

# APSCC Monthly e-Newsletter

## JUNE 2018

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

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

### INSIDE APSCC

**ConnecTechAsia 2018**, 26-28 June, Singapore, [www.connectechasia.com](http://www.connectechasia.com)

**ConnecTechAsia Summit** is the pinnacle where over 150+ regional thought leaders industry and influencers meet to share about the driving forces of today's interconnected ecosystem. Covering 3 tracks on **NetworkComms**, **BroadcastMedia** and **EmergingTech**, the Summit themed "**Digital Business Transformation**" will feature a dedicated session on **Satcomm (Day 1)** covering topics such as industry analysis, satellite for 5G, LEO-GEO-MEO, spectrum wars and new standards for IoT, plus new business partnerships to drive innovation and business growth. Quote 'APSCC' to enjoy *15% discount off the registration fees!* (\*discount not applicable to Passports)

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

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

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

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

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

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

### SATELLITE BUSINESS

#### **Inmarsat Jet ConneX Takes Flight in Latin America with Partner Honeywell**

May 1, 2018 - Inmarsat Jet ConneX, the global, high-speed inflight broadband service for the business aviation sector, has officially arrived in Latin America following its first sale in the region by Inmarsat partner Honeywell Aerospace. Jet ConneX, which is powered by our Ka-band Global Xpress satellite network and runs on Honeywell's JetWave hardware, was selected alongside the Honeywell Avionics Protection Plan and several GoDirect services to support flight planning, weather monitoring, future maintenance and more. The improved in-flight connectivity and GoDirect services will be used on the Brazilian customer's Dassault Falcon 7X to improve the passenger cabin experience and provide pilots with dynamic services for better awareness and decision-making.

### **We Are IT Philippines Signs Bulk Broadband Capacity Deal with Thaicom**

May 2, 2018 - Thaicom Public Company Limited and We Are IT Philippines Inc. (WIT) – the leading satellite broadband service provider in the Philippines – have signed a multi-year capacity wholesale agreement aimed at providing connectivity for the rollout of nationwide enterprise and government broadband projects. According to the terms of the agreement, WIT will use the entire IPSTAR capacity of both spot and broadcast beams for the Philippines. The agreement will also see WIT provide broadband connectivity through the IPSTAR high-throughput satellite to serve market verticals in the Philippines, including broadcasting, telecom, mobile network operators, and maritime.

### **ESA and SES-led Consortium to Develop Satellite-based Cybersecurity**

May 4, 2018 - The European Space Agency (ESA) and an SES-led consortium are developing a system that will allow the generation of encryption keys from space, as well as their secure transmission to users on Earth via laser. Under the agreement with ESA, the SES-led consortium of industry partners will establish a Quantum Cryptography Telecommunication System (QUARTZ), a new platform aimed at providing a global service for next-generation encryption keys for use in geographically dispersed networks. Possible applications will address the needs of users such as telecommunication operators, financial organisations, infrastructure providers, institutions and potentially governmental organisations. In the framework of the QUARTZ project, SES will define, design and develop a satellite-based Quantum Key Distribution (QKD) system and service architecture, which includes the future service and the core technologies up to ground end-to-end testing. Other members of the consortium will provide specific technological contributions and expertise for various elements of the system, and will include companies and research organisations from ESA member states such as Germany, Luxembourg, Austria, Switzerland, the Czech Republic and The Netherlands.

### **Uganda Joins Forces with Intelsat, ITSO and MTN to Accelerate 3G Network Infrastructure Deployment in Rural Areas**

May 4, 2018 - Intelsat S.A. announced that Uganda's Communications Commission (UCC) will utilize Intelsat satellite services and Gilat Satellite Network's ground infrastructure to advance the deployment of 3G wireless communications infrastructure and expand high quality, affordable broadband access for businesses and communities in rural areas of Uganda. Under a pilot program, the UCC will use IntelsatOne Mobile Reach Solar 3G satellite services delivered via the Intelsat 37e satellite and Gilat's SkyEdge II-c multi-application platform to provide high-quality, resilient and affordable broadband connectivity to two communities – Bufundi in Rubanda and Kibuku in Ntoroko. The improved performance, efficiency and lower total cost of ownership delivered by Intelsat 37e, the fifth of the Intelsat Epic<sup>NG</sup> satellites and one of three serving Africa, will enable Uganda to quickly and seamlessly extend broadband connectivity to rural areas of the country in a cost-efficient manner. The objective of the remote connectivity project is to demonstrate the ease of deploying the satellite solution and study the commercial viability and sustainability of the solution.

### **iDirect Government Unveils the 9050 OM Ruggedized Satellite Router**

May 7, 2018 - iDirect Government (iDirectGov) unveiled its 9050 OM ruggedized satellite router. The 9050 OM features enhanced security, military environmental standards and improved functionality in a ruggedized form factor for operation in harsh outdoor environments. A 950mp integrated satellite router board resides at the heart of the 9050 OM, which protects the board from the elements including blowing rain or dusty conditions. Powered by Evolution 4.2 software, the 9050 OM can operate in harsh environments in temperatures ranging from -40°F to +131°F. While en route to a mission, the 9050 OM can survive a parachute jump from 25,000 feet or be submerged in water, and still be able to operate once it reaches its final destination.

### **Speedcast and Plug and Play Partner to Drive Innovation in the Communications Industry**

May 7, 2018 - Speedcast International Limited, the world's most trusted provider of remote communication and IT services, and Plug and Play, the world's largest global innovation platform and startup accelerator, announced a strategic partnership focused on the advancement of technology within the communication and IT services sector. Speedcast's decision to partner with Plug and Play demonstrates the company's commitment to innovation and will accelerate the development of new technologies and business models. The partnership directly links Speedcast with high-potential startups and builds a collaborative environment to focus on technology innovation. Speedcast will join as an Anchor Partner in the Supply Chain & Logistics Program in collaboration with other partners such as CMA CGM,

DHL, Lufthansa Cargo, Maersk, Panasonic, and Union Pacific in Silicon Valley. Plug and Play's Supply Chain & Logistics Program will ensure engagement with a select group of startups exploring new ideas and the development of technologies linked to Speedcast's product roadmap.

### **Hughes to Prototype Multi-Modem Adaptor for DoD Wideband SATCOM Architectural Analysis**

May 7, 2018 - Hughes Network Systems has been awarded a follow-on contract to continue the second phase of a pilot study program to assess the feasibility of interoperability across multiple satellite communication (SATCOM) systems for the Department of Defense (DoD). Under this award, Hughes will be responsible for prototyping a Flexible Modem Interface (FMI) for military terminals that will enable various military and commercial systems and services to interoperate in the field. In Phase Two of this program, Hughes is being asked to develop, demonstrate and deliver a hardware and architecture prototype solution to support interoperable SATCOM capabilities for the military, which will help fortify satellite communications in contested environments.

### **Telstra Expands Availability on Key Routes in Asia**

May 8, 2018 - Telstra has expanded its world-first 'Always On' service to provide more bandwidth options and lower latency on some of Asia's busiest subsea cable routes – Hong Kong to Singapore and Japan to Hong Kong. The service utilizes the unmatched scale and diversity of Telstra's cable network in the Asia Pacific region to reroute traffic to another path, even in the event of a cable cut or damage due to a natural disaster. Complementing the 'Always On' service, Telstra also has the lowest latency routes in the market between key financial hubs in the Asia Pacific region. Telstra's subsea cable network is the largest and most diverse in the Asia Pacific, accounting for up to 30 per cent of active intra-regional capacity. It is this diversity that enables Telstra to reroute traffic impacted by a cable cut onto another path to minimize downtime.

### **VT iDirect Extends Partnership with Kymeta to Resell KyWay Satellite Terminals**

May 8, 2018 - VT iDirect has extended its partnership with Kymeta in an agreement to become an official reseller of the KyWay Terminal (KyWay Terminal) to its global base of mobility-focused partners. The Kymeta KyWay Terminal integrates ground breaking mTenna flat-panel antenna technology and the industry's leading iDirect X7 modem, to serve a broad range of mobility applications, uniting high throughput performance with a sleek form factor, electronic steering, and attractive price point. VT iDirect holds the market share lead for VSAT ground infrastructure in key mobility markets. This agreement provides VT iDirect customers with a strong competitive advantage to expand their footprint into new emerging mobility markets for the land mobile, maritime, government and defence.

### **AST and Thales Announce a New Strategic Partnership for AST INTEGRA Certus**

May 8, 2018 - The AST Group (AST) announced their partnership with Thales which includes the supply of both Thales VesseLINK™ and Thales MissonLINK™ terminals to support Iridium's new Certus services. VesseLINK™ will provide critical marine operations with a lifeline to shore whenever or wherever a vessel is at sea by offering an affordable, enterprise-grade solution designed to meet the unique challenges of maritime environments. The lightweight solution also affords a simple, adaptable and robust design and easy to use interface for ship captains and crews. It can be installed as a stand-alone solution or used as a VSAT companion. MissionLINK™ will be the first of the land-mobile product line and it will operate using Iridium Certus broadband services over a network of 66 satellites that cover 100% of the globe, including the most difficult to service, remote locations.

### **Burkina Faso Government Broadens Digital Access with SES Networks**

May 8, 2018 - A new multi-year agreement between Burkina Faso and SES Networks will enable the local administration of the African country to continue using high-speed connectivity to roll out e-government, e-education and e-health services. The fibre-like connectivity enjoyed by the land-locked country is delivered via the high throughput, low latency O3b Medium Earth Orbit (MEO) satellite fleet. The agreement follows on a Luxembourg and Burkina Faso development cooperation project launched in 2017, which was aimed to improve the IT and communication infrastructure of the country. In the last 12 months, Gaoua, Bobo-Dioulasso, Ouagadougou, Tenkodogo and Dori have had O3b terminals installed, to give the provinces immediate access to fiber-like connectivity.

### **All-in-one Network Service Device for Fleet Xpress**

May 11, 2018 - The first satellite device to combine the Inmarsat Fleet Xpress Network Service Device

(NSD) with a satellite router and VoIP gateway has been launched by RedPort Global. The single rackmount appliance will manage ship networks with satellite broadband routing, VoIP connectivity and crew services, and replaces at least three pieces of hardware that were previously required for Fleet Xpress installations. The innovative RedPort Optimizer Enterprise NSD gives satellite service providers and ship operators an all-in-one solution, significantly reducing the cost and complexity of installations. RedPort will sell the Optimizer Enterprise NSD under its own name, and as a white-label product for satellite service providers looking for a high-quality turnkey solution. In addition to the award-winning suite of RedPort services, hosted application opportunities are available to other providers of value-added satellite services.

#### **RedPort Launches Groundbreaking Hardware Replacement for Inmarsat's Fleet Xpress Network**

May 14, 2018 - The world's first satellite device that combines the Inmarsat Fleet Xpress Network Service Device (NSD) with the RedPort Optimizer Enterprise satellite router and VoIP gateway was launched today by RedPort Global. The single rackmount appliance will manage ship networks with satellite broadband routing, VoIP connectivity and crew services, and replaces at least three pieces of hardware that were previously required for Fleet Xpress installations. The innovative RedPort Optimizer Enterprise NSD for Inmarsat Fleet Xpress gives satellite service providers and ship operators an all-in-one solution, significantly reducing the cost and complexity of installations.

#### **Global Eagle to Collaborate with Telesat on Its Low Earth Orbit (LEO) Satellite Program**

May 15, 2018 - Telesat and Global Eagle Entertainment Inc. have agreed to collaborate in optimizing the capabilities of Telesat's LEO system to serve growing broadband requirements of maritime and aeronautical markets. The collaboration will include user terminal development, service-offering design, marketing, in-flight testing and at-sea performance testing. This collaboration follows Global Eagle's comprehensive review of planned non-geostationary-orbit (NGSO) constellations. The review resulted in Global Eagle concluding that Telesat's innovative LEO system design can provide low latency, high throughput and global coverage – including polar and oceanic regions – to optimally deliver a consistent, responsive and scalable guest experience for airlines and cruise lines. Telesat and Global Eagle will work together on design and testing activities for Telesat's planned LEO constellation using Telesat's recently launched Phase 1 LEO satellite. The parties will focus on airline and large cruise ship applications in polar and high-latitude regions, and passenger use-cases globally that leverage sub-50 millisecond latency for data-intensive applications. For aviation, Global Eagle will be testing its newly developed Ka-band antenna.

#### **SAS Becomes the First Nordic Airline to Launch In-flight Wi-Fi Using Viasat's Internet System**

May 16, 2018 - Scandinavian Airlines System (SAS) launched commercial service of its new high-speed in-flight Wi-Fi service on its short- and medium-haul routes between Scandinavia and Europe. The new in-flight Wi-Fi system, powered by global communications company Viasat Inc., is recognized as the best product on the market. The Wi-Fi is more reliable and faster than many other solutions deployed today, meaning that when in-flight, passengers can stream their favorite movies, use social media, send images from their seat or answer email – effortlessly. The SAS Wi-Fi system has already been installed on 28 aircraft, and by September the airline expects to have around 40 aircraft installed with the new high-speed Wi-Fi system. SAS expects the vast majority of its fleet to be Wi-Fi-enabled by the first quarter of 2020.

#### **Viasat Expanded Relationship with Honeywell for Ka-band Inflight Internet Services**

May 17, 2018 - Viasat and Honeywell announced an expanded agreement where Honeywell, as part of its GoDirect Cabin Connectivity suite of services, will offer Viasat's high-speed Ka-band in-flight internet service to large and mid-cabin business jet customers. Viasat's Ka-band service is proven to support more passengers and more devices simultaneously through all phases of flight, when performing bandwidth-intensive applications, including accessing virtual private networks, or streaming high-definition (HD) video calls, cloud content or live TV entertainment. Viasat's business aviation in-flight internet service will tap into the industry's highest-capacity, most reliable Ka-band satellite communications network. It will also use Viasat's most robust business-class shipset, the Global Aero Terminal 5510.

#### **Satellite Industry to Enter Operational Phase of Crisis Connectivity Charter for Support of Global Disaster Relief**

May 18, 2018 - Members of the satellite community, including Eutelsat signed contribution agreements with the United Nations World Food Programme (WFP), on behalf of the Emergency Telecommunications Cluster (ETC), stepping up their commitment to support global disaster relief. These contribution

agreements are the final steps in operationalizing the Crisis Connectivity Charter signed in late 2015 between the EMEA Satellite Operators Association (ESOA), the Global VSAT Forum (GVF), the UN Office for Coordination of Humanitarian Aid (OCHA) and the ETC. The Crisis Connectivity Charter signed by Eutelsat, Arabsat, Global Eagle, Hispasat, Inmarsat, Intelsat, SES, Thuraya and Yahsat, will help the humanitarian community by greatly enhancing their access to vital satellite-based communications when local networks are affected, destroyed or overloaded following disasters. Under the contribution agreements, the Charter Signatories are now committing satellite equipment and capacity that will be dedicated for humanitarian purposes during emergency responses. The ETC, under the global leadership of WFP, will be able to activate the Charter when disaster strikes and identify which pre-planned solutions are immediately available for any given region and need in order to meet a 24-hour deployment timeline after a crisis. Eutelsat's contribution agreement consists principally of pre-allocated bandwidth on four of its satellites across the globe, complemented on the ground by ready-to-deploy satellite kits.

### **Cobham Announces New FANS Upgrade Solution for Business Jets**

May 22, 2018 - Cobham has announced a new cost-effective communications upgrade option bringing all the benefits of Inmarsat's SB-S technology platform and FANS 1/A compliance to business jets. Enabled by the development of an STC on a Chicago Jet Group (CJG)-owned Falcon 900 aircraft, this joint Cobham and CJG initiative brings a solution to the market that will allow operators to fly preferred FANS routes with CPDLC and ADS-C functionality, while also servicing passengers with high speed data services, all via a single channel of SwiftBroadband. This will be accomplished by combining Cobham's Next Gen AVIATOR 300D satcom system with partner Avionics' avWiFi intelligent router. The revised STC will cover the Falcon 900 B/C/EX series with the potential for development on other airframes.

### **BSC Launches iDirect Network to Expand Broadband Service across Africa**

May 22, 2018 - VT iDirect announced that Broadband Systems Corporation (BSC) has selected the iDirect platform to expand its enterprise Very Small Aperture Terminal (VSAT) services throughout Africa. The new iDirect-based service will leverage iDirect's iQ series remotes to provide high-speed connectivity to multinational companies, small-and-medium enterprises and small businesses, as well as government organizations. BSC will also tap on the iDirect platform to backhaul 4G mobile traffic at enhanced speeds and connectivity. BSC is the largest service provider in Rwanda, and their vision is to make Rwanda one of the most connected countries in Africa. The company was founded in 2010 and provides its services to approximately 35 million end users across the Eastern Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, Uganda, Burundi and South Sudan.

### **Inmarsat Receives IMO Approval to Deliver Maritime Safety Solution**

May 22, 2018 - The International Maritime Organization's (IMO) Maritime Safety Committee (MSC) has formally approved Inmarsat's 'Fleet Safety' solution as a new service to support the Global Maritime Distress & Safety System (GMDSS). Ship owners and operators will now be able to combine maritime safety and broadband data services in a single FleetBroadband or Fleet One terminal provided by Inmarsat. Tens of thousands of vessels are already equipped with FleetBroadband or Fleet One, making the adoption of Fleet Safety simple and hassle free. Ship owners and operators currently deploying FleetBroadband or Fleet One will be able to access GMDSS approved safety services, as well as a host of new innovative safety features only available via the Inmarsat Fleet Safety system, by the addition of a small Maritime Safety Terminal (MST). The new service will be delivered over the existing Inmarsat-4 constellation and the new Inmarsat-6 satellites; the first of which is due for launch in 2020.

### **Cobham SATCOM's EXPLORER 8120 Chosen for Australian Remote Worker Welfare**

May 23, 2018 - The Government of South Australia's Department of Planning, Transport and Infrastructure (DPTI) has selected a solution that features EXPLORER 8120 VSAT antennas enabling broadband data connectivity and high quality telephony for workers delivering essential services to communities in remote areas. The EXPLORER 8120 antennas, which are the only 1.2 meter auto-acquire, drive-away antenna system to feature Dynamic Pointing Correction technology to improve link uptime, were delivered in May 2018. DPTI strives to provide high quality infrastructure for the welfare and operational capability of its teams, ensuring they are enabled to continue delivery of essential services for communities in remote South Australia. EXPLORER 8120 was chosen due to its easy installation and proven ability to deliver high uptime, augmented by a unique antenna stabilisation technology that ensures a reliable link to the satellite, even if the antenna is being buffeted by winds or people are moving around inside the accommodation unit.

### **CPN Satellite Services and Hughes Announce Advanced LTE-BGAN M2M Dual Mode Terminal**

May 23, 2018 - CPN Satellite Services announced the release of one of the world's most advanced LTE-BGAN M2M Dual Mode Terminal. Combining CPN's high quality integrated cellular LTE gateway with the industry-leading Hughes 9502 satellite BGAN M2M modem, the all IP solution is packaged in a ruggedized enclosure with battery back-up, ideal for IoT M2M fixed site locations. The new generation terminal significantly increases reliability for sites transmitting high-value data, whether in urban or rural environments, providing resilient L-band BGAN connectivity for periods when the primary LTE connection is congested or unavailable. Furthermore, it features intelligent IP routing during the failover process, and separate modem power supplies for high reliability.

### **Globecomm Helps Tipco Maritime Company Tune in to Fleet Visibility**

May 23, 2018 - Globecomm has installed a complete hybrid satellite-LTE communications solution for Thailand-based shipowner Tipco Maritime Company. In undertaking a review of its communications systems, Tipco identified a need to make better use of its onboard equipment, improve visibility of operations and achieve closer integration with office-based systems. Globecomm specified a solution that would enable Tipco to employ new techniques including remote management and virtualization of onboard PCs and deploy CCTV systems on its latest new building. Critical to acceptance was better management of the costs of ship-shore connections and improved performance of Tipco's onboard networks. Globecomm provided Tipco with Nimbus, a powerful yet cost-effective network management tool that can be used to control multiple connections via satellite and LTE networks, while providing additional value-added functionality for both enterprise and crew applications.

### **Speedcast Delivers New Standard of Internet Guest Experience to Carnival Horizon Cruise Ship**

May 25, 2018 - Speedcast successfully delivered 3.174 Gbps of satellite bandwidth onboard the Carnival Horizon, Carnival's newest mega cruise ship. This transformative Internet experience follows on the successes first enabled onboard the Carnival Vista, which has been hosting the frictionless high-bandwidth Internet solution for over six months. The unparalleled data rate was initially achieved at the Carnival Horizon naming ceremony on May 23, 2018 in the New York harbor, and sets the guest satisfaction standard that Speedcast will enable onboard the Carnival Horizon to guests and crew. The solution uses "best of breed" bandwidth from multiple satellite operators, in this case leveraging both Intelsat and Telesat. This approach consists of selecting the best satellites in terms of power, look angle and coverage, including the latest high-throughput satellites with beams specifically designed for maritime applications, in order to deliver a land-like connectivity experience. Intelsat and Telesat were key players in the achievement of this exceptional connectivity experience, securing the necessary capacity and working in close partnership with the Speedcast team for engineering.

### **Embraer Selects Viasat as its Connectivity Provider on Legacy 450 and Legacy 500 Executive Jets**

May 28, 2018 - Viasat announced Embraer is the first original equipment manufacturer (OEM) to select Viasat's high-speed, high-capacity Ka-band connectivity solution for its Legacy 450 and Legacy 500 executive jets. The Viasat system is prepared to serve the business jet users' connectivity demands of today, while keeping pace with future bandwidth demands. Viasat will be the Ka-band broadband satellite connectivity provider on the Legacy 450 and Legacy 500 airframes. Aircraft will be equipped with Viasat's Global Aero Terminal 5510, which will tap into the ViaSat-1, ViaSat-2 and European Ka-band satellite platforms today, and will be forward-compatible with Viasat's future-generation satellite constellation, ViaSat-3 – enabling use of the ViaSat-3 capacity with no additional hardware upgrades. ViaSat-3 is an ultra-high capacity satellite platform, which will be comprised of three ViaSat-3 class satellites offering global coverage. Each ViaSat-3 satellite is expected to deliver one terabit per second capacity, which is more than the total network capacity of the approximately 400 commercial communications satellites in space today - combined.

### **Inmarsat to Rollout European Aviation Network Inflight WiFi in the Business Aviation Market**

May 29, 2018 - mobile satellite communications, announced today that its European Aviation Network (EAN) inflight wifi solution will be available for the business aviation market by January 2019. EAN is the world's first inflight wifi solution that integrates connectivity from a satellite, operated by Inmarsat, and an LTE-based ground network, operated by Deutsche Telekom, covering all 28 member states of the European Union, as well as Switzerland and Norway. The unique combination of a satellite and 4G LTE-based ground network offers super-fast, low latency performance over land and water. It can therefore meet highly demanding internet use, such as working with remote business desktops, streaming high-

definition videos, enjoying online gaming and sharing images, with service levels that compare to mobile broadband on the ground.

### **Zodiac Maritime Chooses Satcom Global Aura VSAT for Global Fleet Communications**

May 30, 2018 - Leading international ship management company Zodiac Maritime has extended its satellite communications agreement with Satcom Global, rolling out flagship VSAT service, Satcom Global Aura, across its globally trading fleet of tankers, bulk carriers and container ships. To date, 36 vessels are live on the Aura network enjoying reliable high-speed communications, and upwards of 80 will be installed on Zodiac-managed vessels by the end of the year. Committed to providing seafarers with a superior quality of life onboard their vessels, Zodiac was seeking a VSAT solution capable of providing an enhanced communications experience. Delivering consistent, quality bandwidth, Aura plays a significant role in ensuring high standards of crew welfare, as well as providing the connectivity for efficient business operations. Integral network monitoring capabilities sitting at the heart of Aura, provides Zodiac with additional confidence and assurance of optimum service performance.

### **Yahsat Announces Successful Al Yah 3 Mission**

May 30, 2018 - Yahsat has announced that its third satellite Al Yah 3, located at 20° West has successfully completed its in-orbit testing, and is ready to support the launch of commercial services. The satellite will expand Yahsat's Ka-band coverage to 19 additional markets across Africa covering 60% of the population and marks Yahsat's first entry into Brazil where 95% of the population will have access to its satellite broadband services.

### **ViaSat-2 SATCOM Services Available for Canadian Armed Forces and Government Applications**

May 30, 2018 - Viasat announced the availability of satellite communications (SATCOM) service over ViaSat-2, the world's most advanced communications satellite, for Canadian Armed Forces and government applications. The ViaSat-2 SATCOM system is the first in Viasat's series of ultra-high-capacity global satellite networks, which will enable superior reach, readiness, and resiliency for military forces around the globe. The ViaSat-2 satellite system validates the performance advantages and capabilities of Viasat's commercial SATCOM system today with a glimpse into the Company's ViaSat-3 SATCOM system capabilities. Viasat's SATCOM network delivers exceptional bandwidth and resilience, redundancy and active cyber protection required to maximize operational performance in the contested environments military operations face during combat.

### **SES Provides Managed Services for Galileo**

May 30, 2018 - SES will provide a series of services for the Galileo European navigation system under a long-term agreement signed with Spaceopal, SES announced. The contract is part of the Galileo Service Operator (GSOp) framework agreement between Spaceopal – a joint venture between Telespazio and DLR GfR mbH – and the European Global Navigation Satellite System Agency (GSA). Under the agreement, SES will provide Spaceopal with services to support the maintenance and seamless operations of the Galileo Global Navigation Satellite System (GNSS). SES will be responsible for in-orbit measurements for the Galileo satellite constellation and provide VSAT managed services to Telespazio for the Galileo Data Dissemination Network (GDDN). SES has played an important role in the early development and deployment of the Galileo system, and is instrumental to the deployment and maintenance of the GDDN. Previously, SES has provided infrastructure and services for the Galileo program, as well as ground stations and in-orbit testing during the In-Orbit Validation (IOV) Phase.

### **ThinKom Phased-array Aero Antennas Ready Now for Low-Earth Orbit Satellites**

May 31, 2018 - ThinKom Solutions has announced that its phased-array antennas are fully interoperable with the next generation of low-earth orbit (LEO) and mid-earth orbit (MEO) networks as well as geostationary (GEO) satellites. Agility tests have shown that the company's antenna design achieves switching speeds of less than 800 ms. This has been determined by LEO and MEO service providers to be more than sufficient for beam switching among the fast-moving satellites with virtually no interruption in connectivity.

## BROADCASTING

### **Malaysia's Asian Horror Channel, BOO Available in the Philippines via MEASAT**

May 2, 2018 - MEASAT Satellite Systems Sdn. Bhd. ('MEASAT') announced an agreement with Astro Malaysia Holdings Berhad's ('Astro') to distribute BOO via MEASAT-3a at 91.5°E. BOO, available in Malaysia and the Philippines, delivers 24-hour Asian horror content ranging from psycho-thrillers to other sub-genres such as horror-comedy, horror-action and more. With BOO, Astro continues to grow its regional content distribution via MEASAT. The 6 channels include Asia's premier e-sports channel eGG, BOO and several vernacular channels namely Ria, Prima, Vellithirai and Warna. The 91.5°E prime video hot slot is home to the MEASAT-3, MEASAT-3a and MEASAT-3b satellites, forming one of the region's strongest video neighbourhoods. From 91.5°E, MEASAT supports broadcasters and DTH operators to distribute UHD, HD and SD channels to audiences across Asia, Australia, East Africa and South Eastern Europe.

### **Freenet TV Selects Media Broadcast Satellite for DTH Service**

May 7, 2018 - Media Broadcast Satellite is further expanding its portfolio for professional and highly specialized B2B applications in the broadcast industry. As part of a far-reaching agreement, the company provides extensive services for the newly launched product freenet TV via Sat. They include in particular the processing and distribution of data and control signals for the reception devices of the recently launched freenet TV via satellite. In addition, the 'freenet TV connect' portal is broadcast from the ASTRA 19.2°E position. The proposition extends freenet TV with additional channels, apps, on-demand and catch-up services and an electronic program guide. The associated EPG control signals are also processed and transmitted by Media Broadcast Satellite. The deployment of all services took place following precise configuration and comprehensive tests in time for the launch of freenet TV via Sat on March 28, 2018. The applications are provided from Media Broadcast Satellite's teleport in Usingen near Frankfurt/Main which, with DVB-S/S2 platforms, multiplexing, IPTV and managed playout solutions, over 135 antennas and an addressed orbit from 76° East to 60° West, is one of the largest teleports in the world.

### **Globecomm Chosen by BBG and MBN for DTH services**

May 8, 2018 - Globecomm announced it was awarded a five-year contract by the Broadcasting Board of Governors (BBG) in support of the Middle East Broadcasting Network (MBN). Globecomm will provide satellite transponder, teleport, and terrestrial fiber services for transmitting MBN's Alhurra TV HD and SD video and Radio Sawa audio content to the Middle East and North Africa. This marks the first project awarded by the BBG to Globecomm for turnkey satellite and terrestrial-based broadcast services. It is also Globecomm's first deployment on the new \$2.5 billion GSA Complex Commercial SATCOM Solutions (CS3) IDIQ contract 47QTCE18D0001. Alhurra and Radio Sawa's programming content will be delivered via satellite to more than 58 million direct-to-home (DTH) users, multiple regional MBN rebroadcasting TV and radio affiliates, and BBG/MBN owned-and-operated 24/7 FM radio stations.

### **Eutelsat Renews its Partnership with Polish Broadcaster TVN**

May 9, 2018 - Eutelsat Communications and TVN, the leading broadcaster in Poland, part of Discovery Inc., have signed a multiyear, multi-transponder agreement, renewing capacity at the HOTBIRD position, Poland's leading satellite neighbourhood. This contract consolidates TVN's resources on HOTBIRD, underpinning a relationship established over 20 years ago with the launch of TVN Group's first channel in 1997. This renewed capacity will support TVN's expansion into digital content, promoting an improved image quality and customer experience. TVN's offer on HOTBIRD consists of 23 FTA and pay-TV channels, including 11 HD channels, such as TVN, the most-watched channel in Poland (in 16-49 commercial target group), TVN24, the country's leading news network, and some of flagship lifestyle and DTT channels including TVN7, TTV, TVN Style, TVN Turbo, HGTV, the Travel Channel and Food Network.

### **twofour54 Abu Dhabi and Arabsat Partner to Expand the Region's Satellite Industry**

May 11, 2018 - Broadcasters will now be able to stream their shows to millions of Arabsat viewers around the world after the organisation agreed to establish a satellite uplink-platform from twofour54 Abu Dhabi. The agreement will see Arab Satellite Telecommunication Organisation (Arabsat) and twofour54 launch a new set of satellite TV channels on the Arabsat Badr-4 satellite. twofour54 is already the Capital for content creators and home to a thriving community of more than 470 media companies, including a number of broadcasters. The agreement with Arabsat offers twofour54 partners and broadcasters across the region the ability to distribute content to a huge audience directly from the free zone. Arabsat will work with twofour54 on a number of projects to develop the teleport services, including a HDR platform which is the

first in the UAE. twofour54 and Arabsat will also begin testing the HbbTV platform, which will place twofour54 in a unique position, providing state-of-art technology through collaboration with respected partners such as ArabSat.

#### **Thaicom Expands MCPC Broadcast Platform on Thaicom-6 in Africa**

May 14, 2018 - Thaicom Public Company Limited announced the signature of an agreement with Mediavision a European based content delivery specialist providing end-to-end solutions to the broadcast and media industry for the expansion of its Multi-Channel Per Carrier (MCPC) broadcast platform in Africa. The MCPC broadcast platform is a cost-effective distribution solution, providing broadcasters in Europe direct access to Thaicom's content distribution platform at 78.5° east, located on the Thaicom-6 satellite. European and international programmers will also gain access to Mediavision's integrated solutions for linear and non-linear content distribution including Internet Protocol TV (IPTV). Telespazio will provide uplink services for the platform from its teleport facility in Fucino, Italy. Fucino, with its 170 antennas and 370,000 square meters, is recognized as the first and most important teleport in the world for civilian use. Broadcasters will be able to contribute standard (SD) and high definition (HD) content from Europe to Africa via Telespazio's Fucino facility and the Thaicom-6 satellite.

#### **Canal Digitaal to Broadcast FIFA World Cup in Ultra HD to Dutch Sports Fans via SES Video**

May 23, 2018 - M7 Group, one of Europe's leading pay-TV providers, will be delivering the FIFA World Cup matches live in Ultra High Definition (UHD) to all subscribers of Canal Digitaal from 14 June to 15 July, following an agreement with satellite operator SES and Dutch Public Broadcaster NPO/NOS. The World Cup matches will be delivered live in native Ultra HD to all of M7 Group's Canal Digitaal subscribers via a dedicated channel called "NPO UHD", set up specially for the event. For the duration of the World Cup, NPO UHD will be broadcast via a dedicated transponder on Astra 23.5 degrees East, the key orbital position utilized by Canal Digitaal for the distribution of its main channels. The UHD broadcast of the World Cup was initiated by Dutch public broadcasters NPO and NOS, which are keen to enable soccer fans to enjoy an enhanced viewing experience. As innovative front runners, NPO and NOS also see this UHD transmission as an opportunity to better understand the requirements to boost the uptake of this new TV technology in Dutch homes.

#### **SES Showcases its First Broadcast of 8K Television**

May 23, 2018 - SES will be broadcasting an 8K television signal via its satellite system for the first time during the annual SES Industry Days, held in Luxembourg on 23 and 24 May. Relying on the new DVB-S2X standard that enables greater efficiency, the transmission will be carried out on a single 36 MHz transponder on ASTRA 3B. With a resolution of 7680x4320 pixels, the video will be encoded in HEVC and transmitted at a rate of 80 Mbit/s, which is four times higher than for a 4K signal. In addition, the test transmission will use a native IP formatted signal, providing some insights into the requirements of a future All-IP broadcast infrastructure for television. For this demonstration, SES has partnered with Spin Digital, which developed the expertise to decode and playback 8K HEVC signals in real-time using a software solution, and also encoded the content using its HEVC encoder. In addition, SES teamed up with Sharp / UMC, which is providing the 8K screens. The 8K content, with a frame rate of 60 frames per second and 10-bit color depth, features native 8K camera footage provided by PSNC (Poznan Supercomputing and Networking Center) and an 8K animation (CGI) provided by Unigine Corp.

## **LAUNCH / SPACE**

#### **Firefly to Use of Vandenberg Air Force Base Space Launch Complex 2 West**

May 1, 2018 - Firefly Aerospace, Inc. (Firefly), a developer of orbital launch vehicles for the small to medium satellite market, announced that the United States Air Force (USAF) has issued a "Statement of Support for the Firefly Aerospace Program, Alpha and Beta Launch Vehicles" to utilize Vandenberg Air Force Base (VAFB) Space Launch Complex 2 West (SLC-2W) for future launches of the Firefly Alpha and Beta launch vehicles.

#### **Arianespace and D-Orbit Sign Contract to Launch ION Cubesat Carrier on Vega SSMS POC Flight**

May 2, 2018 - Arianespace and D-Orbit announced the signature of an agreement to offer InOrbit NOW launch and deployment service through the launch of D-Orbit's ION CubeSat Carrier on the Vega launch vehicle, as part of the Small Spacecraft Mission Service (SSMS) Proof Of Concept flight (POC flight). D-

Orbit's ION CubeSat Carrier, a free flying CubeSat deployer and technology demonstrator, will be launched on Vega in 2019 from the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana. The CubeSat carrier will host several CubeSats to be deployed once in orbit. D-Orbit's InOrbit NOW is a revolutionary launch and deployment service designed to transport CubeSats to space and release them into independent orbital slots. Arianespace's launch contract with D-Orbit includes a significant number of CubeSats with an overall separated mass of about 100 kg. Positioned in a sun-synchronous orbit at 500 km., ION CubeSat Carrier will deploy the hosted CubeSats along the orbit over a period of approximately one month. After completing the CubeSat deployment phase, ION CubeSat Carrier will initiate the in-orbit validation phase of payloads directly integrated on the platform.

#### **Arianespace to Launch the First STRIVING Small Satellite for SITAEL on Vega's SSMS POC Flight**

May 3, 2018 - Arianespace announced that it has been selected by SITAEL to launch the first small satellite for delivery of STRIVING services, to be conducted using a Vega as part of the launcher's Small Spacecraft Mission Service (SSMS) Proof of Concept (POC) flight. It is the third contract signed by Arianespace for this POC flight. The first STRIVING small satellite will be launched on Vega in 2019 from the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana. STRIVING is a new one-stop-shop commercial service offering to both private and public entities affordable and effective access to space for testing, validating and/or operating their innovative technologies and solutions. SITAEL, the Space Mission Provider (SMP), acts as a single interface to customers, leading an industrial team composed also by IMT, Planetek and Tyvak International. The service infrastructure is currently under development within a public-private partnership between ESA/ASI and SITAEL in the frame of the ARTES PIONEER Initiative. Built by SITAEL using its S-75 microsat platform, the first STRIVING satellite will weigh approximately 70 kg. at launch and is designed to have a nominal service life of at least two years once positioned in a sun-synchronous orbit at 500 km.

#### **LM-3B Successfully Launches APSTAR-6C Satellite**

May 4, 2017 - APSTAR-6C satellite was launched successfully by the LM-3B launch vehicle from Xichang Satellite Launch Center at Sichuan province of China. APSTAR-6C satellite will enhance the Asia-Pacific satellite communications, broadcasting services capabilities. APSTAR-6C satellite which is designed and manufactured by CAST is based on the DFH-4 platform and with a designed life of 15 years. The satellite, equipped with total 45 operational transponders in C-band, Ku-band and Ka-band, will be positioned at 134° East Longitude geostationary orbit. It will provide regional communication and satellite broadcasting service covering Asia-Pacific regions of VSAT, video distribution, DTH and cellular backhaul applications.

#### **Fengyun-4A Satellite Begins to Serve Asia Pacific Users**

May 4, 2018 - China's new geostationary meteorological satellite Fengyun-4 has begun serving users in the Asia Pacific region from May 1. The FY-4A, the first of China's second-generation geostationary weather satellite, will send satellite data and products to the customers in Southeast Asia, East Asia and Oceania besides China itself, which will help improve their capacity in meteorological disaster prevention and reduction. The satellite, launched on Dec. 11, 2016, is also China's first quantitative remote-sensing satellite in high orbit. It is enabled with vertical atmospheric sounding and microwave detection capabilities to address 3D remote sensing at geostationary altitudes. APSTAR-6C, as replacement satellite of APSTAR-6, is the second DFH-4 platform satellite that APT Satellite has procured from CGWIC. The satellite is equipped with 45 transponders in C, Ku, and Ka bands, with designed service life of 15 years, providing high power transponder services to customers across the Asia-Pacific region for in-flight connection, video contribution/distribution, DTH and cellular backhaul.

#### **Lockheed Martin-built NASA InSight Lander Officially on its Way to Mars**

May 5, 2018 - Lockheed Martin Space continued its Mars heritage when the Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight) spacecraft launched at 4:05 a.m. PT aboard a United Launch Alliance Atlas V 401 rocket. InSight has officially begun its six-month long journey to the Red Planet and is scheduled to arrive Nov. 26, 2018. Landers have explored the surface of Mars in unique ways, but InSight, managed by NASA's Jet Propulsion Laboratory, will be the first mission to peer beneath the surface and take the vital signs of the planet. It will be the first mission to study the planet's interior by measuring its heat output and observing its rotational variations. It will use the seismic waves generated by Mars quakes and meteorite impacts to develop a map of the planet's deep interior. The resulting insight into Mars' formation will help mission scientists to better understand how other rocky planets, including Earth, evolved. Lockheed Martin designed, built and tested the spacecraft and is responsible for flight operations

during the cruise phase as well as entry, descent and landing in November later this year. Also, once the lander is on Mars, the mission operations team, based in Denver, will support science collection through the life of the mission – approximately two Earth years or one Martian year.

### **China Launches New Earth Observation Satellite for Environmental Monitoring**

May 9, 2018 - China launched Gaofen-5, a hyper spectral imaging satellite, as part of the country's high-resolution Earth observation project. The Gaofen-5 satellite was launched off the back of a Long March 4C rocket from the Taiyuan Satellite Launch Center in northern Shanxi Province. The satellite can be used for comprehensive environmental monitoring. The satellite is developed and produced by China Aerospace Science and Technology Corporation and has a designed life of eight years. Gaofen-5 is the first China-developed satellite that can monitor air pollution. It can dynamically reflect the state of air pollution in China through the monitoring of air pollutants, greenhouse gases, and aerosols. Gaofen-5 is able to obtain spectral information from ultraviolet to long-wave infrared radiation. It is the world's first full-spectrum hyper spectral satellite for comprehensive observation of the atmosphere and land. Gaofen-5 has the highest spectral resolution among China's remote sensing satellites. It is equipped with six advanced observation payloads, such as shortwave infrared hyper spectral camera and a greenhouse gas detector.

### **Bangabandhu Satellite-1 Successfully Launched**

May 11, 2018 - The first satellite of Bangladesh, Bangabandhu Satellite-1, successfully took off from Cape Canaveral launch site on-board a SpaceX Falcon 9 rocket. This telecommunications and Broadcasting satellite is targeted to narrow the digital divide, as it will take broadcasting and telecommunication services to rural areas and introduce profitable services, including direct-to-home services, across the country and over the region. Thales Alenia Space was in charge of the design, production, testing and the delivery in orbit of Bangabandhu Satellite-1, and also took charge of the two ground segments (Primary and Secondary), which will benefit of the SpaceOps tools for the mission planning and monitoring. Bangabandhu Satellite-1 is fitted with 26 Ku-Band and 14 C-Band transponders. It offers capacity in Ku-Band over Bangladesh and its territorial waters of the Bay of Bengal, India, Nepal, Bhutan, Sri Lanka, Philippines and Indonesia; it also provides capacity in C-Band over the whole region. Bangabandhu Satellite-1 solution includes all necessary components to manage the customer business and to provide end-user services to network operator.

### **Deployment of First Kenyan Satellite, Selected as First KiboCUBE Programme of UNOOSA and JAXA**

May 11, 2018, - The first CubeSat developed under the KiboCUBE programme has been successfully deployed from the Japanese Experiment Module "Kibo" of the International Space Station. This CubeSat, named "1KUNS-PF" was developed by a team from the University of Nairobi. 1KUNS-PF was developed as Kenya's first satellite, and the University of Nairobi will operate the CubeSat after its deployment from "Kibo". The experience and technology acquired from the development of this CubeSat will be applied in future earth observation satellite of Kenya. KiboCUBE is a cooperative programme between UNOOSA (United Nations Office for Outer Space Affairs) and JAXA (Japan Aerospace Exploration Agency) to offer opportunity to deploy CubeSats from "Kibo". This programme aims to improve space technology of the developing and emerging space nations of the United Nations member states. The third round of application was closed this March, and UNOOSA and JAXA are under the selection process. The result of the third round of application will be announced this summer timeframe.

### **Thales Alenia Space Chosen as Partner in PLATO**

May 15, 2018 - The European Space Agency (ESA) has chosen OHB System AG as prime contractor for a new program called PLATO (PLANetary Transits and Oscillations of stars), with Thales Alenia Space as a partner. Negotiations between ESA and OHB should be completed by mid-June 2018, with the satellite to be launched in 2026 for an initial mission length of 4.5 years. PLATO will be the third medium-class (M3) science mission in ESA's Cosmic Vision Program, following Solar Orbiter (M1) and Euclid (M2), and preceding Ariel (M4). The aim of PLATO is to find and study extrasolar planetary systems, especially terrestrial type planets in the habitable zone (compatible with water in the liquid state) around stars similar to our Sun. Thales Alenia Space (France and UK) will be in charge of avionics and integration for the service module (SVM). The AOCS (Attitude and Orbit Control System) software proposed for PLATO draws on the expertise and processes developed over the last 20 years and more. Thales Alenia Space offers full expertise in satellite avionics development and testing, from initial equipment specifications to test benches and AIT (assembly, integration, testing).

### **Thales Alenia Space Put on Track its Spacebus Neo Product Line**

May 16, 2018 - Thales Alenia Space announces that a major milestone for Spacebus Neo development has been achieved and put on track the qualification and manufacturing of this very innovative product line. Thales Alenia Space has initiated the development of its brand new telecom satellites product line with the aim to deliver the most attractive solution for geostationary satellites to meet operators' needs in the highly competitive worldwide satcom market. This product line is supported jointly by the European Space Agency's (ESA) ARTES programme of Advanced Research in Telecommunication Systems, and France's space agency (CNES).

### **LM-4C Conduct CE-4 Lunar Exploration Mission Launch**

May 21, 2018 - Long March 4C launch vehicle successfully performed the ChangE-4 Tracking and Data Relay Satellite launch mission (CE-4). The passengers consist of the CE-4 TDRS Satellite - "QueQiao" and two HIT scientific satellites - "LongJiang-1 and 2". In this mission, CGWIC successfully piggybacked the Lunar Camera Payload for Saudi Arabia. The cooperation is under the G2G framework of China-Saudi Lunar Exploration Cooperation Memorandum signed in 2017, implemented by CGWIC with support from China Lunar Exploration and Space Engineering Center, which is of great significance to further strengthen the China-Saudi cooperation in the field of Space. CE-4 Program is the lunar exploration program comprises of two launch missions. The first mission is the successful launch of "QueQiao" TDRS satellite mission and the second one is the CE-4 Lunar lander/Rover launch mission which is planned to be conduct at the end of year 2018. By then, CE-4 lunar Lander/Rover will become the first spacecraft to achieve the soft landing on the dark side of the lunar surface.

### **BridgeSat's Laser Satellite Terminals and Ground Services Connect ICEYE's Constellation**

May 21, 2018 - BridgeSat announced a set of agreements to provide space laser terminals and data services to ICEYE, the world's first commercial microsatellite synthetic-aperture radar (SAR) constellation. BridgeSat's innovative, low-cost terminals and associated ground services give businesses and government agencies a faster, less expensive alternative to traditional radio frequency (RF) solutions for low earth orbit (LEO) and geostationary earth orbit (GEO) applications. ICEYE provides turnkey data delivery and analytics services for commercial and government applications worldwide, including global disaster response, agricultural management, city planning, maritime port traffic management and forest management. It's the first organization in the world to successfully deploy SAR satellites with a launch mass under 100 kg. BridgeSat will provide ICEYE its Compact Laser Comms Terminals (CLCT), which provide up to 10 Gbps LEO downlinks in a compact form factor that weighs less than 2 kg. BridgeSat will also provide ground services through BridgeSat's free-space optical network.

### **Orbital ATK Successfully Launches Ninth Cargo Delivery Mission to the ISS for NASA**

May 21, 2018 - Orbital ATK successfully launched the company's Antares rocket carrying its Cygnus spacecraft from the Mid-Atlantic Regional Spaceport Pad 0A on Wallops Island, Virginia, at NASA's Wallops Flight Facility. The launch marks Orbital ATK's ninth cargo mission for NASA. The Antares medium-class rocket matched its record for the heaviest cargo load carried to date with approximately 7,400 pounds (3,350 kilograms) of vital supplies and scientific equipment aboard Cygnus that will be delivered to the crew aboard the International Space Station. Following an approximate nine-minute ascent, the "S.S. J.R. Thompson" Cygnus spacecraft, named in honor of J.R. Thompson, a distinguished leader in the space industry, was successfully deployed into orbit. Orbital ATK's engineering team confirmed reliable communications have been established and the vehicle's solar arrays are fully deployed, providing the necessary electrical power to operate the spacecraft.

### **Iridium Completes Sixth Successful Iridium NEXT Launch**

May 22, 2018 - SpaceX successfully launched five Iridium NEXT satellites from Vandenberg Air Force Base in California. The Iridium satellites were joined by the twin spacecraft for the NASA/German Research Center for Geosciences (GFZ) Gravity Recovery and Climate Experiment Follow-On (GRACE-FO) mission, in a unique "rideshare" launch. Shortly after deployment, Iridium confirmed successful communication with all five new satellites, formally bringing the total number of Iridium NEXT satellites in orbit to 55. This leaves just two more launches of 10 satellites each to complete this ambitious launch program. The Iridium NEXT constellation, featuring 66 interconnected low Earth orbit (LEO) satellites, will enable never before possible services like the Aireon global aircraft tracking and surveillance system and its new broadband service, Iridium Certus.

### **Telesat's Phase 1 LEO Satellite is Operational**

May 22, 2018 - Telesat announced that orbit raising and payload testing on its Phase 1 LEO satellite have been completed and that the spacecraft is now ready to support live demonstrations of its capabilities. Testing of Telesat's Phase 1 LEO is an important milestone in the company's plans to deploy a global LEO constellation that will revolutionize broadband communications services around the world. As previously announced, satellite industry leaders including Global Eagle Entertainment, OmniAccess and Optus Satellite have agreed to collaborate in live, over-the-air trials on Telesat Phase 1 LEO. Other companies that serve major markets of interest to Telesat will also be participating. Once fully deployed, Telesat's LEO constellation is designed to deliver transformative, fiber-like broadband for commercial and government customers throughout the world. The initial constellation will consist of approximately 120 state-of-the-art satellites providing full global coverage and Telesat is evaluating options to expand its system beyond this initial configuration.

### **Geoscience Australia Preparing to Procure Two Satellite Payloads for Positioning Capability**

May 23, 2018 - Geoscience Australia will move quickly to procure two satellite payloads that can support an Australian satellite-based augmentation system aimed at boosting the country's positioning capability and accuracy. It is also looking to appoint a lead contractor to implement the SBAS technology following funding of \$160.9 million over four years in this year's federal budget. Speaking to Space & Satellite AU on the sidelines of the Australasian Satellite Forum in Sydney, Geoscience Australia section leader for positioning John Dawson said the agency is aiming to have the SBAS fully operational within the four-year timeframe. However, given the lead-time needed to procure a payload on a future satellite launch, he said planning had to start immediately. Geoscience Australia has been conducting a two-year SBAS trial involving 28 projects from across 10 different industry sectors. Dawson told the satellite forum that its work with industry had underpinned its proposal to government to invest in an SBAS. The trial received \$12 million from the Australian government and \$2 million from the New Zealand government in 2017 and Dawson is hoping for further support from New Zealand as well as potentially other countries in the region to join the system.

### **Firefly Aerospace Opens Research and Development Center in Dnipro, Ukraine**

May 23, 2018 - Firefly Aerospace, a developer of orbital launch vehicles for the small to medium satellite market, announced the official opening of its Research and Development (R&D) center in the city of Dnipro, Ukraine (Firefly Ukraine). Headquartered in Cedar Park, TX, Firefly currently has additional offices in Washington, D.C. and Tokyo, Japan. The opening of the Dnipro R&D center is a significant milestone towards achieving future Firefly goals. The new R&D center will further enable the world-class engineering teams at Firefly Aerospace to design and manufacture components of launch vehicles and launch systems. Firefly Ukraine, which will be home to more than 150 employees, is equipped with the largest 3D-printer in Ukraine, intended for industrial manufacturing of high-quality metal parts.

### **LM's Fifth AEHF Protected Communications Satellite Completes Launch Environment Test**

May 24, 2018 - Lockheed Martin recently put its fifth Advanced Extremely High Frequency (AEHF-5) satellite through its paces in realistic simulations of its future launch experience. The satellite completed the tests successfully and is now in system-level testing in preparation for delivery to the U.S. Air Force in 2019. For the 39 days of Thermal Vacuum Chamber (TVAC) testing, AEHF-5 was subjected to extreme cold and heat in zero atmosphere to simulate its upcoming on-orbit life. TVAC is a part of a battery of tests that ensure a satellite will arrive in space functionally sound and ready to operate through the extreme temperature changes of space. Following the TVAC test series, AEHF-5 completed acoustic testing, where the satellite was subjected to high intensity, low frequency sound waves that simulated the vibrations generated by a rocket propelling its payload from zero to over 17,500 miles per hour in under eight minutes.

### **Thales Alenia Space Signs Partnership Agreement with SCNTPL Polish Technology Center**

May 25, 2018 - Thales Alenia Space together with Thales Alenia Space in Poland signed a partnership agreement with SCNTPL (Śląskie Centrum Naukowo – Technologiczne Przemysłu Lotniczego Sp. z o.o.), the Silesian Science and Technology Center of Aviation Industry Ltd., based in Czechowice-Dziedzice, Poland, specialized in composite materials. This partnership is the culmination of joint work between the partners reaching back several years, bolstered by the creation of Thales Alenia Space in Poland in 2015. The agreement signed today also confirms a new joint initiative by SCNTPL and Thales Alenia Space, focused on both Research & Development and the production of satellite structures, and anchored in

transfers of composite technologies. Based on this agreement, Thales Alenia Space has placed an initial order with SCNTPL, to provide structural panels for its Spacebus NEO platform.

#### **Orbital ATK to Build Two Additional U.S. Weather Satellites for NOAA**

May 25, 2018 - Orbital ATK announced that NASA has exercised options for two additional Joint Polar Satellite System (JPSS) spacecraft to be built by the company. Orbital ATK is currently producing the JPSS-2 spacecraft, which is scheduled to be launched in 2021. All three satellites are to be operated by the National Oceanic and Atmospheric Administration (NOAA) to provide critical weather forecasting data and to advance environmental and oceanographic science. The total contract amount for all three spacecraft is valued at approximately \$460 million. The JPSS satellites will provide operational continuity of space-based weather observations, extending the successful 50-year NOAA/NASA partnership into the 2020 and 2030 decades. Orbital ATK is responsible for the design and fabrication of the spacecraft, integration of government-furnished instruments, testing of the satellites and in-orbit check outs. The JPSS-2 satellite is on schedule for delivery in 2021, while JPSS-3 and JPSS-4 are on contract for delivery in 2023 and 2026, respectively, with launch dates determined by NOAA/NASA. Each JPSS satellite will have a design life of at least seven years once launched into orbit.

#### **Selection of Service Provider for Small Satellite Deployment from Kibo**

May 29, 2018 - JAXA has selected Space BD and Mitsui to provide small satellite deployment services from Kibo on the International Space Station. In line with its “Kibo Utilization Strategy” JAXA intends to promote the private sector's participation in the Kibo module. These two companies were selected as service providers for small satellite deployment activities in the first phase of the strategy. In 2012, JAXA developed the Small Satellite Orbital Deployer (J-SSOD) for deploying small satellite missions from the ISS using two systems - the Robot Arm and Kibo Airlock. As of the end of May 2018, JAXA has successfully deployed more than 200 small satellites from Kibo, including deployment opportunities for the United States as well. The market of small satellites is expected to further expand globally. JAXA has, to date, provided fee-based services on its own. JAXA expects that Space BD and Mitsui will provide unique services based on their original ideas to both domestic and international markets, and thus further expand the demand for small satellite deployment. As a result, the utilization of Kibo and low Earth orbits will also increase.

#### **Arianespace and ISIS to Launch Small Satellites on the Vega SSMS POC Flight**

May 31, 2018 - Arianespace announced that ISIS – Innovative Solutions In Space – has joined the group of customers who have signed contracts to launch payloads on Vega’s Small Spacecraft Mission Service (SSMS) Proof Of Concept flight (POC flight) in early 2019. ISIS’ small satellites will be orbited on Vega from the Guiana Space Center, Europe’s Spaceport in Kourou, French Guiana. The contract was signed with ISL – Innovative Space Logistics B.V., the launch services subsidiary of ISIS. This agreement includes a QuadPack deployer for multiple CubeSats on the Vega SSMS POC flight, along with options for several microsatellites and more QuadPack deployers for the SSMS POC mission – as well as for subsequent Vega SSMS launches. ISIS is a leading company in the small satellite market. Founded in 2006, it specializes in realizing innovative turn-key small satellite missions – including launch and operations. Through its ISL launch services subsidiary, ISIS has launched more than 270 small satellites of various sizes. The small satellite launch services covered by the ISIS agreement with Arianespace opens the way for more intense future collaboration between the two companies in launching clusters of small satellites integrated by ISIS through Arianespace.

## **EXECUTIVE MOVES**

#### **Geeks Without Frontiers Appoints David Hartshorn as Chief Executive Officer**

May 2, 2018 - Geeks Without Frontiers (GEEKS), an award-winning Non Governmental Organization (NGO) focused on addressing global connectivity challenges with a view to closing the Digital Divide and facilitating the implementation of the United Nations Sustainable Development Goals (SDGs), announced the appointment of David Hartshorn as Chief Executive Officer with effect from July 1, 2018. Hartshorn, who will be supported by Angie Mar in her new role as GEEKS’ International Program Director, brings more than 25 years of experience tackling global communications issues including helping to build and lead the Global VSAT Forum (GVF), an international association focused on all aspects of improving access to satellite-based connectivity.

### **AsiaSat Announces Fred Ho and Fred Vong Promoted to Vice President**

May 3, 2018 - Asia Satellite Telecommunications Company Limited announced the promotions of two senior executives to lead the company's two key technical teams. Fred Ho, Director of Technical Operations, has been promoted to Vice President, Technical Operations. Fred Ho has over 25 years' experience in the satellite communications industry. In his new role, Fred Ho will lead the technical operations team with responsibility for overseeing the operations of the company's satellite fleet and earth stations, teleport and customer network services. Fred Vong, Director of Engineering, has been promoted to Vice President, Engineering. Fred Vong has over 20 years of satellite and telecommunications service experience. In his expanded role, Fred Vong will lead the engineering team in supporting customer activities, from network design to implementation, developing spacecraft programs, managing spectrum resources of the company and working with other departments to assess and crystallize opportunity from new technologies.

### **SSL Expands Leadership Team to Accelerate Innovation and Growth**

May 8, 2018 - SSL, a Maxar Technologies company has announced two executives have joined the SSL leadership team to develop growth opportunities for the company's innovative spacecraft systems and expand the company's focus on small satellites and Earth observation. Adam Marks is assuming the role of Chief Strategy Officer, and Mark Sarojak will serve as Vice President of Commercial Earth Observation. The addition of these two leaders will augment SSL's strategic and satellite technology expertise and accelerate growth by leveraging the collective power of the Maxar Technologies businesses. Adam Marks was most recently Vice President of Strategy & Corporate Development at Thales Group. Prior to that position, he was at Booz Allen Hamilton where he advised Department of Defense and aerospace industry clients. His expertise includes mergers and acquisitions and working with U.S.-based technology start-ups. Mark Sarojak has more than 20 years of experience in technology, geospatial intelligence and dynamic leadership including roles in strategy, sales and marketing. He joined SSL from GeoNeo Inc., where he served as CEO, and provided strategic leadership for the company's work in geospatial technologies. Previously, Sarojak spent 11 years at BAE Systems where he developed commercial strategies, led global sales and marketing teams, and grew partner networks.

### **Mark Guthrie to Direct KVH Initiatives in Asia-Pacific Region**

May 10, 2018 - KVH Industries has announced that Mark Guthrie has been named KVH's vice president for the Asia-Pacific region. Guthrie will oversee all KVH activities in this area, which is of vital importance in the mobile connectivity market. Mobile tech innovator KVH provides connectivity solutions for the maritime market, including global mini-VSAT Broadband<sup>sm</sup> services used by thousands of vessels worldwide. Guthrie joined KVH in 2013, and has held a variety of roles, most recently serving as vice president for global channel management. Mark's extensive experience in the satellite communications and telecom industries includes roles held prior to joining KVH - at SES, BT (British Telecom), Europe Star, and Verestar.

### **DataPath Appoints Board Member as New President and Chief Executive Officer**

May 11, 2018 - DataPath, Inc. announced the appointment of Dr. Sherin Kamal as the company's new President and CEO. He will officially assume the position June 11. Kamal is an international business executive with extensive experience in driving revenue and profitable growth. He most recently served as Chief Engineer and Senior Director of Technical Services at SAIC. Prior to his 10-plus years at SAIC, Kamal served as Founder and CEO, Senior Vice President and General Manager, and Vice President of Engineering at advanced networking technology companies. He has led businesses to strong growth in both domestic and international markets. Kamal is a frequent contributor to major conferences and white papers and is recognized as a thought leader in the areas of advanced military networks and emerging wireless and satellite communication technologies.

### **Mike Morningstar Named President of RUAG Space USA**

May 14, 2018 - RUAG Space, a leading supplier of products to the space industry, announced that Mike Morningstar will assume the role of President and Country Manager of RUAG Space USA. Starting today, Morningstar will be responsible for the operations of all RUAG Space USA sites, and will represent the organization as it expands its presence in the U.S. This new appointment comes on the heels of significant growth for RUAG Space: about one-third of the company's revenue (more than \$370M) is generated in the U.S. market, and the team sees opportunity for growth. RUAG Space USA currently has nearly 100 staff members in sites across four states and is poised to continue growing to become the leading independent space product supplier in the United States. The announcement of Morningstar's appointment reinforces

the commitments that RUAG Space made earlier this year to further strengthen its presence in the U.S. market, in anticipation of more business – supplying its high-level products to U.S. rocket and satellite manufacturers.

#### **XTAR Names Kelly Nicklin as Vice President of Sales and Marketing**

May 21, 2018 - XTAR, LLC announced the promotion of Kelly Nicklin to Vice President Sales and Marketing. Nicklin previously served as the organization's Senior Director of Sales and Business Development. In her new position, Nicklin will oversee all sales and business development activities both foreign and domestic. She will also lead marketing efforts within the organization. Nicklin has over 20 years of sales experience in both government and commercial industries including experience in sales and management of multi-million dollar contracts. She began work at XTAR in 2012 and has served on the board of Space & Satellite Professionals International (SSPI) Mid-Atlantic Chapter.

#### **mu Space Names Michael Soodjinda as Chief Finance Officer**

May 21, 2018 - Satellite and space technology company mu Space has named Michael Soodjinda its new Chief Finance Officer, and it's adding 10 more legal, engineering, media, and finance professionals to the team. mu Space said that Michael's appointment is part of the company's strategy to support fast-track its business expansion across the Southeast Asia region and in the US later this year. With more than 20 years of experience at the top executive level, Michael has joined mu Space in Bangkok following four years of living in the US.

#### **Dmitri Rogozin Appointed as New General Director of Roskosmos**

May 24, 2018 - Russian President Vladimir Putin has appointed Dmitri Rogozin to head State Corporation Roskosmos. Rogozin is going to replace Igor Komarov in this position. Rogozin, once the leader of a nationalist political party, served as one of Russia's deputy prime ministers for the past six years.

#### **Intelsat Appoints Juan Pablo Cofino Regional Vice President, Latin America and the Caribbean**

May 30, 2018 - Intelsat announced that Juan Pablo Cofino has joined the company as Regional Vice President, Latin America and the Caribbean. Cofino will be responsible for the development and implementation of Intelsat's sales and regional go-to-market strategies for the company's broadband, mobility, media and government customers operating in Latin America and the Caribbean. He will be based in Intelsat's Coral Gables office in Florida and report directly to Kurt Riegelman, Intelsat's Senior Vice President, Sales, Marketing and Communications. Cofino joins Intelsat from ATN International, where as president, Caribbean & Latin America, he managed telecom operations on Guyana, the U.S. Virgin Islands, Bermuda, Aruba and the Cayman Islands.

#### **mu Space Appoints New Chief Business Development Officer**

May 31, 2018 - mu Space has announced the appointment of Suwit Pruckwattananon as Chief Business Development Officer. Suwit will lead the company's business development, as well as expansion into new markets. Prior to joining mu Space, Suwit spent six years at Qualcomm, a global leader in 3G/4G and next generation mobile technologies. In his previous role as country manager, he helped develop 3G/4G LTE businesses and build ecosystems for both mobile phone and Internet of Things (IoT) in Thailand and Myanmar. Before moving to Qualcomm, Suwit served in various leadership positions for nearly 20 years with mobile infrastructure industry leader as Nokia. He managed Nokia's accounts and services in several countries, including Korea, Bangladesh, Thailand, Vietnam, Cambodia and Laos.

## **REPORTS**

#### **FSS Capacity Pricing Levels Showing Near-Term Stabilization**

May 2, 2018 - According to Euroconsult's latest report, FSS Capacity Pricing Trends, the combination of oversupply from the addition of traditional satellite capacity in certain areas along with the unrelenting rollouts of HTS capacity has resulted in new pricing references in most geographies and market segments across the FSS sector. While data-oriented markets have been the most exposed, with double-digit capacity pricing declines over the last 2-3 years, video applications have also been impacted. Other factors have included consolidation among service companies in certain segments, resulting in larger capacity buyers with more bargaining power, and heightened competition from a growing pool of national satellite operators.

### **LEO-HTS Constellations Present Great Promise but Challenging Business Cases**

May 2, 2018 - NSR's industry-first Satellite Constellations: A Critical Analysis report forecasts a mixed outcome for large HTS constellations. NSR predicts two, out of the five Non-GEO HTS constellations analyzed, do not have a viable business case and will not be sustainable, if launched. The remaining three will generate 12% of overall satcom market revenues over the next decade. Costly systems and replenishment cycles, matched against funding challenges, demand questions, and extraordinary technical and regulatory complexity, will separate contenders from pretenders in the high stakes constellations market.

### **Satellite Manufacturing & Launch Markets Finding a New Normal in \$250 Billion Opportunity**

May 21, 2018 - NSR's Satellite Manufacturing and Launch Services, 8th Edition report finds that despite a slow 2017, across the board, the global satellite manufacturing and launch market is poised to generate in excess of \$250B in the next decade. As both commercial and government players begin deploying constellations, turning to smallsats to provide more flexibility across a system, and leveraging more advanced flexible and exquisite payloads, the requirements placed on manufacturers and launch service providers enabling these next generation systems will change.

## **UPCOMING EVENTS**

**Defence Satellites 2018**, 5 -7 June, Paris, France, [www.intelligence-sec.com/events/defence-satellites-2018](http://www.intelligence-sec.com/events/defence-satellites-2018)

**Satellite Interference Workshop**, 5 June, Paris, France, <http://satirg.org/>

**VIETNAM ICTCOMM 2018**, 7-9 June, Ho Chi Minh City, Vietnam, [www.ictcomm.vn/en/home](http://www.ictcomm.vn/en/home)

**CASBAA Satellite Industry Forum**, 25 June, Singapore, <http://casbaaevent.com/events/casbaa-satellite-industry-forum-2018/>

The Casbaa Satellite Industry Forum 2018 brings together a wide range of world-class speakers from the industry to deal with crucial issues in a full day of panel discussions. Keynote addresses will set the stage further for robust and frank debate at this Not-to-be-Missed event!

**SatComm 2018**, 26-28 June, Singapore, [www.communicasia.com](http://www.communicasia.com)

**ConnecTechAsia 2018**, 26-28 June, Singapore, [www.connectechasia.com](http://www.connectechasia.com)

The brand new ConnecTechAsia is where technology, ideas, and business converge. It is the only trade event in Asia that combines two of Asia's biggest business platforms – CommunicAsia, BroadcastAsia, and the inaugural NXTAsia, to create one MEGA TECHNOLOGY EVENT, spanning two venues, covering the entire spectrum of Telecommunications, Broadcasting and Emerging Technology.

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

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

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

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

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



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

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

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

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

**Global MilSatCom 2018**, 6-8 November, London U.K., <https://www.smi-online.co.uk/defence/uk/global-milsatcom>

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

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### **About APSCC**

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