JUICE spacecraft. As prime contractor, for design, development, production, and testing of the satellite, Airbus will lead a consortium of more than 80 companies covering more than 110 contracts.

### **Viasat and Arianespace Modify Initial ViaSat-3 Satellite Launch Contract**

June 17, 2019 - Viasat and Arianespace announced a modification to their original ViaSat-3 satellite launch contract, signed in 2016. Under the new agreement, the two companies agreed to move the ViaSat-3 satellite from an Ariane 5 ECA launch vehicle to the next-generation Ariane 64 (A64) launcher. With this contract, Viasat will become the first commercial customer to commit to launch on the A64. The A64 launcher is expected to maintain launch quality and reliability, but with added mission effectiveness, efficiency and flexibility. The A64 launch vehicle will feature a modular configuration based on core stages powered by lower and upper liquid propellant modules, which is supplemented by four solid rocket

motors. The A64's configuration will also provide added performance to deliver a ViaSat-3 satellite into a high-energy geostationary transfer orbit where it can begin on-orbit operations faster. Arianespace will launch the ViaSat-3 satellite from the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana.

### **Swedish Space Corporation to Introduce SubOrbital Express a New Service for Easy Access to Space**

June 18, 2019 - Swedish Space Corporation (SSC) is currently developing Esrange Space Center in northern Sweden with both new capabilities and services. A testbed for reusable rockets is currently being established, and SSC aims at launching small satellites in a couple of years. In addition, SSC is now introducing a new flight ticket service for suborbital space flights, accessible and affordable for both current and new types of customers. The new concept introduces both the opportunity to fly fractional payloads, ranging from only a few kg up to 300 kg, and a substantially more frequent flight schedule. The flight ticket service is carried out jointly between SSC and DLR MORABA within the EuroLaunch partnership. Swedish Space Corporation SSC has been launching more than 560 suborbital rockets from Esrange Space Center since the 1966. At Esrange, SSC also operates one of the world largest ground stations for satellite control and data reception. This legacy gives SSC a unique position in the European space community. For scientists and researchers using microgravity as a tool, the new flight ticket concept SubOrbital Express covers a complete set of services ranging from a flight ticket including launch, quick and safe land recovery to customized services such as design and development of experiment payload modules.

### **Israeli Space Tech Firm hiSky Expands to the UK**

June 18, 2019 - The Israeli company hiSky has established a UK limited company - hiSkySat Limited – based in London, with an R&D centre at Harwell to develop a satellite communications network management system (NMS) and operation centre. The UK Space Agency provided £9 million of funding for hiSky to develop cutting-edge space telecoms technology at the Harwell Space Cluster, which is growing fast and already home to more than 90 space companies. hiSky aims to be the world's first low-cost satellite network operator, bringing innovative technology to voice and data satellite communications, and leveraging existing satellite capacity to reduce costs associated with building and launching new satellites. Part of the new project will integrate and develop 5G networks into their 'Smartellite' satellite receiving terminal and carry out a demonstration to show how it can connect seamlessly between different satellites and operators. This will help roll out the next generation of Internet of Things technology, connecting machines and vehicles around the world and enabling remote monitoring of infrastructure such as power lines and wind turbines.

### **DLR GfR and Thales Alenia Space Shoulder to Strengthen Galileo Operations**

June 18, 2019 - After a long and fruitful negotiation phase, Thales Alenia and DLR GfR Germany have signed the contract. DLR GfR is one of the Core Team Members of the Galileo Service Operator Consortium and is mainly operating the Galileo Control Centre in Oberpfaffenhofen/Germany. Galileo is the independent European Satellite Navigation System developed on behalf of the European Commission together with GSA and ESA. Galileo is providing its service on a global scale with high accuracy and integrity, as well as authentication to supply all users with the best services suitable for their needs. Thales Alenia Space, with its unique expertise in the design, development and maintenance of Galileo GMS and other navigation programmes in and outside EU, is the ideal candidate for this partnership. Thales Alenia Space, with its main Galileo hubs in Toulouse and Ditzingen, plays a major role in the definition of the future system. This partnership shall help to achieve the goals of Galileo by strengthening the relationship of the two major stakeholders from France and Germany within the Galileo environment.

### **Lockheed Martin Selected for the Next Phase of a Small Spacecraft Mission**

June 19, 2019 - Lockheed Martin has been selected to design dual small deep space spacecraft to visit near-earth asteroids in a mission called Janus, led by the University of Colorado Boulder. One of NASA's Small Innovative Mission for Planetary Exploration (SIMPLEx) finalists, Janus is designed to fly by two binary asteroids, or asteroids orbiting a common center of mass, to image the system using both visible and infrared cameras. These small satellites will launch in 2022 to reach the asteroid system in 2026. Downselected for this next phase of NASA's SIMPLEx program, Lockheed Martin will be working toward preliminary design review. SIMPLEx is a cost-capped program focusing science investigations on any Solar System body, except for the Earth and the Sun, using small spacecraft lighter than 180 kg. The Janus mission is designed to meet these requirements. The mission will investigate how binary asteroids form and evaluate existing theories of how these constantly changing systems evolve.

### **Arianespace Launches T-16 and Eutelsat 7C**

June 20, 2019 - Arianespace confirms its status as a trusted partner to world-class operators of communications satellites with the launch of T-16 and Eutelsat 7C. The company's fifth launch of 2019 took place on June 20 from the Guiana Space Center (CSG), Europe's Spaceport in Kourou, French Guiana. With this latest success, the second with an Ariane 5 launch vehicle in 2019, Arianespace consolidates its leadership in the market for commercial launches into geostationary orbit. Today's launch was the 104th overall for an Ariane 5 and the 310th launch by the Arianespace family. Eutelsat 7C is the 33rd satellite to be launched by Arianespace for Eutelsat. With this latest launch, Arianespace continues to bolster its exceptional partnership with Eutelsat, a relationship that reaches back to 1983. More than half of the operator's satellites to date have been orbited by Arianespace. This relationship is set to continue, since Arianespace's backlog includes seven more Eutelsat satellites, to be orbited by Ariane 5 and Ariane 6. Built by Maxar Technologies, Eutelsat 7C is a high-power broadcast satellite for markets in Africa, Europe, the Middle East and Turkey. By significantly increasing power over Sub-Saharan Africa, it will make room for several hundred additional digital channels to support the region's rapidly expanding television market. Built by Airbus Defence and Space, T-16 will provide high-power broadcast services to the continental United States, Alaska, Hawaii and Puerto Rico.

### **Thales Alenia Space and HEMERIA Sign a Partnership on the Nano Satellite Market**

June 20, 2019 - HEMERIA and Thales Alenia Space sign a partnership agreement on the nano-satellite market. HEMERIA will offer its range of nano-satellites, in the size segment from 8 to 27U, and will benefit from the expertise of Thales Alenia Space to co-develop a high-tech platform and to provide the payload, dedicated antennas and ground segment. The general goal will be realized by a number of concrete projects. Thanks to this agreement, HEMERIA and Thales Alenia Space will be able to explore the opportunities promised by the nanosatellite market for in-orbit demonstration, the constellation market or any other operative project.

### **All-electric Maxar 1300-class Communications Satellite to Deliver Broadcast Services for Eutelsat Customers**

June 21, 2019 - Maxar Technologies announced that the all-electric Eutelsat 7C communications satellite, built for Eutelsat, one of the world's leading satellite operators, is performing according to plan. The satellite launched yesterday aboard an Ariane 5 rocket from the Arianespace launch base in Kourou, French Guiana. Eutelsat 7C deployed its solar arrays on schedule and began firing its SPT-140 electric propulsion thrusters to propel toward its final orbit at 7 degrees East longitude, where it is designed to provide service for a minimum of 15 years. Once in service, Eutelsat 7C will deliver high-quality broadcast services to multiple regions, including Africa, the Middle East and Turkey. Based on Maxar's decades-proven 1300-class platform, Eutelsat 7C is equipped with 44 Ku-band transponders and a steerable antenna beam, which enables Eutelsat to adjust coverage as needed while the satellite is on-orbit. The satellite also carries a highly innovative photonics payload, which will demonstrate technologies to enable more efficient payload designs in the future. All-electric satellites provide efficient solutions for satellite operators by reducing launch mass while increasing spacecraft flexibility and performance. As a pioneer in the field of electric propulsion, Maxar's extensive experience includes in excess of 100,000 hours of active electric propulsion thruster operation across more than 30 spacecraft currently in orbit.

### **SSTL Expertise Enables New Space Mission for FORMOSAT-7 Weather Constellation**

June 25, 2019 - The successful launch on 24 June 2019 EST of 6 satellites for the FORMOSAT-7 joint US-Taiwanese weather forecasting constellation marks the start of another SSTL-enabled space mission, a cause for celebration at SSTL's UK HQ. FORMOSAT-7, also known as COSMIC-2 in the US, is a joint constellation meteorological satellite mission between Taiwan and the United States for observing and monitoring the global meteorology, climate, and ionosphere. In addition to two science payloads for detecting ionospheric data, each of the 6 satellites in the constellation is carrying an advanced GNSS receiver to low-inclination-angle orbits and will collect atmospheric data at low and mid latitudes to provide sounding data to improve regional and global weather forecasting. Collaborating with SSTL also enabled NSPO's engineers to work hand-in-hand with SSTL's engineering team throughout the programme, gaining world-class small satellite expertise in the full range of satellite mission capability including design, assembly, test and in-orbit operations. As a continuation of this programme NSPO is now developing its own FORMOSAT-7 platform, named TRITON, using some of SSTL's hardware under license in its own satellite structure and avionics. The satellite is scheduled to be launched in 2021.

### **China Launches New BeiDou Satellite**

June 25, 2019 - China sent a new satellite of the BeiDou Navigation Satellite System (BDS) into space from the Xichang Satellite Launch Center in Sichuan Province. Launched on a Long March-3B carrier rocket, the satellite was sent to the inclined geosynchronous earth orbit. It is the 46th satellite of the BDS satellite family and the 21st satellite of the BDS-3 system. The design of the BDS constellation is unique, including medium earth orbit (MEO), geostationary earth orbit (GEO) and inclined geosynchronous earth orbit (IGEO) satellites. So far, there are already 18 MEO BDS-3 satellites, one GEO BDS-3 satellite, and two IGEO BDS-3 satellites sent into space. After in-orbit tests, the new satellite will work with those BDS satellites already in orbit to improve the coverage and positioning accuracy of the system. The new satellite and the carrier rocket were developed by the China Academy of Space Technology and the China Academy of Launch Vehicle Technology under the China Aerospace Science and Technology Corporation.

### **LeoLabs and New Zealand Space Agency Unveil Regulatory Platform for Low Earth Orbit**

June 25, 2019 - LeoLabs, Inc. announced the world's first dedicated regulatory platform for LEO: the Space Regulatory and Sustainability Platform, developed as a joint initiative between LeoLabs and the New Zealand Space Agency (NZSA). The NZSA is a leader in best practices and industry standards for promoting, regulating, and guiding the global new space community. The regulatory platform offers a ground-breaking set of capabilities to empower the New Zealand government to meet its stated mission of encouraging a sustainable space environment for future generations. The Space Regulatory and Sustainability Platform provides cloud-based services based on LeoLabs' network of global sensors. Observations from this network are then processed via the LeoLabs mapping and SaaS platform which analyzes and delivers operational and compliance information to the New Zealand regulatory and space agency. The platform monitors satellites launched from New Zealand.

### **Vega to Orbit Earth Observation Satellite for United Arab Emirates**

June 28, 2019 - Arianespace will orbit the FalconEye1 satellite. This Earth observation satellite for the United Arab Emirates was developed by Airbus Defence and Space as prime contractor and Thales Alenia Space as co-prime. Flight VV15 marks the 12th Earth observation mission for Vega, a versatile light launcher. Flight VV15 will be performed from the Vega Launch Complex (ZLV) in Kourou, French Guiana (South America). The FalconEye satellite is a high performance optical Earth-observation satellite system for the Armed Forces of the United Arab Emirates (UAEAF) manufactured by Airbus Defence and Space as prime contractor and Thales Alenia Space as co-prime. The overall system is based on two identical satellites, FalconEye1 and FalconEye2, in Sun-synchronous orbit (SSO). Each satellite features an Earth observation payload, with very-high-resolution optical capabilities. It is equipped with a ground system for monitoring, receiving and processing the images. The FalconEye1 satellite, to be orbited by Flight VV15, will be the first space component of the system, and will have a dual use purpose: support the needs of UAE Armed Forces, and provide the commercial market with images. It will weigh approximately 1,197 kg. at launch and will be raised to a heliosynchronous orbit at 611 kilometers. As satellite prime contractor, Airbus Defence and Space was in charge of the satellite design, integration and tests, and supplied the platform. Thales Alenia Space, as co-prime, designed and supplied the Optical Instrument and the image chain.

### **Rocket Lab Successfully Launches Seventh Electron Mission**

June 29, 2019 - A Rocket Lab Electron launch vehicle successfully lifted off from Launch Complex 1 on New Zealand's Māhia Peninsula at 04:30 UTC, Saturday 29 June 2019 (16:30 NZST). The Make It Rain mission launched seven satellites to orbit for rideshare and mission management provider, Spaceflight. At approximately 56 minutes after lift-off, the Make It Rain payloads were successfully delivered to their precise individual orbits by Electron's Kick Stage. Among the satellites on board were BlackSky Global-3, two U.S. Special Operations Command (SOCOM) Prometheus, and Melbourne Space Program's ACRUX-1. The mission was Rocket Lab's seventh launch of an Electron rocket and the company's third launch for 2019. The mission took the total number of satellites deployed by Rocket Lab to 35 and continues the company's record of 100% mission success for its customers.

## **EXECUTIVE MOVES**

### **Vector Names Stephanie Koster as New Chief Financial Officer**

June 12, 2019 - Vector, the space access company, announced Stephanie Koster will join the team as Chief

Financial Officer (CFO). Koster brings more than 20 years of extensive experience in domestic and international strategy, finance, and operations across several Fortune 50 and high growth aerospace companies. As CFO, Koster will lead finance and business operations to enable Vector's dynamic growth. Koster joins Vector from Blue Origin where she spent nearly seven years as Director and Treasurer of its domestic and international affiliates. While at Blue, she oversaw finance and business operations for the consolidated companies. Koster has also held senior leadership roles at The Boeing Company, where she was involved in programs pertaining to its global venture capital, corporate venturing & innovation programs, international M&A, corporate development and technology acquisition.

#### **Aitech Appoints Yaron Mund as CEO**

June 13, 2019 - By appointing business veteran Yaron Mund as CEO, Aitech Group is positioned to provide enhanced engineering and technical support to its worldwide customer base. With Mund at the helm, Aitech will continue to be a leading global manufacturer of embedded systems for military, defense, space and industrial applications. He replaces Moshe Tal, who successfully served as CEO since 2009 and will retire by the end of 2019. Over the past two decades, Mund has effectively managed and governed a variety of business organizations. Most recently, he was COO of Caesarstone Ltd., a publicly-traded entity, where he was tasked with rebuilding the company's operations and positioning it for future growth. In addition, he served as CEO of Rotex, a textile company renowned as a technology leader throughout Europe, Israel, the US and Australia, and as the Managing Director of Aviv AMCG, a global international consultancy with more than 250 professionals.

#### **Eutelsat Announces Two Changes to its Executive Committee**

June 28, 2019 - Eutelsat Communications has announced several changes to its Executive Committee, as part of a generational renewal of its management body. These changes will be effective as of 1 July this year. Philippe Oliva, currently, Executive Vice-President, Sales and Products, succeeds Michel Azibert as Chief Commercial Officer. In this role, he will be responsible for defining and supervising the commercial policy, as well as generating revenue for the Group. Jean-Hubert Lenotte, currently Director of Strategy and Strategic Marketing, will also be taking charge of the Deployment Department and will be responsible for Eutelsat's satellite fleet, frequency management and resource planning. This newly revamped department will now be known as the Strategy and Resources Department. Michel Azibert will remain Deputy Chief Executive Officer and, in this role, will participate in all matters of importance to the Group. Previously Director of Deployment, Jacques Dutronc will become Director of Development, coordinating Group-wide business development projects. Philippe Oliva began his career as a consultant in the consultancy firm CIMAD, before joining IBM in 1999, where he held several senior positions. These included head of Business Services France, then Vice President of the services offered by the Technological Infrastructure Department. He also coordinated the launch of the Cloud business and Hybrid Cloud services in France, then in the United States, where he spent several years. He held the position of Vice President in charge of strategic accounts at IBM before joining Eutelsat in September last year. Jean-Hubert Lenotte began his career with the Bouygues Group, taking part in the creation of its subsidiary Bouygues Telecom in 1994. In 1997, he joined the McKinsey firm in Paris, where he was appointed Associate Director in 2004. In 2009, he joined McKinsey's global Telecommunications, Media and Technology Division, where he was in charge notably of consumer-related issues. He joined Eutelsat as Director of Strategy in 2013 and became a member of the Executive Committee in 2016 as Director of Strategy and Strategic Marketing.

## **REPORTS**

#### **NSR Report Assesses Viability for Satellite Constellations Worldwide**

June 5, 2019 - NSR's industry standard report on the market for and viability of satellite constellations worldwide: *Satellite Constellations: A Critical Assessment, 2nd Edition (SC2)*, releases today. NSR's SC2 report provides a complete assessment of key satellite constellations set to disrupt the satcom market in the next decade. Through a bottom-up assessment of non-GEO demand across core applications, matched against the cost, project specifics and launch likelihood for each key constellation, NSR provides its foresight into this critical market. NSR forecasts a mixed outcome for operators planning projects involving satellite fleets. High-throughput constellations come with very high costs for satellite manufacturing and launch, as well as ground infrastructure. However, IoT constellations have a more favorable CAPEX-to-revenues ratio, driven by much cheaper satellites and diversification of demand for M2M/IoT services.

### **The Maritime VSAT Connectivity Market Passes the \$1B Revenue Mark**

June 12, 2019 - According to Euroconsult's latest report, *Prospects for Maritime Satellite Communications*, the maritime connectivity market continues to be vibrant, as shipowners transition to the next level of broadband connectivity. The merchant, passenger and leisure segments have all been supporting growth in revenues and capacity usage, while a rebound on oil pricing would accelerate the offshore segment. In addition to capacity, an increasing focus is on the supply of value-added services and on the outsourcing of daily operations by shipping companies. The maritime satellite VSAT communications market experienced extensive growth in 2018, with the number of terminals increasing by almost 18% YOY and reaching 26,000 at year-end 2018. VSAT services revenue exceeded \$1 billion, resulting in growth of almost 11% compared to the previous year. Increasing demand from passengers, as well as regulatory pressure on communications and crew welfare are major factors pushing maritime operators to install new generation satellite systems on their vessels. In addition, decreasing prices for capacity and terminals encourage more customers to adopt VSAT services, while existing clients transit to higher data packages. HTS capacity is rising fast and is expected to grow even faster in the next five years, as new operators enter the market. Hardware, such as receiving antennas and modems, is also evolving rapidly; smaller, lighter, and more efficient antenna systems are gaining traction as the industry constantly evolves.

### **Satellite Operators to Generate \$13.7 Billion in Data Revenues by 2028**

June 12, 2019 - NSR's *Global Satellite Capacity Supply and Demand, 16th Edition* report confirms despite a challenging current climate for capacity sales, long-term projections are promising with revenues doubling over the next 10 years. While video demand faces hurdles in all markets, data applications will drive the industry forward at a 6.8% CAGR as HTS capacity in both GEO and LEO/MEO orbits unlocks demand via exponentially more bandwidth and lower prices. Many areas are still in the early days of HTS adoption, but it will progressively capture a larger portion of revenue. By 2028, 2 of every 3 capacity dollars will be generated on HTS vs. FSS capacity. Video continues to be the industry cash cow. Even with continued declines due to the impact of compression and price degradation, video revenues are still critical for the health of the industry. However, a decline of \$1.8 billion in video revenue by 2028 signifies a dire need to transition the satellite business into a more data-centric model where large volumes and low prices ignite growth. This new HTS capacity also expands the total addressable market (TAM) for satcom where satellite solutions are increasingly more cost competitive.

### **Smallsat Dedicated Launch Vehicles to Generate \$2.2B in Commercial Revenue by 2028**

June 18, 2019 - NSR's *Smallsat Launch Vehicle Markets, 2nd Edition* report concludes the dedicated commercial small satellite launch market will see a rapid ramp-up period resulting in over \$2.2B in revenue over the next 10 years, overcoming supply chain constraints, new technology risks, and solidifying its place in the market as a proven competitor. While funding and enthusiasm continues to steadily increase, with twelve new dedicated smallsat launchers anticipating their first orbital launches by the end of 2020, the additional competition and market constraints will cause consolidation by no later than the mid-2020s. Shifting mindsets also impact how the industry perceives small launch vehicle utility. Although, the larger mass category of dedicated smallsat launchers is ideal for smallsats being developed for mega-constellations, most of these satellites will not be launched on dedicated small launchers. For large scale mega-constellation deployments, heavier rockets with bigger payload capabilities will be utilized.

## **UPCOMING EVENTS**

**Small Satellite Conference**, August 3-8, Logan, Utah, USA, [www.smallsat.org/](http://www.smallsat.org/)

**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](http://www.iac2019.org)

**37th International Communications Satellite Systems Conference (ICSSC)**, October 29 – November 1, Okinawa, Japan, <http://www.kaconf.org/call4papersICSSC.php>

**China Satellite 2019**, October 30 – November 1, Beijing, China, [www.china-satellite.org](http://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://apscsat.com>

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

**Broadband India Forum**, November 27-28, New Delhi, India, [www.broadbandindiaforum.com](http://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.

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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.apsc.or.kr](http://www.apsc.or.kr).*