

APSCC Monthly e-Newsletter

JANUARY 2019

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

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

INSIDE APSCC

Join APSCC Session at PTC'19, Satellite and the Internet of Things (IoT)

22 January 2019, Honolulu, Hawaii, USA, <http://apsc.org.kr/event/>

Title: Satellite and the Internet of Things (IoT)
Date: Tuesday, 22 January'19 (1530 – 1645)
Venue: Hilton Hawaiian Village Waikiki Beach Resort, Honolulu, Hawaii
Moderator: Christopher Baugh, President, NSR
Gregg Daffner, CEO, Gapsat; President, APSCC
Speaker: Fabien Jordan, CEO, Astrocast SA, USA
Harim Byeon, Engineer, KTSAT, Republic of Korea
Scott Larson, CEO, Helios Wire, Canada
James Yenbamroong, Founder & CEO, Mu Space Corp, Thailand

APSCC members can enjoy discounted rate when PTC'19 registration. Please contact info@apsc.org.kr if any inquiries.

SATELLITE BUSINESS

Hughes to Provide Managed Network Services for State Agencies throughout Oklahoma

December 3, 2018 - Hughes Network Systems has been awarded an IDIQ contract by the Oklahoma Office of Management and Enterprise Services (OMES) to deliver HughesON™ Managed Network Services including High-Throughput Satellite (HTS) connectivity for state agencies. The contract authorizes Hughes to work with Oklahoma's 130+ state agencies and affiliated organizations – including counties, cities, school districts and hospitals – to optimize networks to meet agency and constituents' needs throughout the state. HughesON Managed Network Services include the award-winning Software Defined Wide Area Network (SD-WAN) solution, managed security packages, Wi-Fi and Voice over IP (VoIP), all with 99.99% network availability, 24 x 7 network monitoring and security operations support. With Hughes managing these services, agencies can incorporate best-of-breed connectivity at each site to achieve mission objectives, enabling them to focus on meeting constituents' needs.

Viasat Introduces Viasat Urban Wi-Fi Service for Urban Areas across Mexico

December 3, 2018 - Viasat Inc. introduced Viasat Urban Wi-Fi, a new satellite-enabled Wi-Fi service for cities throughout Mexico. Viasat Urban Wi-Fi is being deployed first in Mexico City, with plans to bring the high-speed, high-quality broadband service nationwide by the end of 2019. Major Mexican cities expected to receive the service, include: Cabo San Lucas, Guadalajara, Guanajuato, Puebla, Tijuana and Veracruz, to name a few. Viasat Urban Wi-Fi will offer city residents across Mexico a satellite internet service with speeds, quality and pricing that is highly-competitive to other terrestrial internet offerings. In fact, Viasat Urban Wi-Fi will offer speeds up to 100 Mbps to consumers at affordable prices. Other expected use cases for Viasat Urban Wi-Fi in city environments include the need for a resilient connectivity system – as a supplement to existing cellular networks – in times of natural disaster or national security relief. Viasat Urban Wi-Fi leverages the advanced ViaSat-2 satellite system coupled with Viasat's satellite-enabled hotspot platform to bring high-speed, high-quality broadband internet to major cities.

MASMOVIL Group to Provide Satellite Broadband Services in Spain via KA-SAT

December 3, 2018 - MASMOVIL Group, Spain's fourth largest telecommunications operator, has signed an agreement with Eutelsat subsidiary, Eurobroadband Infrastructure, to distribute broadband services to under-connected areas across the country via the KA-SAT satellite. Launched in 2010, KA-SAT is a powerful satellite delivering broadband services across Europe, notably Spain, through 82 spotbeams connected to a network of ten ground stations. Its unique configuration and frequency reuse allow it to achieve a throughput of over 90 Gbps, providing Internet access at speeds comparable to terrestrial networks. This agreement will allow MASMOVIL to achieve its objective of offering broadband services to the entire Spanish population, regardless of the technology used, and bringing Internet access to remote areas of the country, thereby reducing the digital divide in Spain.

NSSLGlobal Acquires Station 711 Business Unit from MX1

December 3, 2018 - Award-winning global satcom provider NSSLGlobal and MX1, a fully owned subsidiary of SES, have entered into an agreement under which NSSLGlobal has acquired the assets and activities of Station 711, a business unit within MX1 focused on providing the maritime market with innovative communication solutions. Station 711 is a fully-fledged Inmarsat Tier 1 Distribution Partner and Value-Added Reseller for FleetBroadband and Global Xpress. Station 711 has been servicing maritime customers for the last twenty years in Europe, the Middle East and Asia, and is renowned for its on-board value added services. NSSLGlobal will as part of the acquisition take over all activities of Station 711 including smart@sea, crewtalk and Station 711's Customer Network Infrastructure.

Comtech Secures a Deal to Enable Critical LBS for New Zealand Emergency Caller Services

December 4, 2018 - Comtech Telecommunications Corp. announced that its Enterprise Technologies group, which is part of Comtech's Commercial Solutions segment, will provide New Zealand's Ministry of Business, Innovation and Employment (MBIE) with a turnkey Location-Based Services (LBS) platform to support location requirements for Public Safety services. This multi-million dollar deployment provides coverage to the country's Emergency Caller Location Information (ECLI) service, enabling location determination for handsets across all New Zealand mobile networks. Launched by MBIE in May 2017, the ECLI service provides emergency dispatch services with the probable location of a caller when dialing 111 from a mobile phone, enabling public safety agencies to respond quickly. By deploying Comtech's virtual LBS platform in a centralized data center, the ECLI can now connect to all local mobile network operators, complementing existing handset-based location services, including Advanced Mobile Location (AML) for Android and iOS handsets. This provides access to location data for all mobile handset models, regardless of network, throughout New Zealand, including international roamers traveling into the country.

Servicio Satelital Launches iDirect DVB-S2X Satellite Network Services across Argentina

December 4, 2018 - VT iDirect announced that Servicio Satelital, the biggest Satellite operator company in Argentina, has chosen the iDirect platform to launch ultra-efficient satellite network services which will help to enhance connectivity across Argentina. Servicio Satelital has deployed an iDirect DVB-S2X network leveraging iDirect's next-generation iQ remotes and space segment from Intelsat's IS-29e EPIC satellite. During application testing to certify the solution, the iQ Desktop reached 256APSK with up to 30% efficiency savings over DVB-S2 networks and reached 110Mbps of combined throughput. This will enable Servicio Satelital to provide high data rates at a reduced cost to their users. The iDirect platform was selected for its L3 and L2oS (Layer 2 over Satellite) backbone capabilities combined with DVB-S2X performance, making it the most cost-effective solution to ensure terrestrial-grade link quality and high reliability for voice and data services.

Speedcast to Deliver VSAT Services to Production and Drilling Platform Fleet in Asia Pacific

December 4, 2018 - Speedcast has been awarded a new multi-year contract valued at over US\$10 million from one of the region's top multinational operators to deliver fully-managed VSAT communications to a fleet of oil and gas platforms and vessels across Asia. This customer required a communications solution that could be delivered across its production platforms, drilling rigs and FPSOs in multiple countries, with unique requirements on each asset. Speedcast was awarded the contract for new business to deliver fully-managed VSAT onboard its offshore assets, replacing the incumbent. This solution leverages C-Band advanced VSAT on multiple satellites for highly-redundant coverage and a dedicated SCPC network to ensure security, reliability and network efficiency on each asset.

Greg Wyler Named as SSPI UK Space & Satellite Personality of the Year

December 4, 2018 - Founder and Executive Chairman of OneWeb, Greg Wyler, has been named SSPI UK Space & Satellite Personality of the Year. The Board of SSPI UK Chapter voted Wyler winner of this annual award for his contribution to the UK space and satellite sector and his recognition of the UK as an important space hub, selecting London as a base for his business. The Board also recognizes the work that Wyler's OneWeb project is doing to enable broadband access for all. A pioneer of the commercial NewSpace sector, Wyler established O3b Networks in 2007, the aim of which was to connect the 'other 3 billion' with broadband connectivity using Medium Earth Orbit (MEO) satellites. The company, although now Netherlands-based and owned and operated by SES, was originally conceived in the UK and possesses a UK satellite licence. In 2015, Wyler founded OneWeb with a vision to bridge the Digital Divide by 2027 using a network of Low Earth Orbit (LEO) satellites. OneWeb will launch 900 small satellites to circle the Earth and enable affordable access to broadband internet services for a variety of use cases including first responders, mobile network operators, schools and health clinics.

Kacific Accepts 2018 Better Satellite World Award

December 5, 2018 - Kacific founder and CEO, Christian Patouraux, accepted the 2018 Better Satellite World Award at a ceremony in London on December 3 in recognition of the company's work bringing affordable connectivity via next-generation satellites to the people of South East Asia and the Pacific. Bestowed by the Space & Satellite Professionals International (SSPI), the award honours companies who use satellite systems to make the world a more prosperous, healthier, better-educated, sustainable and inclusive home for humankind. Once launched in 2019, Kacific's first satellite, Kacific1, will help connect more hospitals, clinics, schools, libraries, post offices, police stations and many other public institutions in rural areas where terrestrial broadband infrastructure is not an option or not economical. The satellite beams will cover previously isolated or underserved regions of South Asia, South East Asia, Melanesia, Micronesia and Polynesia, providing a channel for connectivity.

Singtel Integrates Global Cyber Security Capabilities under Trustwave to Create an Industry Powerhouse

December 5, 2018 - Singtel has pooled the cyber security capabilities, technologies and resources of Singtel, Optus, Trustwave and NCS, into a single global corporate identity operating under the Trustwave brand. The strategic measure forms one of the industry's most comprehensive global cyber security companies offering a complete range of managed security services, consulting, education, and leading-edge technologies to help organisations worldwide contend with rapidly evolving external and internal threats. Through the integration, the new Trustwave can harness the synergies and strengths of Singtel's global cyber security business, revenue, capabilities and teams across the Americas, Europe and Asia Pacific. Trustwave's global cyber business now has about 2,000 security employees, a global network of ten connected Advanced Security Operations Centres (ASOCs) supported by its elite Trustwave SpiderLabs security team, millions of businesses enrolled in its cloud-based security platform, more than 10,000 managed security services customers, and nearly 1,000 channel partners and numerous technology partners worldwide. The Trustwave portfolio includes many services and technologies recognised as industry-leading by analysts.

Comtech EF Data Receives \$9.8M Order for Next Generation Satellite Earth Station Equipment

December 6, 2018 - Comtech EF Data Corp. received an additional \$9.8 million delivery order against the \$59.0 million indefinite delivery/indefinite quantity (IDIQ) contract previously awarded by the U.S. Naval Warfare Systems Command. The delivery order specified SLM-5650B Satellite Modems and NetVue™ Integrated Management System. The SLM-5650B Satellite Modem is Comtech's latest generation satellite modem targeted for government and military applications. The NetVue™ Integrated Management System is a powerful network management system with advanced monitoring and diagnostic capabilities and an easy-to-use graphical user interface. NetVue™ features a robust, comprehensive network management and analytics engine that allows users to intelligently maximize resources and to ensure that Key Quality Indicators meet and exceed Service Level Agreements.

APSTAR-5C Commences Commercial Operation

December 7, 2018 - APT Satellite announced that APSTAR-5C satellite commences commercial operation on 1 Dec 2018. APSTAR-5C was successfully launched to space on a Falcon 9 rocket made by Space X. The satellite finished all in-orbit tests on 24 Oct and drifted to its mission slot at 138E. 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 services.

Speedcast Announces Cybersecurity as a Service

December 7, 2018 - Speedcast International Limited announced its new Cybersecurity as a Service solution, a combination of best-in-class applications and services to protect customers against growing cyber threats. The solution aims to protect customers from cyber risks by defending customers' assets, detecting and monitoring threats, and mitigating cyberattacks. Cyberattacks can lead to business disruption, financial loss, damage to reputation, damage to goods and environment, incident response cost, fines and legal issues. The rapid increase in ransomware and malware attacks globally has led to an increase in cybersecurity regulatory requirements from organizations such as the International Maritime Organization (IMO) and the Baltic and International Maritime Council (BIMCO). Cybersecurity as a Service combines a unified threat management system and end-point protection, ensuring our customers' remote sites are operating securely, allowing personnel to focus on supporting the company's critical operations. Speedcast's Security Operations Center (SOC) proactively monitors the protection level of customer sites, provides alerts and reports, and protects against malicious threats. Cybersecurity as a Service can be operated from remote sites or vessels and runs on Speedcast's integrated communication platforms SIGMA Gateway and SIGMA Gateway Xtreme.

Axelspace Completed Series-B Round of Financing

December 7, 2018 - Axelspace Corporation has completed its Series B funding round raising approximately 2.58B JPY (22.8M USD). The round sees the allocation of new shares to the lead investor 31VENTURES – Global Brain – Growth I Joint Venture (managed by Mitsui Fudosan Co. Ltd. and Global Brain Corporation) and to several other venture capital and corporate investors. With this critical step Axelspace moves closer to the realization of the new-generation Earth-observation infrastructure AxelGlobe, which will observe the whole planet every day, as announced in December 2015. The launch of the GRUS satellite, which had been postponed in 2017, will be performed in December 2018. Moreover, the structure of the organization has undergone some changes in association with the funding event. With the funding obtained in this round Axelspace will develop two additional GRUS satellites for launch in 2020. Increasing the number of satellites will lead to more frequent captures of Earth imagery. To tap into this valuable new resource, we are preparing to begin large-scale collaboration with Mitsui Fudosan, also one of the lead investors.

Hughes Launches High-Speed Satellite Internet Service in Ecuador

December 10, 2018 - Hughes Network Systems, LLC announced the launch of HughesNet®, its high-speed satellite Internet service for consumers and businesses, in Ecuador. Operating over the Hughes 63 West High-Throughput Satellite (HTS) payload, its broadband coverage reaches more than 90 percent of homes throughout Ecuador, including areas unserved or underserved by terrestrial providers. According to figures from the National Institute of Statistics and the Ecuador Census, though Internet penetration is over 50 percent in urban areas, 61 percent of people in rural areas do not have access to the Internet. To date, more than 1.3 million consumer and business subscribers in the Americas enjoy the many benefits of high-speed Internet access with HughesNet. Service plans offered in Ecuador come with built-in Wi-Fi and include speeds of up to 50 Mbps download / 5 Mbps upload.

Gilat to Provide the Next Generation Disaster Management Platform to Japan

December 10, 2018 - Gilat Satellite Networks Ltd. announced the selection of Gilat for a multi-million-dollar project by the Japanese government agency, Local Authorities Satellite Communication (LASCOM), for delivery of the next generation disaster response platform to Japan's forty-seven prefectures. Gilat in partnership with JSAT will ensure essential communication services for the people of Japan in case of disaster. LASCOM requires a highly secure, bandwidth efficient, multi-service single system that is capable of integration into LASCOM's wider network. The network needs to provide very high throughput, quality and resilience so that an array of services can be reliably delivered to prefectural and local governments, individuals, and first responders. This includes voice services, video feeds from disaster sites, video multicasts to local sites, emergency alerts, mobility services, and data services. Gilat's stable multi-service platform, SkyEdge II-c, and its highly efficient versatile modems were selected after a thorough evaluation to provide LASCOM the needed reliability and breadth of services to be deployed in case of disaster. Redundant hubs will be deployed in two different locations and thousands of VSATs will be deployed throughout all of Japan's regions.

Viasat Hits 1,000 Commercial Aircraft Flying with its In-flight Connectivity System

December 10, 2018 - Viasat Inc. announced that it reached a major commercial aviation milestone: it reached 1,000 commercial aircraft flying globally with its in-flight connectivity (IFC) system. Viasat installed more than 400 of its latest IFC equipment on commercial aircraft in 2018, with more than half of those installs occurring in the second half of the year. These installations have helped Viasat achieve new levels of service quality, cutting installation time to around 3 days, which is significantly better than the industry standard.

NATO Deploys Globalstar's IoT Satellite Technology for Oceanography Research

December 11, 2018 - Globalstar Europe Satellite Services announced that scientists from the NATO's Science and Technology Organisation (NATO STO) are deploying an IoT solution using SPOT Trace and Globalstar satellite communications to further their understanding of the world's oceans. Research teams from the NATO STO Centre for Maritime Research and Experimentation (CMRE), based in La Spezia, Italy, are embedding low-cost SPOT Trace devices in freely drifting buoys and setting them afloat in the Mediterranean and in Arctic waters to monitor surface drift behaviour. SPOT Trace tracks the movement of these 'drifters' and transmits their position data over Globalstar's Low-Earth Orbit (LEO) satellite network. The CMRE carries out oceanography and ocean acoustics studies as part of innovative and field-tested Science & Technology (S&T) solutions to address defence and security needs of the NATO Alliance. The data is helping CMRE to measure and understand sea currents with the aim of gaining a deeper understanding of the changing sea environment and to inform NATO operational planning.

Sky and Space Global Signs Binding Reseller MoU Agreement with Globe Teleservices India

December 11, 2018 - Sky and Space Global Ltd (SAS) announced it has signed a binding Reseller Memorandum of Understanding (MoU) agreement with Globe Teleservices (GTS). Globe Teleservices, a private company and an international telecom services provider offering a comprehensive range of communication services, from wholesale data and voice to mobile video and VoIP in Asia and Europe. Under the terms of the Reseller MoU, SAS and GTS will collaborate to explore how GTS will become a key reseller of the SAS Solution with the intent for GTS to include the SAS Solutions in its offering and distribute communication services based upon the SAS Solutions. The signing of this MoU agreement supports the SAS business global rollout model of establishing a localized and international reseller network which will enable efficient provision of SAS's connectivity solutions to equatorial locations and becoming a leading player in the satellite communication market.

Axelspace Selects SKY Perfect JSAT & KSAT Ground Station Service for GRUS

December 12, 2018 - Axelspace selects SKY Perfect JSAT & KSAT Ground Station Service for GRUS, the first commercial Japanese optical EO satellite with KSATLite, a global ground network as a service, optimized for small satellites and big constellations. A high degree of standardization, supporting all the major standards in satellite and launch vehicle space to ground communications, makes the service easily scalable and cost effective. The KSATLite global network is fully operational and live today, and by leveraging this award, SKY Perfect JSAT and KSAT will expand their business for the emerging LEO market. GRUS is a next-generation remote sensing microsatellite, the building block of Axelspace's Earth observation LEO constellation. Even with its mass of less than 100kg, it will enable us to obtain images with 2.5m ground resolution. The first GRUS-1 satellite will be launched this December followed by many more in the coming years, making high-frequency monitoring a reality for the entire Earth. When the full constellation is in place, Axelspace will be able to update the imagery of the Earth every day, making the satellite data easily accessible through the AxelGlobe platform. Axelspace will start commercial service for the imageries and its analysis data in 2019.

Comtech Telecommunications Corp. Awarded \$2.8 Million Additional Funding from U.S. Army

December 12, 2018 - Comtech Telecommunications Corp. announced that during its second quarter of fiscal 2019, its Command & Control Technologies group, which is part of Comtech's Government Solutions segment, received additional funding of \$2.8 million to provide baseband equipment to support the United States Army. The Command & Control Technologies group is a leading provider of mission-critical, highly-mobile C4ISR solutions. Comtech Telecommunications Corp. designs, develops, produces and markets innovative products, systems and services for advanced communications solutions. The Company sells products to a diverse customer base in the global commercial and government communications markets.

Intelsat General Introduces FlexAir: New End-to-End Managed Service for Government Aircraft

December 13, 2018 - Intelsat General Communications announced that it is launching FlexAir, a managed end-to-end service providing cost-effective high-performance, in-flight broadband connectivity to a wide range of military aircraft to support en route communications and intelligence, surveillance, and reconnaissance (ISR) applications. FlexAir's broadband service utilizes Intelsat's global Ku-band satellite fleet and integrates layers of high-throughput satellite (HTS) coverage from the company's proven Intelsat Epic^{NG} fleet with the company's wide-beam satellites to deliver the added redundancy and security needed for the most critical missions. FlexAir also offers committed capacity for ISR applications such as sensor data, video transmission, and communications relay to deliver immediate access at 3 Mbps from the aircraft with optional scalability to 6 Mbps.

Intellian Launches 60cm-class GX Terminal with Increased Power, GX60HP

December 13, 2018 - Intellian, a leading provider of satellite communication antenna systems, introduces the new GX60HP, a 60cm-class compact Global Xpress terminal with higher power output. The GX60HP is a 65cm Ka-band maritime satellite communication terminal with a 10W BUC option, type approved for use on Inmarsat's Global Xpress network for its maritime Fleet Xpress service. The increased BUC output power of 10W on the Ka-band enables greater uplink throughput and a higher level of bandwidth in response to customer needs to enable a faster service at sea. The GX60HP will help fulfill the demands for bandwidth by users in the oil and gas sector, commercial ships, superyachts and government users. It can also support dual antenna solutions using the Intellian GX Mediator to overcome blockage from onboard obstructions. Intellian provides a 10W HP Upgrade Kit for its existing systems. The upgrade kit can be used on an existing GX60 to easily convert a 5W BUC to a 10W BUC using only four machine screws in as little as 10 minutes. The GX60HP will be commercially available from January 2019.

L3 Charts Future Course for Government Aviation Connectivity with Intelsat General

December 14, 2018 - Intelsat announced that L3 Technologies will market FlexAir to United States government aviation users. FlexAir will deliver high-performing, resilient broadband service for intelligence, surveillance and reconnaissance (ISR) missions as well as in-flight communications for government officials, troops, and cargo aircraft. By incorporating FlexAir into its service offerings, L3 will have immediate access to Intelsat's global, flexible and proven Ku-band satellite fleet, including the Intelsat Epic^{NG} high-throughput satellites (HTS). FlexAir is unique; it is the first commercially available aeronautical service for 45cm-performance equivalent Ku-band antennas to be provided to the government as a managed service with a predictable and affordable cost structure. FlexAir will enable government users to select several service offerings and allow them to choose the right plan based on their data rate and geographic needs without having to make an upfront commitment.

Yahsat and Hughes Launch Joint Venture to Deliver Satellite Broadband Connectivity

December 16, 2018 - Al Yah Satellite Communications Company (Yahsat) and Hughes Network Systems (HUGHES) announced the commencement of a joint venture to provide commercial satellite services across Africa, the Middle East and southwest Asia. The agreement to form the joint venture was announced in September 2018, during the World Satellite Business Week Conference held in Paris, and was subject to regulatory and other approvals that have now been obtained. The newly formed company is bringing services to market as "YahClick, powered by Hughes," and is now operational. Through the collaboration, Yahsat will combine its unique position and knowledge as the leading provider of satellite broadband solutions within its current markets with Hughes expertise as the global leader in broadband satellite networks and services. Providing unserved and underserved communities with reliable, high-speed Internet services via Yahsat's Al Yah 2 and Al Yah 3 Ka-band satellites, the new entity will utilize the capabilities of the Hughes JUPITER™ System, designed and optimized for large-scale High-Throughput Satellites (HTS), and Hughes Operating and Business Support System (OSS/BSS) solutions for comprehensive network operations and management.

Capricorn Space Breaks Ground & Commences Civil Work on First Site in Western Australia

December 17, 2018 - Capricorn Space announced that the first site in its Australian Ground Network (AGN) is now under development. Civil works at the Western Australian site near Geraldton commenced on 3rd December 2018 with a formal Ground Breaking Ceremony being conducted on 7th December 2018. Once operational this site will support the satellite industry by providing Ground Segment as a Service at a strategically important location in the southern hemisphere with the attraction of improving time to market for many time sensitive applications. The development of the AGN-West by Capricorn Space will

assist to further Western Australia as a centre for space excellence and increase Australia's standing within the international space community.

Hughes Demos Advanced Modem Interface for Military Leaders

December 17, 2018 - Hughes Network Systems, LLC announced the successful demonstration of advanced hardware technology that facilitates interoperability between different SATCOM systems and services. Witnessed by leaders from the Department of Defense, the new capability reinforces the company's commitment to deliver highly secure and robust communications solutions that overcome intentional or environmental interference through improved resiliency. The terminal solution features a software agent with a first-of-its-kind autonomous selection of modem, satellite and service provider. The Flexible Modem Interface (FMI) presentation, hosted at Hughes headquarters in Germantown, Maryland, exhibited the hardware and enterprise management solution prototype developed by Hughes as part of a pilot study program exploring new interoperable SATCOM capabilities for future military systems.

Speedcast International Completes Globecom Acquisition

December 17, 2018 - Speedcast International announced that on December 14, 2018 it completed the acquisition of Globecom Systems for cash consideration of \$134 million (net of cash acquired). Globecom is a leading provider of remote communications and multi-network infrastructure in over 100 countries and the acquisition strengthens Speedcast's global leadership with enhanced competitive positions in Government, Maritime, and Enterprise. The acquisition complements Speedcast's acquisition of UltiSat in November 2017 by doubling Speedcast's revenue in the Government sector and adding more scale, visibility and capabilities in this growth market. In addition, Globecom will benefit from Speedcast's scale and capabilities in the Maritime and Enterprise sectors.

Globalstar Announces 3GPP Approval of Band 53 for 2.4 GHz Terrestrial Spectrum

December 17, 2018 - Globalstar, Inc. announced that the Third Generation Partnership Project (3GPP) has approved a global standard for terrestrial use of Globalstar's spectrum at 2483.5-2495 MHz. 3GPP has designated Globalstar's terrestrial S-band as Band 53, which now permits LTE services in the U.S. with additional geographies expected to be added in 2019. The approval provides for Time Division Duplex (TDD) services in Band 53 as a standalone band and allows Globalstar's spectrum to serve as an anchor channel for carrier aggregation and LAA next year. The physical properties of the 2.4 GHz band enable high capacity indoor and outdoor applications benefiting from intensive levels of spectral reuse without the need for macro cellular coordination. Band 53 can now be integrated into user equipment and cellular infrastructure. Uniquely, Band 53 provides a single coast-to-coast contiguous license in the U.S., and the growing number of international terrestrial approvals provides harmonization opportunities globally.

Dish Mexico Selects Gilat and Hispasat for Delivery of High-quality Broadband Services in Mexico

December 17, 2018 - Gilat Satellite Networks announced that Dish Mexico, a satellite Pay-TV in Mexico, has chosen Gilat's SkyEdge II-c multi-service platform, operating over Hispasat's HTS satellite, Amazonas-5, to deliver high-quality broadband services in Mexico. Mexico will be connected with ON, a new high-quality satellite Internet access service, to benefit the unserved and underserved people of Mexico. This service will include high speed broadband connectivity over satellite as a solution for remote regions where terrestrial service is not available. The broadband service will utilize Gilat's highly efficient X-Architecture and DVB-S2X VSATs operating over Ka-band capacity from Hispasat's recently launched Amazonas-5 satellite.

Comtech Secures \$2.5 Million Order from Middle East Telecom Service Provider

December 18, 2018 - Comtech Telecommunications Corp. announced that during the second quarter of fiscal 2019, its Enterprise Technologies group, which is part of Comtech's Commercial Solutions segment, has received a \$2.5 million order for various location platforms and location-based services (LBS) applications with a top-tier telecommunications service provider based in Saudi Arabia. The location platforms will enable the service provider to actively and passively locate subscribers within 2G, 3G and 4G networks with the most accurate location technologies available. Additionally, the service provider will have access to a suite of value-added LBS applications including geo-location messages, emergency alerting and asset tracking.

Viasat Upgrades Type 1 Cloud Communication Network Encryptor

December 19, 2018 - Viasat Inc. is announcing upgrades to its KG-142 network encryptor device (KG-142)

for military and government customers. The upgraded KG-142 supports the shift to cloud-centered communications, providing added flexibility for customers and significantly reducing the size, weight, power and overall cost for today's cloud networks. Viasat's KG-142 network encryptor is part of the Company's industry-leading portfolio of National Security Agency (NSA) certified network encryption solutions, which are designed to ensure military and government customers' most sensitive information can be trusted and transmitted securely across today's digital battlespace – from the cloud to the tactical edge. The KG-142 is designed to protect top secret/sensitive compartmented information for government agencies for very high-bandwidth applications, such as cloud computing and big data processing – delivering reliable, network-efficient protection for Layer 2 Ethernet communications.

Speedcast Extends Relationship with Global Energy Supermajor in Brazil

December 19, 2018 - Speedcast International Limited announced that its Brazilian entity SC Caprock has extended its relationship with one of its leading global Energy customers, with a new multi-year contract extension to provide high-throughput satellite communications onboard an FPSO offshore near Rio de Janeiro. Speedcast serves this customer on a global scale, and the two companies have been partners in Brazil onboard this FPSO for over 5 years. The contract extension increases the throughput onboard and provides the option for new enhanced equipment installation as needed for maximized network efficiency.

Comtech EF Data Corp. Enables Gbps Throughput for LTE and 5G Backhaul

December 20, 2018 - Comtech EF Data Corp. announced that it set a new industry performance record for General Packet Radio Services (GPRS) Tunneling Protocol (GTP) acceleration, enabling faster downloads and enhanced Quality of Experience (QoE) in LTE and 5G networks. As the mobile industry is preparing for the introduction of 5G, Comtech EF Data has enhanced its award-winning satellite modem and optimization portfolio to support the most demanding mobile applications and services. The November 2018 Ericsson Mobility Report highlights that there are now 25 LTE-Advanced networks in the world supporting Gigabit download speeds. The report also states that with the introduction of 5G, user demand for mobile data services are expected to increase at a 31% CAGR until 2024.

Ericsson and Panasonic Avionics Bringing Connectivity to the Skies with 5G Ready Platform

December 20, 2018 - Ericsson and Panasonic Avionics Corporation (Panasonic) have announced that Ericsson's *Core Network as a Service* solution is now live, supporting connectivity services across multiple markets served by Panasonic. Ericsson's *Core Network as a Service* solution will help Panasonic and its subsidiary AeroMobile, a global GSMA telecoms operator, provide data, voice and messaging services to the millions of airline passengers that use these services in flight. The collaboration between Ericsson, Panasonic and AeroMobile started in 2016 and is now fully operational and delivers services to Panasonic customers worldwide. As part of Panasonic's initiative to bring a superior connected experience onboard commercial aircraft, Panasonic and Ericsson have seamlessly migrated the existing service operating across a global fleet of aircraft onto the *Core Network, delivered as a Service*, while maintaining network performance and customer experience.

Speedcast and Carnival Renew Contract for Fully-Managed Communications across Global Fleet

December 24, 2018 - Speedcast International Limited has signed a new contract, with multi-year extension options, with Carnival Corporation (Carnival), the world's largest leisure travel company. Speedcast will provide remote communications and value-added services across the company's global fleet of cruise ships. The three-year material contract is expected to generate 8-9% of expected full year 2019 revenue. Speedcast has been delivering communications services to over 100 cruise ships across the various Carnival brands since 2013. With this new contract, Carnival increases its investment in communications, with bandwidth delivered to the fleet increased significantly in order to provide its guests with a high-quality internet experience. Speedcast is leveraging 40 satellites, including High Throughput Satellites (HTS), across C-band, Ku-band and Ka-band spectrums and 20 teleports to deliver the largest dedicated maritime satellite network in the world.

BROADCASTING

NHK Partners with Eutelsat for the Launch of the World's First 8K Channel

December 3, 2018 - NHK, Japan's national broadcaster, has partnered with Eutelsat Communications to launch the world's first 8K network; BS8K. The live broadcast took place on December 2nd from the Vatican

where images were transmitted to Tokyo via EUTELSAT 12 West B satellite with a mobile uplink provided by M-three Satcom. This momentous event by NHK has broken new ground for 8K contribution via satellite. To achieve the technologically challenging feat, NHK relied on DVB-S2X modulation, in 16APSK, and HEVC encoding. The images (7680 pixels over 4320 lines, an astounding 33.3 million pixels per image) were shot at 60 frames per second in BT2020 colour space, with 10 bits of colour depth (1 billion colours) and high dynamic range HLG (Hybrid Log Gamma), combined with 22.2 channel audio. Airing in Japan, BS8K features 8K Ultra HD footage of major cultural and sporting events, museums and natural landscapes, providing viewers with a fully immersive experience which will be broadcast 12 hours a day. The channel will allow for further experimentation with 8K prior to the large-scale deployment of the format for the Tokyo Olympics and Paralympics games in 2020.

Leading Japanese Video Transmission Company Picks Nevion Virtuoso for 4K/UHD Broadcast

December 11, 2018 - Nevion, a provider of virtualized media production solutions, announced that a leading Japan-based global video transmission company, has chosen Nevion's software-defined media node, Virtuoso, for 4K/UHD broadcast contribution with TICO encoding. Initially, Virtuoso is used by the company to transport signals over legacy dark fiber, with a migration to IP expected in the future. Japan introduced new 4K satellite services on December 1st, 2018. As a result, this video transmission company needed a solution to transmit 4K/UHD signals from sports and entertainment venues across the country to broadcasters' central facilities. The company started investigating possible media nodes at IBC 2017. The objective was to find a cost-effective, flexible and high-performance solution that offered pristine video quality, low latency and standards-based interoperability.

The Switch and Eutelsat Partner to Deliver Global Satellite and Fiber Occasional Use Network

December 12, 2018 - The Switch® and Eutelsat are joining forces to provide a new, independent offer delivering a satellite and fiber video contribution network. The partnership will provide The Switch's user community of over 800 of the world's leading content producers and distributors with the ability to transmit feeds on a minute-by-minute basis to and from large parts of the globe. Simultaneously, broadcasters and content producers within Eutelsat's satellite footprint will gain access to The Switch's extensive global fiber network, including 53 physical points-of-presence, as well as connections to U.S. tech leaders, major global broadcasters and more than 180 sports organizations, venues and rights holders. This partnership leverages the resources of three Eutelsat satellites covering Europe, Africa and the Americas, (further satellites may be added in the future to extend the reach of the solution) with The Switch's global video transport network. Customers will be able to schedule transport to and from each region via SwitchIT™, The Switch's patented award-winning customer-control software platform. The integrating of The Switch and Eutelsat systems will enable customers to deliver their content faster, more smoothly and to more regions around the globe.

NorthTelecom and Yahlive Announce a Long-term Video Broadcasting Re-commitment

December 17, 2018 - In another strategic move, one of the leading global satellite service providers NorthTelecom has entered into a renewed partnership agreement with the renowned satellite broadcaster, Yahlive. The agreement encompasses long-term video broadcasting services between NorthTelecom and Yahlive, where NorthTelecom will utilize Yahlive's satellite capacity for their broadcasting segment currently catering to the Persian community across the coverage areas. This will enable NorthTelecom to provide improved services to TV broadcasters for a more superior and well-rounded experience. This move with Yahlive, the leading satellite operator in the Farsi-speaking market reaching more than 62 million viewers, will be a productive association for both entities, as it will ensure their mutual venture into a bigger market space in the broadcasting sector. It is noteworthy to state, that NorthTelecom in coming times will expand its presence in Asia and Europe segments quite significantly.

Liberty Global to Sell Eastern European DTH Operations

December 21, 2018 - Liberty Global plc has reached an agreement to sell its DTH satellite TV operations currently serving four Eastern European markets to M7 Group. Liberty Global will sell its DTH operations for a total enterprise value of approximately €180 million (\$205 million¹) on a U.S. GAAP basis, subject to customary debt and working capital adjustments at completion. Closing of the transaction is subject to regulatory approval, which is expected in the first half of 2019. Currently the DTH business serves customers in Hungary under the brand UPC Direct, in the Czech Republic and Slovakia under the brand freeSAT, and in Romania under the brand FocusSat. The proceeds from the sale are expected to be used for general corporate purposes.

LAUNCH / SPACE

LEO Satellite Project Launched in Chongqing, China

December 1, 2018 - China's first global mobile satellite communication and internet space project via low earth orbit (LEO) satellites has been launched in southwest China's Chongqing Municipality. The project has drawn an investment of about 20 billion yuan (about 2.9 billion U.S. dollars) for its first phase, making it the largest investment for a single commercial aerospace program in China, according to the China Aerospace Science and Technology Corporation, which co-founded a company in charge of the project. The project features hundreds of LEO satellites and a global data processing center, which can help realize global two-way communication in real time under complicated geological conditions 24 hours a day upon completion. The project is expected to boost development of other sectors, including chips, terminals, system integration, operations and training of talent, said a source of China Aerospace Science and Technology Corporation.

China Sends 5 Satellites into Orbit via Single Rocket

December 1, 2018 - China launched a new space environment research satellite and four nanosatellites on a Long March-2D carrier rocket from the Jiuquan Satellite Launch Center in northwest China. The satellites have successfully entered their preset orbit, according to the center. Shiyao-6 will be used for conducting space environment exploration experiments. Among the four nanosatellites, Tianping-1A and Tianping-1B will be used for equipment calibration on ground control stations, while Jiading-1 is the first satellite of the Xiangyun satellite constellation in low earth orbit. A software-defined satellite, developed by the Innovation Academy for Microsatellites, the Chinese Academy of Sciences, will be used for conducting experiments on open-source satellite software research and development on Android platforms.

SPACE-SI Selects Arianespace to Launch the NEMO-HD Microsat on VEGA

December 3, 2018 - Arianespace has been chosen by the Slovenian Centre of Excellence for Space Sciences and Technologies (SPACE-SI) to launch the NEMO-HD microsat on the Vega launch vehicle as part of the Small Spacecraft Mission Service (SSMS) Proof of Concept (POC) flight in 2019. NEMO-HD, the microsatellite for Earth monitoring and observation in high-definition, will be capable of performing real-time imaging and video streaming over Slovenia and other regions. In addition, the spacecraft is designed for remote observation. The satellite will be operated by the Slovenian Centre of Excellence for Space Sciences and Technologies, and was developed in collaboration with the University of Toronto Institute for Aerospace Studies – Space Flight Laboratory (UTIAS – SFL). As the result of NEMO-HD's booking on the SSMS POC flight, the Vega launch vehicle's payload capacity for the mission has been filled – except for last-minute customers willing to book a port for cubesat deployers.

Orbital Micro Systems and NanoAvionics Partner on Weather Observation Satellite Launch

December 3, 2018 - Orbital Micro Systems (OMS), a leader in advanced instrumentation for small satellite missions and weather intelligence analytics, announced it is partnering with NanoAvionics, an innovation leader in nanosatellite bus and flight-proven subsystem technologies, to conduct a rideshare mission to fly one of OMS's miniaturized passive microwave sensors. The mission will utilize the NanoAvionics M6P 6U satellite bus. OMS is on track to launch multiple weather observation satellites in 2019. This mission will carry a humidity and precipitation monitoring sensor that will enhance the company's data collection capabilities. These important atmospheric parameters play a role in decision-making, affecting many industries. NanoAvionics' innovations in bus technology include a green propulsion system, reliable avionics and control systems, and multiple transmission options. The M6P bus provides up to 5U of payload capacity which can be segmented for multiple systems or applications with compatible orbital requirements.

SpaceX Launches Spaceflight SSO-A: SmallSat Express

December 3, 2018 - SpaceX successfully launched Spaceflight SSO-A: SmallSat Express to a low Earth orbit from Space Launch Complex 4E (SLC-4E) at Vandenberg Air Force Base, California. Carrying 64 payloads, this mission represented the largest single rideshare mission from a U.S.-based launch vehicle to date. A series of six deployments occurred approximately 13 to 43 minutes after liftoff, after which Spaceflight began to command its own deployment sequences. Spaceflight's deployments are expected to occur over a period of six hours. This mission also served as the first time SpaceX launched the same booster a third time. Among the satellites launched were 13 satellites for Asia-Pacific (APAC) companies from India, South Korea, Australia, Thailand, Singapore, Kazakhstan.

Audacy Launches First Demo Satellite, Audacy Zero, Into Space

December 3, 2018 - Audacy, a space communications service provider delivering anytime spacecraft connectivity, has launched its first demonstration satellite. Audacy Zero was deployed into low Earth orbit on board Spaceflight's first fully dedicated rideshare mission, SSO-A SmallSat Express, via a SpaceX Falcon 9 Rocket. The mission will validate Audacy's Ka-band radio in space and test its first ground station in Napa Valley, California, laying the foundation for Audacy's development of the world's first commercial inter-satellite data relay network in 2020. Audacy Zero features an entirely Ka-band radio designed and built by Audacy, the first of its kind to be flown on a CubeSat. It is the first iteration of Audacy's radio that will enable customers' spacecraft to communicate with Audacy's relay satellite network. Using this radio, Audacy Zero will transmit images of Earth to Audacy's ground station in Napa Valley, California, to validate its capabilities in space. Data collected from the mission will also contribute to valuable analysis of Audacy's hardware for continued improvements.

Spaceflight Successfully Launches 64 Satellites on First Dedicated Rideshare Mission

December 3, 2018 - Spaceflight, the leading rideshare and mission management provider, announced the success of its SSO-A: SmallSat Express mission, the largest single rideshare mission from a U.S.-based launch vehicle to date. The company successfully launched 64 spacecraft to sun-synchronous low Earth orbit via a SpaceX Falcon 9 that launched today from Vandenberg Air Force Base. Spaceflight launched 15 MicroSats and 49 CubeSats from government and commercial entities including universities, startups, and even a middle school. The payloads vary from technology demonstrations and imaging satellites to educational research endeavors.

SSTL Confirms Successful Launch of KazSTSAT

December 4, 2018 - Surrey Satellite Technology Ltd (SSTL) has confirmed the successful launch of KazSTSAT, a small Earth observation satellite jointly developed by SSTL and JV Ghalam LLP, a joint venture between JSC "National Company Kazakhstan Garysh Sapary" (KGS) and Airbus Defence and Space. The satellite was launched into a 575 km sun-synchronous orbit on board Falcon 9 from Vandenberg Air Base on 3rd December 2018. KazSTSAT has a mass of 105kg and will acquire image data at 18.7 m GSD with a swath width of 275 km. The spacecraft carries several experimental and demonstration units, including a beyond diffraction limit imager, a sun sensor, and a novel OBCARM. KazSTSAT will be operated by Ghalam, using a fully virtualized ground segment with S/X-band software defined back-ends deployed at KSAT ground stations in Svalbard and a technology demonstration ground station in Astana. KazSTSAT is the second satellite SSTL has worked on with Kazakhstan; KazEOSat-2, a medium resolution satellite designed and manufactured by SSTL for KGS, was launched in 2014.

Astrocast Launches First Test Satellite of IoT CubeSat Network

December 4, 2018 - Astrocast announced the successful launch of its first test satellite for the Astrocast, low Earth orbit, Internet of Things (IoT) CubeSat network from Vandenberg Air Force Base. Using L-Band frequencies, Astrocast's small form factor modules, powerful antennas, and optimized data protocol make it the most advanced nanosatellite on the market today. With Astrocast, companies can securely extend IoT applications to the 90% of the globe currently not covered by cellular networks. Astrocast's network delivers high performance, low latency, and low cost two-way communications to maritime, oil and gas, mining, supply chain, and logistics industries. Astrocast provides chipsets, modules, and communications data plans for the network. Designed for IoT applications, Astrocast's small form factor modules are optimized for battery-powered applications. Two-way architecture allows customers to monitor and control remote assets.

Southern Launch to Build an Orbital Launch Site in South Australia

December 4, 2018 - Southern Launch, a company based in Adelaide, South Australia, announced that it will build an orbital launch facility at Whalers Way on the Southern tip of the Eyre Peninsula. The Whalers Way Orbital Launch Complex will support the launch of small-lift vehicles into polar and sun-synchronous orbits, with construction to commence in 2019. Southern Launch will target rockets with payloads between 50kg and 400kg, like Rocket Lab's Electron, that carry microsatellites into polar or sun synchronous orbits to service Internet of Things applications such as monitoring agricultural land.

Arianespace Orbits GSAT-11 and GEO-KOMPSAT-2A for ISRO and KARI

December 5, 2018 - Arianespace has successfully orbited two satellites: GSAT-11 for ISRO (Indian Space Research Organisation), and GEO-KOMPSAT-2A for KARI (Korea Aerospace Research Institute). The sixth

Ariane 5 launch of the year took place on December 4 from the Guiana Space Center (CSG), Europe's Spaceport in French Guiana. GSAT-11 is the 22nd satellite from ISRO to be launched by Arianespace, and the largest and heaviest satellite ever built by India's space agency. GSAT-11, configured on the new-generation I6-K satellite bus, will provide communications services with multi-spot beam coverage of the Indian mainland and nearby islands. With this new satellite, ISRO will help bridge the digital divide in India within the scope of a program that capitalizes on space technology to support national development, while also pursuing space science research and planetary exploration. GEO-KOMPSAT-2 is a national program developed by KARI for the South Korean government, involving the development and operation of two civilian geostationary satellites, GEO-KOMPSAT-2A and 2B. GEO-KOMPSAT-2A is designed to conduct meteorological and space weather monitoring missions.

Thales Alenia Space to Support Korean Aerospace Industry for the Development of a Constellation of Earth Observation Radar Satellites

December 5, 2018 - Thales Alenia Space announced that it has signed two contracts with Korea, one with Korea Aerospace Industries, LTD. (KAI) and one with Hanwha Systems Corporation (HSC) to develop a constellation of high-resolution observation radar satellites for the Agency for Defence Development (ADD), known as Korea "425 Project", so serve South Korea. Korean Aerospace Industries leads a consortium including South Korea's Hanwha System and Thales Alenia Space. All three companies have been involved in developing satellites and related technologies for a number of years. Technical cooperation and several know-hows required for the SAR (Synthetic Aperture Radar) Satellites development will be transferred to Korean companies, up to a maximum involvement in the production of the last satellite of the Constellation, providing them with an outstanding growth in the field of design and development of Earth Observation Systems.

Inmarsat to be First Commercial Customer for the New H3 Launch Vehicle Provided by MHI

December 6, 2018 - Inmarsat announced that it has entered into an agreement with Mitsubishi Heavy Industries, Ltd. (MHI) to be the first commercial customer to place an order for the new H3 launch vehicle. The maiden flight of H3 is scheduled for 2020 with Inmarsat planning to deploy the new launch vehicle after 2022. This is the second agreement entered by Inmarsat and MHI, following the launch services contract awarded to MHI's H-IIA Launch Vehicle in 2017. These agreements underline the growing partnership between the two companies in the area of launch services. MHI Launch Services enjoys an extremely high success rate of 97.9% and has provided 41 successful consecutive launches since 2005, delivered on-time and to the customer's satisfaction by current launch vehicle both H-IIA and H-IIB.

Harris Corporation Successfully Launches Its First Smallsat

December 6, 2018 - Harris Corporation successfully launched and communicated with its first small satellite from India's Polar Satellite Launch Vehicle - showcasing the company's ability to provide complete end-to-end mission solutions for the fast-growing smallsat market. Harris Satellite (HSAT) is a briefcase-size 6U cubesat that provides an affordable solution for defense and commercial customers with very high-speed satellite communications requirements. Designed to fly in low Earth orbit, it features a persistent, resilient mission architecture that can be reconfigured after launch - reducing risk for customers. HSAT leverages the company's 50-year legacy providing exquisite satellites and its advanced, miniaturized technology capabilities. Harris will operate the smallsat from its satellite operations center and ground station in Palm Bay, Florida. Initial on-orbit testing indicates HSAT is performing as expected.

LM-2D Launched SaudiSat 5A & SaudiSat 5B Successfully

December 7, 2018 - SaudiSat 5A & SaudiSat 5B were successfully launched into the predicted orbit onboard Long March 2D (LM-2D) Launch Vehicle of CGWIC from Jiuquan Satellite Launch Center (JSLC), along with 10 piggyback satellites. This launch is another successful cooperation between China and Saudi Arabia in space field after the piggyback launch of the Lunar Camera Payload for Saudi Arabia on ChangE-4 Tracking and Data Relay Satellite launch mission. SaudiSat 5A & SaudiSat 5B are two remote sensing satellites designed and manufactured by the King Abdulaziz City for Science & Technology (KACST), and SaudiSat 5A & SaudiSat 5B are also the largest earth observation satellites designed and manufactured by Saudi Arabia. KACST is Saudi Arabia's national scientific institution under the direct leadership of the Saudi Arabian government, and owns state-level laboratories. KACST's research direction covers broad and different areas including aviation and space, and it plays a key role in the scientific research projects in Saudi Arabia's Vision 2030.

XYO Launch of Blockchain Satellite on SpaceX Falcon 9

December 11, 2018 - XYO Network, the technology that bridges blockchain to the physical world, announces a blockchain industry breakthrough, in its partnership with space industry leader Spaceflight. The unprecedented partnership and subsequent launch into orbit of XYO Networks' "EtherX" spacecraft is the first step in achieving its mission of decentralizing the world's location infrastructure, which currently revolves around the centralized Global Positioning System (GPS), which is owned by the U.S. Air Force. XYO Network will launch its own custom satellite with Spaceflight a board a SpaceX Falcon 9 in late 2019, on SpaceX CRS-19. XYO will send its first satellite, named the "EtherX," into orbit, in a nod to the "Ethereum" blockchain platform. The EtherX is only the first of XYO Network's fleet of satellites. The company intends to launch a fleet of satellites named after important cryptographers and individuals who inspired them. In fact, XYO Network plans on enabling their global community of "Geohackers" to fully participate by purchasing a 'stake' in each satellite.

Australian Space Agency to Adelaide

December 12, 2018 - Australia's Space Agency will be located in Adelaide, reinforcing South Australia's long-standing contribution to the nation's space journey. The Agency, to be located at Lot Fourteen at the old Royal Adelaide Hospital site, is also key to the new Adelaide City Deal, with a Memorandum of Understanding signed by Prime Minister Scott Morrison and South Australian Premier Steven Marshall, aimed at turbo-charging Adelaide's economy and driving long term investment in the city. The Australian Space Agency will be located in Adelaide by mid-2019 and is set to employ 20 full-time equivalent staff in Adelaide.

Rocket Lab Successfully Launches NASA CubeSats

December 16, 2018 - US small satellite launch company Rocket Lab launched its third orbital mission of 2018, successfully deploying satellites to orbit for NASA. The mission, designated Educational Launch of Nanosatellites (ELaNa)-19, took place just over a month after Rocket Lab's last successful orbital launch, 'It's Business Time.' Rocket Lab has launched a total of 24 satellites to orbit in 2018. Rocket Lab's Electron launch vehicle successfully lifted off from Rocket Lab Launch Complex 1 on New Zealand's Māhia Peninsula. After being launched to an elliptical orbit, Electron's Curie engine-powered kick stage separated from the vehicle's second stage before circularizing to a 500x500 km orbit at an 85 degree inclination. By 56 minutes into the mission, the 13 satellites on board were individually deployed to their precise, designated orbits. Until now, launch opportunities for small satellites have mostly been limited to rideshare-type arrangements, flying only when space is available on large launch vehicles. This mission, awarded under a Venture Class Launch Services (VCLS) Agreement, marks the first time NASA CubeSats received a dedicated ride to orbit on a commercial launch vehicle. VCLS is managed by NASA's Launch Services Program headquartered at Kennedy Space Center in Florida.

Spaceflight Awarded Contract to Launch Brazil's Amazonia-1 Spacecraft

December 18, 2018 - Spaceflight was awarded the contract to provide launch services for INPE, Brazil's National Institute for Space Research, the research unit of the Brazilian Ministry of Science, Technology, Innovation and Communications. The contract award is the culmination of a multi-year, highly competitive government procurement process among global launch providers. Throughout the process, Spaceflight was supported in Brazil by a local representative of the Akaer Group. INPE's Amazonia-1 satellite is the first Earth observation satellite to be completely designed, integrated, tested and operated by Brazil. Its goal is to autonomously observe the national territory of Brazil, in particular the Amazon region. Amazonia-1 is also the first satellite based on Brazilian Multi Mission Platform (MMP), a general purpose service bus for 500 kg class satellites.

SSL Awarded Contract to Provide GEO SmallSat for Mobile Broadband Company

December 18, 2018 - SSL, a Maxar Technologies company announced a contract award to manufacture a small geostationary (GEO) satellite for Ovzon, a company located in the U.S. and Sweden dedicated to meeting the demand for increased mobile broadband connectivity in underserved regions. Ovzon selected the mid-size SSL-500 platform for its first satellite, which brings the benefits of SSL's proven technology and performance combined with a lower-cost form factor. The contract is conditional on Ovzon raising financing. The satellite, called Ovzon-3, provides Ovzon's customers with better performance, expanded coverage and faster data rates than competitive solutions. The next-generation satellite provided by SSL will advance communications in remote areas with extremely versatile mobile broadband capabilities.

NanoRacks Announces First Customer Contract for India's Polar Satellite Launch Vehicle (PSLV)

December 19, 2018 - NanoRacks has signed its first customer contract for a small satellite rideshare on the India Space Research Organization's (ISRO) Polar Satellite Launch Vehicle (PSLV). Spire, a long-time customer of NanoRacks, has signed to fly four of their Lemur 3U CubeSats, targeting a March 2019 flight. Spire's CubeSats offer data and analytics for parts of the world where collecting data is notoriously difficult, tracking ships, planes, and weather in remote regions which often go unmonitored. To date, of the 80+ satellites Spire has launched, 37 have been deployed into orbit via NanoRacks from both the International Space Station and the Cygnus Spacecraft. For this PSLV opportunity NanoRacks is working with Berlin-based Astro- und Feinwerktechnik Adlershof GmbH (Astrofein) to manufacture and supply deployers, and is coordinating this launch opportunity with Antrix Corporation Limited (Antrix), the commercial arm of the Indian Space Research Organization (ISRO).

France's CSO-1 Military Observation Satellite in Orbit

December 19, 2018 - The CSO-1 military observation satellite was successfully launched by Arianespace, using a Soyuz rocket from the Europe's Spaceport in French Guiana. Developed for the French Ministry for the Armed Forces by French space agency CNES, delegated as contracting authority by French defense procurement agency DGA, it was built by Airbus Defence and Space, and features a very-high-resolution optical observation instrument built by Thales Alenia Space. CSO is a military observation program comprising three satellites in Sun-synchronous orbit, deployed by France to succeed the two Helios 2 satellites operated by the armed forces for more than ten years. Providing higher resolution and day/night imaging, it will support the country's military operations. The satellite also offers greater operational agility, and is capable of taking series of views over a given crisis zone, thus increasing the number of images acquired in a single passage.

GSLV-F11 Successfully Launches GSAT-7A

December 19, 2018 - Indian Space Research Organisation's (ISRO) Geosynchronous Satellite Launch Vehicle (GSLV-F11) successfully launched the communication satellite GSAT-7A from the Satish Dhawan Space Centre (SDSC) in Sriharikota. The GSLV-F11 lifted off from the Second Launch Pad at SDSC at 04:10 pm IST, carrying 2250 kg GSAT-7A and about 19 minutes later, injected GSAT-7A into a Geosynchronous Transfer Orbit (GTO) of 170.8 km x 39127 km which is very close to the intended orbit. GSAT-7A is the 39th Indian communication satellite of ISRO to provide services to the users in Ku-band over the Indian region. Most of the functional requirements of the communication payloads and the other systems have been derived from ISRO's earlier geostationary INSAT/GSAT satellites.

DNK to Build New Indonesia MSS Satellite Following Orbital Slot Award

December 19, 2018 - PT. Dini Nusa Kusuma (DNK), an Indonesia satellite communications company, has been awarded the Mobile Satellite Service (MSS) Orbital Slot located at 123 degrees East Longitude by the Indonesian Ministry of Communications. The Ministry awarded the strategic orbital slot above Indonesia after six months of competitive evaluation and bid qualification. DNK's license gives the company exclusive rights to the space slot forever so long as we abide by the established regulations of the country years and includes the necessary L-band radio frequency spectrum to deliver services across the country and region. DNK plans to develop and launch its own satellite to deliver a portfolio of next generation satellite communications services over Indonesia and the neighbouring region. The company in discussions with multiple satellite suppliers, including Airbus, Navayo and Hughes Network Systems, on the construction of its turn-key, secure connectivity satellite, which will feature up to 700 beams supported by digital on-board beam forming. The satellite will be optimised for data while supporting voice services as well as narrowband Internet of Things applications. It will also feature military grade encryption with guaranteed connectivity within its footprint. DNK's satellite is scheduled to launch in mid 2022 with commercial services planned to follow. In addition to Indonesia, the orbital slot also allows DNK's service footprint to span the ASEAN region and the South China Sea. As part of its license, DNK also secured L-band spectrum serving China and India.

Super-efficient 'Electric Engines' Set BepiColombo on its Trajectory to Mercury

December 19, 2018 - The QinetiQ-engineered Solar Electric Propulsion System (SEPS) on board BepiColombo, the joint ESA/JAXA spacecraft on a mission to Mercury, has now begun propelling the Mercury Transfer Module (MTM) to the heart of our solar system. The four QinetiQ T6 Gridded Ion Thrusters will power two science orbiters – the Mercury Planetary Orbiter and Mercury Magnetospheric Orbiter – on their seven year journey to gather more knowledge about the least explored of our 'neighbour'

planets. The QinetiQ SEPS is the most powerful and high-performance electric propulsion system ever flown. Its super-efficient T6 thrusters enable the spacecraft to reach maximum speed with minimal fuel consumption, using electricity generated by solar panels to produce charged particles from xenon gas. A beam of these charged particles, or ions, is then expelled from the spacecraft to propel it forward. The thrusters will be used for interplanetary travel, running in pairs in order to share the workload. The BepiColombo spacecraft left Earth on 20 October aboard an Ariane 5 and the engines were first powered up on 16 November to undergo testing, the first time the engines had been fired in space. Each thruster was brought to life, warmed up, and then taken to full power individually – a force of 125 millinewtons (mN) – and then in pairs. This week saw the QinetiQ SEPS begin the first of the 22 planned ion thrust arcs that will steer BepiColombo on its interplanetary trajectory.

Thales Alenia Space and ESA Sign New Contract for Operational Phase of the Galileo Ground Mission Segment and Security Facility

December 20, 2018 - Thales Alenia Space has signed a new tranche of the framework contract originally signed on October 18 with the European Space Agency (ESA), on behalf of the European Commission and the European GNSS Agency (GSA), to develop and deploy new versions of the ground-based Galileo Mission Segment (GMS) and the Galileo Security Facility (GSF), both known under the designation “WP2X”. The new tranche of this contract, worth about 130 million euros through June 2021, will concern the completion of PRS (Public Regulated Service), adaptation of the ground segment to provide an interface, via computerized POCs (Point of Contact Platforms), between the Galileo Security Monitoring Center (GSMC), which manages PRS access to the new system, and Government entities which control access on their own receiving stations. Thales Alenia Space will direct a consortium including major companies in France, Spain, Italy and Germany. It will call on the Thales group for both prime contractor support and for the architecture and integration of security components and the POCs, and on Leonardo for the Galileo Security Facility (GSF), which manages PRS service and the POCs.

ISS-Reshetnev-built Communications Satellite Successfully Launched

December 21, 2018 - ISS-Reshetnev Company successfully launched its new communications and broadcasting satellite, Blagovest. A Proton-M rocket carrying Blagovest got off the ground at 03:20 Moscow time from the Baikonur launch base. Nine hours and two minutes into flight, the satellite was injected into the geostationary orbit on a Briz-M upper stage. Teams at the ground control center are currently monitoring the satellite, confirming that all its systems perform as designed, mechanical subsystems fully deployed. The satellite is now in the Sun pointing mode. The Blagovest satellite was built by ISS-Reshetnev Company on its heavy-class Express-2000 platform. The satellite is equipped with a payload that was also designed and produced by the company in-house.

China Launches Experimental Satellite of Hongyun Project

December 22, 2018 - China launched a tech-experimental satellite as part of the Hongyun Project, a low-orbit broadband communication satellite system. A Long March-11 rocket carrying the experimental satellite blasted off from the Jiuquan Satellite Launch Center in northwest China. It was also the first satellite of the Hongyun Project. The successful launch signifies the substantial progress of China in mapping the low-orbit broadband communication satellite system, said developer China Aerospace Science and Industry Corporation (CASIC).

China's BeiDou Officially Goes Global Service

December 27, 2018 - China announced that the primary system of BeiDou-3 has been established and started to provide global services, meaning its home-grown BeiDou Navigation Satellite System (BDS) officially went global. The BDS has been performing well in the Asia-Pacific region and it goes global with cutting-edge technology and high-quality service. In November 2017, BeiDou-3, the latest generation of the BDS, started its satellite constellation, which was completed this November. The BDS was created in a spirit of openness and cooperation. Before BeiDou-3 started its global service, services provided by BeiDou-2 had been applied in over 70 countries and regions, from land planning and supervision of river transport in Myanmar to urban modernization and smart tourism in Brunei. In recent years, the BDS's pace of globalization has been quickening. At the sixth ministerial meeting of the China-Arab States Cooperation Forum in 2014, the application of the BDS in Arab countries has been discussed. In May 2015, China and Russia signed the BeiDou-Glonass system compatibility and interoperability cooperation agreement. In April 2018, the China-Arab States BDS/GNSS Center, the first overseas center for China's indigenous BDS, was officially inaugurated in Tunisia.

South Africa Announces Successful Launch of Nanosatellite

December 27, 2018 - Africa's most advanced nanosatellite, developed by South Africa, was successfully launched, the South African Department of Science and Technology said. The ZACube-2 took off with the Russian Soyuz Kanopus mission from Russia's Vostochny spaceport. The cube-satellite, which left the earth together with small satellites from the United States, Japan, Spain and Germany, is orbited as secondary payload in a launch mission designed for real-time monitoring of natural and manmade disasters and other emergencies, according to the statement. The ZACube-2 will provide cutting-edge remote sensing and communication services to South Africa and the region with a mission to monitor the movement of ships along the South African coastline with its automatic identification system (AIS) payload.

China Launches Six Yunhai-2 Satellites for Atmospheric Environment Research

December 29, 2018 - A Long March-2D rocket carrying six Yunhai-2 satellites and a test communication satellite blasts off from the Jiuquan Satellite Launch Center in northwest China, Dec. 29, 2018. The six atmospheric environment research satellites will be used to study atmospheric environment, monitor space environment, prevent and reduce disasters, and conduct scientific experiments. The six Yunhai-2 satellites will be used to study atmospheric environment, monitor space environment, prevent and reduce disasters, and conduct scientific experiments.

EXECUTIVE MOVES

Gary Drutin Appointed New CEO of NovelSat

December 5, 2018 - NovelSat, a world leader in satellite transmission technology, announced that Gary Drutin has been appointed as Chief Executive Officer of NovelSat and as a member of the Board of Directors of the company. The Board has accepted the request by Itzik Wulkan to be released from his position as CEO, a role he has held since co-founding NovelSat 11 years ago. Wulkan will continue to serve the company as its President, focusing on strategic Business Development and as an observer of the Board of Directors. Drutin joined NovelSat earlier this year as Chief Business Officer. He has served as CEO of FST Biometrics, Chief Customer Officer for Allot, and Bizdev Director for Broadcom's Microwave business following the acquisition of Provigent, where he was SVP Worldwide Sales. Drutin also held GM, VP and other positions for AudioCodes, Cisco and Digital. Drutin was appointed to the top management position by the NovelSat Board of Directors with the full support of the company's lead Investors.

ManSat Group Opens New Office in California and Appoints New CFO

December 6, 2018 - Satellite firm the ManSat Group has opened a new office in California as it continues its plan for international growth. The California office is headed up by Katherine Gizinski, who has joined the Group as Vice President of Sales and Marketing. The office will work alongside ManSat's existing operations in Florida, London and the Isle of Man. Another new face on the ManSat team sees John Sheath appointed as the Group's new Chief Financial Officer and Finance Director. Before joining ManSat, Katherine worked with U.S. defense contractors to bring cutting edge commercial satellite and terrestrial communication technologies to austere environments in support of military, diplomatic, first responder and commercial initiatives.

Timothy Schermerhorn Joins Intelsat as Regional Vice President, North America

December 6, 2018 - Intelsat announced that Timothy Schermerhorn has joined the company as regional vice president, North America. Schermerhorn will be responsible for the development and implementation of Intelsat's sales and go-to-market strategies for the company's network, mobility and media customers operating in North America. He will be based in Intelsat's McLean office in Virginia and report directly to Kurt Riegelman, Intelsat's senior vice president, sales, marketing and communications. Schermerhorn joins Intelsat from Synacor, where as senior vice president, sales and marketing, he led the global sales, marketing and channel distribution strategies for the company's telecommunications service providers. Prior to joining Synacor, he served as vice president and general manager, broadband & media at Ericsson, Inc. In that role, he directed sales, business development and operations for Ericsson's leading broadband and media accounts. Prior to that, he held senior sales and general management roles at Intel Corporation, Advanced Digital Broadcast, Motorola and General Instrument.

REPORTS

NSR: Land Mobile Satcom Market to Generate \$18 Billion over 2 Million Sites by 2027

December 12, 2018 - NSR's *Land Mobile via Satellite, 6th Edition* (LMvS6) forecasts the markets to yield \$18 billion in cumulative retail revenues from the satcom land mobile markets, and annual retail equipment revenues to quadruple from \$92 million in 2017 to \$376 million in 2027. Flat panel antennas driving vehicle connectivity contribute to this rapid growth of equipment revenues, and new form factors and products hitting the market, offering an increasingly diverse range of devices, will further contribute to such growth.

WTA Report, "Automating the Teleport," Explores the Critical Role of Automation in the Industry's Future

December 17, 2018 - The World Teleport Association (WTA) released *Automating the Teleport*, a new research report that shares insights from thought leaders in the industry on how automation will play a critical role in transforming the teleport from traditional antenna farms to data centers with dishes that layer on value-added capabilities and services. Based on interviews with executives from teleport, satellite and technology firm, the report offers guidance on what to automate, how to analyze the cost and benefit, and how to avoid deployment nightmares. The report is sponsored by Kratos. The explosion in satellite capacity is dramatically changing the dynamics in the space industry. The teleport which sits in between the terrestrial and space segment is being driven to become more innovative and operationally efficient to meet these new bandwidth demands. The current environment is changing quickly and moving from traditional teleports working with wideband FSS satellites to HTS gateways supporting a huge increase in bandwidth and an exponential growth in services.

UPCOMING EVENTS

CES - Consumer Electronics Show, January 8-11, Las Vegas, NV, USA, <http://www.ces.tech/>

PTC'19, January 20-23, Honolulu, Hawaii, USA, <https://www.ptc.org/ptc19/>

Convergence India 2019, January 29-31, New Delhi, India, <http://www.convergenceindia.org/>

Convergence India is the only platform in this region which demonstrates convergence of technologies in Telecom, IT, Broadcast & Digital media sectors. The expo will showcase latest trends and technologies related to Telecom, Broadcast, Cable and Satellite TV, Cloud & Big Data, IoT, Digital Homes, Mobile devices, Film and Radio, Content Creation, Management and Delivery, etc. and also provides engagement with digital innovators, international business gurus, telecom and broadcasting czars, leaders from IT & Internet and IoT industries. It is a mecca of mega-minds accumulating under one roof to take Prime Minister Narendra Modi's vision of Digital India ahead, thus resulting in empowering the citizens of the country by transforming the landscape of Indian economy.

CSTB 2019, January 29-31, Moscow, Russia, <https://en.cstb.ru/>

SmallSat Symposium, February 4-7, Silicon Valley, USA, <http://2019.smallsatshow.com/>

The Global Space and Technology Convention (GSTC), February 14-15, Singapore, www.space.org.sg/gstc, https://gstc2019.eventbrite.sg?discount=APSCCmembers_020

The Global Space and Technology Convention (GSTC) is a leading space and tech event in Asia, showcasing the latest space technology developments, trending topics in the satellite scene, and innovations in the space startup ecosystem. Already in its 11th iteration, the event has grown to become a key platform in the region for dialogues on partnerships, and commercial collaborations between businesses, government and academia. GSTC 2019 will be held from 14 to 15 February 2019 at the St Regis Singapore. With the theme "Pushing the Innovation Frontier", GSTC 2019 aims to focus on emerging satellite technologies, along with new applications and paradigms in the NewSpace arena. All APSCC members can get a 20% discount to GSTC delegate passes at https://gstc2019.eventbrite.sg?discount=APSCCmembers_020

OTT Summit 2019, February 19-20, Singapore, <http://www.ottsummit.asia/>

ABU Digital Broadcasting Symposium, March 4-7, Kuala Lumpur, Malaysia, <http://dbs.abu.org.my>

The ABU Digital Broadcasting Symposium turns 15 in 2019 – a milestone that marks years of steady growth since its launch in 2005. From modest beginnings, DBS has become one of the region’s leading events for the broadcasting industry. Held annually in Kuala Lumpur, and organised by the ABU, it now attracts more than 1,000 participants. Comprising a conference, an exhibition, masterclasses and workshops, the symposium is designed to provide broadcasters with the information needed to make the right decisions in the rapidly-changing digital age. When DBS began 15 years ago, many Asian broadcasters had not yet gone digital. Many have now made the transition, or are in the process of doing so. At the same time, an ever-growing range of digital technologies is becoming available, offering exciting new opportunities – and challenging decisions – for broadcasters. DBS aims to help them stay ahead of the curve.

CABSAT 2019, March 12-14, Dubai, UAE, <https://www.cabsat.com/>

Taking place in Dubai across 3 days, over 13,000 people will converge on DWTC to attend the foremost annual event in the broadcast, satellite, content creation, production, distribution & digital media sector. Don’t miss out, ensure you’ve got CABSAT 2019 firmly booked in your calendar!

Global Space Congress (GSC) 2019, March 19-21, Abu Dhabi, UAE,
<https://www.globalspacecongress.com/events/global-space-congress-2019/event-summary-ae6d3a25a75a4cb88ea19b02560959fa.aspx>

Global Conference on Space for Emerging Countries (GLEC 2019), April 24-26, Marrakesh, Morocco,
<http://www.iafastro.org/events/global-series-conferences/>

Space Tech Expo 2019, May 20-22, Pasadena, CA, USA, <http://www.spacetecheexpo.com/>

Australasia Satellite Forum 2019, May 21-22, Sydney, Australia,
<http://www.talksatellite.com/asf2019flyer.html>

Satellite Industry Forum 2019, June 17, Singapore, <https://asiavia.org/events/sif-2019/>

ConnecTechAsia2019, June 18-20, Singapore, <https://www.connectechasia.com/>

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About APSCC

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