

APSCC Monthly e-Newsletter

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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. To unsubscribe, send an email to info@apscc.or.kr with a title "Unsubscribe."

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

INSIDE APSCC

The APSCC 2018 Conference & Exhibition Marks Great Success!

The APSCC 2018 Satellite Conference & Exhibition successfully ended on 5 October 2018 in Jakarta after 3 days of in-depth conference sessions, state-of-the-art technology displayed exhibition, and diverse networking events with more than 400 delegates attending the event. At APSCC 2018, thought leaders covered major issues impacting the Asia-Pacific satellite industry, including market insight on the latest trends, new applications, and innovative technical solutions throughout the three-day discussions and presentation sessions.

The APSCC-ISU Youth Development Workshop

The 2018 APSCC-ISU Youth Development Workshop was successfully held on October 5 in Jakarta concurrently with the APSCC 2018. The workshop provided a platform for the brightest up-and-coming engineering students and young professionals in Indonesia to connect with leading satellite and space industry experts and learn more about the opportunities in the sector. The 2018 APSCC-ISU Youth Development provided the students with a deeper understanding of the industry through lectures and case studies.

2018 APSCC Awards

Each year, APSCC recognizes outstanding individuals through the APSCC Awards to honor industry veterans for their collaboration, guidance and support in helping APSCC reach its mission as well as for their contribution to the satellite industry. At 2018 APSCC Awards Ceremony held on 2 October, APSCC awarded 'Lifetime Achievement Award' to Adi Adiwoso, President & CEO, PSN for his outstanding achievements and named Bogi Witjaksono, President Director, PATRAKOM as 'Satellite Executive of the Year in the Asia-Pacific' for his achievements and contributions to the satellite industry in the Asia-Pacific Region, and by taking the lead to enhance the satellite industry.

2018 APSCC Young Talents Awards

The APSCC Young Talent Award is the latest initiative of APSCC to ensure a healthy future for the satellite industry and to attract and retain young talent to the satellite and space industries in Asia-Pacific region. 2018 APSCC Young Talent Awards' 3 winners were Chee Conrad, Principal Engineer, MEASAT; Risdianto Yuli Hermansyah, Satellite Spectrum Management Officer, TELKOM Indonesia; Rezki Erdian, Telkom-4 Payload Officer, TELKOM Indonesia. Chee Conrad, MEASAT was selected as the winner of the 2019 SH-SSP program on October 5 at the APSCC 2018 Satellite Conference & Exhibition, in Jakarta, Indonesia. The winner received the scholarship to enroll the Southern Hemisphere Space Studies Program of International Space University (ISU).

SATELLITE BUSINESS

Inmarsat Confirmed as Fastest-Growing Maritime VSAT Provider in 2018

September 3, 2018 - The digital transformation of the commercial shipping industry will pass a major milestone this September. Inmarsat has confirmed that the 5,000th ship installation of Fleet Xpress, the world's only high-speed, globally-available Ka-band VSAT service designed for mobility and available from a single operator, will be completed by the close of the month. Following its launch in March 2016, Fleet

Xpress has emerged as the market-leading pathway to digital transformation as shipping companies seek to deliver improved vessel and fleet efficiency, boost profitability and enhance seafarer wellbeing. The latest data compiled by the respected, specialist market analyst, Euroconsult, indicates that six out of ten VSAT installations undertaken in the first half of 2018 were for Fleet Xpress. Euroconsult's independent research also confirms that Inmarsat was the fastest growing VSAT provider to the maritime industry in the first six months of 2018, accounting for over 1,500 terminals out of an industry total of 2,550.

Intellian Launches World's First Future-proof Ku-to-Ka Convertible Sub-1m VSAT, v85NX

September 3, 2018 - Intellian, the world's leading provider of satellite communication antenna systems, is launching its new 85cm Ku to Ka band convertible maritime VSAT antenna, the Intellian v85NX, the first to be developed based on the high-performance more reliable NX platform. The v85NX is a future-proof system that supports GEO constellations as well as ensuring compatibility with future networks, such as LEO and MEO. It is designed to be easily convertible from Ku to Ka band by simply changing the RF Assembly and Feed while still using the dual-band optimized reflector and radome, and is capable of supporting full 2.5GHz Wide Ka-band networks, the first antenna to ever be so. Hence, users can avoid having to buy a completely new system to use new services in the future.

Speedcast Launches New Industry-leading VSAT Propositions

September 4, 2018 - Speedcast International announced a new portfolio of VSAT plans that will meet an extensive set of customer requirements. All of the plans come with Committed Information Rate (CIR), which provides customers with a guaranteed level of performance. The plans are also supported by the world's largest and most robust Ku-band network with advanced cybersecurity protection, ensuring outstanding bandwidth availability and exceptional user experience in the Maritime and offshore Energy markets. The four new plans are Quota, Burst, Guaranteed and Professional.

Inmarsat Unveils Major New IoT Service for the Shipping Industry

September 5, 2018 - Inmarsat unveils Fleet Data, a new Internet of Things (IoT) service, which will enable ship owners and managers to access and analyse real-time onboard data more efficiently, and as a result will help accelerate the adoption of IoT across the maritime industry. Developed in partnership with Danelec Marine, Fleet Data will record data from the onboard Voyage Data Recorder (VDR), and other vessel sensors, pre-process that data, and upload it to a central (cloud-based) database equipped with a dashboard and Application Process Interface (API). This will allow ship owners and managers to quickly and easily identify equipment issues and failures and seamlessly link 3rd party applications to monitor vessel performance and fuel efficiency. Latest research published by Inmarsat on digital transformation in shipping* indicates that, on average, ship operators and managers plan to spend \$2.5 million on IoT-based solutions within three years and expect, on average, to achieve IoT-driven cost savings of 14% over the next five years. The research also strongly suggests that a greater maritime appetite for IoT-based solutions would emerge if more data could be delivered and analysed in real-time.

RigNet Secures Global Master Supply Agreement

September 5, 2018 - RigNet's fast-track installation and highly differentiated end-to-end connectivity helped secure a global master supply agreement with a subsidiary of McDermott International, Inc. A premier, fully integrated provider of technology, engineering and construction solutions to the energy industry, RigNet provided McDermott with managed communication services and multiple over-the-top (OTT) solutions to ensure their fleet of vessels is equipped with the most advanced communication systems available. RigNet was able to leverage its network of global support to fast-track the implementation of the project and install McDermott's entire global fleet to meet an aggressive mobilization timeline. RigNet installed and is providing fully-managed communications solutions that included a stabilized dual-band smart antenna that enables automatic switching between C-Band and Ku-Band networks. RigNet also provides industry leading OTT solutions: CrewConnect and infotainment services for crew welfare, hotspot services for easy Internet connectivity, and Adaptive Video Intelligence for crew safety and operational efficiency.

Sky and Space Global Signs MoU to Provide Nanosatellite Connectivity Services in Indonesia and Suriname

September 5, 2018 - Sky and Space Global Ltd, which works to provide affordable communications to the world's equatorial regions, expands its reach into Indonesia and Suriname. The company has signed a binding memorandum of understanding agreement with Cendrawasih Teknologi Nusantara (CTN) to

provide the Indonesian company with nanosatellite connectivity services. The agreement will enable CTN to offer the services to its individual and small business customers throughout the island nation. With a population of over 260 million spread out over thousands of islands, Indonesia is an ideal market for SAS' nanosatellite technology. Moalem notes that the agreement with CTN will enable SAS to leverage and expand its existing connectivity services across the entire Asia Pacific region. In addition to the MoU in Indonesia, SAS has also signed a binding MoU agreement with Surinamese Internet Service Provider - Foundation Busie Suriname. Foundation Busie Suriname was granted an Internet Service Provider (ISP) license in 2016 by the Telecoms Authority Suriname (TAS) and provides internet service solutions to individuals and businesses in rural Suriname, South America. Due to the geographic location and number of inhabitants outside of large cities, internet and online connectivity services are unreliable and expensive.

Kratos Receives Contract to Build Multi-Site Gateways for Kacific's New HTS Network

September 6, 2018 - Kratos Defense & Security Solutions, Inc., a leading National Security Solutions provider, announced that it has been awarded an \$11 million contract by Kacific Broadband Satellites, to design and build ground stations for Kacific's new Ka-band High Throughput Satellite (HTS) network. The Kacific-1 HTS satellite, launching in 2019, will deliver broadband services to Pacific Rim and South East Asia. Kratos will help address Kacific's HTS gateway infrastructure needs by designing and building a state-of-art Ka-band multi-site gateway solution for Kacific-1. Kratos' gateway solutions are pre-configured in a secure and controlled off-site environment resulting in higher quality and faster time-to-market. The company's industry-leading designs will optimize and protect Kacific's investment by reducing complexity and risk, and accelerating market entry.

SatADSL, APT Satellite and iSAT Partner to Provide Connectivity in Africa

September 6, 2018 - A new partnership between professional VSAT services provider SatADSL, iSAT Africa, and APT Satellite will see affordable broadband via satellite offered across Africa. Under the agreement, SatADSL will provide its innovative Cloud-based Service Delivery Platform (C-SDP). This will enable iSAT to offer a suite of new services, including voucher services, VNOFlex and congestion-based services. APT Satellite will provide capacity via its APSTAR-7 satellite located at 76.5 East, covering Asia, Australia, The Middle East, Europe and Africa with C-band transponders and China, the Middle East and Africa with Ku-band transponders. SatADSL's C-SDP is a Platform-as-a-Service (PaaS) solution which enables operators to deliver a full range of satellite-based connectivity services without investing in physical infrastructure. SatADSL expects to have worldwide coverage by the end of the year, further expanding the reach of its C-SDP. iSAT is the latest service provider to connect to the platform, which is now being used by 77 Africa-based partners.

Yahsat and Hughes to Form Joint Venture to Deliver Satellite Broadband Services

September 10, 2018 - Yahsat and Hughes Network Systems announced an agreement to enter into a joint venture to provide commercial Ka-band satellite broadband services across Africa, the Middle East and southwest Asia. This new venture combines Hughes deep expertise as the global leader in broadband satellite networks and services with Yahsat's unique position and knowledge as the leader in satellite broadband solutions across these regions. Hughes will purchase a minority interest in the venture. The new venture will continue to provide unserved and underserved communities with reliable, high-speed Internet services operating over Yahsat's Al Yah 2 (AY2) and Al Yah 3 (AY3) Ka-band satellites, and leveraging the capabilities of the Hughes JUPITER™ System, designed and optimized for large-scale High-Throughput Satellites (HTS). Hughes will also supply its proven Operating and Business Support System (OSS/BSS) solutions for comprehensive network operations and management.

Boeing HorizonX Ventures Invests in BridgeSat to Advance Satellite Communication

September 10, 2018 - Boeing announced its investment in Denver-based BridgeSat Inc., an optical communications solutions company enabling the future of connectivity in space through a network of ground stations and proprietary space terminals. BridgeSat is developing a global network of optical ground stations (OGS) to transmit large amounts of data into space quickly and reliably. Its stations support low Earth orbit (LEO) and geostationary (GEO) satellite optical communications, enabling secure transmissions between satellites, other spacecraft, unmanned aerial vehicles and high-altitude aircrafts. Boeing HorizonX Ventures led BridgeSat's Series B funding round, with participation by Allied Minds. The investment and relationship with Boeing connects BridgeSat with Boeing experts, testing labs and other valuable resources to accelerate the deployment of its OGS services around the world.

SES Government Solutions to Support Air Combat Command Training and Testing Operations

September 11, 2018 - SES Government Solutions (SES GS), a wholly-owned subsidiary of SES, has teamed with prime contractor Bushtex, Inc. to provide commercial Ku bandwidth to U.S. Air Combat Command (ACC), SES announced today. This satellite communications capability will support training and testing operations in the continental U.S. Bushtex Inc., a woman- and minority-owned small business based in Gilbert, AZ, is a satellite communications provider that currently delivers commercial services for a variety of Department of Defense (DoD), Department of Homeland Security (DHS) and other U.S. Government agencies. To support this contract, Bushtex leveraged SES GS' extensive experience in providing satellite communication services for the U.S. DoD, and more specifically for the U.S. Air Force, over the past 30 years.

LeoSat Hits Major Commercial Milestone

September 11, 2018 - LeoSat Enterprises, which is launching the fastest, most secure and widest coverage data network in the world via a constellation of low-earth-orbit satellites, announced that it had achieved an important milestone by securing commercial agreements valued at over US\$1Billion. These pre-launch agreements span a wide range of fast-growing data and mobility sectors including, Enterprise, Telecoms, Government and Finance. Big Data and Cybersecurity are driving the need for new communications infrastructure. Data volumes are exploding with more data carried in the past two years than in the entire history of the human race. Global networks are already carrying more than 1 Zeta Byte of traffic and this is forecast to grow exponentially. This is having a lasting effect on the satellite communications industry, with the need to invest in and deploy resilient and future-proof networks to deliver connectivity and services.

Comtech's New Consumer Data Management Platform Helps Mobile Operators Manage Data Security, Compliance and Monetization

September 12, 2018 - Comtech Telecommunications Corp. announced that they will showcase the Specifix™ customer data rights management, "Platform-as-a-Service", for mobile operators at Mobile World Congress Americas. In February 2018, Intertrust Technologies and Comtech's Enterprise Technologies group created a partnership to help customers managing large amounts of data. Leveraging Intertrust's Personagraph™ customer data platform, Comtech created Specifix™ an advanced data rights management platform that allows operators to easily manage and monetize their data, while securing their users' privacy and complying with consumer protection laws, including GDPR.

SatADSL and Talia to Provide Ultra-low-cost Broadband across Iraq and Afghanistan

September 12, 2018 - A new low-cost satellite broadband service will be launched across Iraq and Afghanistan as SatADSL, a provider of professional VSAT services via satellite, and Talia agreed to expand their long-term partnership. The two companies' current agreement lets SatADSL link directly to Talia's teleport to provide services across the whole of Africa, with Talia's equipment providing high performance and low-cost per megabit. Under the new deal, SatADSL will also be able to access Talia's new platform in Jordan Media City, enabling it to offer Ka-band services across Iraq and Afghanistan. By connecting its Cloud-based Service Delivery Platform (C-SDP) to Talia's hub, SatADSL will be able to offer the full range of services available on its platform in Iraq and Afghanistan, including vouchers, VNOFlex, Wi-Fi Hotspots, etc. The C-SDP is a Platform-as-a-Service (PaaS) solution which enables operators to deliver a full range of satellite-based connectivity services without investing in physical infrastructure. SatADSL expects to have worldwide coverage by the end of the year, further expanding the reach of its C-SDP.

C-COM Signs 5 Year Contract with Altegrosky

September 12, 2018 - C-COM Satellite Systems Inc. has signed a contract with one of its long-standing integrator partners pursuant to which the partner is permitted to order up to US\$2,000,000 worth of C-COM's products over a 5-year period. Altegrosky is a leading VSAT satellite communication operator in Russia with subsidiaries that include satellite operators CJSC "Rais Telecom", CJSC "SETTELECOM", CJSC "Moscow Teleport" and system integrator LLC Altegrosky Engineering. The company has been reselling for more than a decade and has created unique integrated solutions in many vertical markets, including Emergency Services (police, fire, ambulance), Oil & Gas exploration, Broadcasting, and Mobile Banking for rural Russian communities.

Reliance Jio Selects Hughes India for Nationwide Satellite Backhaul Network

September 13, 2018 - Hughes Communications India Limited (HCIL), a subsidiary of Hughes Network

Systems, announced that Reliance Jio Infocomm (Jio), the largest 4G and mobile broadband digital services provider in India, has selected the Hughes JUPITER System to enable satellite connectivity to more than 400 4G/LTE sites in remote and rural locations. Hughes and Jio were both recognized in Fortune's 2018 Change the World list of the top 10 companies that make a positive social impact as part of their core business strategy. Jio ranked number one on the list for expanding Internet access in India, including via its 4G network, which will leverage JUPITER System technology to connect locations beyond the reach of terrestrial backhaul technology. Under the agreement with Jio, Hughes India will provide a managed service to include network planning, implementation, operation and maintenance.

Ultra Electronics, Gigaset Announced the First Deliveries of New Vehicle Mount Satellite Antenna

September 14, 2018 - Building on the success of the DA-180 Lite and DA-200 Lite products, a new 1.5m version has been developed to meet growing demand. Government, emergency response and broadcasters increasingly require more compact and rapidly deployable solutions for higher data throughputs at X, Ku and Ka band. The first units were delivered to a large Asian military customer after a successful factory acceptance in August. The DA Lite series of vehicle mount antennas has been one of the most significant new product ranges Ultra Gigaset has developed in recent years, and the DA-150 Lite was the natural next step in our development programme.

SatADSL and Marlink Partner to Expand Worldwide Coverage

September 14, 2018 - SatADSL, a provider of professional VSAT services via satellite, and Marlink Group (Marlink) announced a new partnership which will grow both companies' offerings worldwide. Under the agreement, SatADSL will be able to link directly to Marlink's Newtec Dialog platform to provide high-bandwidth C- and Ku-band VSAT services across its coverage footprint. This will give SatADSL a global presence for the first time. Marlink, the world's leading provider of end-to-end managed connectivity and IT solutions, will utilize SatADSL's Cloud-based Service Delivery Platform (C-SDP) to extend voucher-based and congestion-based services to customers, expanding its technology-leading portfolio of business-critical solutions.

Arabsat and Newtec Sign New Multi-Million Euro Agreement

September 15, 2018 - Newtec – a specialist in designing, developing and manufacturing equipment and technologies for satellite communications – and Arab Satellite Communications (Arabsat) have signed a new multi-million Euro contract, expanding their long-term partnership. The new agreement will enable the launch of new High Throughput Satellite (HTS) services in the Middle East and Africa, including Enterprise and VNO services, IP Trunking and mobile backhaul for 3G and 4G services. Under the partnership, Arabsat will deploy a Newtec Dialog® platform with a variety of Newtec's DVB-S2X Wideband modems. The specific modem used for each customer will depend on the market being served, with Newtec's portfolio providing vertical-specific solutions to deliver the best connectivity experience for any satellite application. Once launched, the new services will use Arabsat satellite capacity, with the initial hub expected to be installed in Europe within the next month.

Marlink and SES Networks Extend Enterprise Services Partnership

September 17, 2018 - SES Announced that Satellite services and solutions provider Marlink has contracted SES Networks' fibre-like connectivity to enable new low-latency services in its enterprise portfolio. With a highly differentiated range of satellite-based solutions, Marlink is expanding the options and value it offers to meet the evolving demands of its customers. The contract enables Marlink to leverage SES' O3b medium earth orbit (MEO) constellation for big data applications that require fibre-like performance. With round-trip latencies below 150 milliseconds, the performance of MEO-enabled networks is equivalent to that of standard fibre connections, while also providing greater reach and faster deployment times. These high throughput services will complement Marlink's existing portfolio of geostationary (GEO) services for utilities, renewable energy, oil and gas, civilian governments and other industries.

Thaicom and Bangladesh Communication Satellite Company Sign Consulting Contract

September 18, 2018 - Thaicom Public Company, a leading Asian satellite operator and provider of integrated satellite end-to-end solutions, and Bangladesh Communication Satellite Company Limited (BCSCL), a Bangladesh Government owned satellite operator, announce the signing of a multi-year consultancy service agreement. Under the agreement, Thaicom will provide BCSCL comprehensive business and market development services for the Bangabandhu Satellite-1, the first ever geostationary satellite of Bangladesh that was successfully launched on 11 May 2018.

Hughes to Provide Satellite Broadband Services for U.S. Government Education & Training Network

September 18, 2018 - Hughes Network Systems has been awarded a new General Services Administration (GSA) Blanket Purchase Agreement (BPA) contract for a fully managed, global satellite network to support distance learning programs for the Government Education and Training Network (GETN). The GETN community, a consortium of multiple agencies, has depended on Hughes to power its distance learning network across the U.S. and dozens of international sites, and this contract builds on the company's commitment to deliver innovative network technology for the Federal Government. The contract award, estimated at \$15 million in total funding for up to five years, marks the third time Hughes has been selected to deliver the turnkey satellite broadcast network, which is expected to encompass 1,030+ downlink sites with 1 or more classrooms, five uplink sites, 21 broadcast studios, and 44 international sites. The Hughes team includes longtime subcontractor Convergent Media Systems to support installation, maintenance and content scheduling for the network.

Kratos to Build Two Satellite Earth Stations

September 18, 2018 - Kratos Defense & Security Solutions has received \$3 million in contract awards for design and build of two Ku-Band earth stations for a certain customer. Kratos will deliver two Ku-band earth station solutions that include Kratos' high-performance 5.0 meter and 6.2 meter Ku-band limited motion antenna systems and a Compass monitoring and control system. Kratos' antenna solutions meet strict customer requirements and are optimized to reduce complexity and risk. This protects and maximizes operator infrastructure investment by delivering faster time-to-market, faster time-to-revenue and reduced costs. Compass® provides complete monitor and control of devices for satellite and hybrid networks to ensure the health and uptime of mission critical equipment. The Kratos' earth station solutions will be pre-configured at Kratos' controlled, off-site facility and deployed at the customer's location to provide higher quality and accelerated market entry. Kratos' satellite and space products and systems support approximately 85 percent of U.S. space missions and approximately 75 percent of the world's commercial space system operators, respectively.

New Business Success for e-GEOS in Indonesia and Japan

September 18, 2018 - e-GEOS, a company set up by Telespazio and the Italian Space Agency, has extended its presence in the Far East with the awarding of a tender in Indonesia and a contract renewal in Japan. In Indonesia, e-GEOS won an international tender announced by the Ministry of Marine Affairs and Fisheries (KKP) in support of operations at the SAR (Synthetic Radar Aperture) ground station located in the Perançak Space Centre. The agreement, whose main objective is to guarantee satellite monitoring of illegal fishing within the Indonesian Exclusive Economic Zone, provides that e-GEOS be responsible for activating and updating processing chain software, the satellite receiving processor, and the receiving antenna. In Japan, e-GEOS has renewed for the third year in a row, following an international tender, the agreement underwritten with JSI (Japan Space Imaging), allowing the Japanese company to supply their clients with satellite data generated by the COSMO-SkyMed constellation. The partnership between the two companies has already led to, in January 2017, the creation, in Japan, of a CUT (Commercial User Terminal) ground station for the management of operations of planning, acquisition and processing of satellite images.

AsiaSat Gets Second Patent on "Methods and Systems for Improving Spectrum Utilisation for Satellite Communications"

September 19, 2018 - AsiaSat has received its second patent from the United States Patent and Trademark Office (USPTO), titled, "Methods and Systems for Improving Spectrum Utilisation for Satellite Communications" (US Patent No. 10,050,698 B2). This new patent is about the methods and systems to mitigate the imbalance of uplink and downlink spectrum allocation in satellite communications. Through digitalising uplink spectrum with an onboard digital channelising processor (DCP), unused Fixed Satellite Service (FSS) guard bands (a bandwidth for separating two adjacent communications channels without interfering each other) in the uplink spectrum, whether from the same band or different bands such as C-, Ku- or Ka-band can be extracted, fully harvested and put into use.

Navarino Announces Connectivity Cooperation Agreement with Intelsat

September 19, 2018 - Navarino, the maritime industry's leading technology company, announced that it will add maritime connectivity services from Intelsat S.A. to its portfolio of connectivity solutions. Under the agreement, Navarino will introduce innovative Intelsat satellite services delivered from the award-winning IntelsatOne Flex platform, a global managed service designed to optimize bandwidth allocations and provide flexible coverage where it is needed most. With this service set to be introduced to customers

in Q3 2018, Navarino CEO Dimitris Tsikopoulos is expecting a high level of interest in the new possibilities that the Intelsat/Navarino collaboration will bring.

Telstra Achieves Provisional Certification for Teleports in Australia and Hong Kong from WTA

September 19, 2018 - The World Teleport Association (WTA) announced that Telstra has achieved provisional certification of three teleports: Gngangara (Perth, Western Australia), Oxford Falls (New South Wales, Australia) and Stanley (Hong Kong) under WTA's Teleport Certification Program. With these latest certifications, Australia now has the most WTA-certified teleports of any country in the world. Since its introduction at IBC 2015, the Certification program has quickly grown in popularity, with 12 teleports currently engaged in the quality evaluation process and certifications already issued to teleports owned by Eutelsat, du, Signahorn, Optus, Globecomm, Horizon, Media Broadcast, Elara Comunicaciones, GlobalSat, Talia, Telenor, Vivacom, Cyta, Batelco, CETel, Etisalat, Speedcast, Singtel and Arqiva.

Viasat Signs New Master Agent Agreement with Intelisys

September 19, 2018 - Viasat Inc. announced it signed Intelisys, Inc., a ScanSource company and the nation's leading Technology Services Distributor, as its latest Master Agent partner offering Viasat's business internet services. This new partnership significantly increases Viasat's presence in the business and enterprise channel, giving Viasat access to over 3,000 Intelisys agents nationwide. The agreement with Intelisys comes on the heels of the ViaSat-2 service launch for business internet users. Specifically as a Viasat Master Agent, the Intelisys network will be able to offer Viasat high-speed satellite internet as an option to their enterprise and business customers across the U.S., filling broadband coverage gaps where business customers want assured, reliable, high-speed broadband communications. Additionally, with Viasat satellite internet service, Intelisys business customers gain access to a diverse, resilient secondary connection for business continuity and SD-WAN implementations. Installation of service typically takes place within three to five days of ordering, giving business customers the ability to quickly deploy and use Viasat's fast, reliable connectivity service.

Inmarsat and Panasonic Enter into Strategic Collaboration for Commercial Aviation

September 20, 2018 - Inmarsat and Panasonic Avionics Corporation (Panasonic) have agreed a strategic collaboration, for an initial ten-year period, that enables them to combine their highly complementary market leading services to offer broadband in-flight connectivity (IFC) paired with high-value solutions and services to customers in the commercial aviation industry worldwide. This collaboration will enable airlines, aircraft manufacturers and passengers to benefit from the combined expertise of two companies that have been at the forefront of technology and innovation for nearly four decades. Under the terms of the agreement, Inmarsat will become Panasonic's exclusive provider of Ka-band IFC for commercial aviation. Panasonic will now be able to offer Inmarsat's high-speed, broadband connectivity service, GX Aviation, powered by Global Xpress, the world's first global Ka-band satellite network, owned and managed by a single operator. Panasonic will continue to invest in its own network and, with GX Aviation as a primary offering for new business, will be perfectly positioned to serve both its current and future customers.

ThinKom and Telesat to Jointly Develop an Enterprise User Terminal for Telesat's Global LEO Satellite Constellation

September 24, 2018 - ThinKom Solutions, Inc. and Telesat have signed a memorandum of understanding (MoU) to jointly develop a Ka-band enterprise user terminal for Telesat's planned low Earth orbit (LEO) constellation of satellites. As an initial step in the process, ThinKom's ThinAir® Ka2517 phased array antenna system, which is currently in production for commercial and government in-flight connectivity (IFC), will be used for over-the-air testing on Telesat's Phase 1 LEO satellite over the next few months. Telesat's state-of-the-art LEO constellation will combine the company's global spectrum rights in Ka-band with Telesat's proprietary LEO architecture to transform global communications. The constellation will deliver an unsurpassed combination of capacity, speed, security, resiliency, latency and low cost. Telesat's LEO constellation will accelerate 4G/5G expansion, bridge the digital divide by bringing fiber-like high-speed services into rural and remote communities, and set new levels of performance for commercial and government broadband on land, sea and in the air.

Romantis Received Landing Rights to Use the Capacity of the RSCC Express-AM8 Satellite in Brazil

September 24, 2018 - The RSCC and the Romantis group of companies continue to actively promote the capacity of the Russian Express-AM-series satellites to implement satellite communications and digital

broadcasting projects in Latin America. As a result of the work with the National Agency of Telecommunications of Brazil (Anatel), Romantis Brazil has successfully completed the formalities to obtain the landing rights to use the capacity of the Express-AM8 satellite in the orbital position of 14 degrees west in Brazil. This paves the way for further advancing business in this largest country of Latin America having a huge economic potential. In August 2018, at SET EXPO 2018 in São Paulo, the RSCC and the Romantis group of companies will present solutions based on the capacity of the Express-AM8 and Express-AM44 spacecraft to support HD and UHD broadband services, as well as broadband access and backbone Ku- and C-band communication channels in Brazil and other countries of South America and the Caribbean.

La Compagnie Airline and Viasat to In-flight Wi-Fi Service Onboard New A321neo Aircraft

September 25, 2018 - La Compagnie, the exclusively business-class boutique airline offering two daily flights between New York and Paris, has partnered with Viasat to equip La Compagnie's brand-new, all business-class A321neo aircraft with high-speed Wi-Fi capabilities. Deployment of the new in-flight Wi-Fi service is scheduled for April 2019 – making unlimited in-flight connectivity available to all 76 passengers onboard. The boutique airline selected Viasat because its unique satellite design has the ability to meet connectivity demands even in high-density areas, like major airport hubs and congested air corridors – all at unprecedented prices for the passenger. Thanks to this partnership, all passengers will be able to go beyond curated entertainment with amplified internet access throughout their in-flight experience, which rivals connectivity standards on the ground.

ThinKom Successfully Demonstrates First Aero Terminal Connectivity with SES' O3b MEO Satellites

September 25, 2018 - ThinKom Solutions announced the successful completion of the first ground test of its ThinAir Ka2517 Ka-band phased-array satellite antenna with the SES' O3b constellation of medium-Earth orbit (MEO) satellites. The test was conducted in August 2018 at ThinKom's facility in Hawthorne, California, in collaboration with SES Networks. For the ground test, a vehicle-mounted ThinKom Ka2517 aeronautical antenna acquired successive O3b MEO satellites at 13-degree elevation and successfully tracked them for 30-minute periods while the satellites traversed from west to east. ThinKom said this test is a precursor to a flight test, expected to take place before the end of 2018. This will be the first in-flight demonstration of a ThinKom antenna communicating through a non-geostationary (NGSO) constellation and will demonstrate the ability of ThinKom's phased-array antenna to auto-track and perform seamless beam switching through aircraft roll, pitch, and yaw motions.

Airbus Tests Stratospheric 4G/5G Defence Communications with Balloon Demonstration

September 26, 2018 - Airbus has successfully tested stratospheric 4G/5G defence applications with a high-altitude balloon demonstration. The technology tested, an Airbus LTE AirNode, represents a key part of Airbus' secure networked airborne military communications project, Network for the Sky (NFTS). With this new generation of long-range communications in the sky, high-altitude platforms such as Airbus' Zephyr will be able to create persistent, secured communication cells to relay information on a variety of different aircraft platforms including helicopters, tactical UAVs and MALE UAVs (Medium Altitude Long Endurance Unmanned Aerial Vehicles). Airbus flew and tested the communications solution in Canada at all altitudes up to 21km above the Earth's surface, using a stratospheric balloon to create a high-altitude airborne cell site. In its payload, the balloon carried an Airbus LTE AirNode, which provided a 30km-wide footprint of coverage for private and secure communications. The Airbus team, equipped with two vehicles and two drones, tracked the balloon over 200km, exchanging 4K video between the different assets – simulating an ISR mission with real-time transmission. The data was sent via a private network at speeds from 0.5 to 4 Mbps, which is comparable to 4G/5G mobile communication.

Comtech Awarded in Excess of \$4.0 Million Additional Funding from US Army

September 26, 2018 - Comtech Telecommunications has announced that, during its fourth quarter of fiscal 2018, its Command & Control Technologies group, which is part of Comtech's Government Solutions segment, received additional funding in excess of \$4.0 million on the previously announced three-year \$123.6 million contract to provide ongoing sustainment services for the AN/TSC-198A SNAP (Secret Internet Protocol Router (SIPR) and Non-classified Internet Protocol Router (NIPR) Access Point), Very Small Aperture Terminals (VSATs). SNAP terminals provide quick and mobile satellite communications capability to personnel in the field. The contract has been funded \$33.5 million to-date.

Speedcast Announces Pricing of \$175 Million Incremental Term Loan

September 27, 2018 - Speedcast International Limited has successfully priced the US\$175 million incremental term loan add-on (the "Incremental Term Loan") to its existing US\$425 million US Term Loan B facility (due 2025) (the "Existing Term Loan"). The Incremental Term Loan and the Existing Term Loan will have the same terms, including interest margin, and will be priced at LIBOR plus 2.75% p.a., which is a 0.25% p.a. increase on the current interest margin under the Existing Term Loan. Speedcast intends to use the proceeds from the Incremental Term Loan to fund the acquisition of Globecomm Systems Inc. for approximately US\$135 million, to pay fees and transaction expenses and to repay a portion of the loans outstanding under its Revolving Credit Facility (RCF), enhancing Speedcast's liquidity position. The Incremental Term Loan will be borrowed on completion of the acquisition which is expected to occur in Q4 2018, subject to customary closing conditions, including regulatory approvals.

BROADCASTING

Eutelsat Launches Eutelsat CIRRUS

September 6, 2018 - Eutelsat Communications is launching Eutelsat CIRRUS, a hybrid satellite-OTT delivery solution, enabling broadcasters to offer a flexible, seamless content experience across multiple screens. Eutelsat CIRRUS will provide a turnkey content delivery solution via satellite and OTT to operators seeking to launch or upgrade their service, offering the benefits of rapidly deployed video services, low operational costs, high image quality and consistent end-user experience. Through its dual offer of turnkey DTH services and OTT multiscreen delivery, this new service represents a further step for Eutelsat in the integration of satellite into the IP ecosystem. Eutelsat CIRRUS' turnkey DTH service will provide satellite TV broadcasters with end-to-end video distribution combined with cloud-based service management. Bringing together the strengths of traditional DTH with next-generation features, the fully integrated platform will deliver an enriched viewer experience through live channel broadcasting, channel numbering, programme information, content security, subscriber and set-top box management.

CTC Media Selects DataMiner to Manage its Media-over-IP Playout

September 6, 2018 - Skyline Communications, the global leader in end-to-end multi-vendor network management, orchestration and OSS software solutions for the broadcast, satellite, cable, IPTV and mobile industry, is proud to announce that CTC Media, Russia's leading independent broadcasting company, has rolled out the award-winning DataMiner NMS/OSS platform to manage its new SMPTE 2022 media-over-IP playout facility. The solution is built using fully redundant DataMiner nodes with no single point of failure, resulting in an uptime of 365*24*7. The DataMiner platform manages the complete virtualized playout infrastructure end to end, including video server storage, encoders, decoders, multiplexers and test signal generators. In addition to the hardware infrastructure, DataMiner also manages the playout data center's virtual machines, networking and the uncompressed SMPTE ST 2022-6 media-over-IP streams, including SMPTE ST 2022-7 redundancy.

Irdeto Selected as Conditional Access Partner for Eutelsat's New Hybrid Platform

September 7, 2018 - Irdeto announces that it has been selected by leading global satellite operator, Eutelsat as a security partner for its new Eutelsat CIRRUS hybrid platform. The new service provides a turnkey solution for Eutelsat customers, allowing them to offer Direct-to-Home (DTH) services combined with OTT services across multiple screens. Irdeto Cloaked CA will enable the secure delivery of DTH content on the platform. With the launch of Eutelsat CIRRUS, the satellite operator is offering a variety of value-added services to its customers, whether they are using only satellite or both satellite and OTT networks. Eutelsat CIRRUS is designed to provide a unified back-end system, capable of embracing the full scope of business and operational tasks across both DTH and OTT networks.

TeamCast Supports DVB-T2 Trials Performed by Broadcast Australia and Free TV

September 12, 2018 - Broadcast Australia (a BAI Communications Company) and Free TV are performing trials in order to evaluate next generation broadcast technology for Australia. The objective is to have a second-generation system able to broadcast 4K TV programmes, while the first generation system built in 2001 and based on DVB-T cannot. The trials include both laboratory testing and field trials to determine candidate operating modes for the future system and to verify interoperability of multiple- vendors equipment for single frequency network (SFN) operation. TeamCast provided a TWISTER DVB-T2 exciter and associated support for the tests.

Channel 4 Secures Continued DTH Coverage of the British Isles with SES

September 12, 2018 - reliable Channel 4 programs on direct-to-home (DTH) platforms following a multi-year extension agreement at 28.2/28.5 degrees East with SES. Under the agreement, Channel 4 will renew capacity on SES's ASTRA 2E and 2G satellites to transmit a full line-up of services for the British and Irish markets. DTH is a key technology ensuring high quality video for viewers in the British Isles, and the long-term renewal with SES of the transponders on the ASTRA fleet highlights the value both companies place on their relationship.

Panaccess Launches Pantelio, a New DTH TV Platform Enabled by Hispasat and Belinter Media

September 12, 2018 - Panaccess, the audiovisual service provider, presented Pantelio, a direct-to-home (DTH) television platform for the Slovak and Czech markets, which it has launched in a joint agreement with Hispasat and Belinter Media. This new platform will be distributed in these countries through the Hispasat 30W-5 satellite, located in 30°W, one of HISPASAT top video distribution neighborhoods in Europe and America. Pantelio offers initially 40 SD and 60 HD channels -thus becoming one of the pay TV platforms with more HD content including premium content such as Discovery Channel, National Geographic, Eurosport, Disney Channel or Nickelodeon, among others, as well as many regional channels. This new platform incorporates state of the art technology that allow the telecommunications service providers to offer very innovative services such as Ultra High Definition, HbbTV (Hybrid Broadcast Broadband TV), video on demand and a seven-day TV archive. Together, top high quality content and cutting edge technology capabilities make Pantelio one of the most advanced pay TV platform in the region.

QVC UK Ensures Continuity of its Retail Channels across the British Isles with SES

September 13, 2018 - British and Irish viewers will continue to receive QVC's range of retail channels as the result of a multi-year renewal agreement signed with SES, including services from MX1. The new agreement covers QVC's continued lease of capacity from SES' ASTRA 2G satellite and complementary ground services such as encoding, fibre, backup services, and uplinking from SES and SES' wholly-owned video subsidiary, MX1. This one-stop shop combination of video distribution and services enables QVC to ease its operational processes. This important renewal is a continuation of the service SES has been delivering to QVC in UK and Ireland since the 1990s. Today this relationship is global with QVC relying on SES to deliver their retail channel range in multiple markets around the world.

Irdeto's New Geodiversity Functionality Enables Global Expansion of OTT Services

September 14, 2018 - OTT revenues continue to grow rapidly as consumers want a choice of high quality content across a range of devices. This has seen a raft of new OTT services from operators, content owners and other market players, and global growth is now a focus for many as demand increases. However, global expansion of OTT services can be costly. To address these challenges, Irdeto has added geodiversity into its multi-DRM and policy management solution for OTT services. Irdeto Rights, a cloud-based managed service, now allows a single deployment to serve licenses from multiple regions. This enables global OTT services to be offered with faster video start up time and better performance. In order to expand OTT services across the globe, consumers must have the best viewing experience no matter where they are. Service providers must also mind the cost of expansion to avoid duplicate content storage and packaging infrastructure. Irdeto Rights with geodiversity simplifies management and operation of global OTT services and ensures high availability and minimum latencies to all viewers, even if a region experiences an outage.

Talia and Arabsat Partner to Provide Secure TV Broadcast

September 14, 2018 - Talia Limited, a leading communication provider serving the Middle East, Africa, Europe and the Americas, announced the completion, and successful deployment of a new state-of-the-art uplink platform, complete and ready to host HD and SD channels secured transmission on Arabsat Badr-7 satellite at 26°E. Thanks to Arabsat's unique satellite technology, customers will benefit from secure broadcasting service that is immune to signal jamming and interference at 26°E hot spot. The partnership with Talia will enable Arabsat to secure its broadcasting service by using its technologically advanced Badr-7 satellite and Talia's state-of-the-art ground facilities to broadcast video channels through 26°E covering the Middle East & North Africa.

Orange Slovensko Selects EUTELSAT 16A to Expand its Pay-TV Offer via Satellite

September 14, 2018 - Orange Slovensko has signed its first-ever multiyear contract with Eutelsat Communications expanding its pay-TV offer via satellite and enabling a nationwide reach across Slovakia.

Eutelsat's 16° East position is already a key video neighbourhood for Slovakia thanks to its exceptional channel line-up tailored to local viewers. Orange Slovensko will broadcast from EUTELSAT 16A satellite to extend its existing offer to reach households not covered by its FTTH network. Under this contract with Eutelsat, the platform delivers 38 channels, with more than half in HD. These channels are available in 3 main pay-TV packages, plus additional thematic and premium channel add-ons, starting at 6 euros per month. The service includes exclusive distribution of Orange Sports channels, home of Champions League matches for the Slovakian territory for the next three seasons as well as other highly valued football, ice hockey, basketball and mixed martial arts (MMA) content.

Kiwisat Adds Channels to its Bouquet via SES

September 14, 2018 - Aiming to enhance the variety of its TV package with Spanish-speaking content and new English-speaking channels, satellite TV provider Kiwisat is delivering 60 new channels to Caribbean audiences, of which 50 are in HD (High Definition), using SES's satellite SES-10. Under the long-term extension agreement announced by SES, Kiwisat is leasing additional capacity to transmit the 60 additional channels via SES-10, which is already delivering Kiwisat's current TV package of about 130 channels. This brings the new Kiwisat content line-up to about 190 channels, of which about 140 are in HD, with a mix of content in three languages: English, French, and now Spanish. Launched in April this year on SES-10, Kiwisat offers the largest HD bouquet in the Caribbean region. By extending its channel line-up, Kiwisat will be able to offer different targeted TV packages adapted to the islands' population and main language. With the support of resellers across the Caribbean, this will allow the platform to cater to various consumers' needs in the region and reach a wider audience.

Irdeto Partners with Airtel to Secure Content on Airtel's Digital TV Platform

September 15, 2018 - Irdeto has partnered with Bharti Airtel (Airtel), India's largest telecommunications service provider, to secure all content offered on Airtel's Digital TV services. As part of the strategic partnership, Irdeto will deploy its security solutions to secure the linear channels offered on the set-top-box and the content offered on Airtel's hybrid Android TV platform. Irdeto will implement its state-of-the-art security solutions – Irdeto Armor for Android TV, Irdeto Cloaked CA and Middleware – on Airtel's set-top-boxes to deliver the utmost safety for all its valuable content and also provide an improved customer experience. Open platforms like hybrid set-top-boxes offer customers a vast choice of content and a premium user experience. Customers can enjoy flexibility and convenience as they experience content on-demand. While these platforms offer service providers an immense opportunity to meet unique customer demand for content, securing the content is imperative to ensure data protection. Under the partnership, Irdeto will work with Airtel on a robust content protection strategy that also ensures a premium user experience for customers.

Hispasat Introduces its New Video on Demand via Satellite Solution Enabled by Quadrille

September 15, 2018 - Hispasat, and Quadrille, the independent software provider and leader in supplying software solutions for content and OTT channels delivery via satellite, are introducing their new solution for non-linear satellite-managed services, Push VoD (Video on Demand), at the IBC fair in Amsterdam. The solution allows on demand video contents (films, series, etc.) to be distributed via satellite without the need of internet access. Through this new solution, HISPASAT provides an effective tool to its clients in the Media market who wish to distribute non-linear contents or video on demand (VoD) via satellite quickly and easily. Additionally, the platform can also be used in market segments such as the mobility, and corporate and government services. This is an important step forward in the satellite operator's innovative vision. The company has thus selected the French company Quadrille, which provides its QuadriFast software package to send video files and advertisements, as a response to the new media consumption habits, which go beyond traditional television.

Cinegy Helps Globecast Deliver UK's First Dedicated UHD/4K Entertainment Channel

September 16, 2018 - Cinegy, the global leader for broadcast playout software for the cloud, has announced today that it helped its partner Globecast launch the UK's first dedicated UHD/4K entertainment channel. Cinegy's broadcast playout engine, Cinegy Air PRO, is used to allow the building of the "Channel in the Cloud" clearly showing the benefits of cloud technologies in being able to launch a complete service in a fraction of the time it would have taken traditionally.

Nigeria's Latest FTA Local Channel Bouquet via SES Unveiled

September 25, 2018 – SES announced that Local television broadcast audiences will now have access to 13

new free-to-air (FTA) channels delivered as a multi-channel bouquet branded 'PREMIUM.FREE'. The bouquet's launch channels will be supplied by AfricaXP and delivered via SES satellites at 28.2 degrees East. AfricaXP is the leading independent African channel network, content distributor and producer, which owns and operates over 20 different themed channels supplied to major African broadcasters and African diaspora platforms worldwide. This new bouquet of FTA channels includes premium channels, which are custom-made for African viewers and blend premium African programming with top-flight international content across a diverse range of themes from sports to movies, telenovelas, kids, factual, reality and lifestyle programming.

China Central Television Selects Nevia for New UHD/4K Contribution

September 27, 2018 - Nevia, the award-winning provider of virtualized media production solutions, has announced that China Central Television (CCTV), the largest television broadcaster in China, has selected Nevia Virtuoso software-defined media nodes to provide a contribution solution for 4K Ultra HD signal transmission between studios. CCTV wants to increase its use of UHD/4K, so it needed a solution that would enable it to transport these signals reliably and efficiently over its existing baseband (SDI) infrastructure initially, and over IP eventually. The new Nevia Virtuosos will be used to encode UHD/4K signals (4x3G-SDI) to fit on bandwidth equivalent to a single 3G-SDI signal – with the help of the lightweight TICO compression technology (profile 1 and 2). This will enable CCTV to use its existing 3G-SDI infrastructure to route and transport the UHD/4K signals, dramatically reducing the need to invest in additional capacity to support the higher resolution.

LAUNCH / SPACE

Chinese Private Space Company Launches Suborbital Rocket

September 5, 2018 - A Chinese private company sent a suborbital rocket into space from the Jiuquan Satellite Launch Center in northwest China. The SQX-1Z was developed by iSpace, a Beijing-based private rocket developer, founded in 2016 with a research center in Xi'an, Shaanxi Province. The rocket carried three CubeSats, miniature satellites, for two Chinese commercial companies. After entering its preset orbit, the rocket will release two satellites for testing, and the other satellite will be parachuted to Earth, according to a statement by the company. The SQX-1Z rocket will provide minisatellite and constellation launch services for clients.

DigitalGlobe Announces EnhancedView Contract Option Year

September 5, 2018 - DigitalGlobe announced it signed a contract with the U.S. National Reconnaissance Office (NRO) to transition the U.S. National Geospatial-Intelligence Agency (NGA) EnhancedView Service Level Agreement (SLA) for commercial imagery acquisition, effective September 1, 2018. The NRO contract, referred to as EnhancedView Follow-On, includes the two remaining option years of the NGA SLA and exercises the first \$300 million option year. DigitalGlobe will continue without interruption its long-standing commitment to deliver the highest resolution, most accurate commercial satellite imagery, enabling U.S. Government users to make decisions with confidence.

Lockheed Martin Prepares Ground System Support for Upcoming GPS III Satellites Launches and M-Code Operations

September 6, 2018 - Once the next-generation GPS III satellites begin launching later this year, a series of updates to the current ground control system from Lockheed Martin will help the U.S. Air Force gain early command and control of the new satellites for testing and operations. In 2016 and 2017, the Air Force placed Lockheed Martin under two contracts, called GPS III Contingency Operations (Cops) and M-Code Early Use (MCEU), which directed the company to upgrade the existing Architecture Evolution Plan (AEP) Operational Control System (OCS), which operates today's GPS constellation. These upgrades to the AEP OCS are intended to serve as gap fillers prior to the entire GPS constellation's operational transition to the next generation Operational Control System (OCX) Block 1, now in development.

Ariane 6 Accelerates as Arianespace Signs First Commercial GEO Multiple-launch Contract

September 10, 2018 - Arianespace is confirming the attractiveness of its launcher family with the announcement of two contracts for Ariane 6: the first with Eutelsat as part of a launch services agreement involving five satellites; and the second with France's CNES space agency and the country's DGA defense procurement agency for the CSO-3 satellite. A third contract also was signed recently with the Indian

Space Research Organization (ISRO) for Ariane 5 missions to orbit two satellites. Arianespace's backlog is now 59 launches to be carried out during the coming years, including three on Vega C and five on Ariane 6 – the new launchers slated to make their maiden flights in 2019 and 2020, respectively.

Eutelsat Signs Long-Term Multiple-Launch Service Agreement with Arianespace

September 10, 2018 - Arianespace and Eutelsat Communications have concluded a long-term multiple-launch service agreement. The agreement covers five launches until 2027 and will provide Eutelsat with assured access to space with schedule flexibility at cost effective prices. With this agreement, Eutelsat is the first commercial customer to sign up to Ariane 6, Arianespace's next-generation launch vehicle, expected to start service from 2020. This new long-term commitment builds on the previous contract signed by Eutelsat and Arianespace in February 2013, which was expanded in 2017. Under these earlier agreements, three future Eutelsat satellites, EUTELSAT 7C, EUTELSAT QUANTUM and KONNECT, are already scheduled for launch on Ariane 5.

Arianespace to Launch the GSAT-31 and GSAT-30 Satellites for India with Ariane 5

September 10, 2018 - The Indian Space Research Organization (ISRO) has chosen Arianespace to launch its GSAT-31 and GSAT-30 telecommunications satellites. The two satellites are to be launched on separate Ariane 5s from the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana from end 2018 onwards, starting with GSAT-31. Both satellites will be designed, assembled and integrated by ISRO. They are planned as replacement satellites for the currently operational satellites providing key national services in multiple frequency bands including C- and Ku Bands. GSAT-31 will be based on an enhanced I-2K platform, to be stationed in geostationary orbit at a longitude of 48° East. It will weigh 2,500 to 2,600 kg. at launch. Providing communications to India, it will replace Insat 4CR, whose end of life is soon expected. As for GSAT-30, it will be based on an I-3K platform, will weigh 3,450 kg. at launch and ensure continuity of service for INSAT 4A, positioned at 83° East longitude. It will provide high-quality television, telecommunications and broadcasting services.

APT Satellite Successfully Launched APSTAR-5C Satellite

September 10, 2018 - In Cape Canaveral, Florida, US, APSTAR-5C was successfully launched to space on a Falcon 9 rocket made by Space X. APSTAR-5C is based on the Space System Loral FS-1300 platform, it is equipped with C-band, Ku-band regional beams and Ku-band HTS payload, providing high power transponder services to customers across the Asia-Pacific region for VSAT, video distribution, DTH, maritime and broadband applications. Through APSTAR-5C, APT Satellite plans to maintain services for its existing customers on APSTAR-5 satellite, assuring their businesses not be interrupted by the replacement. Meanwhile, APSTAR-5C satellite will carry more transponders, and expand to broader service areas with more powerful performance, while the new high-throughput (HTS) capacity will satisfy growing market demand in Southeast Asia. APSTAR-5C's mission slot is at 138E, it will replace APSTAR-5 satellite which was launched in 2004 and now approaching end-of-life. By utilizing a hybrid chemical-electric propulsion system, APSTAR-5C is expected to last more than 18 years in its station-keeping orbital slot. APSTAR-5C is also a host payload project between APT Satellite and Telesat, a Canadian satellite company, under its name of Telstar-18V.

Viasat Selects United Launch Alliance for Commercial Satellite Launch

September 10, 2018 - Viasat selected United Launch Alliance's (ULA's) proven Atlas V vehicle to launch one of its ViaSat-3 satellite missions. This is the first commercial contract ULA has directly signed since assuming responsibility for the marketing and sales of the Atlas V launch vehicle from Lockheed Martin Commercial Launch Services earlier this year. The Viasat mission will carry one of the ViaSat-3 series spacecraft and is scheduled to launch in the 2020 - 2022 timeframe from Space Launch Complex-41 at Cape Canaveral Air Force Station in Florida. This mission will launch aboard an Atlas V 551 configuration vehicle, the largest in the Atlas V fleet. The 551 configuration provides the performance to deliver a ViaSat-3 satellite into a high-energy geostationary transfer orbit where it can begin on-orbit operations faster than with other available launch vehicles. The ViaSat-3 class of Ka-band satellites is expected to provide unprecedented capabilities in terms of service speed and flexibility for a satellite platform. The first two satellites will focus on the Americas and on Europe, Middle East and Africa (EMEA), respectively, with the third satellite planned for the APAC region, completing Viasat's global service coverage. Each ViaSat-3 class satellite is expected to deliver more than 1-Terabit per second of network capacity, and to leverage high levels of flexibility to dynamically direct capacity to where customers are located.

Telesat Successfully Launches Telstar 18 VANTAGE

September 10, 2018 - Telesat announced the successful launch of its new Telstar 18 VANTAGE high throughput satellite (HTS) aboard a SpaceX Falcon 9 rocket from Cape Canaveral Air Force Station. Built by SSL, Telstar 18 VANTAGE is the third HTS in Telesat's global fleet with capacity that delivers a new level of performance and value for satellite broadband requirements on land, at sea and in the air. Telstar 18 VANTAGE will replace and expand on the capabilities of Telesat's Telstar 18 satellite with its extensive C-band capacity over Asia, its Ku-band HTS spot beams over Indonesia and Malaysia, and its five additional regional Ku-band beams. Operating from 138 degrees East, the satellite's coverage reaches across Asia all the way to Hawaii – in both C and Ku-band – enabling direct connectivity between any point in Asia and the Americas. Its innovative Ku-band payloads of HTS spot beams and focused regional beams will provide customers operating in Southeast Asia, Mongolia, Australia & New Zealand, and the North Pacific Ocean with greater choice and flexibility to serve today's bandwidth intensive applications.

Thales Alenia Space Selected by CLS to Develop the Kineis Nano-satellite Constellation

(10 September 2018 - Thales Alenia Space has been selected by CLS to develop the Kineis nano-satellite constellation, designed to support connectivity for The Internet of Things. Kineis connectivity draws on a new innovative satellite constellation of 20 nanosatellites with a new communication technology tailor-made for connected objects. CLS has entrusted the development of this constellation to Thales Alenia Space for the prime contractor of the complete system, which will rely on Nexeya for the fabrication of nanosatellite platforms and Syrlinks for its support in the design and construction of the instrument. This selection clearly confirms the pertinence of the products and services offered by Thales Alenia Space to meet emerging market requirements and celebrates its entry as a key player in the IoT sector.

DigitalGlobe Announces the Availability of MDA RADARSAT-2 Data in SecureWatch

September 10, 2018 - DigitalGlobe announced that synthetic aperture radar (SAR) imagery from Maxar's MDA RADARSAT-2 satellite will become available to SecureWatch subscribers on October 1, 2018. SecureWatch, DigitalGlobe's powerful, cloud-based geospatial intelligence (GEOINT) platform, will now combine in one platform the company's high-resolution optical imagery and MDA's SAR imagery, enabling defense and intelligence analysts to deliver actionable insights to decision makers regardless of weather and light conditions. Maxar's MDA will refresh hundreds of global sites on a weekly basis using RADARSAT-2's Wide Ultra Fine format (3 meter resolution, 50 kilometer scene width). RADARSAT-2 imagery allows users to observe features and changes that go undetected using other imaging techniques, and provides day and night coverage regardless of weather. SecureWatch users can access timely RADARSAT-2 imagery using current subscription plans. When combined with 30 cm optical imagery, analysts will have an even more uniquely powerful and reliable toolset to perform analysis to make decisions with confidence.

Kineis: The First European Constellation of Nanosatellites

September 10, 2018 - Kinéis constellation will be 25 nano-satellites for IoT services (Mass connectivity complementary to Orbcomm and Iridium services). Kinéis is a private company comprised of CLS company as a minority shareholder and including the CLS/Argos International Commercial Network and antennas. In Asia, the CLS network represents offices in Hanoi, Seoul, Bangkok, Tokyo and subsidiaries in Beijing, Jakarta, Melbourne, Canberra and Perth. For the coverage of the globe to be updated regularly, we need as many antennas as nano-satellites. Kinéis network will represent around 25 antennas in the world including one in Jakarta and five in Australia and still others to be installed in Southeast Asia. The Kinéis Space Network will complement the existing terrestrial network for object connectivity (IoT Low frequency). To begin with, the services of Kinéis and its beacons will be for the safety of canoes, fishermen from Indonesia. In Australia, the Kinéis service consists of monitoring in white areas of livestock, and food security of herds.

Israel Aerospace Industries (IAI) and Effective Space in Technological and Financial Cooperation

September 11, 2018 - IAI and Effective Space, a company pioneering last mile logistics in space, announced that they have signed a term sheet for cooperation, including both technological and financial partnerships. Under the conditions of the term sheet, Effective Space will appoint IAI as the primary contractor of its SPACE DRONE™ spacecraft, while IAI will work to complete the necessary approvals for equity investment in Effective Space. The term sheet follows more than a year of cooperation, during which both companies have been jointly working on the SPACE DRONE™ spacecraft design. Effective Space is developing a unique, small spacecraft to extend the life of satellites in orbit, based on the vision to provide logistics services in

the rapidly growing space economy. To this end, it has developed a unique and patented technology for rendezvous and docking to satellites in space through a small spacecraft called SPACE DRONE™.

Spaceflight Offers Rideshare Launches to Geosynchronous Transfer Orbit

September 11, 2018 - Spaceflight has procured upcoming launches to Geosynchronous Orbit – a popular destination for communications satellites. The company anticipates offering rideshare opportunities to Geosynchronous Transfer Orbit (GTO) approximately every 12-18 months, or as customer demand requires. The first mission will launch from Cape Canaveral Air Force Station aboard a SpaceX Falcon 9 which was procured by SSL, a Maxar Technologies company. It will represent the two companies' first combined launch and Spaceflight's first mission beyond Lower Earth Orbit (LEO). The manifest for this Falcon 9 GTO rideshare mission is completely full. It features several undisclosed payloads along with an unmanned lunar spacecraft from SpaceIL, an Israeli nonprofit organization that was competing in the Google Lunar XPrize to land a spacecraft on the Moon. The first rideshare satellites will separate in GTO and then the SSL host spacecraft will continue on to Geostationary Orbit (GEO) where the remaining rideshare satellites will be separated.

GapSat Selects Terran Orbital for GEO Mission

September 12, 2018 - GapSat has commissioned a geosynchronous satellite from Terran Orbital Corporation, a leading aerospace provider of small satellites and services. GapSat-1 is a multi-band system offering wide band solutions in C-band, Ku-band, Ka-band and Q/V bands. The spacecraft will be injected directly into the geosynchronous arc. The system is equipped with an electric propulsion system that optimizes usable payload mass. The spacecraft is scheduled for launch in the third quarter 2020. The Ka-band payload features wideband spot beams, suitable for significant traffic-carrying capability. These Ka-band spot beams are fully steerable across the visible arc promoting Internet and other high demand services. The use of the V/Q bands helps push the envelope of wideband services that can be offered via satellite. Small, geosynchronous satellites are particularly well-suited to increase the capacity and the connectivity to well-defined target areas. Less CAPEX intensive by nature, this new class of satellites offers unique opportunities to scale up capacity and explore new business models for established operators and new market entrants ensuring a faster allocation of the full capacity of the satellite.

Arianespace to Orbit THEOS-2 for Airbus in the Framework of a Turnkey Contract with GISTDA

September 12, 2018 - Arianespace announced that it will orbit THEOS-2, the very-high-resolution Earth observation optical satellite for Thailand, under the terms of a turnkey contract between Airbus Defence and Space and the Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA). Using a Vega or Vega C rocket, this Earth observation mission will be conducted from the Guiana Space Center in Kourou, French Guiana, from 2021. THEOS-2 is a very-high-resolution Earth observation optical satellite, part of the next-generation national geo-information system provided by Airbus Defence and Space to support the Kingdom of Thailand's key development priorities. This end-to-end system will make Thailand one of the few nations in the world able to fully exploit geo-information for societal benefits. As an optical satellite system delivering 0.5-meter ground resolution imagery, THEOS-2 is based on Airbus' innovative, flight-proven AstroBus-S platform. It will secure the service continuity of THEOS-1, an Airbus-built satellite launched in 2008, which continues to deliver high-quality imagery five years after its expected end of life. With the AstroBus-S satellite, Thailand is joining a small circle of nations with sovereign access to very high-resolution geostrategic information. Built by Airbus Defence and Space, THEOS-2 will weigh about 450 kg. at launch and is designed for a nominal service life of at least 10 years once injected into a sun-synchronous orbit at approximately 620 km.

Airbus and Orbital Insight Partner on the OneAtlas Platform to Build Geospatial Analytics

September 12, 2018 - Airbus Defence and Space has entered into a partnership with Orbital Insight, a U.S.-based geospatial analytics company, to build a suite of geospatial analytics services and tools. The agreement will provide Orbital Insight with access to Pleiades and SPOT satellite imagery at scale and provide Airbus with analytics services, making Orbital Insight the first analytics partner for the Airbus Digital Platform, "OneAtlas." The OneAtlas Platform is a collaborative environment enabling users to easily access constantly updated satellite imagery, perform large-scale image processing, extract industry-specific insights, and benefit from Airbus assets to develop tailored solutions for a wide range of markets in both commercial and government sectors.

United Launch Alliance Successfully Launches Final Delta II Rocket with NASA's ICESat-2

September 15, 2018 - A United Launch Alliance (ULA) Delta II rocket carrying NASA's Ice, Cloud and land Elevation Satellite-2 (ICESat-2) spacecraft lifted off from Space Launch Complex-2 on Sept. 15 at 6:02 a.m. PDT. This marks the final mission of the Delta II rocket, which first launched on Feb. 14, 1989, and launched 155 times including ICESat-2. From its origin as the launch vehicle for the first Global Positioning System (GPS) satellites to NASA's Earth observing, science and interplanetary satellites – including Mars rovers Spirit and Opportunity – to vital commercial communication and imaging satellites, the Delta II rocket has truly earned its place in space history. ICESat-2 will provide scientists with height measurements to create a global portrait of Earth's third dimension, gathering data that can precisely track changes of terrain including glaciers, sea ice, forests and more. Northrop Grumman built the spacecraft. In addition to ICESat-2, this mission included four CubeSats which launched from dispensers mounted to the Delta II second stage.

PSLV-C42 Launches 2 Foreign Satellites

September 16, 2018 - The Polar Satellite Launch Vehicle (PSLV-C42) of Indian Space Research Organisation (ISRO) successfully launched two satellites – NovaSAR and S1-4 – from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota. Both satellites were injected into the Sun Synchronous Orbit at an altitude of 583 km. The satellites belong to UK-based Surrey Satellite Technology Limited (SSTL), which has a contract with Antrix Corporation Ltd, the commercial arm of ISRO. NovaSAR carries S-band Synthetic Aperture Radar (SAR) and an Automatic Identification Receiver payloads. The satellite applications include forestry mapping, land use and ice cover monitoring, flood and disaster monitoring and maritime missions. It will be operated from SSTL's Spacecraft Operations Centre in Guildford, UK. S1-4 is a high resolution earth observation satellite meant for surveying resources, environment monitoring, urban management and disaster monitoring. This was the 44th flight of PSLV and the 12th flight of the Core Alone version of the vehicle. Core Alone is its lightest version without the six strap-on motors. It is used for launching smaller payloads.

ESA Chooses Thales Alenia Space to Support Sentinel 2A and 2B Satellites Data Processing

September 18, 2018 - Thales Alenia Space announced that it has signed a contract with the European Space Agency (ESA) to provide operations, maintenance and upgrade services for the Payload Data Ground Segment (PDGS) supporting the Sentinel 2A and 2B Earth observation satellites. The service contract is worth 29 m€ for the period from May 2018 to December 2021. It is being carried out for the European Commission as part of the Copernicus program, in particular the ground segment subsystem of the Copernicus Space Component (CSC). The two Sentinel 2 satellites with optical sensors continuously scan the Earth's surface. Together, they provide updates images of the entire land surface of our planet in five days, with a resolution of 10 to 60 meters. These images are mainly used to monitor vegetation, bodies of water, soil and coastal zones. They are also used to observe and/or help prevent natural disasters, including floods, volcanic eruptions, landslides, etc.

China Launches Twin BeiDou-3 Satellites

September 19, 2018 - China successfully sent twin BeiDou-3 navigation satellites into space on a single carrier rocket. The Long March-3B carrier rocket lifted off from the Xichang Satellite Launch Center. It was the 285th mission of the Long March rocket series. The twin satellites are the 37th and 38th editions of the BeiDou navigation system. After a series of tests and evaluations, they will work together with 12 BeiDou-3 satellites already in orbit. The twin satellites will provide danger alerts and navigation services for global users. A basic system with 18 orbiting BeiDou-3 satellites will be in place by the end of the year, which will serve countries participating in the Belt and Road Initiative. The satellites and the rocket for Wednesday's launch were developed by the China Academy of Space Technology and the China Academy of Launch Vehicle Technology, respectively. Named after the Chinese term for the Big Dipper, the BeiDou system started serving China in 2000 and the Asia-Pacific region in 2012.

Rocket Lab Signs Contract to Launch First Satellites for Kleos Space Constellation

September 19, 2018 - US orbital launch provider Rocket Lab has signed a contract with Luxembourg-based satellite technology company Kleos Space to launch scouting mission satellites that will geolocate maritime radio to guard borders, protect assets and save lives. The Kleos Scouting Mission (KSM) will form the cornerstones of a 20-system constellation that will geolocate VHF transmissions from marine vessels to provide global activity-based intelligence data as a service. The Kleos Space constellation will detect radio transmissions and pinpoint their origin and timing, enabling governments and organizations to

detect activity such as drug and people smuggling, illegal fishing and piracy, and also identify those in need of search and rescue at sea. Built by GomSpace, the Kleos Space satellites are scheduled to launch on an Electron rocket from Launch Complex-1 in mid-2019. The satellites will be integrated into Rocket Lab's in-house designed and built Maxwell dispensers and deployed from the Electron kick stage to low Earth orbit. Rocket Lab's unique kick stage, powered by the 3D printed Curie engine, is designed to circularize small satellite orbits and perform complex manoeuvres, including multiple engine burns, to deploy many satellites into different orbits.

Arianespace to Launch KOMPSAT-7 for the Korea Aerospace Research Institute (KARI)

September 20, 2018 - Arianespace has been selected by the Korea Aerospace Research Institute to launch KOMPSAT-7. Using a Vega C launcher, the mission will be conducted from the Guiana Space Center in Kourou, French Guiana, from December 2021. For nearly 30 years now, Arianespace and Korea's satellite technology research centers have developed a sound relationship, with the launch of both scientific microsatellites (Kitsat A&B) and the multi-mission COMS satellite. Following the upcoming launches of GEO-KOMPSAT-2A & 2B, the KOMPSAT-7 will be the fourth KARI satellite – as well as the ninth Korean satellite – to be orbited by Arianespace to date. Developed by KARI at its facility in Daejeon, South Korea, KOMPSAT-7 will weigh approximately 2,000 kg. at launch, and will be placed in a sun-synchronous orbit. KOMPSAT-7 is the follow-up model of KOMPSAT-3A whose mission is to provide high-resolution satellite images to satisfy South-Korea's governmental and institutional needs.

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

September 23, 2018 - Mitsubishi Heavy Industries, Ltd. (MHI) and Japan Aerospace Exploration Agency (JAXA) launched 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), from the JAXA Tanegashima Space Center. H-IIB F7 flight proceeded nominally. Approximately 14 minutes 59 seconds after launch, as planned, the payload separated from the launch vehicle.

Boeing Completes Acquisition of Millennium Space Systems

September 25, 2018 - Boeing completed the acquisition of Millennium Space Systems, a provider of agile, flight-proven small-satellite solutions. Millennium Space Systems will operate under Boeing Phantom Works as a subsidiary called Millennium Space Systems, A Boeing Company. It will retain an independent operating model while benefiting from Boeing's resources, scale, manufacturing capability and technology research as the leading provider of aerospace products and services. Boeing first announced the agreement with Millennium Space Systems on August 16, 2018, pending U.S. government approval. Terms of the approved deal were not disclosed and do not affect Boeing's financial guidance or the company's commitment to returning approximately 100 percent of free cash flow to shareholders. Headquartered in El Segundo, Calif., Millennium Space Systems has approximately 260 employees and has developed high-performance satellites and space systems for exacting missions ranging from 50 KG to more than 6,000 Kg.

Ariane 5 Launch Orbits Two Satellites for Intelsat, SKY Perfect JSAT and Azercosmos

September 25, 2018 - Arianespace has successfully launched two communications satellites: Horizons 3e for Intelsat and SKY Perfect JSAT Corporation, and Azerspace-2/Intelsat 38 for Azercosmos and Intelsat. The launch took place on Tuesday, September 25, 2018 from the Guiana Space Center (CSG), Europe's Spaceport in French Guiana (South America). This was Arianespace's sixth mission of the year, as well as the 100th mission by the Ariane 5 heavy launcher. In 22 years of operations, Ariane 5 has orbited a total of 207 satellites. Today's launch also marked the 300th mission by the Arianespace family of launchers, reflecting the company's ongoing role in support of leading satellite operators, both regional and global.

UK and Singapore Collaborate to Develop Next Generation Communications Networks

September 27, 2018 - The early demonstration of new quantum space technologies, through the latest collaboration between the UK and Singapore governments, could lead to more secure online activity for consumers in everything from financial transactions to online conversations. The £10 million initiative between the UK and Singapore governments is to build and fly a satellite quantum key distribution (QKD) test bed. Through this collaboration, Singapore and the UK will co-develop "QKD Qubesat", a satellite based on the CubeSat standard that will use a pioneering QKD technology to test the secure distribution of cryptographic keys over globe-spanning distances. Satellite-based QKD is emerging as an un-breakable communication technology, far more secure than existing encryption techniques. This new joint quantum technology satellite mission opens access to a global market thought to be worth up to US\$15 billion

(£11.5 billion) over the next ten years. The collaboration aims to build on both countries' efforts to grow the space and quantum technologies sectors by staking a claim in the emerging QKD market. The satellite will be operational in late 2021.

Thales Alenia Space Delivers a Key Element for ESA's Exomars 2020 Mission

September 27, 2018 - Thales Alenia Space in the UK achieves the major milestone of delivering its IMU Flight Models to Airbus Defence and Space in UK for integration with the ExoMars Rover. Exomars is a project under international cooperation between ESA (European Space Agency) and Roscosmos (Russian Space Agency), Thales Alenia Space, Joint Venture between Thales (67 %) and Leonardo (33 %) is the prime contractor for the global program. The Inertial Measurement Unit (IMU) designed by Thales Alenia Space in the UK has been delivered for integration in to the ExoMars Rover mission, scheduled to launch in July 2020 and arrive at Mars nine months later. The ExoMars Rover will be the first to drill 2 meters down the red planet's surface, to look for traces of past or present life and retrieve samples. The IMU enables the Rover's navigation during its mission, providing critical data on its orientation, speed and direction.

EXECUTIVE MOVES

Philippe Oliva Joins Eutelsat as EVP of Sales and Products

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

ABS Announces New Executive Management Changes

September 4, 2018 - ABS announced new appointments and changes of its executive management team to reflect its transition into the next phase of company growth and its ongoing commitment to customer service. These leadership changes include the following appointments and promotions: James Frownfelter has been appointed as Chief Executive Officer (CEO). Jim Frownfelter, who will also continue to serve as the Chairman of ABS' Board of Directors, has over 30 years of technology and communications experience in the satellite, aeronautical, broadband, and wireless fields. Sam Wong previously Chief Financial Officer, has been promoted to President and Chief Financial Officer. Dee Schwalb previously EVP of Business Development, is promoted to Chief Operating Officer (COO). Carmen Gonzalez-Sanfeliu has been appointed as Chief Commercial Officer (CCO). Stephen Salem has been appointed as General Counsel. Ron Busch previously Vice President, Network Services, is promoted to Executive Vice President, Network Services. Justin Derksen is appointed as Senior Vice President, Business Development. Patrick French previously Vice President Global Business Development is promoted to Senior Vice President, Global Business Development. Jason Miller is appointed as Vice President, Sales Support & Market Research.

Globalstar Announces Appointment of Dave Kagan to CEO

September 4, 2018 - Globalstar announced the promotions of Dave Kagan to the position of CEO and Jay Monroe to Executive Chairman of the Board of Directors. In keeping with the strategy the Company previously disclosed in connection with the intended merger, the promotions separate management of Globalstar's satellite operations and spectrum-related activities, with responsibility for all satellite operations under the CEO. The promotion of Kagan advances this strategy and he will oversee and drive all activities related to the Company's satellite business. Monroe, as Executive Chairman, will be responsible for strategic financing efforts and liquidity matters, other than the Company's senior credit facility which will be the responsibility of Kagan. In addition, Monroe will have primary responsibility for all strategic terrestrial spectrum-related activities on a global basis, including the Company's ongoing efforts to standardize and monetize its terrestrial spectrum assets.

OneWeb Appoints Adrian Steckel as CEO and Eric Béranger as President and COO

September 7, 2018 - OneWeb announced the appointment of Adrian Steckel as Chief Executive Officer and

Eric Béranger as President and Chief Operating Officer. During Eric's tenure as Chief Executive Officer, OneWeb grew five-fold and developed the technical foundation to launch its system. In his new role, as President and Chief Operating Officer, Eric will ensure that OneWeb's innovative system of satellites and ground infrastructure can deliver high quality services to customer communities around the globe. Adrian brings extensive experience and passion for enabling connectivity to OneWeb. Since 1999, he has been building companies from the ground up and working to enable voice and data communications in countries around the world. Adrian was the CEO of Iusacell, a very successful mobile carrier in Mexico, which he sold to AT&T in 2015. He also led the buildout and operations of the fiber backbones in both Colombia and Peru in cooperation with their respective governments and during his time as CFO at TV Azteca, he also took the company public on the New York Stock Exchange (NYSE).

NSSLGlobal Appoints Dr Andrew Slaney as Chief Technology Officer

September 11, 2018 - Independent satellite communications provider NSSLGlobal announced the appointment of Dr Andrew Slaney as Group Chief Technology Officer (CTO). Dr Slaney will work alongside the NSSLGlobal leadership team to roll out the company's technology roadmap, to deliver innovative engineering solutions to its existing and future customer base. Dr Slaney has worked in the communications industry for 25 years, specialising in Communication System Design at organisations such as Satellite Information Systems Ltd (SIS), Ultra-Electronics, GigaSat and Vislink. Dr Slaney brings a wealth of experience leading design teams at CTO and Technical Director level, and has a proven track record for fast-tracking product growth and innovation within manufacturing organisations. Dr Slaney has extensive experience of working in the commercial, government and military markets and led the development of a range of innovative Multi-Band, rapid to deploy, Micro-VSAT terminals.

Kacific Appoints Matteo Catanuto to Head Sales in New Zealand and the Pacific

September 12, 2018 - Kacific Broadband Satellites has appointed Matteo Catanuto as Vice President Sales, New Zealand and the Pacific Region. Matteo is a senior telecommunications sales professional who joins Kacific following his role at Digicel Samoa as Sales Director. Prior to that he held high-level sales and business development roles working for TelstraClear, Orcon, Spark Digital, and Digital Mobile (part of the Vodafone New Zealand Group). He has extensive experience in New Zealand and the Pacific in areas highly relevant to Kacific's growth strategy, including satellite connectivity, bandwidth and solution sales. In his role with Kacific he will be responsible for establishing service provider networks and distribution channels in New Zealand, American Samoa, Samoa, Tonga, Niue and the Cook Islands for the company's range of satellite broadband products and services leading up to the launch of Kacific-1 in 2019.

Kymeta Appoints New Sales Executives in Move to Build Global Sales Force

September 13, 2018 - Kymeta announced the appointment of Rash Jhanjee to Vice President of Sales, EMEA (Europe, Middle East, and Africa) & Indian Subcontinent, Paul Mattear to Vice President of Sales and Business Development, and Scott Glass to Sales Director. Kymeta recognizes the appointment of Mattear, Jhanjee and Glass as a critical move that will support the global growth and accessibility of Kymeta solutions across multiple markets. Kymeta's focus on its global sales force will help the company serve both commercial and government customers.

Jody Singer Named Director of NASA's Marshall Space Flight Center

September 13, 2018 - NASA Administrator Jim Bridenstine has named Jody Singer director of the agency's Marshall Space Flight Center in Huntsville, Alabama. Singer has been the center's deputy director since February 2016, and has been serving as acting director since the retirement of Todd May as center director in July. She is the first woman appointed to the position. As Marshall's director, Singer will lead one of NASA's largest field installations, with almost 6,000 civil service and contractor employees and an annual budget of approximately \$2.8 billion. Singer began her NASA career in 1985 as an engineer in NASA's professional intern program. Among many other leadership roles, she was also the manager of the Flight Programs and Partnerships Office at Marshall from 2013 to 2016, where she held primary responsibility for the center's work with human advanced exploration projects, science missions, technology demonstrations, commercial crew, and many aspects of International Space Station operations.

RSC Energia Elects New General Director

September 13, 2018 - On September 12, by the decision of an extraordinary general meeting of shareholders of RSC Energia held in the form of voting by correspondence elected as the General Director of the Corporation was Sergey Yurievich Romanov. Sergey Yurievich Romanov has been working at the

company since 1980. During that time he rose through the ranks from an engineer to the Chief Designer of manned space systems of the Corporation.

Comtech Telecommunications Promotes Michael Porcelain to COO and Michael Bondi to CFO

September 26, 2018 - Comtech Telecommunications announced that Michael Porcelain, the Company's Senior Vice President, Chief Financial Officer (CFO), has been promoted to Chief Operating Officer (COO). Porcelain will be succeeded in his role by Michael Bondi, who is currently the Company's Vice President, Controller. These promotions are effective October 1, 2018. Porcelain has been Senior Vice President and CFO of Comtech since March 2006 and was previously Vice President of Finance and Internal Audit of Comtech from 2002 to March 2006. Bondi has been Vice President, Controller of Comtech since January 2004. Prior to joining Comtech, he served as Assistant Controller at EDO Corporation (EDO), which designed and manufactured products for defense, intelligence and commercial markets and provided related engineering and professional services.

REPORTS

In-Flight Connectivity Demands Better QoS and Measurement of Passenger Experience

September 10, 2018 - NSR's *Aeronautical Satcom Markets, 6th Edition* report forecasts in-flight connectivity will generate \$37 billion by the end of 2027 with quality of service and measuring the passenger experience as critical issues for the market to develop. In the process, NSR expects airlines to take more of the control over the customer-facing environment and dictate terms for smarter suites of services in what is still an underperforming market.

Non-GEO Satellites to Dominate Supply, Adding over 25 Tbps in Next Decade

September 19, 2018 - NSR's *Global Satellite Capacity Supply & Demand, 15th Edition* report finds Non-GEO Satellite (NGSO) annual capacity revenues will skyrocket to \$4 billion by 2027. These networks offer a new set of attributes for customers such as low latency, full mesh connectivity, or high-bandwidth per terminal, and will be key to unlocking new greenfield markets. However, CAPEX exposure is massive, and new revenue drivers might not be enough to pay back initial investments. Consequently, there is a risk of price disruption for the entire industry if these new players dump capacity to poach customers from legacy verticals.

FSS Industry's Transition to Data Markets to Re-Ignite Long-Term Revenue Growth

September 20, 2018 - According to the 25th edition of Euroconsult's report, *Satellite Communications & Broadcasting Markets Survey*, due to be published later in September, the FSS industry continues to move towards telecom/data markets, as wholesale revenues derived from video markets continue to erode. Based on the latest market projections, wholesale capacity revenues from telecom applications will surpass video applications by 2021. The growth is largely supported by the influx of low cost capacity from new VHTS systems & NGSO broadband in the coming years. As a result, total capacity supply is projected to grow eight-fold from 1.3 Tbps in 2017 to nearly 10 Tbps by 2022.

WTA Releases "Factoring 5G into the Future" Report

September 26, 2018 - The World Teleport Association (WTA) has released *Factoring 5G into the Future*, a new research report detailing the opportunities and challenges of the coming deployment of 5G mobile for teleport and satellite operators. The report explains the technology, the industry partnerships shaping the standards and the market-specific opportunities that deployment will bring, from expansion of IoT to communication with moving vehicles to the next step in video distribution.

UPCOMING EVENTS

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

China Satellite 2018, 24-26 October, Beijing, China, www.china-satellite.org

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

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

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

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

CYBERSAT18, 14-16 November, Arlington, VA, USA, www.cybersatsummit.com

India Satcom 2018, 20-21 November, New Delhi, India, <https://www.broadbandindiaforum.com/india-satcom-2018.html>

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