

# APSCC Monthly e-Newsletter

## SEPTEMBER 2018

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

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

### INSIDE APSCC

#### **APSCC 2018 Satellite Conference & Exhibition**

**2-4 October, Shangri-La Hotel, Jakarta, Indonesia, <http://apsccsat.com>**

The APSCC Satellite Conference and Exhibition is Asia's must-attend executive conference for the satellite and space industry, where business leaders come together to gain market insight, strike partnerships and conclude business deals. The APSCC 2018 Satellite Conference & Exhibition, with the theme **#SATECHconnect**, will incorporate industry veterans and new players into the program to reach out to a broader audience. Mark your calendar for the APSCC 2018 and expand your business network while hearing from a broad range of thought provoking panels and speakers representing visionary ideas and years of business experience in the industry. Contact [info@apscc.or.kr](mailto:info@apscc.or.kr) for general inquiries to the APSCC 2018.

#### **APSCC 2018 Youth Development Workshop**

**4 October 2018, Shangri-La Hotel, Jakarta, Indonesia, <http://apsccsat.com/workshop/>**

The APSCC Youth Development Workshop is a platform for the brightest up-and-coming engineering students in the Asia-Pacific region to connect with leading satellite and space industry experts and to learn more about the opportunities in the satellite and space sector. The 3rd Youth Development Workshop will be held on October 4 at Shangri-La Jakarta Hotel for university students who are interested in the satellite and space industry. This one day workshop consists of educational sessions including Satellite Communications Fundamentals, Satellite Communications Regulation, and Satellite Telecommunications Market Overview and a hands-on activity. Dr. Soyeon Yi, the first and only astronaut in Korea will lead the workshop as the Chair!

### SATELLITE BUSINESS

#### **Hispasat and Gilat Partner to Commercialize HTS Capacity of Amazonas 3 and 5 Satellites**

August 2, 2018 - Hispasat and Gilat Satellite Networks Ltd. have entered into a partnership to commercialize Hispasat's Ka band satellite capacity over Brazil, with an estimated potential revenue of tens of millions of dollars over a period of several years. The contract enables Hispamar, a Hispasat subsidiary, to deliver consumer broadband and enterprise services to local Internet Service Providers (ISPs). In this way quality access to the Internet may be offered to every city, town, and community in the country, even in remote areas, thus reducing the digital divide and promoting regional development. Hispasat and Gilat are joining forces to develop the satellite broadband market in Brazil. Hispamar will utilize the recently launched Amazonas-5 multi-spot-beam Ka satellite capacity, as well as Amazonas-3 Ka capacity, while leveraging Gilat's SkyEdge II-c multi-service platform, versatile VSAT equipment, Network Operation Center (NOC), and field support services.

#### **Yahsat Completes Acquisition of Thuraya**

August 5, 2018 - Yahsat completed the acquisition of a majority and controlling stake in the mobile satellite services operator Thuraya. The acquisition of the UAE's first home grown satellite operator, Thuraya, is set to significantly expand Yahsat's current satellite solutions portfolio on both commercial and government fronts and creates a strong platform to capture the growing opportunity around IoT and M2M applications across both sectors. Thuraya's two satellites, serving over 160 countries, will join the Yahsat

fleet, expanding the group's satellite fleet to five. The combination of geostationary satellites operating in the C, Ka, Ku and L-bands will jointly cover Europe, Africa, the Middle East, South America, and Asia, providing a broad range of Fixed and Mobile Satellite Services spanning voice and data communications to both commercial and government sectors.

#### **Comtech EF Data Expands WAN Optimization Product Line to Enhance Users' Quality of Experience**

August 6, 2018 - Comtech EF Data Corp. announced the expansion of its WAN Optimization (WANOp) product line targeted at satellite service providers for Internet trunking applications. The expansion includes new WANOp appliances and enhanced functionality focused on users' Quality of Experience (QoE). The new Release 7 of the FX Series WANOp appliance solution delivers unparalleled performance of up to 5 Gbps throughput and 1,000,000 TCP flows, leveraging the bandwidth capabilities of High Throughput Satellites. When paired with Comtech EF Data's CDM-760 Advanced High-Speed Trunking and Broadcast Modem, the FX Series delivers the ultimate Internet trunking solution for satellite service providers.

#### **Casbaa Becomes the Asia Video Industry Association (AVIA)**

August 6, 2018 - At an Extraordinary General Meeting of members, Casbaa overwhelmingly approved the adoption of a new constitution and new name. Casbaa will now be known as the Asia Video Industry Association (AVIA) and have a new mandate to represent the interests of companies across the broader video industry. The principal objective of AVIA is to make the video industry and ecosystem in Asia Pacific stronger and healthier. Specifically, the Association will be focused on three main goals: to be the interlocutor for the video industry with governments across the Asia Pacific region; to be dedicated to reducing video piracy and creating a more sustainable business environment within which established and new video companies can innovate and grow; and to be a leading source of insight into the video industry through publications and reports as well as seminars and conferences.

#### **Uniwise Offshore Selects Thaicom Nava for Entire Fleet**

August 6, 2018 - Uniwise Offshore Limited, one of Asia's leading offshore support vessel (OSV) operators, has chosen Nava™, Thaicom's new high-speed broadband service for maritime markets, to enhance the company's operations on their entire fleet of more than 30 vessels. Uniwise Offshore will use Nava enabled high-speed connectivity and solutions to focus on operational improvements, including optimized electronic document handling, as well as ship-to-ship and ship-to-shore communications for safer and more cost-effective operations. The company will also be able to improve its on-board communication services including crew welfare and fleet management. The service is powered by Nava FTTS™ (Fibre-to-the-Ship) which is able to support very high data rates, providing constantly high bandwidth for operational efficiency with wide area satellite coverage across Asia Pacific. Nava FTTS incorporates an L-band backup solution.

#### **Newtec Powers Milano Teleport's Maritime Offerings**

August 6, 2018 - Newtec announced its Newtec Dialog® multiservice platform is being used by global telecommunications provider Milano Teleport to enrich its services for the maritime market. Targeting namely yachts (via the "Orbis Yacht" brand) and cruise liners (with "iSeaglobal") which both require very high-bandwidth connectivity, especially now during the height of the maritime season for yachts in the Middle East. Milano Teleport is mainly using two types of Newtec modems depending on the throughput required – Newtec's MDM33xx and the MDM5000 Satellite Modem series. A number of vessels are already in service, with Milano Teleport seeing significantly reduced Operational Expenditure (OpEx) as a result of the Newtec Dialog hub located at its teleport in Italy.

#### **Comtech Awarded Follow-on Contract for Military SATCOM TWTAs**

August 6, 2018 - Comtech Xicom Technology has received a contract for more than \$2.6 million from a domestic military system integrator. This contract is for Ku and Ka-band high-power travelling wave tube amplifiers (TWTAs) for a transportable satellite communications ground system. Comtech Xicom Technology, Inc., a world leader in high-power amplifiers, manufactures a wide variety of tube-based and solid-state power amplifiers for military and commercial satellite uplink applications. The product range encompasses power levels from 8 W to 3 kW, with frequency coverage in sub-bands within the 2 GHz to 51 GHz spectrum. Amplifiers are available for fixed and ground-based, ship-board, and airborne mobile applications.

### **Gilat Telecom to Provide Global Land Mobile Satellite Connectivity with Iridium Certus**

August 6, 2018 - Gilat Telecom announced that it has been chosen as a service provider for Iridium Certus for land-mobile applications and can now offer customers a wider variety of fixed and “on-the-move” connectivity solutions. The Iridium Certus service provides the fastest reliable L-band satellite broadband connectivity on the market with high-quality voice calling and low latency IP data with speeds debuting at 352 Kbps, and upgradable to 704 Kbps download speeds in the future. The Iridium satellite constellation has 66 cross-linked, low-earth-orbit (LEO) satellites and is designed to provide consistent data speeds everywhere on the planet. Gilat Telecom will use the Iridium Certus service to provide connectivity to both remote work sites and moving vehicles that have a Thales MissionLINK terminal. The hardware used is small and able to withstand harsh conditions.

### **Viasat's VISION Software Passes Critical Test to Support Upgraded NATO Satellite Control Stations**

August 7, 2018 - Viasat Inc. announced its Commercial off-the-Shelf (COTS) Visual Integrated Satellite Communications Information, Operation and Networking (VISION) software has successfully passed the North Atlantic Treaty Organization (NATO) First Article System Test (FAST). With Viasat VISION passing FAST, NATO can expedite the roll-out of its Ultra High Frequency (UHF) satellite communications (SATCOM) modernization efforts. Under a contract awarded in January 2018, NATO will upgrade its legacy UHF communications network to Viasat's VISION planning and network management platform, the first commercially-available software package to simultaneously support all 25-kHz legacy Demand-Assigned Multiple-Access (DAMA) and next-generation Integrated Waveform (IW) networks and services.

### **AST Expands in 3 Continents**

August 7, 2018 - Global satellite solutions and projects company, The AST Group, has recently opened new offices in Sydney, Rotterdam, Ecuador and Norwich, UK. These new locations provide strategic bases for expansion in the maritime and land sectors and increase geographic reach. Australia continues to be a success story, with growth gravitating to the East of the continent with Sydney becoming AST's third Australian office. AST Marine Networks, a maritime solutions division of AST, has moved into larger premises based in Norwich, Norfolk to accommodate expansion in the maritime VSAT and L-Band sectors as well as opening an office in Rotterdam. The expansion in Ecuador results from some significant key customer wins and illustrates AST's acknowledgement of the many solutions and services opportunities represented within the Americas.

### **Open Cosmos and Addvalue Announce Partnership for Continuous LEO Connectivity**

August 8, 2018 - Space mission provider Open Cosmos and satellite communication service provider Addvalue have announced the signature of a key partnership to provide continuous communication and “data-burst as-a-service” to constellation-based remote sensing and IoT businesses. The agreement will allow Open Cosmos's nanosatellites to stay in continuous communications with their operation centre on the ground, thereby enabling mission tasking and mission data delivery in near real time. The combination of light weight, small form factor, and a low cost system also makes it perfectly suited for carrying out telemetry, tracking, and command (TT&C) communications, mission tasking, trouble-shooting and restoring operations. This agreement builds on Addvalue's Inter-Satellite Data Relay System (IDRS™) capability and Open Cosmos's satellite-as-a-service, offering to service a range of customer applications needing near-real time connectivity. The Addvalue terminal on-board the satellite will communicate to its operations centre via Inmarsat's global space and ground network.

### **ORBCOMM Adds Data Analytics Capabilities to its Industrial IoT Solutions**

August 8, 2018 - ORBCOMM Inc., a global provider of Machine-to-Machine (M2M) and Internet of Things (IoT) solutions, announced that it has released a new Cloud-based analytics service that leverages ORBCOMM's extensive telematics expertise and industry-leading portfolio of IoT solutions to provide greater insights into the operations of its customers' enterprises. With ORBCOMM's new analytics offering, its global customers can extract valuable, real-time information from their asset-based data to determine patterns and predict future outcomes and trends, significantly improving operational efficiency and driving better business results.

### **Es'hailSat Takes over Eutelsat's Interest in EUTELSAT 25B Satellite**

August 9, 2018 - Eutelsat has sold its interest in the EUTELSAT 25B satellite operated at 25.5 degrees East to the co-owner of the satellite, Es'hailSat, for a consideration of €135 million. Eutelsat's share of the satellite generated FY2018 revenues of €16 million in the video application. The divestment of this non-

core asset is in line with Eutelsat's strategy of optimizing its portfolio of businesses in the context of its policy of maximizing cash generation. It has no impact on Eutelsat's revenue objectives which are at constant perimeter, and will be absorbed within the Group's EBITDA margin target. The discretionary free cash flow objective excludes the impact of the disposal.

### **Intersputnik Prepares to Launch an International Investment Program for Business Development**

August 9, 2018 - The Intersputnik starts inviting preliminary applications within the framework of a business development program pertaining to satellite telecommunications. The program investment fund totals USD 4,500,000. Out of this fund, a single applicant may receive up to USD 750,000 on preferential conditions. The mission of the program is to contribute to the implementation of innovative space projects, including those in the field of satellite telecommunications services, satellite audio and video broadcasting, manufacture of satellite systems and telecommunications equipment, construction and upgrading of satellite telecommunications ground infrastructure. In the first place, the investment program is targeted at the member-countries of Intersputnik. At the same time, projects from other countries can also be considered. Today, Intersputnik unites the following 26 countries: Azerbaijan, Afghanistan, Belarus, Bulgaria, Hungary, Vietnam, Germany, Georgia, India, Yemen, Kazakhstan, Kyrgyzstan, Korean Democratic People's Republic, Cuba, Laos, Mongolia, Nicaragua, Poland, Russia, Romania, Syria, Somalia, Tajikistan, Turkmenistan, Ukraine, and the Czech Republic. The program will be launched in Q1-Q2 2019.

### **New Distributors Expand ViaLite's Asia Pacific Reseller Network**

August 9, 2018 - Two new distributors in the Asia Pacific region have been appointed by ViaLite Communications in the latest expansion to the company's reseller network. Both distributors have their head offices in Hong Kong, with Datacom System International being system integrators for satcom and broadcast applications while Starcom Electronics focuses on timing and synchronization applications. With presence throughout the whole Asia Pacific region, including Pakistan and Malaysia and a subsidiary, Wancom Communication & Network Technology Ltd, in China, Datacom are a major supplier of satellite communications equipment and one of the main system integrators for satcom applications in the region. ViaLite's RF over fiber products make a good fit with their other product lines.

### **One Space Completed B Round Financing**

August 12, 2018 - One Space Technology completed B round financing of 300 million yuan (\$43.8 million). The funding was led by CICC Jiatai (Tianjin) Equity Investment Fund and followed by FinTrek Capital while its shareholders like China Merchants Innovation Investment Management Co increased investment. Founded in August 2015, OneSpace has secured four rounds of financing, raising about 800 million yuan. OneSpace CEO Shu Chang said that the funds will be used in the research and manufacturing of the company's OS-X and OS-M series rockets, industrial upstream and downstream layout, intelligent manufacturing base construction and building a team of talented staff, according to the press release. OneSpace plans two launches by the end of this year. It is expected to achieve annual production capacity of more than 30 OS-M series rockets and 20 or more OS-X series rockets by 2020.

### **Inmarsat Awards Contract for GX-5 Ground Infrastructure to VT iDirect**

August 14, 2018 - VT iDirect announced that Inmarsat has awarded the ground infrastructure contract for Inmarsat's fifth Global Xpress (GX-5) high-speed, broadband communications satellite to VT iDirect. VT iDirect's Velocity platform and iQ Series remotes support Inmarsat in delivering the high-speed broadband capabilities of GX-5 at a very low cost per bit. Inmarsat terminals will also be able to seamlessly switch between existing GX capacity and new GX-5 capacity. The agreement builds on a long-standing partnership and reflects Inmarsat's strategy of adding capacity to its already established, unique, mobile global broadband network, supported by the iDirect Velocity platform, to meet growing customer demand.

### **Comtech Receives Order to Support U.S. Navy's Advanced TDMA Interface Processor Terminals**

August 15, 2018 - Comtech EF Data received a delivery order in support of a recently awarded contract to provide long-term support for the Advanced Time Division Multiple Access (TDMA) Interface Processor (ATIP) production terminals in support of the Space and Naval Warfare Systems Command (SPAWAR). This latest delivery order against the 10-year, \$19.1 million follow-on IDIQ contract is for \$2.8 million, and has an initial funding level of \$1.6 million. ATIP is a Layer-2 Ethernet bridging device installed on ship, shore and submarine platforms in the Navy Multiband Terminal (NMT). The ATIP program provides significant improvements to the Advanced Extremely High Frequency (AEHF) system's performance through dynamic bandwidth management, support for higher XDR data rates, and increased throughput.

### **Inmarsat and Auxilium to Deliver Satellite IIoT Mining Solutions**

August 16, 2018 - Inmarsat and Auxilium, a leading Australian mining technology solutions company, have established a formal partnership to deliver the most effective Industrial Internet of Things (IIoT) and communications solutions for Australian mining companies. The partnership will see Auxilium deploying satellite connectivity from Inmarsat in its IIoT solutions. This will ensure that mining companies can access IIoT and communications services regardless of how remote their location is, and without the need to invest significant sums in building a terrestrial communications infrastructure in order to connect their mining operations. Auxilium designs and manufactures technically advanced mining equipment, technology and services to support high-value mining and construction assets. It deploys satellite connectivity to enable the seamless transition of data from mine site to the control centre, which can be thousands of kilometres apart.

### **Comtech Receives \$1.9 Million Order from Major Mobile Network Operator in China**

August 16, 2018 - Comtech EF Data Corp. won a tender by a major Mobile Network Operator (MNO) in China to replace the older generation of lower efficiency modems to provide more reliable services at a much lower OPEX. This latest order for \$1.9 million, specified Comtech EF Data's CDM-625A Advanced Satellite Modems, Up & Down Frequency Converters and the CX-U Series RAN Optimization by its subsidiary, Memotec. The purchase highlights the customer's long-standing confidence in the Comtech mobile backhaul solution. For over 10 years, the MNO has utilized Comtech's infrastructure equipment to support 1000+ sites that are serving China's rural communities and disaster recovery efforts. By leveraging Comtech EF Data's award-winning and bandwidth efficient satellite modems and Memotec's 2G traffic optimization solutions, the MNO has been extremely successful in lowering the total cost of ownership (TCO) of backhauling its traffic over satellite. Some of the leveraged features include industry best VersaFEC-2® Forward Error Correction, the revolutionary DoubleTalk® Carrier-in-Carrier® bandwidth compression, lower rolloffs, and 2G TDM optimization.

### **NSSLGlobal Brings Iridium Certus to Maritime Customers**

August 20, 2018 - NSSLGlobal has signed a Service Provider agreement with Iridium Communications Inc. that will see NSSLGlobal offer the new Iridium Certus L-Band service as part of its portfolio of maritime satcom offerings to its extensive customer base. Iridium Certus will be offered both as a standalone L-Band service and in conjunction with NSSLGlobal's premier VSAT IP@SEA service as its preferred service assurance offering. The Iridium Certus service is suitable for vessels across the maritime spectrum, from recreational yachts and workboats to commercial fishing trawlers and merchant vessels. Alongside the Cobham SAILOR 4300 Iridium Certus terminal, NSSLGlobal will be offering customers its unique Cruise Control solution, which enables users to fully manage their operational and crew communications, while also offering a suite of value added services, covering everything from crew entertainment, onboard IT management, cybersecurity to an integrated IP PBX.

### **CPI Expands with Acquisition of Orbital Systems and Quorum**

August 21, 2018 - Communications & Power Industries (CPI) has acquired the related companies Orbital Systems, Ltd. and Quorum Communications, Inc. from their cofounders. The acquired companies design and manufacture associated ground-based full-motion antenna products that play a key role in communications applications; Orbital Systems provides antenna systems primarily for communications with earth observation satellites in low earth orbit (LEO) and telemetry, tracking and control (TT&C) applications, while Quorum Communications, its sister company, provides satellite microwave receivers, downconverters and other communications products.

### **Comtech Xicom Technology Awarded over \$20.0 Million for High Frequency SATCOM Amplifiers**

August 22, 2018 - Comtech Telecommunications Corp. announced today that during its fourth quarter of fiscal 2018, its Santa Clara, California-based subsidiary, Comtech Xicom Technology, Inc., which is part of Comtech's Commercial Solutions segment, received an award of over \$20.0 million from a systems integrator for millimeter-wave traveling wave tube amplifiers (TWTAs) to support a new high-speed satellite network. Products will be delivered over the next two fiscal years.

### **Viasat's Handheld Link 16 Radio Receives Authorization for Use by International Military Forces**

August 22, 2018 - Viasat Inc. announced its Battlefield Awareness and Targeting System – Dismounted (BATS-D) device, known to the United States Department of Defense as the AN/PRC-161, is now authorized by the National Security Agency (NSA) for immediate use by Five Eyes (FVEY) partners and

coalition forces, worldwide. The Viasat BATS-D radio bridges a critical gap between air and ground forces by providing real-time fused air/ground situational awareness to coordinate and direct forces instantaneously via machine-to-machine interface. The terminal offers warfighters at the tactical edge secure, reliable access to integrated air and ground data for improved situational awareness capabilities and enhanced close air support communications. Empowered with better communications, warfighters can more rapidly engage enemy targets and reduce the risk of fratricide incidents.

### **Kratos Completes Second Milestone in Critical Deployment Study for Air Force Satellite Enterprise Ground Services**

August 22, 2018 - Kratos Defense & Security Solutions announced that it has demonstrated successful performance on the second phase of a pathfinder study for migrating the Command and Control System – Consolidated (CCS-C) ground system to the Enterprise Ground Services (EGS) architecture. CCS-C currently operates a fleet of over 20 Military Satellite Communications (MILSATCOM) satellites from four different spacecraft families. Enterprise Ground Services (EGS) is an enabling technology for the Air Force's Space Enterprise Vision (SEV). EGS enables a sustainable, resilient space architecture that can respond to threats and protect space-based assets. Two other SEV components focus on enhanced satellite communications and satellite manufacture. Kratos is actively involved in supporting the satellite ground and satellite communications enhancement initiatives.

### **Romantis Received the Landing Rights to use capacity of RSCC Express-AM8 satellite in Brazil**

August 22, 2018 - The RSCC and the Romantis group of companies continue to actively promote the capacity of the Russian Express-AM-series satellites to implement satellite communications and digital broadcasting projects in Latin America. Romantis Brazil has successfully completed the formalities to obtain the landing rights to use the capacity of the Express-AM8 satellite in the orbital position of 14 degrees west in Brazil. This paves the way for further advancing business in this largest country of Latin America having a huge economic potential.

### **Kleos Space to Debut on the ASX Following \$11M Capital Raising**

August 24, 2018 - Luxembourg-headquartered satellite firm Kleos Space makes its debut on the Australian Securities Exchange. It follows a successful \$11 million capital raising that will allow it to launch its first satellite in mid-2019. Kleos is targeting the \$41 billion global intelligence, surveillance and reconnaissance market, with Australian government agencies on its prospective customer list. Co-founder and CEO Andy Bowyer said interest from investors, including in Australia, was indicative of the current demand for satellite-based ISR. Kleos was spun-off from UK-based parent company Magna Parva and has had backing from the Luxembourg Government, the UK Ministry of Defence, the European Space Agency and UK Space Agency. In March this year it signed a \$3.5 million contract with GomSpace to deliver the first of a planned 20 satellite constellation. The company also opened its first overseas sales and business development office in Canberra recently. The Australian subsidiary will be tasked with developing the broader Asia Pacific market and is being headed up by former ADF member Erik Tyler.

### **Comtech EF Data Announces New Durostream WAN Optimization Solution**

August 27, 2018 - Comtech EF Data Corp. announced the introduction of new Durostream AHA725 and AHA723 WAN Optimization appliances with packet protection from its AHA Products Group. The AHA725 model is packaged in a 1RU rack-mountable chassis and supports WAN data rates up to 1 Gbps. The AHA723 is the compact form factor model that supports WAN data rates up to 50 Mbps. The Durostream WAN Optimization solution provides a resilient, full-duplex, point-to-point survivable tunnel that dynamically adapts to network conditions to maximize throughput and minimize latency. The products address the challenge of packet loss on unreliable networks when streaming video or transmitting time-sensitive data.

### **Speedcast Announces Acquisition of Globecom**

August 28, 2018 - Speedcast has entered into a definitive agreement to acquire Globecom Systems Inc. The acquisition, which is expected to close in Q4 2018, strengthens Speedcast's global position in Government, Maritime and Enterprise and it strongly complements last year's acquisition of UltiSat. This will double Speedcast's revenue in Government, and add more scale, visibility and capabilities in this strategic growth market. Speedcast estimates it will generate over US\$15 million in annual cost synergies within 18 months after the acquisition. The acquisition will be funded by a fully underwritten US\$175 million add-on to Speedcast's existing 7-year senior secured credit facility (due 2025) from the US

institutional term loan market. This will also be used to repay a portion of Speedcast's Revolving Credit Facility and enhance Speedcast's liquidity and cash reserves.

#### **COMSAT and Avanti Sign Seven Year Master Distribution Agreement**

August 28, 2018 - COMSAT has announced a seven year Master Distribution Agreement (MDA) with London-listed Avanti Communications plc. COMSAT will benefit from the Avanti advanced satellite fleet and particularly from the Hylas 4 satellite, a High-Throughput Satellite (HTS), focused on the Middle East and Africa. In turn, Avanti will gain immediate access to US global governmental and military activity that may otherwise take multiple years to gain approval to serve. Hylas-4, with four uniquely steerable HTS beams and a further 64 Fixed beams, will enter service in September, 2018. The agreement will allow COMSAT to offer advanced, complete service packages to its customers, with focus on Africa and the Middle East and on particular high-value deployments currently planned or underway.

#### **Cobham Ships First Certified SAILOR Iridium Certus Terminals**

August 28, 2018 - After receiving certification for its first Iridium Certus<sup>SM</sup> terminal in August, Cobham SATCOM has shipped its first SAILOR 4300 L-band systems, ensuring that maritime early adopters of Iridium's next generation multi-service platform, powered by the \$3 billion Iridium<sup>®</sup> NEXT Low-Earth Orbit (LEO) satellite constellation are ready for the commercial service introduction planned for 2018. Co-operating closely with Iridium following its appointment as an Iridium Certus manufacturing partner in 2015, Cobham SATCOM has leveraged its position as the recognized market and technology leading L-band terminal provider to ensure that end-users can fully leverage the power of Iridium's new service. SAILOR 4300 L-band is the highly reliable link to the low-latency Iridium NEXT network, enabling Iridium Certus service users to optimize diverse operational applications including; multi-user Internet/VPN, IoT and telemedicine, alongside regular usage including email, electronic forms/reporting and crew communication. SAILOR 4300 L-band is also GMDSS ready, with Iridium services expected to start in early 2020.

#### **Gilat to Provide Broadband Connectivity across Russia over New Yamal 601 Ka Satellite**

August 29, 2018 - Gazprom Space Systems (GSS), international satellite operator, and Gilat Satellite Networks signed the contract with an estimated value of \$18M, to provide broadband connectivity across Russia. Gilat will deliver its' multiservice platform and user terminals to operate over the new Yamal 601 Ka satellite. The companies also signed a Cooperation Agreement for joint development of communication projects such as IFC, and railway transport. The Yamal 601 Ka satellite is expected to be launched in 2019 and will provide broadband coverage for both the European and Asian regions of Russia. The satellite's 32 beams will be lighted up by Gilat's two SkyEdge II-c gateways to be installed in the Central and Siberian Federal Districts.

#### **CETel and Türkmen Hemrasy Sign Cooperation Agreement**

August 29, 2018 - CETel has signed a cooperation agreement with Türkmen Hemrasy CJSC, a closed joint stock company and the national satellite operator in Turkmenistan. The aim of this cooperation is to mutually create a business environment that helps customers to precede with their communications requirements on fixed satellite services in the region. Türkmen Hemrasy satellite TurkmenAlem 52.0°E covers not only the territory of Turkmenistan but Central Asia, Iran, Turkey, North Africa and most part of Europe. It carries 38 Ku-Band transponders and is specifically designed for satellite communications and TV broadcasting. The east and west beam provide major opportunities for companies operating in this region. With the cooperation signed, the two companies bundle their competences and customers can easily proceed with their projects, allowing effortless management of end-to-end connections, including backhaul, regulatory requirements, and local field support. Customers will mutually benefit from having a strong satellite operator in the region with ideal coverage, paired with a WTA full-certified Teleport located in the heart of Germany.

#### **Singtel, KVH Industries Collaborate to Accelerate Maritime Sector Digitalization across Asia Pacific**

August 30, 2018 - Singtel and KVH Industries, Inc. announced a partnership to provide shipping companies a seamless broadband satellite service with KVH's mini-VSAT Broadband<sup>SM</sup> satellite connectivity to help accelerate the digital transformation of the maritime industry across the Asia Pacific region. This satellite service is designed to facilitate the use of digital solutions in the maritime industry to significantly improve operational efficiency, crew welfare, and onboard safety. Vessels can leverage this fast and reliable connectivity to harness real-time data about engine performance gleaned from onboard

sensors to facilitate preventive maintenance and reduce maintenance costs; obtain information on weather patterns and sea currents to determine the ship's most fuel-efficient route; and provide onshore operations staff regular updates about the status of cargo. Through this collaboration, Singtel will provide its maritime customers with KVH's product and service offerings, including AgilePlans™, a subscription-based connectivity solution for commercial fleets.

#### **Optus Named 2018 Satellite Provider of the Year**

August 30, 2018 - Optus has won the Satellite Provider of the Year at the Annual Communications Alliance's ACOMM Award dinner. Optus received the distinguished award for its Satellite Small Cell in a Container. Optus designed the standalone, autonomously-powered solution for remote sites where other facilities, existing infrastructure and power are unavailable. Optus was the first in Australia to deliver satellite small cells, enabling 3G mobile coverage and extending the Optus mobile network into remote, rural and regional locations using Optus' satellite backhaul service.

#### **Intellian Launches Higher Power GX Terminal for High Throughput Customers**

August 31, 2018 - Intellian, the world's leading provider of satellite communication antenna systems, announced the launch of the GX100HP, a 1m Global Xpress terminal designed with a higher power 10W GaN BUC option. The GX100HP is a 1m Ka-band maritime terminal that is type approved for use on Inmarsat's Global Xpress network and for its maritime Fleet Xpress service. The increased BUC output power to 10W on the Ka band supports greater throughput in response to customer requests to push even more traffic through the network. The increase in BUC power allows a higher level of bandwidth, with upload speeds of 5Mbps and over 10Mbps download capability on Fleet Xpress service. These faster speeds help support the ever-increasing demand for bandwidth by key users in the oil and gas sector, commercial ships, superyachts, cruise and ferry operators and governments. The GX100HP can also be used in a dual antenna configuration using the Intellian GX Mediator to mitigate blockage from any vessel obstructions.

#### **ABS hosts Seminar for Bridging the Digital Gap in Timor Leste**

August 31, 2018 - ABS held a seminar session on 29 August 2018 on the topic "Empowering Timor Leste with Satellite". The dialogue's aim was to foster greater interest in bringing satellite-enabled services to communities across the country. The forum provided an opportunity for the exchange of views on satellite connectivity and how this could bring Timor Leste into the next digital age. The half-day session was attended by government departments including the Ministry of Transport and Communications, key telecom companies (Telemor, Timor Telecom and Telkomcel), Radio Television of Timor Leste (RTTL), Gardamor TV, Banco Nacional de Comércio de Timor-Leste BNCTL and several state-owned oil companies. The seminar included an overview of the region, live demonstrations, technical sessions and case studies with interaction from the participants.

## **BROADCASTING**

#### **Media Group Ukraine Partners with Eutelsat to Broadcast its "Xtra TV" Television Platform**

July 1, 2018 - Eutelsat Communications has signed a multi-year, multi-transponder contract with Media Group Ukraine for broadcasting services on its EUTELSAT 9B satellite. Leveraging the EUTELSAT 9B satellite's dedicated coverage over Ukraine, Media Group Ukraine will broadcast "Xtra TV", one of the country's leading pay-TV platforms, with an enhanced offer of over 60 channels including 19 in HD, in eight thematic packages for all audiences. Xtra TV is the only Ukrainian pay-TV platform to broadcast two TV channels dedicated to football, holding exclusive rights for the UEFA Champions League, UEFA Europa League, Premier League and Serie A. Media Group Ukraine is deploying advanced encryption technology across all of its decoders to guarantee the exclusivity of content delivered to its subscribers.

#### **C-SPAN Joins Intelsat's Highly Penetrated Galaxy 14 Video Distribution Neighborhood**

August 9, 2018 - Intelsat S.A. announced that C-SPAN, the Washington D.C. based suite of public affairs networks, has signed a new, long-term contract for C-band satellite services on Intelsat's Galaxy 14 satellite. By choosing Intelsat's highly penetrated Galaxy 14 neighborhood located at 125° West, C-SPAN joins a select group of top tier programmers. Galaxy 14 distributes more than 200 channels in North America, with over 100 channels in high-definition (HD). Intelsat will transport the signals from C-SPAN's headquarters in Washington, D.C. via IntelsatOne fiber and provide an uplink to Galaxy 14 for distribution

to cable head-ends via the Intelsat teleport in Ellenwood, Georgia. Intelsat's Riverside teleport in California will provide an additional disaster recovery uplink. C-SPAN is expected to transition its programming to Galaxy 30, a next-generation Intelsat satellite, after Galaxy 30's planned launch in 2020.

#### **Arista Networks and Nevia Partner to Provide Media Network Solutions for Broadcasting**

August 13, 2018 - Nevia, the award-winning provider of virtualized media production solutions, announced they are partnering with Arista Networks to provide media networks solutions for the broadcasting industry. Arista and Nevia have developed a joint solution that features a close integration of Nevia's orchestration and SDN control, VideoPath, with Arista's Extensible Operating System (EOS). The partnership also allows Nevia to act as a reseller of Arista software driven cloud networking solutions. As part of the partnership, Nevia's award winning VideoPath SDN control has been extended to include support for Arista's EOS OpenConfig API. This allows VideoPath to create deterministic connections across IP local and wide area networks, including the redundant paths, as well as to manage bandwidth - ensuring the performance required in live video broadcasting. VideoPath also controls Nevia's software-defined media nodes, Virtuosos, which provide the special broadcast media transport and processing capabilities of the overall joint solution.

#### **Astro Launches First 4K UHD Broadcast in Malaysia**

August 14, 2018 - Astro has achieved a historic milestone with the launch of Malaysia's first live 4K UHD broadcast. The media company showcased live Premier League games, of Liverpool vs West Ham and Arsenal vs Man City in the country's first 4K UHD broadcast for football fans at its partner food and beverage outlet Souled Out. Football fans can check out the list of participating outlets showing Astro's 4K UHD here. The list is expected to grow over the next few weeks and F&B outlets or retailers interested to participate in the Astro 4K UHD broadcast can register their interest at the same website. The 4K UHD broadcast of Premier League is a preview of Astro's plans to unveil its 4K UHD set top box later this year. Astro which has been investing in infrastructure to enhance the viewing experience with 4K UHD broadcast, will progressively roll out 4K UHD service in dedicated channels, a brand-new software and programme guide to make content discovery easy and intuitive as well as other innovative product features later in the year.

#### **AsiaSat Distributes Live Coverage of 2018 Asian Games**

August 15, 2018 - Asia Satellite Telecommunications Company Limited supports live coverage of the 2018 Asian Games with AsiaSat 5. The 18th Asian Games, co-hosted by the cities of Jakarta and Palembang of Indonesia, includes 40 sports, to be contested by over 11,000 athletes from 45 participating countries and regions. Live HD coverage of the Games from the opening ceremony on 18 August to the closing on 2 September will be telecast across AsiaSat 5's C-band footprint for viewers to enjoy real-time on TVs, online and mobile devices. New events will feature for the first time this year, as 'e-sports' and 'canoe polo' are introduced as demonstration sports to the Games. The increasingly popular e-sports is scheduled to be a medal event at the next Asian Games in 2022.

## **LAUNCH / SPACE**

#### **Telesat Signs Airbus to Further Develop the Design for Telesat's Global LEO Satellite Constellation**

August 1, 2018 - Telesat is pleased to announce that it has entered into an agreement with Airbus Defence and Space (Airbus) to further develop the system design for Telesat's LEO constellation. This follows closely on Telesat's July 30th announcement that it has signed the consortium of Thales Alenia Space and Maxar to undertake a similar scope of work on Telesat's LEO program. Telesat now has two separate teams, comprised of industry leading satellite manufacturing companies, who will work in close cooperation with Telesat over the coming months in a series of engineering activities and technical reviews. These efforts will culminate in each team submitting a firm proposal for final design and manufacture of Telesat's LEO satellites and ground system infrastructure. Telesat anticipates deciding by mid-2019 on a prime contractor for Telesat's LEO program - space segment, ground segment and system integration.

#### **China Launches New Twin BeiDou-3 Navigation Satellites**

August 1, 2018 - On July 29, China launched twin satellites into space via a single carrier rocket, entering a period with unprecedentedly intensive launches of BeiDou satellites. The Long March-3B carrier rocket lifted off from Xichang Satellite Launch Center in southwest China's Sichuan Province, the 281st mission of

the Long March rocket series. The twin satellites are the 33rd and 34th of the BeiDou navigation system. They entered orbit more than three hours after the launch. After a series of tests, they will work together with eight BeiDou-3 satellites already in orbit, said the launch service provider. A basic system with 18 BeiDou-3 satellites orbiting will be in place by the year end, which will serve countries participating in the China-proposed Belt and Road Initiative. The satellites and the rocket for Sunday's launch were developed by the China Academy of Space Technology and China Academy of Launch Vehicle Technology, respectively.

### **ISS-Reshetnev Completes Phase 1 of New Assembly and Testing Facility**

August 2, 2018 - ISS-Reshetnev Company is preparing to commission into service phase 1 of the new Assembly and testing facility. The new building, having an area of 31 000 square meters, will include workplaces dedicated to assembly and high-frequency testing of spacecraft. The largest part of the facility's area will be dedicated to clean areas where the required levels of cleanliness, humidity and temperature could be maintained. The new Assembly and testing facility also includes the largest anechoic chamber among all companies of the ROSCOSMOS State Corporation. Its automated measuring and computing complex will enable ISS-Reshetnev Company to run radio testing of antennas and whole payloads of satellites. When finally completed, the Assembly and testing facility will comprise two buildings and nearly double current production capabilities of ISS-Reshetnev Company. The new Assembly and testing facility is expected to help organize spacecraft manufacturing and testing in a fully integrated way enabling a perfect process flow. Phase 2 of the facility is due to be completed in 2020 and will be dedicated to thermal, vacuum, mechanical and electrical testing of satellites.

### **China Unveils Newest Micro-rocket**

August 3, 2018 - China Aerospace Science and Technology Corporation (CASC) unveiled its micro rocket the Lightning Dragon No.1. The rocket, the first in the Lightning Dragon series, could have a carrying capacity of no less than 150 kilograms and operate on the sun-synchronous orbit. The rocket is capable of launching within 24 hours after arriving at the launch site. It can be delivered to the customer six months after the signing of the contract. It is now under development by Chinarocket Co., Ltd. under CASC. The device features a complete cabin space of 1.1 meters in width and 1.5 meters in height. The rocket is capable of carrying out launch missions consisting of one-rocket-one-satellite and one-rocket-multiple-satellites.

### **New Launch Unit Standards Announced for SmallSats**

August 6, 2018 - The Aerospace Corporation (Aerospace) announced details of a new small satellite (smallsat) standard called a Launch Unit (Launch-U) during a briefing at the Small Satellite Conference in Logan, Utah. This standard provides major benefits to the smallsat industry – manufacturers, launch providers, and satellite users – by increasing access to space and decreasing launch costs. It also enables the space community to come together to work innovative solutions for sharing costs, adopting new business models, and adapting to regulatory or statutory changes. The space community was in search of a standard to make launching small satellites more flexible. Given Aerospace's role as an objective technical advisor, the community identified the corporation as the ideal partner to work across all elements of the space enterprise, from satellite and launch manufacturers to service providers and government officials.

### **Loft Orbital Announces inSpace Mission Partner Program to Standardize Access to Space**

August 6, 2018 - Loft Orbital Solutions, a provider of Space Infrastructure as a Service, announced that it has signed agreements with over 20 companies to join its inSpace Mission Partner Program as inaugural members. inSpace partners are companies across the space value chain with whom Loft Orbital will collaborate for its end-to-end space mission offering. These partners span Satellite Bus, Launch Services, Ground Segment Services, Payload and Data Analytics. Each partner's product has been validated for compatibility with Loft Orbital's technology. Loft Orbital owns and operates standard small satellites and flies customer payloads as a service. The company is developing the Payload Hub, a universal interface for accommodating multiple payloads on the same satellite, as well as Cockpit, software that enables customers to operate their payloads in orbit. Loft Orbital handles all aspects of the satellite mission on behalf of the customer, including satellite procurement, launch campaign management and satellite operations, as well as insurance, licensing and financing.

### **Spaceflight Prepares for Launch of More than 70 Spacecraft aboard SpaceX Falcon 9**

August 6, 2018 - Spaceflight, the leading rideshare and mission management provider, announced details behind its SSO-A mission, the largest single rideshare mission from a US-based launch vehicle to date.

Spaceflight has contracted with more than 70 spacecraft from approximately 35 different organizations, to launch from a SpaceX Falcon 9 later this year. The mission, named SSO-A: SmallSat Express, represents the company's purchase of an entire Falcon 9 to accommodate the growing number of domestic, international, government and commercial customers seeking affordable rideshare options to launch their spacecraft into orbit. SSO-A, which signifies the company's first dedicated rideshare mission to a Sun-Synchronous Low Earth Orbit, is slated to launch from Vandenberg Air Force Base. It includes 15 microsats and 56 cubesats from commercial and government entities, of which more than 30 are from international organizations from 18 countries including United States, Australia, Italy, Netherlands, Finland, South Korea, Spain, Switzerland, UK, Germany, Jordan, Kazakhstan, Thailand, Poland, Canada, South Africa, Brazil, and India.

#### **Indian-led Telescope Manager Consortium Concludes Design Work on SKA**

August 6, 2018 - After four and a half years, the international Telescope Manager™ consortium has formally concluded its work on the architectural design of a fundamental part of the software for the Square Kilometre Array: the nervous system of the Observatory, which is called the Telescope Manager. Formed in November 2013, the consortium was tasked with designing the crucial software that will control, monitor and operate the SKA telescopes. TM brought expertise in the field of Monitoring and Control for large-scale, complex systems and design of user interface experience. Led by India's National Centre for Radio Astrophysics (NCRA), the international consortium comprised nine institutions in seven countries. The Square Kilometre Array (SKA) project is an international effort to build the world's largest radio telescope, led by the SKA Organisation based at the Jodrell Bank Observatory near Manchester, UK. The SKA will conduct transformational science to improve our understanding of the Universe and the laws of fundamental physics, monitoring the sky in unprecedented detail and mapping it hundreds of times faster than any current facility.

#### **Astrocast and D-Orbit Announce InOrbit NOW Launch Agreement**

August 7, 2018 - Astrocast and D-Orbit announced an InOrbit NOW DPOD agreement for the launch and deployment of ten Astrocast nanosatellites. Signed today by company officials at the SmallSat Conference in Logan, Utah, the agreement calls for the Astrocast nanosatellites to be launched onboard an Arianspace VEGA or Vega C vehicle from Kourou, French Guiana between late 2019 and early 2020. VEGA C, the last generation of launcher is a European vehicle realized by AVIO SpA in the Colleferro Headquarters, in Italy. The ten Astrocast nanosatellites represent one orbital plane of their 80-satellite network. The constellation will consist of 8 orbital planes, each consisting of 8 operational and 2 spare satellites. This 64-unit network of Low Earth Orbit spacecraft that will provide cost-effective Internet-of-Things (IoT) and machine-to-machine services for the 90% of the globe not covered by cellular systems. Astrocast's constellation is expected to disrupt numerous enterprises, creating substantial efficiencies and cost advantages within key global sectors including maritime, oil and gas, mining, supply chain and logistics, automotive, utilities, and many others.

#### **SpaceX Successfully Launched SSL-built Merah Putih Satellite for PT Telkom**

August 7, 2018 - Falcon 9 successfully lifted off from Space Launch Complex 40 (SLC-40) at Cape Canaveral Air Force Station, Florida carrying the Merah Putih mission for PT Telkom Indonesia. The satellite is part of the critical telecommunications backbone connecting thousands of islands in Indonesia, other parts of Southeast Asia, and it expands service to South Asia. Merah Putih, which will be located at 108 degrees East longitude, is an all C-band satellite that enhances both internet and telephone service for populations in remote regions and will be used to offload backhaul for cellular service. Merah Putih is based on the powerful and reliable SSL 1300 platform, which provides flexibility for a broad range of applications and technology advances. It is designed to provide service for 16 years or more.

#### **Rocket Lab Signs Agreement for Ten Dedicated Electron Missions with Circle Aerospace**

August 7, 2018 - US orbital launch provider Rocket Lab has signed an agreement with Circle Aerospace for ten dedicated Electron launches, with the first launch scheduled to lift off in Q4 2019. Headquartered in Dubai, Circle Aerospace is a new turnkey launch brokerage and satellite development company serving to catalyze the growth of a commercial space and small satellite industry across the United Arab Emirates and wider Gulf Cooperation Council nations (GCC). Circle Aerospace offers full-spectrum, bespoke orbital solutions, including the design, build, and launch of payloads for customers worldwide. The agreement sees Rocket Lab selected as the sole launch provider and primary provider of associated mission services for Circle Aerospace clients. Circle Aerospace missions will primarily launch from Rocket Lab's private

orbital launch site, Launch Complex-1, in New Zealand. Launches may also be conducted from Rocket Lab's US launch site as required.

### **APSTAR-6C Completed In-Orbit Delivery Successfully**

August 8, 2018 - APSTAR-6C satellite was launched on May 4, 2018 by the Long March 3B launch vehicle from the Xichang Satellite Launch Center in Sichuan, China. The satellite conducted LEOP operations, including five apogee firings and perigee engine firings, and positioned at the designated orbit slot for in-orbit test while APT Satellite control center in Tai Po, Hong Kong taking over the tracking and control operation of the satellite. As of now, APSTAR-6C satellite finished all in-orbit tests, and it is operating at 134° East in very good health condition. APSTAR-6C satellite is designed and manufactured by CAST based on the DFH-4 platform with a designed life of 15 years. It is equipped with totally 45 transponders in C-band, Ku-band and Ka-band. As the most advanced satellite with the highest capacity in the DFH-4 series satellites, APSTAR-6C will provide satellite communication and broadcasting services covering Asia-Pacific region.

### **Arianespace to Launch Spire Small Satellites on Vega SSMS POC Flight**

August 8, 2018 - The multi-launch contract with Spire, a company providing weather, maritime, and aviation data to public and private customers, will cover a significant number of CubeSats to be launched on Vega as part of the Small Spacecraft Mission Service Proof Of Concept (POC) flight in 2019, as well as options on subsequent Vega flights. Built in-house by Spire using its LEMUR2 CubeSat platform, the nanosatellites will weigh approximately 5 kg. at launch and are designed to have a nominal service life of two to three years once positioned in a Sun-synchronous orbit at 500 km. Each satellite carries multiple sensors, making them capable of performing data collection for all of Spire's data products. The Vega Proof of Concept (POC) flight is the first of the Small Spacecraft Mission Service (SSMS) – a program initiated by the European Space Agency in 2016, with the contribution of the European Commission. For all the European partners involved, its purpose is to perfectly address the promising microsatellite market for both institutional and commercial needs with a new rideshare concept on the Vega light-lift launcher.

### **SSL Delivers Azerspace-2/Intelsat 38 to Launch Base in French Guiana**

August 8, 2018 - SSL, a Maxar Technologies company (formerly MacDonald, Dettwiler and Associates Ltd.), and a leading provider of innovative satellites and spacecraft systems, announced that the multi-mission Azerspace-2/Intelsat 38 communications satellite has arrived at the European Spaceport in Kourou, French Guiana, where it will be launched aboard an Ariane 5 launch vehicle by Arianespace. The satellite has a contractual lifetime of 15 years, but actual life may be longer and it demonstrates SSL's commitment to providing a high-performance platform for services that inform, entertain and connect people around the globe. Azerspace-2 will help Azercosmos meet the growing demand for direct-to-home (DTH) television, government, and network services in Europe, Central and South Asia, the Middle East and Sub-Saharan Africa. It is Azercosmos' second telecommunications satellite, and will expand on the service currently available from Azerspace-1. For Intelsat, the satellite will provide continuity of service for the Intelsat 12 satellite, which was also built by SSL and was launched in 2000. At 45 degrees East longitude, it provides DTH platforms for Central and Eastern Europe as well as the Asia-Pacific region. Intelsat 38 will also provide connectivity for corporate networks and government applications in Africa.

### **Rocket Lab Chooses RUAG Space as Preferred Supplier**

August 9, 2018 - Rocket Lab, an independent developer and manufacturer of small launch vehicles, and RUAG Space, a leading product supplier for satellites and launchers, signed a MOU creating a new agreement in the small launcher market, in support of flying RUAG separation systems on the Electron Launch Vehicle. Rocket Lab, the developer of the world's first fully carbon composite orbital launch vehicle, Electron, powered by 3D printed, electric pump-fed engines selected RUAG Space as its preferred supplier to provide a 15" microsatellite separation system for future missions of its Electron Small Launch Vehicles (SLV). These adapters connect satellites and rockets during the launch, and ensure a smooth separation in orbit. RUAG Space develops payload adapters and separation systems used on many institutional and commercial launch vehicles. With a 100 percent success rate to date, RUAG's separation system will securely attach a Rocket Lab's customer spacecraft to Electron during its journey to space and deliver it safely to orbit with precision

### **SSL Expands Scope of Work for NASA Asteroid Exploration Mission Psyche**

August 9, 2018 - SSL announced that it was selected by Zin Technologies to build and test the Psyche

Compute Element. This critical flight system component was designed by NASA's Jet Propulsion Laboratory for Psyche, a NASA Discovery Mission, which will investigate a metal asteroid that is expected to offer insight into how our planet formed. The award builds upon a long standing and trusted relationship with NASA and further demonstrates As the main on-board computer, the Psyche Compute Element acts as the brain of the spacecraft, functioning as the coordinating center for command and data handling activity. In addition to the Psyche Compute Element, SSL is providing a high power solar electric propulsion spacecraft chassis based on the SSL 1300 satellite platform. Using SSL's standard commercial spacecraft design helps NASA reduce cost and ensure reliability for this mission to the asteroid belt, which lies between Mars and Jupiter. Scheduled to launch in 2022, the Psyche mission was selected over four other NASA Discovery Mission candidates. The spacecraft recently completed a comprehensive NASA mission systems review and is on track to meet its next development milestone, called the Preliminary Design Review.

### **ULA Successfully Launches NASA's Parker Solar Probe Spacecraft**

August 12, 2018 - A United Launch Alliance (ULA) Delta IV Heavy rocket carrying NASA's Parker Solar Probe spacecraft lifted off from Space Launch Complex-37 on Aug. 12. NASA selected ULA's Delta IV Heavy for its unique ability to deliver the necessary energy to begin the Parker Solar Probe's journey to the sun. This mission was launched aboard a Delta IV Heavy, which is comprised of three common core boosters each powered by an Aerojet Rocketdyne (AR) RS-68A liquid hydrogen/liquid oxygen engines producing a combined total of more than 2.1 million pounds of thrust. The second stage was powered by an AR RL10B-2 liquid hydrogen/liquid oxygen engine. Due to the extremely high energy required for this mission, the Delta IV Heavy's capability was enhanced by a powerful third stage provided by Northrop Grumman.

### **Cloud Constellation Corporation Launches Global Partner Program**

August 14, 2018 - Cloud Constellation Corporation announced the launch of a global partner program for its SpaceBelt™ Data Security as a Service (DSaaS) space-based cloud service. Enabling a new dimension in cybersecurity, partners can offer their customers a cloud service that eliminates the terrestrial infrastructure as a key data breach vulnerability that every enterprise organization faces. Using a networked constellation of eight satellites in low Earth orbit, SpaceBelt DSaaS is a patented, scalable, space-based cloud service for securing high-value and highly sensitive data assets by providing data storage in space along with global, secure managed network services. Enterprise, government and military organizations communicate directly with the SpaceBelt network from their secure facilities, thus avoiding the risk of traversing vulnerable terrestrial infrastructure. Providing the ultimate air gap security, SpaceBelt is an extension of a customers' enterprise network with dynamically scalable space-based data storage capacity and network bandwidth.

### **New Constellation for Hainan**

August 15, 2018 - Hainan is preparing a satellite network that is expected to enable China to conduct effective and efficient surveillance over the South China Sea. Design work for the Hainan Earth-Observation Satellite Constellation, a project headed by the Sanya Institute of Remote Sensing in Hainan and sponsored by the provincial government, has begun at the institute and by its contractors. The first in the constellation, a Hainan 1 optical satellite, is scheduled to be launched in the second half of 2019, according to a statement from the institute. The statement said the constellation will have 10 satellites that will be launched in four stages by the end of 2021. First, three Hainan 1 optical satellites are scheduled to enter orbit in 2019. The following year, three Hainan 1 satellites and two Sanya 1 multispectral remote-sensing satellites will be launched. In 2021, two Sansha 1 synthetic aperture radar satellites are expected to be sent into space. According to the institute, each Hainan 1 will weigh 50 kilograms, and will operate in a low-Earth orbit 500 kilometers above Earth and move at 7.9 km per second.

### **ISRO's PSLV to Launch NovaSAR-1 and SSTL S1-4**

August 16, 2018 - Surrey Satellite Technology Ltd (SSTL) has signed an agreement with Antrix Corporation Limited, the commercial arm of the Indian Space Research Organisation (ISRO), for the launch into a 580km sun-synchronous orbit of NovaSAR-1, a small Synthetic Aperture Radar (SAR) satellite, and SSTL S1-4, a high-resolution Earth observation satellite. The two satellites will launch on PSLV-C42, due to lift-off in September 2018. NovaSAR-1 is a technology demonstration satellite mission designed to test the capabilities of a new low cost S-Band SAR platform. The spacecraft was designed and manufactured by SSTL, with an S-Band SAR payload developed by Airbus Defence and Space in Portsmouth, and an

Automatic Identification Receiver (AIS) supplied by ComDev to track ships at sea. NovaSAR-1 will be operated from SSTL's Spacecraft Operations Centre in Guildford, UK. Also on the PSLV-C42 launch will be the SSTL S1-4, a sub-one meter resolution Earth observation satellite with a mass of 440kg that will further enhance SSTL's existing in-orbit observation capabilities.

### **SSL Selected to Define Next-generation Secure Satellite Communications for the U.S. Air Force**

August 16, 2018 - SSL, a Maxar Technologies company has been selected to help define next generation protected communications for the U.S. Air Force Space and Missile Systems Center. SSL will develop, test and analyze antenna subsystem prototypes through a contract with the Space Enterprise Consortium, managed by Advanced Technology International. The award highlights SSL's ability to contribute to U.S. leadership in space with novel concepts for the U.S. Department of Defense's next-generation spacecraft systems. Leveraging its knowledge of trends in satellite communications and next-generation advances both in space and on the ground, SSL will create antenna subsystem prototypes that define and demonstrate key technologies for a resilient, cost-effective, and high performance protected tactical satellite communications capability. The study builds on previous SSL studies to develop and demonstrate next-generation military satellite communications architectures for the U.S. Air Force Space and Missile Systems Center.

### **Boeing to Acquire Millennium Space Systems**

August 16, 2018 - Boeing will acquire Millennium Space Systems, a provider of agile, flight-proven small-satellite solutions, under an acquisition agreement that will expand Boeing's satellite and space portfolio, talent and capabilities. Millennium Space Systems was founded in 2001 and is based in El Segundo, Calif. With approximately 260 employees, the company has developed high-performance satellites for exacting missions ranging from 50 kg to more than 6,000 kg. The acquisition, which is subject to customary conditions, is expected to close by the end of third quarter 2018. Once finalized, Millennium Space Systems will become a Boeing subsidiary, operating under its current business model and reporting to Mark Cherry, vice president and general manager of Phantom Works. The terms of the agreement were not disclosed. The transaction will have no impact on Boeing's 2018 financial guidance or the company's commitment to returning approximately 100 percent of free cash flow to shareholders.

### **ISS-Reshetnev Company to Build Two Satellites for RSCC**

August 16, 2018 - ISS-Reshetnev Company has won a contract to build two new telecommunications satellites Express-AMU3 and Express-AMU7. Contracts for the manufacture of Express-AMU3 and Express-AMU7 have already come into effect. The new satellites are intended to augment Russia's national orbital constellation of communications and broadcasting satellites. The contracts signed by ISS-Reshetnev Company, RSCC – the Russian satellite services provider and the European manufacturer Thales Alenia Space Italia provide for the design, manufacture, testing and in-orbit commissioning of Express-AMU3 and Express-AMU7 satellites and the manufacture of payloads for them. Express-AMU3 and Express-AMU7 satellites will provide advanced communications, television and radio broadcasting services for millions of users in Russia and other countries. These satellites will be based on ISS-Reshetnev's middle-class Express-1000 platforms with payloads operating in Ku-, L- and C-bands – the telecommunications equipment is to be delivered by the Italian division of Thales Alenia Space. Express-AMU3 and Express-AMU7 are due to launch in 2020 to their orbital positions located at 96.5 and 145 degrees East respectively.

### **Stratolaunch Announces New Launch Vehicles**

August 20, 2018 - Stratolaunch announces its new family of launch vehicles that will enter regular service starting in 2020. The company's unique air-launch system will use the world's largest aircraft as a mobile launch platform, capable of deploying launch vehicles that will carry satellites to multiple orbits and inclinations on a single mission. With these new vehicles, Stratolaunch is poised to make access to space convenient, affordable, and routine.

### **U.S. Air Force Declares Second Lockheed Martin GPS III Satellite "Available for Launch"**

August 21, 2018 - As the first Lockheed Martin-built GPS III satellite prepares to ship to the launch pad, the U.S. Air Force has declared that the second GPS III satellite is complete, fully tested and ready to launch. The Air Force's "Available for Launch" declaration is the final acceptance of Lockheed Martin's second GPS III Space Vehicle (GPS III SV02) – declaring it technically sound and ready to launch. GPS III SV02 will bring new capabilities to U.S. and allied military forces, and a new civil signal that will improve future connectivity worldwide for commercial and civilian users. GPS III SV02 now awaits official call up for

launch in Lockheed Martin's GPS III Processing Facility clean room in Denver. In June, the Air Force officially called up its first GPS III satellite for launch.

### **Successful Launch by Arianespace and Vega for ESA and Sustainable Development**

August 22, 2018 - Arianespace has successfully launched the European Space Agency's (ESA) Aeolus satellite, the first space mission designed to acquire profiles of Earth's winds on a global scale. The launch took place on Wednesday, August 22, 2018 at 6:20 p.m. (local time) from the Guiana Space Center (CSG), Europe's Spaceport in French Guiana (South America). Aeolus is the first space mission designed to measure wind profiles across the entire planet. It will deliver data and 3D dynamic maps that will help improve weather forecasting and climate research. The first wind observation satellite using laser technology, Aeolus carries a single instrument, a Doppler wind lidar called Aladin (Atmospheric LAsER Doppler INstrument). This instrument will probe the atmosphere with pioneering ultraviolet laser pulses, which will enhance our understanding of tropical dynamics and processes relevant to climate variability.

### **Chinese Private Space Company to Launch First Carrier Rocket**

August 23, 2018 - China will launch its first solid-propellant carrier rocket developed by a Chinese private company late this year. The ZQ-1 rocket was developed by Landspace, a Beijing-based rocket-maker. Its technicians are former state-owned aerospace industry workers. Carrying a small satellite, the rocket will be launched at the Jiuquan Satellite Launch Center in northwest China. The 19-meter-long rocket has a 1.35-meter diameter, a takeoff weight of 27 tonnes and thrust of 45 tonnes. It is flexible, cost-efficient and has been designed with mature technology and fast response ability. The satellite, Future, carried by the rocket is for space science and remote sensing for a TV show on China Central Television. It will orbit for two years. The company also plans to launch ZQ-2, a liquid-fueled rocket, in 2020.

### **Eagle Technology Joins HawkEye Satellite Partner Program**

August 23, 2018 - New Zealand's Eagle Technology has become one of the first firms to sign up for HawkEye 360's new strategic partner program. Auckland-based Eagle, which provides geographic information systems and geospatial services for New Zealand and the South Pacific Islands, will be able to leverage HawkEye 360's future constellation of low earth orbit smallsats to support its solutions as a strategic partner. The launch of the strategic partners program followed a successful Series A-3 funding round by HawkEye 360, which raised an additional US\$9.6 million for the development of its satellite systems. HawkEye 360 said it expects to launch its first cluster of three experimental satellites later this year. The new funds will go towards its first commercial satellite cluster.

### **Telesat's Telstar 19 VANTAGE Satellite Now Operational**

August 27, 2018 - Telesat announced that its new Telstar 19 VANTAGE high throughput satellite (HTS) is fully operational at 63 degrees West and has entered commercial service. Telstar 19 VANTAGE was launched by a SpaceX Falcon 9 rocket on July 22nd and will serve growing consumer, enterprise and mobility markets across the Americas and Atlantic. It is being operated by Telesat Brasil, a Brazilian satellite company wholly-owned by Telesat. Telstar 19 VANTAGE was built by SSL, a Maxar Technologies company, and is the latest in a new generation of Telesat satellites with capacity optimized to serve the types of bandwidth intensive applications increasingly in demand by users worldwide. It operates from Telesat's prime orbital location of 63 degrees West, the same as Telesat's highly utilized Telstar 14R satellite, and brings a new level of performance and value for satellite broadband requirements on land, at sea and in the air. With its distinct zones of coverage across the Americas and Atlantic, Telstar 19 VANTAGE combines regional beams and high throughput spot beams in Ku-band with additional HTS spot beams in Ka-band.

### **SSL Selected by NASA to Explore Commercial Satellite Assembly and Manufacturing in LEO**

August 29, 2018 - SSL announced that it has been selected by NASA to perform a study exploring the use of commercial habitats in space as satellite manufacturing facilities. In support of NASA's vision of a vibrant space economy, and expanded opportunities for American industry, SSL will study the feasibility of habitable space platforms for building commercial satellites and how they might unlock new capabilities and business paradigms. SSL brings its decades of experience in satellite manufacturing and space-based robotics to developing new architectures that dramatically improve the value, performance, flexibility, and responsiveness of spacecraft services. Transferring spacecraft manufacturing to space eliminates the constraints of launch vehicle volumes and schedules and the need for spacecraft to withstand the harsh conditions of launch. It allows for more simple and capable system designs that can be fielded more

rapidly and economically.

### **Launch of H-IIA F40 with IBUKI-2 and KhalifaSat Aboard**

September 29, 2018 - Mitsubishi Heavy Industries, Ltd. and JAXA hereby announce the launch of the H-IIA Launch Vehicle No. 40 (H-IIA F40) on October 29, 2018 from Yoshinobu Launch Complex at the JAXA Tanegashima Space Center. H-IIA F40 will carry aboard JAXA's Second Greenhouse Gases Observing Satellite "IBUKI-2" (GOSAT-2) and KhalifaSat, a remote sensing Earth observation satellite, developed by the Mohammed bin Rashid Space Centre (MBRSC) in the United Arab Emirates. MBRSC is a Dubai government organization. Utilizing its launch oversufficiency, the H-IIA F40 launch will provide launch opportunities for five small satellites as auxiliary payloads.

## **EXECUTIVE MOVES**

### **Thuraya Names New CEO, CTO and CCO**

August 5, 2018 - Ali Al Hashemi, who has led Yahsat Government Solutions, Yahsat's specialised unit fulfilling defense and governmental client requirements, for the past few years is announced as the new CEO of Thuraya, while former CEO Ahmed Al Shamsi will remain as Advisor to the CEO. Ali Al Hashemi, will at the same time continue to be General Manager of Yahsat Government Solutions. Yahsat has also named Marcus Vilaça as Thuraya's Chief Technical Officer. Marcus will continue his role in Yahsat as the Chief Technical Officer in addition to his newly announced role in Thuraya. Marcus brings over 35 years of experience in the satellite industry, acquired from Embratel, SES, Inmarsat and Yahsat, importantly bringing invaluable experience from the mobile satellite services sector. Shawkat Ahmed is appointed as Thuraya's Chief Commercial Officer succeeding Rashid Baba's tenure as Thuraya's Acting Chief Commercial Officer. Shawkat carries over 22 years of experience in satellite communications attained through occupying senior commercial leadership roles in Yahsat, Thuraya and Telstra V-Comm.

### **RSC Energia Appoints Acting General Director**

August 6, 2018 - At the meeting of the Board of Directors of RSC Energia held in the form of absent voting (voting ends on August 3, 2018), a decision was taken to suspend the General directorship of RSC Energia, Solntsev Vladimir Lvovich from August 4, 2018 due to the termination of an employment contract with him by agreement of the parties. The Board of Directors took a decision to appoint Sergey Yurievich Romanov Acting General Director of RSC Energia from August 4, 2018 until the formation of a new sole executive body (General Director) of RSC Energia by the extraordinary general meeting of shareholders of RSC Energia. At the same time, it was decided to convene an extraordinary general meeting of shareholders in the form of absent voting (the voting ends on September 12, 2018).

### **GatesAir Appoints Jacky Yee to Asia-Pacific Leadership Role**

August 16, 2018 - GatesAir, a global leader in wireless, over-the-air content delivery solutions for radio and TV broadcasters, continues to grow its global sales team with the appointment of Jacky Yee as Head of Sales, Asia-Pacific. Based in Singapore, Jacky will lead a team of four regional sales managers and report directly to Rich Redmond, President and Managing Director, International. Jacky comes to GatesAir with more than 20 years of experience in the broadcast and audio-visual industries, including key regional and director-level sales roles with industry heavyweights such as Tektronix, Extron Electronics, Grass Valley Group and Snell Advanced Media. His vast experience also includes a stint as Sales Manager, Southeast Asia for Harris Broadcast Communications Division – the company from which GatesAir was born. While at Harris, Jacky exceeded sales quota each year.

### **RigNet Announces Lee M. Ahlstrom as Senior Vice President and Chief Financial Officer**

August 20, 2018 - RigNet announced the appointment of Lee M. Ahlstrom as Senior Vice President and Chief Financial Officer (CFO), effective immediately. As CFO, Ahlstrom will report directly to President and Chief Executive Officer, Steven Pickett. He will be responsible for overseeing all financial aspects of the company, including financial planning and analysis, accounting and financial reporting, as well as managing the tax, internal audit, treasury, and investor relations functions. Ahlstrom brings more than 20 years of finance and capital markets experience, an extensive background in strategic planning and investor relations, and a broad range of capabilities to RigNet. Most recently, Ahlstrom served as Senior Vice President and Chief Financial Officer for Paragon Offshore Ltd. and as Senior Vice President of

Investor Relations, Strategy, and Planning.

### **Orbcomm Announces Michael W. Ford as Chief Financial Officer**

August 21, 2018 - Orbcomm announced the addition of Michael (Mike) W. Ford as Executive Vice President and Chief Financial Officer, effective September 4, 2018. Ford will oversee the Company's financial operations, including financial planning and analysis, reporting, accounting, tax and treasury functions, as well as focus on operations management. Ford has more than 30 years of experience as an international business leader for multi-billion dollar revenue companies, heavily focused on strategic business and financial planning as well as operations management. He most recently served as Executive Vice President of Commercial Lending for Emigrant Savings Bank, the largest privately-owned bank in the United States.

### **Kacific Appoints Brandon Seir to Head Broadband Marketing of Products**

August 23, 2018 - Kacific Broadband Satellites has appointed Brandon Seir as Vice President, Sales and Marketing – Asia & International Carriers. He is a marketing, sales and strategic planning specialist with over a decade of experience working in leading international telecommunications, internet service providers and digital technology companies. He spent 11 years over two periods with Roshan (Telecom Development Company), a subsidiary of AT&T, Talia Sonora & Monaco Telecom a GSM cellular provider with over 7.9M customers, initially as Director Sales, and then Chief Commercial Officer. In his role with Kacific Brandon is responsible for overseeing the development and introduction of the company's complete range of satellite broadband products and service offerings leading up to the launch of Kacific1 in 2019. He is also responsible for sales of dynamic solutions to international carriers, ISPs and other service providers in Myanmar, Malaysia, Philippines, Guam, Bhutan, Bangladesh, Timor Leste, Nepal, Brunei and Fiji.

### **David Meltzer Appointed as Secretary General of Global VSAT Forum**

August 27, 2018 - The Global VSAT Forum (GVF) has announced the appointment of David Meltzer to serve as its Secretary General with effect on 27 August 2018. Meltzer brings over twenty five years of experience in the satellite industry, including serving as a board member for both a regional satellite operator and for a mobile satellite operator. Previously, he served for 16 years in various business and legal roles at Intelsat, culminating in serving as Intelsat's General Counsel and Executive Vice President for Regulatory Affairs. Most recently, Meltzer served as the General Counsel and Chief International Officer of the American Red Cross where he led its legal, international disaster relief and development activities.

### **Philippe Oliva Joins Eutelsat as EVP of Sales and Products**

August 30, 2018 - Philippe Oliva is appointed as Executive Vice President of Sales and Products as of September 3rd, 2018. He will report to Michel Azibert, Deputy CEO and Chief Commercial & Development Officer, with a view to succeeding him as Commercial Director during the course of 2019. Michel Azibert will continue to serve as Deputy CEO. Philippe Oliva was previously Vice President and Managing Director of Strategic Accounts at IBM. After starting his career at CIMAD, Philippe joined IBM in 1999 where he held several senior positions including head of Business Services France and Vice President of Integrated Technology Services. During his career at IBM he oversaw the launch of the Cloud business and Hybrid Cloud services in France, then in the United States where he worked for several years. A French national, Philippe is a graduate of Ecole Supérieure des Ingénieurs Commerciaux.

## **REPORTS**

### **7,000 Small Satellites to be Launched over Coming Decade**

August 6, 2018 - According to Euroconsult's latest report, *Prospects for the Small Satellite Market*, a significant expansion is underway in the smallsat market, both in terms of demand and systems' capabilities. About 7,000 smallsats are due to be launched over the next ten years, i.e. a six-fold increase from the 1,200 units launched over the past decade. About 50 constellations, two of which are mega constellations, account for over 80% of the smallsat count. Smallsat applications are multiple. In the past, "technology development" was the dominant application to test future technologies and payloads or for educational purposes.

### **Disruptive New Entrants Lead Small-satellite Launch Race**

August 7, 2018 - Frost & Sullivan's recent analysis, *Small-satellite Launch Services Market Quarterly Update*

Q2 2018, reveals that the market is abuzz with major service providers such as PSLV, CASC, Rocket Lab, JAXA, SpaceX, Roscosmos, and others launching a total of 62 small-satellites in the first quarter of 2018. Frost & Sullivan now expects launch demand to increase to 11,740 small-satellites by 2030 with revenues reaching \$70.10 billion. Commercial players will offer and enable real-time imagery, digital transformation, and seamless global connectivity.

### **Global Assessment of Satellite Capacity Supply & Demand, 15th Edition (GSCSD15)**

August 22, 2018 - NSR's *Global Assessment of Satellite Capacity Supply & Demand, 15th Edition (GSCSD15)* is the longest running and most detailed source for satellite capacity analysis worldwide. Building on over 18 years of regular NSR reporting and in-depth satcom data, GSCSD15 provides key assessments of applications, orbits, frequency bands, capacity pricing and revenue potential across 13 regions.

### **Satellite Constellations: A Critical Assessment Report**

August 28, 2018 - NSR's *Satellite Constellations: A Critical Assessment* provides an in-depth competitive assessment of key satellite constellations within three market segments: Communication HTS, IoT & EO. NSR's *Satellite Constellations: A Critical Assessment* reviews various aspects of the business case including launcher strategy, ground infrastructure costs, manufacturing and replenishment plans, as well as, financing status and distribution for each constellation.

## **UPCOMING EVENTS**

**Vietnam in View**, 5 September, Ho Chi Minh City, Vietnam, <http://casbaevent.com/events/avia-vietnam-in-view-2018/#>

**World Satellite Business Week**, 10-14 September, Paris, France, <http://www.satellite-business.com/en>

**IBC 2018**, 14-18 September, Amsterdam, the Netherlands, <https://show.ibc.org/>

**VSAT Global 2018**, 18-21 September, London, U.K., <https://tmt.knect365.com/vsat-global/>

**Myanmar Connect 2018**, 19-20 September, Nay Pyi Taw, Myanmar, <http://www.capacityconferences.com/Myanmar-Connect>



**APSCC 2018 Satellite Conference and Exhibition**, 2-4 October, Jakarta, Indonesia, <http://apscsat.com>

**APSCC 2018 Youth Development Workshop**, 4 October, Jakarta, Indonesia, <http://apscsat.com/workshop/>

**Satellite Technology Asia**, 9-11 October, Singapore, <http://www.intelligence-sec.com/events/defence-satellites-2018>

**Satellite Innovation 2018**, 9-11 October 2018, Silicon Valley, CA, USA, <https://2018.satelliteinnovation.com/>

**VSAT Congress 2018**, 15-16 October, Washington D.C., USA, <https://www.vsatcongress.com>

**Broadcast Indonesia 2018**, 24-26 October, Jakarta, Indonesia, [www.broadcast-indonesia.com](http://www.broadcast-indonesia.com)

**China Satellite 2018**, 24-26 October, Beijing, China, [www.china-satellite.org](http://www.china-satellite.org)

**Asia Video Summit 2018**, 29 October - 1 November, Hong Kong, <https://asiavideosummit.com/>

### **Global MilSatCom 2018 & Small Satellite and Disruptive Space Technology Focus Day**

5-8 November, London, UK, <http://www.globalmilsatcom.com/janesw>

As Europe's leading military communications event for satellite professionals, Global MilSatCom's reputation has been built on the high-level international speakers and decision makers it attracts and the fantastic interactive opportunities offered during the conference sessions, workshops and networking receptions. NEW FOR 2018, a pre-conference 'Small Satellites and Disruptive Space Technology Focus Day' on the 5th November, exploring how the next generation of launch capability, research and development of small, cube, micro and nano-satellites and how military agencies and industry are collaborating in this new era of SATCOM. Register for the conference by 28th September to save £100! To register or for more information visit: <http://www.globalmilsatcom.com/janesw>

**Asia-Pacific Regional Space Agency Forum (APRSAF-25)**, 6-9 November, Singapore, [https://www.aprsaf.org/annual\\_meetings/aprsaf25/meeting\\_details.php?mail159](https://www.aprsaf.org/annual_meetings/aprsaf25/meeting_details.php?mail159)

**Myanmar Satellite Forum 2018**, 8 November, Nay Pyi, Myanmar, <http://www.talksatellite.com/MSF%202018%20a.html>

**CYBERSAT18**, 14-16 November, Arlington, VA, USA, [www.cybersatsummit.com](http://www.cybersatsummit.com)

### **Editorials and Inquiries**

*News, comments, and suggestions can be sent to the editor at:*

Inho Seo, Editor, APSCC Publications  
Asia-Pacific Satellite Communications Council (APSCC)  
T-1602, 170, Seohyeon-ro, Bundang-gu, Seongnam-si,  
Gyeonggi-do, SEOUL 13590, Rep. of KOREA  
Tel: +82 31 783 6247 Fax: +82 31 783 6249  
E-mail: [editor@apscc.or.kr](mailto:editor@apscc.or.kr) Website: [www.apscc.or.kr](http://www.apscc.or.kr)

### **About APSCC**

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