

# APSCC Monthly e-Newsletter

## AUGUST 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 July 1 to July 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!

#### **APSCC Welcomes OneWeb as New Member**

OneWeb's is a global communications company with mission to enable affordable Internet access for everyone - connecting every school on Earth and bridging the digital divide by 2027. OneWeb is building a global communications network with a constellation of Low Earth Orbit satellites that will provide low latency, high-speed broadband to billions of people around the world. With more than 8 terabits per second of new capacity, it will transparently extend the networks of mobile operators and ISPs to serve new coverage areas, bringing voice and data access to consumers, businesses, schools, healthcare institutions and other end users. In 2018, OneWeb will launch its first satellites, and our capacity, coupled with our low cost and easily deployed user terminals, OneWeb will offer ubiquitous connectivity across the globe.

### SATELLITE BUSINESS

#### **Intellian FleetBroadband Terminals Receive Japan TELEC Certification**

July 2, 2018 - Intellian, the world's leading provider of satellite communication antenna systems, announced that Intellian's FleetBroadband terminals, FB250R and FB500R, successfully received Japan's TELEC certification. TELEC is a leading Japanese radio equipment certification and testing organization and recently, it has also been broadening its operations in certification and testing for overseas markets, including the EU. Intellian has been given the TELEC Radio equipment conformity certification, which is to certify that the specified radio equipment conforms to the technical standards under the Radio Act of

Japan. With this confirmation of the Intellian FB250R and FB500R, now all Intellian Fleet Xpress and FleetBroadband terminals, including Intellian GX100 and GX60, are certified by TELEC and this enables Intellian to provide Inmarsat's Fleet Xpress service with FleetBroadband backup to shipping companies in Japan.

### **L3 Strengthens Space Mission Capabilities with Acquisition of Applied Defense Solutions**

July 2, 2018 - L3 Technologies acquired Applied Defense Solutions (ADS), a leading aerospace engineering, software development and space situational awareness company. The purchase price was approximately \$50 million, subject to customary working capital adjustments. ADS is expected to generate approximately \$15 million in sales for the remainder of calendar year 2018 and approximately \$50 million for calendar year 2019. The transaction is expected to be EPS neutral for 2018 and accretive in 2019. Headquartered in Columbia, Maryland, with offices in Herndon, Virginia, and Colorado Springs, Colorado, the business will be renamed L3 ADS and provides the intelligence community, DoD, NASA and other customers with space systems mission planning, space exploration and satellite operations, protection and resiliency.

### **CETel Expands Service Portfolio with SatADSL**

July 3, 2018 - SatADSL, a provider of professional VSAT services via satellite has joined forces with CETel – a leading provider of global satellite, fiber and wireless-enabled communications solutions – to deliver an expanded range of services in Ku- and C-band across Africa and the Middle East. Under the agreement, SatADSL will provide CETel with its innovative Cloud-based Service Delivery Platform (C-SDP), a complete OSS/BSS carrier-grade, fully redundant platform. This will enable CETel to deliver cost effective Virtual Network Operator (VNO) flex services to serve customers in Corporate & Enterprise, Energy, Mining, Construction, Telco & ISP, Marine and Government & NGO sectors.

### **KT Unveils 5G Emergency Rescue Platform 'SKYSHIP'**

July 5, 2018 - KT Corp. has unveiled a next-generation platform for disaster and safety management, in its latest effort to pioneer new businesses with its fifth-generation (5G) and information and communications technologies (ICT). KT introduced the new platform, named SKYSHIP, at a press briefing last week. The SKYSHIP platform operates a special aircraft and a mobile communication center to remotely control drones and robots that carry out search and rescue operations for disaster survivors. Rescuers on the ground are also assisted with augmented reality (AR) glasses that have a direct line of communication to doctors at nearby hospitals for assistance delivering emergency treatment. The Korean telecom leader is gearing up to diversify its business as it prepares for the launch of the world's first nationwide 5G wireless network in March next year. KT's SKYSHIP platform also comes in time for South Korea's 1.7 trillion won (US\$ 1.5 billion) nationwide public safety Long Term Evolution (PS-LTE) network, a project beginning later this year and finishing in 2020.

### **Telesat and Gilat Join Forces to Develop Broadband Communication Modem for LEO Satellites**

July 9, 2018 - Gilat Satellite Networks Ltd. announced a collaborative project with Telesat for development of broadband communication technology using low earth orbit (LEO) satellites. CIIRDF will fund the project to facilitate faster and more secure data transmission over satellite. The joint Canada-Israel innovation project will combine Telesat's and Gilat's engineering capabilities to do live testing, using Gilat modem technology, over the Telesat Phase-1 LEO satellite launched earlier this year. The adaptation of Gilat's leading-edge modem technology to support advanced LEO constellations, such as the system Telesat is developing, will highlight the benefits that a high-quality satellite broadband experience can deliver to billions of potential users worldwide who live beyond the reach of fiber networks.

### **Viasat's Small Tactical Terminal Reaches 1,000 Production Units Shipped**

July 9, 2018 - Viasat has surpassed a key milestone of 1,000 KOR-24A Small Tactical Terminal (STT) production units shipped. The 1,000th terminal has been installed on a United States Marine Corps AV-8B Harrier II attack aircraft, one of the numerous aircraft models on which the STT has been integrated and fielded. STTs are operational on air, ground and maritime platforms, and are currently deployed and in use by all U.S. military armed forces and by military organizations of five international coalition partner nations. In addition to shipping the 1,000th production unit in April 2018, Viasat is steadily increasing production deliveries to 50 per month in response to growing market demand. The STT is a significant contributor to Viasat's portfolio of Non-Developmental Item (NDI) offerings leveraging Link 16 for the U.S. and international defense markets.

### **Sky and Space Global Signed MOU with Chinese Satellite Communication Company**

July 10, 2018 - Sky and Space Global Ltd (SAS) announced it has a MoU with Beijing Commsat Technology Development Co., Ltd. (Commsat) to test and explore how the SAS network can be incorporated into the Commsat IoT offering. Commsat is a Beijing based satellite communications company that is developing a Low Earth Orbit (LEO) constellation to provide IoT services to users and corporations mainly in the Chinese geographical region. Under the terms of the MOU, SAS and Commsat will work collaboratively to test and explore how SAS' advanced nano-satellite technology can be incorporated and utilised to significantly advance and enhance the current Commsat network offering. This is further validation of the elite capabilities of the SAS network. SAS will also explore with Commsat the possibility of joint provision of IoT and additional narrow-band communication services in China, and cooperate to further the business of SAS in Greater China.

### **Hispasat and LeoSat Sign Strategic Investment Agreement**

July 10, 2018 - LeoSat Enterprises, which is launching a constellation of low-earth-orbit communications satellites providing the fastest, most secure and widest coverage data network in the world, has entered into an agreement with Hispasat, the Spanish national satellite operator, to invest in LeoSat, both companies announced today. With this agreement, Hispasat joins Asia's largest satellite operator SKY Perfect JSAT, in the growing trend for satellite operators to future-proof their communications solutions through the development of low earth orbit (LEO) capabilities. With Hispasat now joining SKY Perfect JSAT, both companies will work with LeoSat to accelerate a number of key activities including, vendor selections for customer premise equipment and ground operations, as well as further optimization of the satellite platform. The partnership will also enable LeoSat to leverage both the commercial and regulatory expertise of these two well-established operators.

### **Comtech Wins Follow-on Contract for High-Power Military SATCOM TWTAs**

July 10, 2018 - Comtech Xicom Technology has received a contract for more than \$4.8 million from a U.S. military integrator for high-power satellite communication (SATCOM) traveling wave tube amplifiers (TWTAs). 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. Please visit [www.xicomtech.com](http://www.xicomtech.com) for more information.

### **Telesat to Collaborate with General Dynamics Mission Systems**

July 10, 2018 - Telesat has signed a MOU with General Dynamics Mission Systems under which the companies will cooperate in developing user terminals to meet the mission critical needs of government and commercial customers who choose to make Telesat LEO a core component in their communications infrastructure. Telesat LEO is designed to deliver transformative, fiber-like broadband for commercial and government customers throughout the world. The initial constellation will consist of approximately 120 state-of-the-art satellites providing full global coverage and Telesat is evaluating options to expand its system beyond this initial configuration. As previously announced, satellite industry leaders including Global Eagle Entertainment, OmniAccess and Optus Satellite have agreed to collaborate in live, over-the-air trials on Telesat's Phase 1 LEO satellite. Other companies that serve major markets of interest to Telesat will also be participating in live testing.

### **Globecomm Delivers Global VSAT Connectivity for Briese Schiffahrts Fleet Expansion**

July 10, 2018 - Globecomm, one of the leading providers of maritime connectivity services, has supplied its global Ku-band VSAT service to specialist shipowner and manager Briese Schiffahrts in support of its fleet growth plans. Long-time Globecomm customer Briese is undertaking a program of fleet renewal, constructing a series of eight 'Open Top Eco 5000' multi-purpose vessels, designed to consume 30% less fuel but with increased crane and cargo capacity. The first of four ships was christened in mid-April 2018 at Zhejiang -Zengzhou Shipbuilding Co with three more of the 90-meter long, 3415gt, Dutch flag, ice-class 1A ships slated for delivery later this year. Another new building, the project cargo carrier BBC Russia – a sistership to the 12,500-dwt Jan – was delivered from Jiangsu Hongqiang Marine Heavy Industry in April. With all of its vessels outfitted with a combination of a Sailor 900 VSAT terminal, one or more Iridium OpenPort L-Band as a back-up and the Globecomm Nimbus network management 'smartbox,' Briese will enjoy unlimited data for enterprise users and crew members.

### **Eutelsat Partners with Intelsat and SES in U.S. C-band Spectrum Proposal**

July 12, 2018 - Intelsat S.A., SES, and Eutelsat announced that they are aligned on a market-based proposal for the future use of the lower C-band spectrum in the U.S. Eutelsat has agreed to join the breakthrough proposal initiated by Intelsat, Intel and SES. The market-based proposal was developed in response to a proceeding initiated by the U.S. Federal Communications Commission (FCC). The proposal reflects the unique U.S. telecommunications environment and aims to protect the quality and reliability of the extensive services provided by satellite operators in the C-band spectrum to U.S. broadcasters, media, and data companies. The proposal establishes a commercial and technical framework that would enable terrestrial mobile operators to quickly access spectrum in the 3,700 to 4,200 MHz frequency band in the U.S., speeding the deployment of next-generation 5G services. With Eutelsat joining the proposal, the three satellite operators will continue to work with customers, other stakeholders, and the FCC on the market-based proposal. The next phase of this effort will begin with the FCC's planned adoption of a Notice of Proposed Rulemaking on July 12. Intelsat, SES and Eutelsat together represent a very substantial majority of the relevant satellite C-band spectrum in use in the U.S.

### **Thaicom, Royal Thai Navy and Top Engineering Taking a Step towards 'UAV'**

July 12, 2018 - Thaicom Public Company Limited, Royal Thai Navy and TOP Engineering Corporation Co., Ltd. has officially signed the Memorandum of Understanding on the Development of "Command, Control and Communication of Unmanned Aerial Vehicles (UAV) in the Gulf of Thailand". The main purpose of this MOU is to establish mutual collaboration on the UAV research, knowledge sharing and initiative in all up-to-date innovation in order to enhance and expand the limitation of UAV operations by using the satellite capability.

### **EL AL Launches New In-flight Wi-Fi System, Powered by Viasat**

July 12, 2018 - EL AL Israel Airlines announced it officially launched its new fast, reliable commercial in-flight Wi-Fi service, powered by global communications company, Viasat. EL AL was Viasat's European launch customer. Since first announcing their relationship, both companies undertook broad market studies focused on in-flight Wi-Fi passenger demand, engagement and service offerings, including a customer beta phase to determine internet package types. EL AL also began to re-energize its fleet taking on new Boeing 787 Dreamliners – a recent addition to Viasat's certified platforms. As of today, 15 EL AL aircraft have been outfitted with Viasat's latest equipment, providing high-speed connectivity to EL AL's mix of Boeing 787 Dreamliners, Boeing 737-900 aircraft and Boeing 737-800 planes. By mid-2020, EL AL expects to have the majority of its fleet connected with the Viasat service.

### **Airbus Reveals its Network for the Sky Military Communications Solution**

July 13, 2018 - Airbus will unveil its secure networked airborne military communications solution, Network for the Sky (NFTS). NFTS combines different communication technologies to form one resilient global mesh network, allowing aircraft to be fully part of a high-speed connected battle space. Leveraging its unique breadth of experience in aircraft, satellites and secure military communications, Airbus is preparing a communication network solution that is interoperable between aircraft, satellites, command centers and mobile units deployed on the ground or at sea. NFTS will integrate various technologies, such as satellite links with geostationary, medium and low Earth orbit constellations, tactical air-to-ground, ground-to-air and air-to-air links, voice links, 5G mobile communication cells and laser connections, into a single global secure network.

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

July 16, 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. The iDirect 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. VT iDirect's next-generation technology enables interoperability between DVB-S2 and DVB-S2X which not only drives improved efficiencies but also delivers more Mbps directly to the aircraft or maritime vessel. This, combined with VT iDirect's unique seamless beam switching and mobility feature set, powers Inmarsat's state-of-the-art, uninterrupted, global connectivity service.

### **Bank BRI Selects Hughes to Power Next Generation Satellite Network**

July 17, 2018 - Hughes Network Systems, LLC (Hughes) announced it has been selected by PT Bank Rakyat Indonesia (Persero) Tbk. (Bank BRI), a state-owned bank and the largest bank in Indonesia, to deploy its JUPITER™ System to power services over BRIsat, Bank BRI's satellite covering Indonesia and Southeast Asia. The next-generation satellite broadband solution brings Bank BRI an enterprise-grade wide-area network (WAN) to connect tens of thousands of sites with the Quality of Service (QoS) capabilities, scalability and availability necessary to meet customer banking needs throughout the region. Incorporating the industry's most advanced networking capabilities, the JUPITER System Gateway provides a single platform compatible on both C- and Ku-band satellite capacity, resulting in enhanced operational efficiencies and bandwidth utilization. The solution also incorporates redundant primary and secondary gateways to deliver 99.9 percent availability, ensuring Bank BRI can serve more customers in Indonesia with the reliability and quality necessary for critical banking needs. In a competitive bidding process, Bank BRI rated the Hughes solution technically higher than other vendors, and the company was recognized for having the highest performing terminals supporting up to 300 Mbps of throughput, along with the multi-service capabilities necessary for future scalability.

### **EM Solutions Cobra M2 Ka- dual-band Maritime Terminal Receives WGS Certification**

July 17, 2018 - EM Solutions Cobra M2 Maritime Satcom Terminal has successfully completed the WGS testing and certification process and been notified by the certification authority that the terminals are now able to operate at Ka-Band on the WGS Satellite Network. The testing phases of the certification process were completed by the Australian Certification Authority within the Satcom Systems Program Office. The Cobra terminals have already been operating on the Inmarsat GX network for nearly two years on numerous vessels for an Australian Government customer, and this new certification provides further service assuredness by providing access to both military and commercial Ka-band satellites.

### **CNES Selects Zodiac Data Systems to Supply Autonomous Range Safety System**

July 17, 2018 - As the operator of the Guiana Space Centre (CSG), CNES is responsible on behalf of the French government for assuring the safety of people and property on each launch from the base, a task that involves being able to track launchers very precisely at all times so that a flight can be terminated if it poses a risk. This tracking function is currently accomplished by a suite of radars. A first version of the KASSAV (Kit Autonome de Sécurité pour la SAuvegarde en Vol) autonomous range safety system set to enter service in 2019 will enable more precise tracking of launchers. Designed by Zodiac Data Systems, KASSAV employs an innovative hybrid technology that combines positioning data from an inertial measurement unit (IMU) with a receiver using navigation data from the European Galileo constellation, which offers greater precision than the U.S. Global Positioning System (GPS). KASSAV is scheduled to enter operational service in late 2019 on an Ariane 5 launcher. Ultimately, it will equip all launchers operated from the CSG, as well as the Callisto demonstrator vehicle.

### **Inmarsat and ESA Complete Major Milestone toward Air Traffic Modernization**

July 17, 2018 - Inmarsat and the European Space Agency (ESA) have successfully completed the first test flight using the world's most advanced aviation satellite technology for their Iris program in support of European air traffic modernization. The evaluation is a significant step forward in realizing more precise flight surveillance and more efficient air traffic management. The Iris program is a public-private partnership, sponsored by ESA and led by Inmarsat to enable secure, high bandwidth datalink communications over Europe. The three-hour test flight, which departed from Amsterdam Schiphol Airport, was supported by the Iris technology partners Honeywell, CGI and SITAONAIR using Inmarsat's SB-S L-band service. Using a Cessna Citation II aircraft provided by Dutch company NLR, a number of real-time communication exchanges were completed between the cockpit and flight control facility over continental and oceanic airspace.

### **Comtech Receives \$5.1 Million of Funding to Support the U.S. Army Blue Force Tracking Program**

July 18, 2018 - Comtech Telecommunications Corp. announced that during its fourth quarter of fiscal 2018, its Command & Control Technologies group, through its Maryland-based subsidiary, Comtech Mobile Datacom Corporation, which is part of Comtech's Government Solutions segment, was awarded option period one of a contract to support the BFT-1 program. The option has an overall potential value of approximately \$8.0 million. Including this order, to-date funding in the overall amount of \$5.9 million has been received. The overall funded value of the contract inclusive of the Base and Option Year 1 is approximately \$13.5 million. These contract modifications are part of the five-year BFT-1 sustainment

support contract for the U.S. Army's Project Manager Mission Command (PM MC) Blue Force Tracking ("BFT-1") program. Comtech continues to perform engineering services, satellite network operations and program management through a Firm Fixed Price (FFP) contract with Time & Materials (T&M) and Cost Reimbursement elements. Option period one performance period began April 15, 2018 and ends April 14, 2019, and the contract provides for three additional twelve-month option periods, exercisable by GSA.

### **Intelsat Joins the Seamless Air Alliance**

July 19, 2018 - Intelsat S.A announced that it has joined the Seamless Air Alliance, a consortium dedicated to the development and promotion of standards to facilitate a better, more seamless, inflight connectivity experience for passengers. The standards would eliminate the immense costs and hurdles commonly associated with acquisition, installation, and operation of data access infrastructure by streamlining system integration and certification, providing open specifications for interoperability. More importantly, it would empower mobile operators to extend their services into airline cabins and airline passengers to board any flight on any airline anywhere in the world and use their own devices to automatically connect to the Internet, with no complicated login process and no paywall to scramble over.

### **Finnair Launches Viasat's Best-in-Market In-Flight Internet Service on European Flights**

July 19, 2018 - Finnair is launching a new high-speed internet service on its narrow-body Airbus fleet on European flights. From July 19 onwards, Finnair customers will be able to enjoy the industry's fastest in-flight connection speeds – even gate-to-gate – enabling each customer to use the internet as they do on the ground, from web surfing and online shopping to listening to music and even watching movies and TV shows from popular video streaming services. Finnair partnered with global communications company, Viasat Inc., to deliver the high-speed in-flight internet service, which has already been installed on 6 of Finnair's narrow body Airbus aircraft. By the end of this summer about 20 aircraft are expected to be installed with internet connectivity, with the entire narrow-body Airbus fleet expected to be internet connected by summer 2019.

### **Airbus Launches AirSense and Signs Strategic Partnership with Aireon**

July 19, 2018 - Airbus Defence and Space has launched AirSense, an advanced analytics solution enabled by multi-source surveillance data, based on global Automatic Dependent Surveillance-Broadcast (ADS-B) data. AirSense is based on various aircraft positions data feeds. The agreement recently signed at Farnborough Airshow forms a strategic partnership between Airbus and Aireon, provider of global, space-based ADS-B data. This partnership is enabling AirSense to accurately track any aircraft in real-time and identify flight-related events around the globe. With upcoming International Civil Aviation Organization (ICAO) requirements and growing volumes of air traffic, aviation stakeholders increasingly require real-time situational awareness on a global scale – supporting effective decision-making. AirSense now combines Aireon's global, space-based ADS-B data with unique Airbus assets and domain expertise to offer advanced analytics leading to further enhance the aircraft situational awareness, optimize flight routes, increase airport capacity, optimize airspace utilization and improve the overall travel experience. The collaboration also paves the way to further develop applications for improved industry operations delivered through the various Airbus service offerings.

### **Sky and Space Global to Bring Nano-Satellite Based Communications to the Caribbean**

July 23 2018 - Sky and Space Global Ltd is stepping up its efforts to bring nano-satellite based communications to the Caribbean. In order to target the Caribbean, SAS is holding discussions with the Caribbean Telecommunications Union (CTU) about the use of its novel nano-satellite technology, following a successful demonstration of the company's 3 Diamonds telecommunications network. The demonstration of the narrowband network's capabilities on July 12 took place at the Information and Communication Technologies (ICT) conference held in Georgetown, Guyana. The presentation team also attended a tour of rural Guyana where the SAS technology is most needed to ensure a prosperous economy. Nano-satellite narrowband services to the Caribbean region will be provided by SAS' Pearls constellation once deployment commences in 2019. This supports the SAS business model of providing connectivity to equatorial locations such as the Caribbean, where these services are required. In 2017 SAS successfully launched its '3 Diamonds' nano-satellites as a proof of concept. The timetable calls for launching a constellation of 200 nano-satellites beginning next year with full scale deployment by 2020.

### **Hughes 63W Payload on Telstar 19 VANTAGE Satellite Successfully Launched**

July 23, 2018 - Hughes Network Systems, LLC, announced the successful launch of its Hughes 63W Ka-

band hosted payload on the Telstar 19 VANTAGE (Telstar 19V) satellite. With this new High-Throughput Satellite (HTS) capacity over South America, Hughes will offer HughesNet broadband services to businesses and residences, managed network services to enterprises, cellular backhaul to mobile network operators and community Wi-Fi solutions to enable governments to bridge the digital divide. Hughes will deploy its next-generation JUPITER™ System technology for the ground system and customer premises equipment to deliver broadband services on Hughes 63W. The JUPITER System supports a wide range of applications including consumer and small- and medium-sized business (SMB) broadband internet service, community Wi-Fi, cellular backhaul, managed network services and mobility, including aeronautical services. Services on Hughes 63W are expected to begin in early fourth quarter 2018, after Telesat and SSL complete orbit-raising and in-orbit testing of Telstar 19V. Hughes has signed a 15-year agreement with Telesat for the Ka-band capacity.

#### **Telstra Selects Gilat for 4G Mobile Service Expansion to Remote Locations across Australia**

July 24, 2018 - Gilat Satellite Networks Ltd. announced that Telstra, a leading global telecommunications and technology service provider, chose Gilat's backhaul solution to expand its 4G mobile service throughout remote locations across Australia. Gilat's satellite backhaul solution enables fast and smooth integration into Telstra's network. Gilat's DVB-S2X Capricorn VSAT, member of the SkyEdge II-c platform, is a key part of Telstra's 4GX-lite Mobile Satellite Small Cell offering. Telstra's service will bring coverage to new areas for the benefit of customers such as rural farmers, mining companies and local councils. Gilat's SkyEdge II-c platform delivers high spectral efficiency and optimized space segment via advanced transmission and Gilat's innovative LDPC fast adaptive return access scheme. Gilat's solution supports integration at both layer-2 and layer-3 with a full end-to-end encryption.

#### **Cobham Announces Success for Connected Cockpit Solutions at Farnborough**

July 24, 2018 - Cobham announced the latest orders for its AVIATOR satcom-powered cockpit connectivity solutions at Farnborough International Air Show this year. Demonstrating significant industry support for the systems, Cobham confirmed that Shenzhen Airlines has selected the AVIATOR 300D system for its entire Airbus A320 fleet. Cobham also revealed details of a five-year \$40m deal to deliver its AVIATOR 700D systems for integration in the C-130J Super Hercules fleets as part of the Block 8.1 upgrade program. Chinese operator Shenzhen Airlines ordered 77 AVIATOR 300D systems, powered by Inmarsat's next-generation SB-S satellite IP platform, for the Airbus aircraft, enabling unprecedented visibility into operations through dedicated IP connectivity between the aircraft and the ground.

#### **Capricorn Space Secures Licenses to Establish Satellite Ground Segment Infrastructure in Australia**

July 25, 2018 - Recently established Capricorn Space Pty Ltd has secured licenses from the Australian Communications and Media Authority (ACMA) that allows the Company to establish ground infrastructure in Australia to support a diverse range of satellite missions. Founded in early 2018 and funded by the Knowles Group of Companies, Capricorn Space will now finalize site and infrastructure selection with plans to begin commercial service in early 2019. Initial sites will be established on the west coast and in the south east of Australia and will enable satellites to be accessed across much of the southern hemisphere. Initial licenses have been secured in the UHF, S and X frequency bands which are expected to prove attractive to many SmallSat and CubeSat operators. Whilst there is significant infrastructure to support these services in the northern hemisphere there is lack of capability south of the equator. Capricorn Space intends to provide a range of service options to its customers including establishing partnerships with existing international infrastructure providers to significantly improve the capability of satellite operators to control and distribute information from their space assets.

#### **ip.access Collaborates with Blue Arcus Technologies to Improve Satellite Backhaul for Rural Areas**

July 26, 2018 - ip.access announced the collaboration with Blue Arcus Technologies Inc., a company dedicated in providing the best network solution and telecom engineering, to improve satellite backhaul for rural deployments. A trial in Jakarta, Indonesia using 3G technology has demonstrated significant cost savings of an estimated \$1,000 per site per month. Due to the high cost of satellite backhaul and its performance limitations, subscribers in remote and rural portions of the world are typically limited to using voice centric technology such as GSM. At the same time, issues with VoLTE latency mean that LTE is not viable for rural users who require voice services. To offer a solution to this significant challenge, Blue Arcus Technologies Inc. and VSAT provider Lintasarta carried out a live speed, performance and QOS testing using ip.access' RAN infrastructure and Blue Arcus' optimisation software. The test was completed using service provider Indosat Ooredoo's network and using satellite backhaul with VSAT downlink

bandwidth of 1Mbps and an uplink of 512Kbps.

### **Taqnia Space Contracts Additional Capacity from Eutelsat to Expand in-Flight Connectivity Services**

July 30, 2018 - Saudi Arabia's Taqnia Space (TSC) has signed a multi-year contract with Eutelsat including incremental multi-transponder wide-beam capacity on the EUTELSAT 70B satellite as well as the fifth HTS spotbeam on EUTELSAT 3B, on which it already operates the four others. This incremental capacity will enable Taqnia Space to add more space assets to its high-density bandwidth coverage over MENA and Europe, and expand for the first time TSC in-flight connectivity services over Central and South-East Asia. New capacities added to TSC aero platform will be utilized as a part of global connectivity package called UON, expected to be launched on the Saudia fleet in the fourth quarter of 2018. Using their personal devices (laptops, tablets and smartphones), airline passengers flying over these regions will be able to enjoy live television, connect to broadband Internet, and benefit from cellular voice or data services on aircraft equipped with TSC aero connectivity solution.

### **Tier-1 Mobile Network Operator in Latin America Selects Gilat for LTE Satellite Backhaul**

July 30, 2018 - Gilat Satellite Networks Ltd. announced it was chosen for an LTE satellite backhaul project for a tier-1 Mobile Network Operator (MNO) in Latin America. Gilat was selected due to its field proven large network expertise and highly efficient technology. Gilat will deliver reliable 4G cellular backhaul to over one hundred remote locations in Latin America during the second half of 2018 and the first half of 2019, with further expansions expected in the coming years. The satellite backhaul solution will be deployed with Gilat's SkyEdge II-c platform, including the highly efficient DVB-S2X enhanced VSAT, and will also include installation services and initial hub operation.

### **Viasat's Dual-band Airborne SATCOM Antenna Completes FAA Certification and Testing**

July 30, 2018 - Viasat announced its Ku-/Ka-band multi-network, multi-mode Global Mobile Antenna (GMA) 5560-101 has successfully completed the Federal Aviation Administration (FAA) D0-160G certification process and the U.S. Air Force Materiel Command (AFMC) C-17 Modified Airworthiness Certification Criteria (MACC) testing. By completing both the certification and test programs, the Viasat antenna has demonstrated it can provide powerful in-flight broadband connectivity, enabling advanced situational awareness, en-route mission planning, and a host of other applications that demand the highest forward and return link capacity available.

### **NorthTelecom Announces Strategic Partnership with KNS**

July 30, 2018 - In a strategic move, NorthTelecom, one of the leading global satellite service provider, has entered into a partnership agreement with KNS, a leading Marine Antenna manufacturer. NorthTelecom's aggressive market penetration strategy in the oil & gas and maritime sector can be gauged by its earlier acquisition of Scopetel, a Malaysia based Telecommunication Company with expertise particularly in oil & gas and maritime sector. With this new partnership with KNS, NorthTelecom further strengthens its position globally, especially in the South Asian market. By leveraging their respective competitive edge, especially their commitment to meet customer needs, both NorthTelecom and KNS by means of this agreement, will be able to increase the profitability of their market share and client base. Under this agreement, apart for proactive support and assistance to KNS to build together their global outreach, NorthTelecom will also provide standby storage facilities for antennas manufactured by KNS in their state of art warehousing facilities across the globe.

### **Bangladesh Opens Satellite Ground Stations**

July 31, 2018 - Bangladeshi officially opened two ground stations for the country's first satellite code-named "Bangabandhu Satellite-1". The ground stations are situated at Telipara in Gazipur on the outskirts of capital Dhaka and Bethbunia in southeastern Bangladesh's Rangamati district. May 12 this year was a red-letter day for Bangladesh when the country ushered in a new era by launching its first "Bangabandhu-1" satellite. The launch made Bangladesh the 57th nation in the world and fourth in South Asia after India, Pakistan and Sri Lanka to own a satellite.

### **ITC Global Extends Contract for Nonprofit Youth With A Mission Medical Ships**

July 31, 2018 - ITC Global announced a three-year contract extension with Youth With A Mission Medical Ships Australia, Ltd (YWAM MSA). Under terms of the agreement, ITC Global will provide critical connectivity services to the nonprofit's medical ship serving the Papua New Guinea (PNG) region, along with new crew welfare services for staff leisure use not previously available to the YWAM team. The all-

volunteer-operated vessel based in Townsville, Queensland, Australia is staffed by medical professionals dedicated to helping to build strength within Papua New Guinea's health system by working in collaboration with national and provincial health authorities to deliver medical services and supplies to remote villages. YWAM MSA is a charity organization that aims to care, connect, serve and build with individuals and communities across PNG.

### **Infostellar Partners with Bright Ascension, GMV, Spaceit for Mission Control Software Solutions**

July 31, 2018 - Infostellar, a satellite communications infrastructure provider developing a quick and flexible ground station network called StellarStation, has entered multiple partnership agreements with mission control software providers to pre-integrate StellarStation into their software products. These partners include Bright Ascension and Spaceit. StellarStation has also been deemed compatible with GMV's software products and can be integrated in the future according to customer demand. As a result of this partnership, users of these mission control software products will have the option of choosing StellarStation as a ready-made ground station network without worrying about custom integration. This minimizes the time and investment needed to secure ground services, allowing users to focus on the main developmental challenges of their missions. By pre-integrating mission control software and ground station networks, Infostellar hopes to minimize labor and lead time for satellite operators.

### **Citilink Signs Fleet-wide Contract for GX Aviation Inflight Broadband**

July 31, 2018 - Inmarsat has signed a contract with Mahata Aero Teknologi (MAT), an Indonesian wireless technology provider, to deploy our GX Aviation inflight broadband solution on a fleet of 50 Airbus A320 aircraft for Indonesian low-cost airline Citilink. Citilink, a subsidiary of Indonesian national airline Garuda, was named Asia's Best LCC at the TripAdvisor Travellers Choice Awards 2018 and has a four-star rating by Skytrax. Installations onboard the first aircraft are expected to commence later this year.

### **SES and Leading Mobile Network Operators to Enable End-to-End 5G Platform**

July 31, 2018 - SES continues its leadership in satellite-enabled 5G networks by providing satellite fleet capacity, ground infrastructure and end-to-end solutions to the 5G Verticals Innovation Infrastructure (5G-VINNI) project, SES announced. These contributions will enable 5G demonstrations and validation of the target 5G Key Performance Indicators and use cases. The project will explore solutions in areas such as public safety, eHealth, shipping, transportation, media and entertainment, and automotive. The 5G-VINNI project is supported by the EU's 5G Infrastructure Public Private Partnership (5G-PPP) Horizon 2020 Research and Innovation programme, and is aiming to accelerate the uptake of 5G in Europe. The project is led by Telenor Group and comprises 23 partners including leading mobile network operators (MNOs) and industry vendors. Among key 5G-VINNI objectives are to design 5G end-to-end facility and interworking sites, to provide user friendly orchestration, and to develop a viable business model to demonstrate the value of 5G solutions and enable their widespread adoption.

## **BROADCASTING**

### **MEASAT Expands Its Video Neighborhood in South Asia**

July 2, 2018 - MEASAT Satellite Systems Sdn. Bhd. (MEASAT) announced that it has expanded its video neighborhood in South Asia with the distribution of News24, Sagarmatha TV and Prime TV. News24 is the premium news channel of Nepal which shares ground breaking news of the region and exclusive interviews with prominent figures in Nepal. Sagarmatha TV is the first Nepali news broadcast channel from Nepal dedicated to keep its audiences informed of events happening in Nepal and to display Nepalese culture to the multinational communities in America and around the world. Prime TV one of the newest channel in Nepal is designed to serve all genres from entertainment, infotainment, news and views. The 91.5° E prime video hot slot is home to the MEASAT-3, MEASAT-3a and MEASAT3b satellites, forming one of the region's strongest video neighborhoods. 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.

### **Sports Star of Pakistan adds HD channel 'Public News' on AsiaSat 7**

July 4, 2018 - Asia Satellite Telecommunications Company Limited (AsiaSat) announced an expansion of services for Sports Star International Private Limited (Sports Star) of Pakistan on AsiaSat 7, to deliver an HD news channel 'Public News' across the Asia-Pacific. Sports Star currently transmits entertainment

channel 'A-Plus' as well as Pakistan's first women's channel 'A-Lite' on AsiaSat 7, targeting different audience segments locally and across the Asia Pacific. Public News is Sports Star's latest HD service to bring daily news bulletins to viewers by leveraging the power of AsiaSat 7 and its excellent penetration, already enjoyed by the two current channels. AsiaSat will also offer Ku-band capacity on AsiaSat 7 for Public News' SNG services in news gathering and contribution. AsiaSat has been serving Pakistan since 1991, which is hosting one of Asia's widest range of Urdu language programming, from news, entertainment, music, to movies, cartoons and dramas.

#### **SES Relies on Rohde & Schwarz Satellite Uplink Amplifier for First 8K TV Transmission**

July 6, 2018 - SES for the first time broadcast an 8K television signal via its satellite system during the SES Industry Days in Luxembourg this May. In this demo broadcast, uplink signal transmission was successfully supported by the brand-new R&S PKU amplifier from Rohde & Schwarz. Using the DVB-S2X standard, SES transmitted the 8K TV signal on a single 36 MHz transponder via its Astra 3B satellite. The demo video with a resolution of 7680 x 4320 pixels (8K), which is four times higher than for a 4K signal, was encoded in HEVC and transmitted at a rate of 80 Mbit/s. The 8K content was broadcast with a frame rate of 60 frames per second and 10 bit color depth. A native IP-formatted signal was used in addition to learn about the requirements to be met for a fully IP-based broadcast infrastructure.

#### **Romantis Partners with RSCC to Bring the 2018 FIFA™ World Cup to Latin America via Express-AM8**

July 16, 2018 - Romantis, an international alliance of specialists and companies professionally engaged in satellite communications, in association with Russian Satellite Communication Company (RSCC) supported distribution of FIFA™ World Cup in Russia to Latin American countries (Peru, Columbia and others) via RSCC Express-AM8 satellite located at 14° West. The satellite's unique coverage provided a single-hop broadcast from the World Cup host cities to the Latin American countries without the repeated uplink from Europe that respectively helped to reduce delay of the TV signal transmission. Both Latin American and Russian viewers watched live broadcasts of the training sessions of their national teams, interviews with the fans from the fan-zones and other news of the World Cup from different Russian cities.

#### **RSCC Successfully Provided Broadcasts of FIFA World Cup Championship across Russia**

July 18, 2018 - The RSCC put in massive efforts to prepare and ensure high-quality broadcasting of the matches by all those Russian TV channels that were granted a license to provide coverage of the games of the 2018 FIFA World Cup Championship in Russia. The RSCC's own ground-based technical facilities were engaged, as well as the assets of its orbital satellite constellation. At the same time, the RSCC successfully implemented a set of measures to ensure uninterrupted broadcasting and suppress possible external interference. All operational shifts of the RSCC were augmented by specialists of technical services to eliminate possible emergencies and off-nominal situations on the Company's communication networks.

#### **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.

## **LAUNCH / SPACE**

#### **China Launches New-tech Experiment Twin Satellites**

July 2, 2018 - China successfully launched new-tech experiment twin satellites on the Long March-2C rocket from southwest China's Xichang Satellite Launch Center. The twin-satellites missions are to link the inter-satellite network and conduct new technology tests on satellites earth-observation. It was the 278th mission of the Long March rocket series.

#### **Japan's VERA Telescope Granted SKA Pathfinder Status**

July 3, 2018 - The VLBI Exploration of Radio Astrometry (VERA) telescope, operated by the National

Astronomical Observatory of Japan, has been officially designated as an SKA pathfinder. In operation since 2003, VERA uses Very Long Baseline Interferometry (VLBI) to explore the three-dimensional structure of the Milky Way based on high-precision astrometry of Galactic maser sources. It comprises four Cassegrain antennas each measuring 20 metres in diameter. VERA joins more than a dozen pathfinder facilities around the globe which are contributing to SKA-related technology and science. Pathfinder telescopes provide valuable information to teams working on the design of the SKA, but unlike precursors they are not located at SKA sites. SKA-mid, an array of almost 200 dishes, will be hosted in South Africa's Karoo region, incorporating the existing 64-dish MeerKAT precursor telescope. It will be engaged in exploring many exciting areas of science, including gravitational waves, pulsars, and the search for signs of life in the galaxy. A later expansion would see SKA baselines extended across the African continent.

#### **Airbus and United Nations Team up for Universal Access to Space**

July 3, 2018 - Airbus and the United Nations Office for Outer Space Affairs (UNOOSA) have signed a MoU during the UNISPACE+50 conference celebrating half a century of international cooperation in outer space. The five-year renewable MoU aims to jointly build capabilities in developed and developing countries in microgravity experiments and its related benefits. Furthermore it aims to build capability in terms of usage of Earth observation data and support the missions of the UN, its specialist agencies and Member States. Both partners will work together to support the Member States in accessing and using space by enabling access to the International Space Station (ISS). Bartolomeo, the new external hosting platform developed by Airbus, self-funded and operated in cooperation with the European Space Agency, enables cost and time-efficient access to space. Airbus offers free payload space, giving UN Member States the opportunity to participate in an orbital space mission utilizing the Bartolomeo platform attached to the European Columbus Module of the ISS. Application areas include Earth observation, robotics, material science and astrophysics. Operated aboard the ISS in low Earth orbit, the Bartolomeo platform offers the ISS' most unobstructed view of planet Earth and outer space.

#### **Astroscale Establishes S/X-Band Ground Station Optimized for LEO Satellites to Develop Space Debris Removal Services**

July 4, 2018 - Astroscale, an international company developing space debris removal services to secure long term spaceflight safety and sustainability, has established a ground station in Totsuka, Yokohama for sending and receiving satellite data. This is the first ground station for the rapidly growing company and represents an important step towards its mission of monitoring and removing space debris. The primary purpose of the ground station is to enable the operation of ELSA-d, Astroscale's pioneering debris removal demonstration satellite, scheduled to launch in late 2019. In addition to supporting ELSA-d and other future Astroscale missions, the ground station's high-performance data transmission and reception services in S-band and X-band frequencies will be utilized by other low-Earth orbiting satellites. This contribution to the provision of reliable ground communications is necessary for the growing number of satellites in low-Earth orbit.

#### **ISRO Successfully Tests Crew Escape System**

July 5, 2018 - Indian Space Research Organisation (ISRO) carried out a major technology demonstration, the first in a series of tests to qualify a Crew Escape System, which is a critical technology relevant for human spaceflight. The Crew Escape System is an emergency escape measure designed to quickly pull the crew module along with the astronauts to a safe distance from the launch vehicle in the event of a launch abort. The first test (Pad Abort Test) demonstrated the safe recovery of the crew module in case of any exigency at the launch pad. After a smooth countdown of 5 hours, the Crew Escape System along with the simulated crew module with a mass of 12.6 tonnes, lifted off from its pad at Satish Dhawan Space Centre, Sriharikota. The test was over in 259 seconds, during which the Crew Escape System along with crew module soared skyward, then arced out over the Bay of Bengal and floated back to Earth under its parachutes about 2.9 km from Sriharikota.

#### **Successful Launch of PRSS-1/PakTES-1A/LM-2C/SMA Mission**

July 9, 2018 - A LM-2C/SMA launch vehicle was launched successfully and sent the PRSS-1 and PakTES-1A satellites to designated orbits. This is another significant space program between China and Pakistan after the successful in-orbit delivery of PakSat-1R Satellite, marking a step forward for China-Pakistan aerospace cooperation. This mission was based on the PRSS-1 Satellite System Program Contract signed between China Great Wall Industry Corporation (CGWIC) and Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) on April 20, 2016. In accordance with the Contract, as the Prime

Contractor, CGWIC in-orbit delivers to Pakistan a remote sensing satellite, Ground Control System and a Ground Application System, and provides such technical support services as in-orbit tests, on-site support, training, launch insurance and so on. The PRSS-1 satellite was designed and manufactured by DFH Satellite Co. Ltd., China Academy of Space Technology (CAST), a subsidiary of China Aerospace Science and Technology Corp. (CASC), based on CAST 2000 platform. The PakTES-1A satellite was designed and developed by SUPARCO.

### **Thales Alenia Space and SwRI Sign MOU to Cooperate on Stratobus™ Development**

July 9, 2018 - Thales Alenia Space, a major player in the market for satellites, scientific spacecraft and orbital infrastructures as well as the developer of the Stratobus™ airship, and Southwest Research Institute (SwRI), an internationally recognized research and development provider, have signed a Memorandum of Understanding (MOU) to cooperate in the development of Stratobus™. As Thales Alenia Space continues to move forward with the design and development of its highaltitude platform station (HAPS) Stratobus™, SwRI will support Thales Alenia Space with technical advice and assistance based on SwRI's considerable experience with lighter-than-air technologies. Thales Alenia Space and SwRI have established a Joint Working Committee (JWC) to manage their cooperative activities as the Stratobus™ project moves forward.

### **Swedish Government Decided on Investment for a Space Testbed at Esrange**

July 9, 2018 - Sweden invests 80 million Swedish kronor in establishing a test bed for reusable rockets and spacecraft development at Esrange Space Center in northern Sweden; 60 million from the Swedish Government and 20 million from SSC, a state-owned company. The test facility is the first step of the further development of Esrange, defined in the recently published Swedish Space Strategy. The international space business is developing very quickly. Several government-financed projects in Europe have a great need for these types of tests, which can be conducted at the new test bed and thus this investment is not only good for Esrange, but for all space actors within Europe.

### **China Test-fires New Solid Booster for Next Generation Rocket**

July 9, 2018 - China had successfully finished the first joint hot-fire test of a new solid-fuel booster engine and its servomechanism system. With a diameter of two meters, the booster engine is expected to be used on China's next generation medium-sized carrier rocket, according to a China Aerospace Science and Technology Corporation statement. The segmented design was used in the engine, making it the most powerful solid-fuel engine at present.

### **Sky and Space Global Signed MOU with Chinese Launch Services Provider**

July 10, 2018 - Sky and Space Global Ltd (SAS) has signed a MOU with China Great Wall Industry Corporation (CGWIC) to explore the provision of launch services to SAS. Under the terms of the MOU, SAS will assess whether CGWIC's capabilities meet SAS' technical and operational launch requirements and, if so, enter into formal contract negotiations for the provision of nano-satellite launch services. Signing agreements with numerous nano-satellite launch providers supports the SAS's business strategy of hosting multiple satellite launches to establish the full Pearls constellation. In addition to this, SAS and CGWIC will explore the possibility of broader collaborative projects and commercial relationships by leveraging existing CGWIC partnerships and in turn expand the reach of the SAS network into the greater China region.

### **Rocket Lab to Expand Launch Capability with US Launch Site**

July 10, 2018 - US orbital launch provider Rocket Lab has confirmed plans to expand its launch capability by developing a US launch site, with four US space ports shortlisted to launch the Electron rocket. Final selection is underway with Cape Canaveral, Wallops Flight Facility, Pacific Spaceport Complex – Alaska and Vandenberg Air Force Base. A decision on the confirmed site, to be named Launch Complex 2, is expected to be made in August 2018. Designed to serve both commercial and US government missions, the US launch site expands on Rocket Lab's ability to provide customers with the rapid, flexible and cost-effective access to orbit needed to support the increasing number of small satellites.

### **GomSpace Signs Contract with the European Space Agency**

July 11, 2018 - GomSpace A/S, a subsidiary of GomSpace Group AB, has signed a 400.000 EUR contract with ESA for the first phase of the RACE project to deliver two 6-unit CubeSats for an IOD mission to demonstrate the capability of nano-satellite systems to perform close proximity operations such as

rendezvous and docking, and close fly around manoeuvres. The Rendezvous Autonomous CubeSats Experiment (RACE) Mission has been conceived by ESA to contribute to system concepts such as autonomous on-orbit assembly of large structures (e.g. optical telescopes, RF antennas) from building blocks, and damage inspection/upgrade of cooperative targets (e.g. larger spacecraft). GomSpace brings a very strong consortium consisting of GMV Poland/Romania together with Almatech and Micos from Switzerland, encompassing all the needed expertise for delivering the spacecrafts including the guidance, navigation & control algorithms, docking mechanisms and relative navigation sensors for the mission. The first phase of the RACE project will be finalized in Q4 2019.

### **China Launches New Beidou Navigation Satellite**

July 11, 2018 - China sent a new Beidou navigation satellite into orbit on a Long March-3A rocket from the Xichang Satellite Launch Center, in the southwestern Sichuan province. The satellite is the 32nd of the Beidou navigation system, and one of the Beidou-2 family, which is the second generation of the system. China started to construct the third-generation of Beidou system in 2017, and eight Beidou-3 satellites are now in space.

### **ArianeGroup Inaugurates the New Production Line for the Ariane 6 and Vega-C Nozzles**

July 12, 2018 - The production line for the P120C solid propellant booster nozzles was inaugurated on the ArianeGroup site at Le Haillan, near Bordeaux, in the presence of Alain Rousset, Chairman of the Nouvelle-Aquitaine Region. This 1,600 m<sup>2</sup> unit, christened B-Line, is designed to produce up to 35 nozzles per year for the P120C solid propellant booster, an output that is three times higher than that of the current Ariane 5 boosters. The P120C (for "Common") is the core of the rationalization process for the European launchers range, as it will be used for the boosters powering the Ariane 62 (2 boosters) and Ariane 64 (4 boosters) as well as for the first stage of the Vega-C launcher. Its lift-off thrust can reach more than 4500 kilonewtons and, when loaded with 142 tons of propellant, the booster can function in flight for 130 seconds. It is assembled in French Guiana by Europropulsion, a 50/50 subsidiary of ArianeGroup and Avio.

### **Airbus-led Consortium to Provide EU with Seamless Satellite-based Coverage of Europe**

July 12, 2018 - The European Commission and the European Space Agency (ESA) have awarded an Airbus-led consortium a contract for the provision of satellite-based seamless coverage of the whole of Europe at very high-resolution. The consortium includes Airbus Defence and Space, Planet, Deimos Imaging, IGN-France and space4environment. This agreement is part of the Copernicus Earth Observation program for the European Union (EU). As part of the contract, six million square kilometres over 39 countries will be covered in 2018 with freshly acquired very high-resolution optical satellite imagery. The result-based approach of the procurement has led European EO industry to federate and respond with a coordinated offer bringing together the strengths of each partner. The contracted solution leverages the latest in remote sensing and imagery processing technologies to deliver new data at an unprecedented scale and speed. The data will feed the geo-information services coordinated by the European Environment Agency with which European institutions and governments implement their environmental and land management policies.

### **Launch Schedule of the H-II Transfer Vehicle KOUNOTORI7 aboard the H-IIB Vehicle No. 7**

July 13, 2018 - Mitsubishi Heavy Industries, Ltd. and the Japan Aerospace Exploration Agency (JAXA) will launch the H-IIB Launch Vehicle No. 7 (H-IIB F7) which carries aboard the H-II Transfer Vehicle "KOUNOTORI7" (HTV7), the cargo transporter to the International Space Station (ISS). Scheduled date of launch is September 11, 2018 from Yoshinobu Launch Complex at the JAXA Tanegashima Space Center

### **Lockheed Martin and Orbex to Launch UK into New Space Age**

July 16, 2018 - Lockheed Martin and Orbex are investing in space launch operations and bringing innovative new technology to Britain. Under the plans, global space leader Lockheed Martin and innovative spaceflight company Orbex will launch rockets into space from the north coast of Scotland. The companies will work together with Highlands and Islands Enterprise, which has been awarded £2.5 million to develop a vertical launch site in Sutherland. Horizontal launch sites have significant potential in a future UK spaceflight market, which could attract companies from all over the world to invest in Britain. Sites such as Newquay, Glasgow Prestwick and Snowdonia will be boosted by a new £2m fund to grow their sub-orbital flight, satellite launch and spaceplane ambitions.

### **GomSpace and AISTECH Sign New Agreement**

July 16, 2018 - GomSpace Group AB and the Spanish company AISTECH have signed a contract for a total value of approx. 1.4 million EUR. The first part of the contract, for 6 standard nanosatellite platforms, is a follow-on order of 4 platforms ordered in September 2017, according to the Framework Delivery Agreement signed between both companies then. The second part of the contract includes Assembly, Integration and Verification of AISTECH's 10 DANU spacecraft, built on GomSpace platforms, as well as other engineering services, such as pre-launch Environmental Testing. All these activities will take place within the next 12 months at GomSpace's recently inaugurated center for constellation integration. The DANU Constellation, made by over 100 spacecraft, will provide global Air Traffic detection services as well IoT / M2M (Internet of Things / Machine to Machine) connectivity for critical asset tracking and monitoring. The DANU spacecraft have been designed by AISTECH to deliver the highest levels of quality services with space-based data infrastructure.

### **mu Space and SSL Work Together on Satellite Systems**

July 17, 2018 - Satellite and space company mu Space Corp announced collaboration with SSL to develop concepts for communications and Earth observation satellites. SSL brings a depth of technical expertise and an agile approach to helping mu Space with its plans to launch a satellite into Low Earth Orbit (LEO) in the early 2020s. The satellite is intended for earth observation applications including remote sensing technology. SSL designs and builds satellites ranging from a few kilowatts of power to more than 25 kilowatts for a broad range of applications including direct broadcast (DBS), high throughput satellites (HTS) for consumer broadband, and Earth observation. The company will work with mu Space to tailor designs to meet its market demand. A mu Space low-orbit satellite could also be used for agricultural observation, national security purposes, and satellite-enabled broadband applications using advanced phased-array antennas. mu Space, founded in 2017, develops satellite communication technologies to accelerate the adoption of Internet of Things devices and smart cities. It plans to launch its own satellite in 2020 using Blue Origin's New Glenn space vehicle and to lead space technology development in Asia-Pacific.

### **Arianespace's Ariane 5 Launch for the Galileo Constellation and Europe**

July 17, 2018 - For its fourth launch of the year, Arianespace will orbit four more satellites (satellites 23 to 26) for the Galileo constellation. This mission is being performed on behalf of the European Commission under a contract with the European Space Agency (ESA). For the third time, an Ariane 5 ES version will be used to orbit satellites in Europe's own satellite navigation system; with all Galileo spacecraft having been launched to date by Arianespace. Ariane 6 will take over from 2020. Arianespace is proud to mobilize its entire family of launch vehicles for the benefit of Europe's ambitions and its independent access to space. The Flight VA244 will be from Ariane Launch Complex No. 3 (ELA 3) in Kourou, French Guiana. The Launch Readiness Review (LRR) will take place on Friday, July 20, 2018 in Kourou, to authorize the start of operations for the final countdown.

### **ATLAS Space Operations Brings on BlackSky's Earth Observation Constellation as Customer**

July 17, 2018 - ATLAS Space Operations, a company that provides satellite communications as a service through an innovative software-driven, high data flow global antenna network, announced today that BlackSky has selected ATLAS to provide telemetry, commanding, and data support for its high-revisit, Earth imaging constellation of satellites. ATLAS will be offering this support via new ground station sites in Guam and Japan to further maximize the performance of the BlackSky constellation. A division of Spaceflight Industries, BlackSky is a leading geospatial monitoring and alerting service that helps organizations observe and understand global events by integrating a diverse set of sensors and data, including satellite images. The company is launching its first four satellites (of a planned constellation of 60) in the next year. The constellation will provide 1-meter resolution color imagery with frequent revisit rates of 95 percent of the Earth's population.

### **Latest Blue Origin Launch Tests Technologies of Interest to Space Exploration**

July 18, 2018 - On July 18, Blue Origin successfully launched its New Shepard rocket from the company's West Texas launch site with five NASA-supported technologies onboard. For each of these payloads, this flight was one in a series of suborbital demonstrations to facilitate technology development. The flight helped researchers collect critical data to help them confirm theories, refine previous results and fine-tune experiments for future testing. Selected for flight test by Flight Opportunities, many of the payloads on this New Shepard flight aim to provide value to other payloads on future flights. For example, a sensor package

developed at NASA's Johnson Space Center in Houston will help characterize suborbital test flight environments – data critical for implementation of technology and science payloads.

#### **SafeAvio Steps forward for Implementation**

July 18, 2018 - Following the research and development and a series of flight tests on the SafeAvio project in the fiscal years through March 2016, this year, JAXA in collaboration with Mitsubishi Electric Corporation, conducted flight tests of the technology on ecoDemonstrator 2018, Boeing's flight test program. On SafeAvio, JAXA took up the development of the technology that could provide commercial airplane pilots with weather information ahead of time and help them better detect and avoid weather disturbances. Mitsubishi Electric Corporation, JAXA's partner built the system. The flight demonstration tests brought JAXA and Mitsubishi Electric Corporation evaluations by Boeing of the technological feasibility and problems regarding installation and the subsequent tuning and operation.

#### **mu Space Makes History for Asia with Successful Blue Origin Flight**

July 19, 2018 - Blue Origin successfully launched the New Shepard space vehicle, with its first payload from Asia to be on-board. The six-kilogram payload, sent by satellite and space company mu Space Corp, contains experiments from several universities and space agencies in Thailand. In an earlier announcement by mu Space, the company revealed they included to its payload a bleeding preventive device, a carbon nanotube and a vacuum-sealed food product. These experiments and items came from their project partners Queen Sirikit National Institute of Child Health, Chulalongkorn University, Geo-Informatics and Space Technology Development Agency (GISTDA), King Mongkut's Institute of Technology Ladkrabang, and National Astronomical Research Institute of Thailand (NARIT). mu Space, on their part, had sent textile materials that they plan to use on the space suit and apparels they will soon develop. The payload flew on-board Blue Origin's New Shepard space vehicle. The New Shepard vertical takeoff and vertical landing vehicle is capable of carrying hundreds of pounds of payloads per flight and will ultimately carry six astronauts to altitudes beyond 100 kilometers, the internationally-recognized boundary of space.

#### **Telesat Successfully Launches Telstar 19 VANTAGE**

July 23, 2018 - Telesat announced the successful launch of its new Telstar 19 VANTAGE high throughput satellite (HTS) aboard a SpaceX Falcon 9 rocket. Liftoff occurred on Sunday, July 22nd, from Cape Canaveral Air Force Station. Built by SSL, Telstar 19 VANTAGE 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. Operating from Telesat's prime orbital location of 63 degrees West, the same as Telesat's highly utilized Telstar 14R satellite, Telstar 19 VANTAGE will bring a new level of performance and value for satellite broadband requirements on land, at sea and in the air. It will have distinct zones of coverage across the Americas and Atlantic, combining broad regional beams and high throughput spot beams in Ku-band with additional HTS spot beams in Ka-band. Hughes Network Systems LLC (Hughes) has signed a 15-year agreement for Telstar 19 VANTAGE Ka-band capacity that Hughes will utilize to expand its broadband satellite services for consumers and businesses in five South American countries. Hughes will refer to this capacity as "Hughes 63 West." Telesat also has long-term contracts for the entire Ka-band capacity of Telstar 19 VANTAGE over Northern Canada, including providing Bell Canada subsidiary Northwestel with the HTS spot beam capacity required to enhance broadband connectivity for all 25 communities in Nunavut, Canada's northernmost territory.

#### **Iridium Completes Seventh Successful Iridium NEXT Launch**

July 25, 2018 - Iridium Communications Inc. announced that SpaceX Falcon 9 rocket successfully launched 10 Iridium NEXT satellites to low earth orbit (LEO). Lifting off from Vandenberg Air Force Base in California, this was the seventh of eight launches planned for the Iridium NEXT constellation, replacing the company's existing 66 satellite network. Only one more launch of 10 satellites remains until the Iridium NEXT network is completed, ushering in a new era of capabilities, like the Iridium Certus<sup>SM</sup> broadband service and Aireon<sup>SM</sup> real-time aircraft surveillance system. Completion of Iridium NEXT will spark both a technological and financial transformation for the company, while providing its partner ecosystem with an unrivaled industry platform for innovation. The Iridium partner ecosystem, consisting of hundreds of companies, plays an invaluable role in the creation, distribution and servicing of Iridium equipment, airtime and applications.

#### **Arianespace Orbits Four More Galileo Satellites, as Ariane 5 Logs its 99th Mission**

July 25, 2018 - Arianespace has successfully launched four more satellites in the Galileo constellation from

the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana. Today's launch was the 99th mission by the Ariane 5 heavy launcher. It was carried out on behalf of the European Commission as part of a contract with the European Space Agency (ESA). It also was the last in a series of three launches for Galileo using the version of Ariane 5 with a storable propellant upper stage (ES). Two additional missions to deploy four more satellites have been assigned to the A62 version of the upcoming Ariane 6 launch vehicle. Today's emblematic launch also was a landmark for the European space sector.

#### **GomSpace Signs Contract for the Supply of Nanosatellites to Kleos Space**

July 26, 2018 - GomSpace A/S and Kleos Space S.A. ("Kleos") have signed a contract for the supply of a multi-nanosatellite system. The contract value is approx. 2.42 million EUR and the delivery of the multi-nanosatellite system is expected to take place in Q2 2019. Kleos aims to guard borders, protect assets and save lives by delivering global activity based intelligence & geolocation as a service. The first Kleos satellite system, known as Kleos Scouting Mission (KSM), will perform technology demonstration that will be the keystone for a later global high capacity constellation. The Scouting Mission will deliver targeted daily services with the full constellation delivering near-real-time global observation.

#### **Thales Alenia Space and SSL Form Consortium to Further Design and Develop Telesat's LEO Satellite Constellation**

July 30, 2018 - Thales Alenia Space and SSL have signed a consortium agreement to pursue the development and manufacture of Telesat's highly advanced global LEO satellite constellation and end-to-end system. In addition the consortium, led by Thales Alenia Space, announced today that they have been awarded a contract by Telesat for a System Design and Risk Management Project for the Telesat LEO constellation. The three companies will work together on the design of the end-to-end system, including satellites, gateways, user terminals, operations centers, and ground network. Telesat will provide funding during this phase and anticipates selecting a prime contractor, either the Thales Alenia Space/Maxar consortium or an alternate team, in mid-2019 for Telesat's LEO program – space segment, ground segment and system integration.

#### **China Launches High-resolution Earth Observation Satellite**

July 31, 2018 - China launched Gaofen-11, an optical remote sensing satellite, as part of the country's high-resolution Earth observation project. The Gaofen-11 satellite was launched on a Long March 4B rocket at 11 a.m. Beijing Time from the Taiyuan Satellite Launch Center in northern Shanxi Province. It was the 282nd flight mission by a Long March carrier rocket. The satellite can be used for land survey, urban planning, road network design, agriculture, and disaster relief. Its data will also be used for the Belt and Road Initiative. Since the Gaofen project began in 2010, China has gained an increasingly clearer view of the planet.

#### **NASA Selects US Firms to Provide Commercial Suborbital Flight Services**

July 31, 2018 - NASA's Flight Opportunities Program has selected four companies to integrate and fly technology payloads on commercial suborbital reusable platforms that carry payloads near the boundary of space. The selection is part of NASA's continuing effort to foster a viable market for American commercial reusable suborbital platforms that allow testing of new space technologies within Earth's atmosphere. Through these new awards, selected companies will receive an indefinite-delivery, indefinite-quantity contract for integration and flight services, drawing from a pool of commercial space companies. The five-year contracts have a combined potential contract value of \$45 million. The flights will carry a variety of payloads to help meet the agency's research and technology needs. The selected companies are Aerostar International, Blue Origin, Up Aerospace Inc., and World View Enterprises, Inc.

## **EXECUTIVE MOVES**

#### **CASIS Announces Joseph Vockley as President and Executive Director**

July 2, 2018 - The Center for the Advancement of Science in Space (CASIS) has named Joseph Vockley, Ph.D., as president and executive director for the organization. CASIS is the nonprofit tasked by NASA to manage, promote, and broker research on the International Space Station (ISS) U.S. National Laboratory. Within the role of president and executive director, Dr. Vockley will be responsible for driving the CASIS mission, enabling science and technology opportunities onboard the ISS National Lab that benefit life on Earth while maximizing U.S. taxpayers' investment in the orbiting laboratory. Dr. Vockley is set to assume duties

on July 1, 2018.

### **Thales Alenia Space Appointed Steve Good as VP of Business Development in North America**

July 3, 2018 - Thales Alenia Space appointed Steve Good as Vice President of Business Development to broaden the group's North American space footprint. Working closely with Thales North America, Mr. Good will lead Thales Alenia Space initiatives which include continued collaboration with satellite operators, new space ventures and government space institutions, to continue pushing the innovations envelope and deliver market driven solutions to meet accelerating levels of demand. He will also support commercial efforts for the newly formed LEOStella, LLC, a Thales Alenia Space and Spaceflight Industries joint venture. Previously, he has held a number of executive level roles with several of the top satellite communications companies in the industry, including Intelsat, Comtech EF Data and Hughes Network Systems. Steve was most recently Senior Vice President, Market and Business Development at Comtech EF Data and previously held the position of Vice President, Network Services at Intelsat.

### **DigitalGlobe Appoints Mike Edwards as Vice President**

July 5, 2018 - DigitalGlobe announced today that Mike Edwards has joined DigitalGlobe as Vice President, Senior Advisor Defense Programs, to provide strategic leadership on various defense programs, including the company's work with the U.S. Department of Defense and collaboration with aero-defense companies. Edwards joins the company's senior leadership team and will report to DigitalGlobe President Dan Jablonsky. Edwards was most recently Corporate Director of Space, Intelligence and Cyber at Northrop Grumman, where he spent the past 11 years. Previously he had a distinguished career in the U.S. Air Force, serving at the Pentagon for 13 years in a variety of leadership roles. These included leading the Department of Defense's Interagency Protection Task Force and the Defense Intelligence Agency's Emerging Threat Working Group, where he was responsible for creating and executing solutions for emerging threats, and directing operations for the Air Force Combat Support Office. The retired Air Force Colonel served as a command pilot with 83 combat sorties and more than 3,300 hours in the A/OA-10, T-38 and T-37.

### **Maxar Technologies Appoints Biggs Porter as Chief Financial Officer**

July 12, 2018 - Maxar Technologies (formerly MacDonald, Dettwiler and Associates) announced the appointment of Biggs Porter as Executive Vice President and Chief Financial Officer, effective August 15, 2018. Porter most recently served as Executive Vice President and Chief Financial Officer at Fluor Corporation, the largest U.S.-listed engineering and construction company, from 2012 to 2017. He was Chief Financial Officer of Tenet Healthcare from 2006-2012. Previously, he held finance and accounting leadership positions with Raytheon and Northrop Grumman. He is a Certified Public Accountant and began his career as an Audit Principal at Arthur Young and Co. He earned a Master's degree in Accounting from University of Texas and a Bachelor's degree in Accounting from Duke University. Porter was twice named one of the 100 most influential people in finance by Treasury and Risk magazine, and was ranked as the top CFO in the engineering and construction industry by Institutional Investor magazine.

### **Northrop Grumman Announces CEO Transition**

July 12, 2018 - Northrop Grumman chairman and chief executive officer Wes Bush announced that he will step down from the position of chief executive officer effective Jan. 1, 2019. He will remain chairman through July 2019. Northrop Grumman's board of directors has elected Kathy Warden, the company's president and chief operating officer, to the position of chief executive officer and president, effective Jan. 1, 2019. The board has also elected Warden to serve as a member of the board, effective immediately. Warden joined the company in 2008, and has held a series of positions of increasing responsibility, including serving as the vice president and general manager of the company's cybersecurity business, president of its former Information Systems sector, president of its Mission Systems sector, and currently as president and chief operating officer.

### **Bob Gough Joins Goonhilly to Lead Business Expansion in Australia and Asia-Pacific**

July 13, 2018 - Goonhilly Earth Station announced the appointment of Bob Gough as Head of Business Development, Australia and Asia-Pacific. Based in Australia, Gough's role is to spearhead commercial expansion for Goonhilly across the region, develop new business opportunities and grow Goonhilly's customer base. Gough's appointment comes just days after the July 1st establishment of the Australian Space Agency, signalling a major step forward in developing space-based opportunities to enhance businesses and communities in the region. Goonhilly offers unmatched connectivity to businesses seeking

international expansion. It provides access to all global satellite constellations, interconnected with bundles of subsea cables delivering worldwide high-capacity terrestrial reach, and local ultrafast fibre broadband. As a result, Goonhilly can serve as the gateway to the world and to space for regional satellite operators, broadcasters and enterprises based in the fast-growing Asia-Pacific markets.

#### **Ball Aerospace Names Dr. Makenzie Lystrup VP and General Manager of Civil Space Business**

July 16, 2018 - Ball Aerospace announced that Jim Oschmann, vice president and general manager of the company's Civil Space strategic business unit, plans to retire from the company, effective Friday, August 10. Dr. Makenzie Lystrup, currently senior director, Civil Space Advanced Systems and Business Development, will succeed Oschmann as the vice president and general manager of the Civil Space strategic business unit. Since joining Ball in 2004, Oschmann has held several key leadership positions. He served as the vice president and general manager of the Tactical Solutions strategic business unit, director of Program Execution for the Advanced Technologies & Products business area, director of Program Management Tools & Processes, and chief engineer. Well-known in the industry, Jim plans to balance retirement and family with his current role as the SPIE (international society for optics and photonics) president-elect, and as the society's president in 2019. He will also continue some of his current engagements on several industry advisory boards.

#### **Phillip Spector Joins Phasor's Board of Directors**

July 20, 2018 - Phasor, the leading developer of enterprise-grade electronically-steered antenna (ESA) systems for mobile broadband, announced that satellite industry veteran and Satellite Hall of Fame member Phillip Spector has joined the Phasor Board of Directors. Spector's career in the satellite sector spans over 30 years. A highly respected and experienced attorney in government and business, he was formerly Executive Vice President, Business Development, and General Counsel of Intelsat, where he was responsible for legal and regulatory matters in connection with a major industry merger, the \$16.6 billion sale of Intelsat from one private equity group to another, and over \$25 billion in financing transactions. He was also a member of Intelsat's Board of Directors. Spector's career also includes the practice of telecommunications and satellite law at two major international law firms.

#### **MDA Appoints Michael Rack President, MDA Commercial**

July 27, 2018 - MDA announced the appointment of Michael Rack to serve as President of the newly-created MDA Commercial division beginning September 24, 2018. The addition of Rack, along with the recently announced appointment of Chris Pogue as President of MDA Government, rounds out the MDA senior leadership organization announced in June 2018. Rack will lead MDA Commercial and have responsibility for global growth and operations of all the commercial product lines including space robotics, space sensors (the recently acquired Neptec), antennas and electronics, payloads, and non-space products. Rack will report to Mike Greenley, the Group President of MDA.

#### **AsiaSat Appoints Ina Lui Senior Vice President, Commercial, Business Development and Strategy**

July 30, 2018 - AsiaSat announced that it is integrating the company's commercial, marketing and business development teams under the leadership of Ms. Ina Lui, who has been promoted to the new role of Senior Vice President, Commercial, Business Development and Strategy, effective 30 July 2018, following the decision of Mr. Barrie Woolston to resign as Chief Commercial Officer. Ina Lui in her newly expanded role will assume additional responsibilities in commercial and marketing. Ina possesses over 25 years of experience in the satellite, telecommunications and technology sectors, covering areas in commercial, marketing, product and business development. She has worked in Singapore, South China and Hong Kong, and has held senior management positions at ABS, Intelsat, PanAmSat and Hong Kong Telecom. Prior to joining AsiaSat, Ina was at ABS as Managing Director, Sales Asia Pacific where she was responsible for sales and business initiatives for the region.

## **REPORTS**

#### **Maritime SATCOM Markets to Generate \$4.7 Billion in Annual Revenue by 2027**

July 2, 2018 - NSR's Maritime SATCOM Markets, 6th Edition report, published today, forecasts Maritime SATCOM will generate \$36 Billion in cumulative revenues through 2027. Driven by the migration of unconnected vessels to MSS, MSS customers to VSAT, and VSAT vessels to even higher throughputs, revenue growth will approach 7% from 2017 – 2027.

### **Casbaa Releases Updated Pay TV and OTT Regulatory Review for Asia**

July 19, 2018 - Casbaa, the Association for the Asian video industry, released review of OTT and regulatory policies for the video industry around Asia. Based on a year-long study of legal frameworks and government policies in 17 Asian markets, and using the UK and USA as comparators, Casbaa has examined key issues in regulation of the pay TV and online video industry. Casbaa released a booklet entitled "OTT TV Policies in Asia", which focuses on policies for professional, curated over-the-top (OTT) services.

### **NSR Releases Global Satellite Capacity Supply & Demand, 15th Edition**

July 24, 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.

### **Data Applications Drive \$189 Billion in Satellite Capacity Revenues over Next Decade**

July 26, 2018 - NSR's Global Satellite Capacity Supply & Demand, 15th Edition report finds satellite capacity revenues continue a long-range growth path of 6.8% CAGR over the next decade. However, near term caution persists as business models pivot to data-centric & HTS applications, amidst a projected video-centric capacity revenue loss over \$2 billion by 2027. Emerging data use cases, such as Mobility, Cellular Backhaul and Broadband Connectivity, will undoubtedly propel the next wave of satcom growth.

## **UPCOMING EVENTS**

**APSAT 2018**, 3-4 July, Jakarta, Indonesia, <http://assi.or.id/en/>

**Vietnam in View**, 5 September, Ho Chi Minh City, Vietnam, <http://casbaaevent.com/events/casbaa-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 2018, Jakarta, Indonesia, <http://apscsat.com>

**APSCC 2018 Youth Development Workshop**, 4 October 2018, 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)

**Asia Video Summit 2018**, 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/janeswl>

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/janeswl>

**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)

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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).*