

# APSCC Monthly e-Newsletter

## DECEMBER 2015

The **Asia-Pacific Satellite Communications Council (APSCC) e-Newsletter** is produced on a monthly basis as part of APSCC's information services for members and professionals in the satellite industry. Subscribe to the APSCC monthly newsletter and be updated with the latest satellite industry news as well as APSCC activities! To renew your subscription, please visit [www.apscc.or.kr/sub4\\_5.asp](http://www.apscc.or.kr/sub4_5.asp). To unsubscribe, send an email to [info@apscc.or.kr](mailto:info@apscc.or.kr) with a title "Unsubscribe."

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

### INSIDE APSCC

**APSCC Session at PTC'16**, 18 January 2016, Honolulu, Hawaii, USA, <http://ptc.org/ptc16>

Satellites now stand at the cusp of a new era of higher bandwidth, lower cost and improved offerings, and the broader telecom industry has taken notice. Whether through HTS capacity or enhanced managed services offerings, satellite technology is no longer niche and is now seen as a viable platform for global, low cost connectivity. And perhaps nowhere is this more evident than in the Pacific. However, many questions remain:

- *Is satellite really a viable option for inclusion in telco networks, and where/why?*
- *Which applications are driving the converged offering, now and in the future?*
- *Which areas must be improved in order to further the convergence trend?*

This session will pair satellite companies and telcos together to explore the offerings, requirements and applications jointly enabled, and thus evaluate if satellite-telco convergence is finally here.

#### **Moderator**

Christopher Baugh, NSR

#### **Speaker**

Imran Malik, Regional Vice President, O3b Networks

Dani Indra, Executive Vice President, PSN

Jacques-Samuel Prolon, General Manager, Kacific Broadband Satellites

#### **Call for Nominations for CommunicAsia 2016 Summit**

Following the success of CommunicAsia Summit which concluded in June 2015, the 2016 edition will take place from 31 May – 1 June at Marina Bay Sands, Singapore.

You can expect an even more dynamic event as more senior key players and decision makers in the Satellite industry will gather at the region's largest and prestigious ICT conference. More than 800 senior executives from over 60 countries are expected to participate in the CommunicAsia2016 Summit to explore the latest technologies, key issues, and development in the ICT space.

Leverage on this exclusive platform to showcase your expertise and position your company firmly in the minds of senior stakeholders across the region by joining expert speakers' panel.

Share your thought-provoking insights by submitting your nominations on the following areas (not limited to):

- *High Throughput Satellites (HTS)*
- *Low Earth Orbit (LEO) Satellites*
- *High Capacity Satellite technologies*
- *Ultra HD Satellite technologies*
- *Satellite software-over-the-air*
- *Industry opportunities and best practices in integration with Aviation, Maritime, Military, Energy and Disaster Management sectors*

Please submit your Nominations at <http://www.communicasia.com/conference/call-for-nominations/>.

All submissions must be received by **8th January 2016**.

Please contact IB Saravanan at [ib.saravanan@sesallworld.com](mailto:ib.saravanan@sesallworld.com) for any speaking enquiries.

### **WRC-15 Decides Satellite Spectrum is Central to Future Vision for Global Connectivity**

November 27, 2015 - The world's governments resoundingly affirmed a clear vision for the importance of many vital and irreplaceable services provided today over satellite. They also agreed on a clear framework for future access to satellite spectrum for innovative satellite communications. This was accomplished by agreeing to preserve and create new additional valuable spectrum for fixed and mobile solutions used to support a multitude of video, television and data services, to expand Internet access, and to bridge the "Digital Divide" for billions of people around the world.

The inter-governmental decisions in support of satellite spectrum were made during the conclusion of the International Telecommunication Union's (ITU's) World Radiocommunication Conference (WRC), where the agreements reached by national administrations reflected a comprehensive strategy in which the unique value proposition of satellite-based connectivity is an integral part of a portfolio of synergistic technologies.

"WRC-15 has been a turning point in the global recognition of the value of satellite services for the future. We commend the national administrations – and the WRC Chairman, Mr. Festus Daudu – for their commitment to connectivity for all," said a joint statement of a coalition of associations representing the satellite industry. "These decisions provide the stability necessary for the entire satellite industry to fully leverage its strengths in support of the vision expressed by the WRC delegates."

Among the key decisions made during WRC are the following:

**L-band:** WRC-15 avoided identification of the L-band spectrum, which is used by mobile satellite service operators around the world, for IMT. The Conference identified the band 1427-1518 MHz for IMT, requesting the ITU-R to determine the technical measures to ensure compatibility with the mobile-satellite service operations in the adjacent band (1518-1559 MHz).

**C-band:** WRC-15 reconfirmed the need to protect critical fixed-satellite service (FSS) services throughout the world in this unique band. The lower 200 MHz of the C-band downlink frequencies (3400-3600 MHz) were identified for IMT in ITU Regions 1 and 2; In Region 3 a handful of countries will sign a footnote allowing potential IMT use of these 200 MHz, while the vast majority of the region will continue satellite use of this band with no change. A position of "No Change" was adopted in the band 3600-4200 MHz, and only in Region 2 was a footnote agreed which identified IMT for a few countries in the 3600-3700 MHz band. A "No Change" decision means that administrations have recognised the vital and widespread use of those frequency bands by satellite services. Anywhere that IMT is deployed, it will be subject to adherence to strict protection requirements with neighbouring countries. In addition, the Conference declined to consider a proposal for IMT systems in the C-band uplink frequencies (5925-6425 MHz).

**Ku-band:** In order to address a spectrum imbalance in Ku-band spectrum, WRC-15 identified additional spectrum for FSS systems between 10-17 GHz. A downlink allocation in the 13.4-13.65 GHz band in Region 1 (EMEA) was approved by the Conference. In addition, an allocation in the 14.5-14.8 GHz was approved in several countries around the world.

**Future bands for 5G:** The Conference decided that no globally harmonised bands for the fixed satellite service, mobile-satellite service and broadcast-satellite service in C, Ku or Ka band would be included in the scope of a new WRC-19 agenda item, which aims to identify new frequency bands for future IMT/ 5G use. Throughout the deliberations, multiple administrations in every world region expressed strong opposition to studying the Ka band for IMT/5G, again confirming the Conference's confidence in satellite being a key player in the future digital ecosystem.

**ESIMs:** The Conference adopted new regulations to facilitate the operation of "Earth Stations in Motion" (ESIMs) in part of the Ka-band satellite spectrum (19.7-20.2 GHz and 29.5-30 GHz). ESIMs operating in this band provide satellite broadband connectivity to mobile terminals, such as on ships and aircraft. The new regulations adopted

by WRC-15 will facilitate the global roaming of such terminals, while protecting other services and applications from interference.

**Other:** WRC-15 adopted several agenda items for future conferences that will spur growth in the satellite industry. Studies were approved for WRC-19 for additional FSS spectrum in 51.4-52.4 GHz. In addition, the conference adopted a future agenda item for WRC-23 for additional satellite spectrum in the 37.5-39.5 GHz. Also, in a hotly contested debate, the Conference adopted a Resolution which sets the path towards allowing the use of FSS links for Unmanned Aerial Systems (UAS).

*(Source: Asia Pacific Satellite Communications Council (APSCC), Cable and Satellite Broadcasting Association of Asia (CASBAA), EMEA Satellite Operators' Association (ESOA), Global VSAT Forum (GVF), Interference Reduction Group (IRG), Satellite Industry Association (SIA), Society of Satellite Professionals International (SSPI), World Teleport Association (WTA), and other international associations of the satellite industry)*

## SATELLITE BUSINESS

### **SpeedCast Successfully Deploys 35-Site Network for Save the Children**

November 2, 2015 - SpeedCast France (formerly Geolink Satellite Services) has successfully deployed a 35-site network for Save the Children International (SCI), an international NGO with its central office in London, UK. The new satellite service provides connectivity to a network of 35 C-band VSAT systems across 35 sites in Africa. The rollout of the new service was particularly complex, as it involved the migration from an existing service provider to SpeedCast. The migration process required work across multiple countries and had to be completed in a highly efficient manner, due to a tight deadline to complete the roll-out before the previous provider switched off the existing service. All sites were successfully deployed ahead of the deadline, and as a result there was no disruption of service for the customer.

### **Airbus Defence & Space selects Advantech Wireless for Border Control Infrastructure Project**

November 2, 2015 - Advantech Wireless, a global leader for Satellite and Microwave broadband communications solutions, has been selected by Airbus Defence & Space to provide the Beyond Line of Sight communications solution as part of their very successful Border Control infrastructure. Advantech Wireless have successfully partnered with Airbus to provide A-SAT™ technology capable Hubs and Remotes delivering a realistic, affordable yet highly adaptable SatCom option where fibre or microwave links are unachievable in a Border Control & Security arena.

### **ABS and Arabsat Strengthen Partnership on ABS-3A at 3°West**

November 3, 2015 - ABS and Arab Satellite Communication Organization (Arabsat) have signed an expansion capacity agreement on ABS-3A for a multi-transponder, multiyear deal for Ku-band payload. The additional capacity will be used for different customer networks within the Middle East and North Africa regions in particular Saudi Arabia. Under the agreement, Arabsat will use the new bandwidth on ABS-3A at 3W, mostly for data services for enterprises, banking and government institutions. ABS-3A, an all-electric propulsion satellite entered commercial service on 31st August. The satellite features 48 C and Ku-band transponders (96 x 36MHz equivalent) and is equipped with high performance beams to support rapidly growing markets in the Americas, Europe, the Middle East and Africa regions. ABS-3A provides expansion capacity to reach markets servicing high-growth data, video, mobility and government applications.

### **iDirect to Deliver Satcom Products and Services to Danish Armed Forces**

November 3, 2015 - iDirect has signed a framework agreement with specialized procurement center and logistics authority Danish Acquisition and Logistics Organization (DALO) to deliver hardware, software, and services to the Danish Armed Forces. Using the iDirect defence portfolio, the Danish Armed Forces can ensure high quality support for multinational missions quickly and efficiently at all times and in any location. In order to carry out a wide range of missions, the Danish Armed Forces require a communication system that can deliver secure, effective Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR). The iDirect Evolution portfolio enables the Danish Armed Forces to leverage the Wideband Global SATCOM (WGS) program, along with partner nations defence satellites, and commercial satellites. The advanced Quality of Service (QoS) capabilities of the iDirect platform allows the Danish Armed Forces to dynamically balance traffic between operational and welfare requirements, and mobile and static deployments depending on the varying levels of priority.

### **CIMC Selects ORBCOMM Satellite Service for Shipping Container Market**

November 3, 2015 - ORBCOMM Inc. has been selected by the China International Marine Container Company's (CIMC) Intelligent Technology Division to provide next generation OG2 satellite service and modem technology for their dual-mode telematics solution being developed as an Original Equipment Manufacturer (OEM) product designed for dry shipping containers. Headquartered in Shenzhen, China, CIMC is the world's leading supplier of logistics and energy equipment. CIMC builds nearly fifty percent of the world's shipping containers with the capacity of more than 2.4 million annual units. Their satellite-based telematics platform can be installed as a factory option or retrofit for its global customers, which include some of the world's largest shipping fleets and container leasing companies. By leveraging ORBCOMM's satellite connectivity and modem technology, CIMC's telematics solution will track and monitor its shipping containers in real time, which will improve the information flow throughout the intermodal supply chain.

### **Intelsat and JSAT to Bring High Throughput Capacity to Asia Pacific to Meet Growing Mobility and Broadband Demands**

November 4, 2015 - Intelsat S.A. and SKY Perfect JSAT Corporation have signed a definitive agreement to form a joint venture that will launch a new satellite with optimized C-band and high throughput Ku-band capacity to satisfy the growing mobility and broadband connectivity demands in the Asia-Pacific region. To be known as Horizons 3e, the satellite is based on the Intelsat Epic<sup>NG</sup> high throughput design which, upon launch, will complete the global footprint of the Intelsat Epic<sup>NG</sup> next generation platform. The satellite will be stationed at the 169 degrees East orbital location with a launch expected in the second half of 2018. Building upon a successful alliance between the two operators, the Horizons 3e satellite marks the fourth satellite to be owned jointly by JSAT and Intelsat, following Horizons-1 (launched in 2003); Horizons-2 (launched in 2007) and Intelsat 15/JCSAT-85 (launched in 2009). With the most advanced commercial fixed satellite digital payload, bandwidth flexibility and power portability, Horizons 3e will bring high performance, improved economics and simple access to the aeronautical and maritime mobility, cellular backhaul, corporate enterprise and government customers operating in the region.

### **Cobham Unveils World's First BGAN/3G M2M Terminal**

November 4, 2015 - The new EXPLORER 540, Cobham SATCOM's latest addition to its established EXPLORER range of satellite terminals, has been introduced as the world's first Machine-to-Machine (M2M) communication terminal to operate on both Inmarsat BGAN (Broadband Global Area Network) and 2G/3G/GPRS networks. As the only M2M terminal to offer dual-mode operation, EXPLORER 540 provides unique installation flexibility and M2M data communication cost-control, as it ensures the most cost-effective communication service can be chosen depending on location of the installation and service quality/availability. Securing continuity of M2M IP data transfer, which often originates in hard to reach, remote locations, dual-mode operation also delivers significant failover capabilities with automatic switching to the secondary service should EXPLORER 540 detect that its primary communication service is unavailable.

### **Optus Delivers 100% Mobile Coverage across Australia with the SatSleeve**

November 5, 2015 - Optus Satellite has announced the availability of Thuraya's new generation of SatSleeve models, the SatSleeve+ and SatSleeve Hotspot, effectively delivering 100% mobile coverage across Australia – where line of sight to the satellite exists. SatSleeve+ connects to a range of iOS or Android devices from Apple, Samsung, HTC, LG, Sony and Huawei, and enables users to turn their handset into a satellite phone via a SatSleeve app. The SatSleeve allows calls to a mobile number from a user's contacts simply and if users are out of mobile range, the call will be diverted to the satellite phone free of charge, with the diversion set-up a simple, one-off process. The SatSleeve was launched in 2013 and pioneered 'bring-your-own device' in the satellite industry. Users can access voice, SMS and data services with the sleeve, providing there is a direct line of sight to the satellite.

### **Hughes Unveils New HM Satellite System for Mobility & Portability Applications**

November 5, 2015 - The new HM System employs a commercially-based, open standards architecture and frequency band-agnostic platform that enables affordable, resilient solutions to meet a wide variety of mobility and portability requirements for government users. In addition to supporting fixed applications, the HM System provides satellite-on-the-move capabilities for airborne, maritime and land mobility solutions, including a complete, ultra-compact and portable terminal for small teams reliant on quick-deploy connectivity. With the first gateway installed and fully operational in September 2015, the COTS products are now ready for market roll-out.

### **Euroconsult Inked Strategic Partnership with World Space Risk Forum**

November 5, 2015 - Euroconsult has entered into a strategic partnership with the World Space Risk Forum (WSRF) whereby Euroconsult will assist in the WSRF's commitment to the creation of a comprehensive platform for the global space risk community. The alliance will primarily be focused on developing valuable insights on space risk data, analysis of industry trends, and providing a global networking platform for the space industry. Since 2010, the WSRF has hosted a series of events attended by industry-leading space risk experts, including manufacturers, operators, underwriters, space agencies and reinsurers. The main forum event will be held in Dubai, November 2016, to coincide with other UAE-based announced space events including Abu Dhabi Global Space Congress 2016. The 2016 WSRF will develop existing and future themes and aims to attract new industry players to the space risk arena.

### **Airbus Defence and Space Launches XEBRA – Military Satellite Communications Service with World's Smallest and Lightest X-band Terminal**

November 5, 2015 - Airbus Defence and Space has launched its new XEBRA (Zee-brah) X-band miltatcom service using the world's most compact X-band terminals and the Skynet satellite network. The XEBRA service provides superior global communications mobility with high throughput for tactical and intelligence based missions using terminals weighing 5.1kg and only 23 x 25 x 8cm in size. The Skynet satellite network consists of eight satellites and associated ground segment, and is the world's only commercially owned military satellite communications system. Skynet provides hardened and secure communication services over X-band, a frequency band resilient to rain-fade (signal interference by precipitation) and primarily reserved for military and government users. The XEBRA service is the first of its kind at X-Band and is ideal for transmitting full motion video via secure remote access. The compact, lightweight terminal, created in conjunction with Hughes Network Systems LLC, is backpack portable and ideally suited for missions requiring Communications on the Pause (COTP) capabilities.

### **Yahsat to Test In-flight Connectivity on Etihad's Airbus 320**

November 9, 2015 - Yahsat, the UAE-based satellite operator, has announced its plan to test high speed in-flight satellite connectivity using an Etihad Airbus 320. The collaboration will allow both UAE companies to work together to trial in-flight high-speed satellite connectivity via Ka-band on a test aircraft. Yahsat's Ka-band capacity provides higher speeds and cheaper rates compared to legacy in-flight connectivity systems based on Ku-band. As airlines continue to explore ways to enhance the passenger experience, high-speed in-flight connectivity is increasingly becoming a critical differentiator. With Ka-band solutions, speeds of up to 50 mbps to the plane are commonplace, allowing passengers to have the necessary bandwidth to stream video and enable applications such as video conferencing.

### **McMurdo Completes Asia Pacific's First MEOSAR Search and Rescue Satellite Ground Station**

November 9, 2015 - McMurdo has completed the installation of a six-antenna next-generation Medium-Earth Orbit Search and Rescue (MEOSAR) satellite ground station system in New Zealand. The project, which is part of a joint initiative with Maritime New Zealand and the Australian Maritime Safety Authority, is expected to significantly boost search and rescue capability in the New Zealand and Australia search regions and marks the first implementation of MEOSAR in Asia Pacific. MEOSAR is the next-generation version of Cospas-Sarsat, the international search and rescue satellite system that has helped to save 37,000 lives since 1982. In a typical satellite-based search and rescue scenario, ships, aircraft or individuals transmit distress signals from an emergency location beacon via satellite to a fixed ground receiving station or local user terminal. The ground station receives and calculates the location of the distress signal and creates and sends an alert to the appropriate rescue authorities. Today, the beacon-to-alert process depends on a limited number of Low Earth Orbit (LEO) satellites and may take several hours before a position is confirmed. With MEOSAR, beacon signals will be received more quickly and beacon locations identified with greater accuracy thereby reducing this time to minutes.

### **Hughes and Telesat Sign Agreement for High-Throughput Capacity**

November 11, 2015 - The agreement calls for Telesat to deliver Ka-band capacity of 31 Gbps on T19V covering many countries in South America, which Hughes will utilize to expand its broadband satellite services for consumers. High-throughput JUPITER™ technology from Hughes will be deployed for the ground system and customer premises equipment. Telstar 19 VANTAGE, which will be co-located with our Telstar 14R satellite at 63 degrees West, is the second of a new generation of Telesat satellites designed with high-throughput capabilities optimized to serve the types of bandwidth intensive applications at which Hughes excels. In addition to its high-throughput Ka-band capacity for Hughes, Telstar 19 Vantage will bring significant additional state-of-the-art Ku-

band capacity to Latin America, providing users in the region with greater choice and the competitive advantages they need to succeed in the markets they serve.

### **China Eastern First Chinese Carrier to Launch International Wi-Fi**

November 12, 2015 - China Eastern Airlines became the first Chinese carrier to launch in-flight connectivity on international flights, partnering with Panasonic Avionics. The leading Chinese carrier, which, in partnership with China Telecom Satellite, was also the first to offer Wi-Fi on domestic flights, has installed Panasonic's award-winning eXConnect in-flight connectivity system on its newest Boeing 777-300ER aircraft. Panasonic Avionics' eXConnect uses the company's global Ku-band satellite network to deliver broadband connectivity to aircraft flying all over the world – even over oceans. This Wi-Fi connectivity service enables passengers to access a wide range of services including the internet, email, and their favorite social media sites.

### **Airbus Defence and Space Enable PETSE to Expand VSAT Services**

November 12, 2015 - Integrated Petroleum & Energy Services Company (PETSE) and Airbus Defence and Space have signed a three year agreement for supply of the Terralink Hub communications services. Terralink Hub will provide a fully managed service to PETSE which again provide them with the complete range of connectivity services to their local market in the Kingdom of Saudi Arabia. Already a licensed VSAT services reseller and leading provider of Engineering, Project Management, Business consultancy and Procurement services for the Oil, Water treatment and Civil work segments in the Kingdom, PETSE will become a full VSAT service provider, enabling high levels of IP connectivity with support from Airbus Defence and Space and the Terralink Hub platform, enabling PETSE to provide more flexible services to their customers.

### **SpeedCast Strengthens its Leadership in Asia with the Acquisition of ST Teleport**

November 13, 2015 - SpeedCast International Limited has entered into a definitive agreement to acquire ST Teleport, a leading satellite communications services provider based in Singapore. The acquisition includes ST Teleport's world class teleport facilities and data centre infrastructure in Singapore, a major hub in Asia for global maritime and oil & gas customers. The acquisition enables SpeedCast to remain, more than ever, the partner of choice for satellite communications in Asia-Pacific and further strengthens the Company's position in both the maritime and energy sectors. ST Teleport's hybrid satellite-fiber infrastructure supports access to more than 22 satellites and direct connections to fiber switches in Asia and in the US, facilitating an extensive reach in global content and data distribution. Services for maritime and oil & gas customers represent a significant percentage of ST Teleport's business, and will further enhance SpeedCast's position in these two important sectors.

### **Bluewave Selects Eutelsat's IP Easy Service for Broadband in Myanmar**

November 16, 2015 - Bluewave has announced its selection of the IP Easy solution provided by Eutelsat Communications in order to offer a new satellite broadband service in Myanmar. The service will offer speeds of up to 12 Mbps and will be operational from first quarter of 2016 using capacity on the Eutelsat 70B satellite that provides countrywide coverage of Myanmar. Eutelsat's IP Easy service will accelerate broadband access for unserved and underserved users, remote communities and enterprises at a time of exceptional economic development in Myanmar. The new service uses Newtec's cutting edge VSAT broadband platform (Sat3Play) and terminals (MDM2200 IP satellite modems, antennas and interactive LNBs). The user-friendly installation of the equipment can be done directly by end-users thanks to a "Point & Play" system and the set-up is compact with similar antenna sizes to satellite TV antennas.

### **ABS App Goes LIVE!**

November 16, 2015 - ABS and Satbeams announce the launch of the ABS fleet mobile application. Powered by Satbeams footprints visualization engine, the mobile application features ABS satellite fleet, services, ground infrastructure, company information and an augmented reality sat-finder – packed together into friendly companion for your iOS smartphone or tablet. Application features: Quick and intuitive ABS fleet navigation, access satellite parameters, positions and beams; Flat Map and Earth View of all the satellite coverage; On-the-fly integrated Sun Outage calculation; Augmented reality sat-finder to search the location of ABS satellites – turns on automatically when device camera is pointed up in the sky; Advanced Search through locations, satellites and beams; Full offline mode – take it everywhere! All the data gets synchronized when the device connects online.

### **Newtec Dialog Chosen by Liquid Telecom**

November 17, 2015 - Newtec announced that Liquid Telecom has chosen the Newtec Dialog multiservice platform to enlarge and improve its current VSAT services with more applications and features for both current and new customers. Extending its current relationship with Newtec, Liquid Telecom – a leading independent data,

voice and IP provider in eastern, central and southern Africa – will utilize the Newtec Dialog platform to expand its service portfolio towards new markets. The first Newtec VSAT platform with Liquid Telecom became operational in early 2014. Since then, Liquid Telecom has been able to deploy thousands of Newtec VSAT terminals. Liquid Telecom will operate the Newtec Dialog hub alongside its current Newtec Sat3Play broadband hub, allowing it to expand its current satellite services to more advanced business-to-business applications and deliver reliable cellular backhaul connections for mobile operators throughout Africa.

### **CNT EP to Use O3b Networks to Bring High Speed Broadband Services to Galápagos Islands**

November 17, 2015 - O3b Networks announced the launch of trunking services to Ecuadorian telecommunications company CNT. The operator is using a high throughput, low latency satellite network to offer broadband internet on the Galápagos archipelago. CNT, Ecuador's state-owned telecommunications operator, provides fixed line telephony, mobile, satellite TV and internet services. Offering their Galápagos subscribers support for the same cloud services and data-intensive applications used on the mainland has been a challenge. For about 20 years the connection to the island has been over a geostationary (GEO) satellite. The use of O3b satellites, which are closer to the earth than traditional GEO satellites, reduces latency, increases internet speed and improves voice and video quality for the user. CNT is using O3b's next-generation IP trunking solution, O3bTrunk, which boosts the existing link.

### **ViaSat, Jet Aviation St. Louis Collaborate on Hybrid Ku-/Ka-band Radome for Business Jets**

November 17, 2015 - ViaSat and Jet Aviation St. Louis announced they are partnering to develop the first-ever hybrid Ku-/Ka-band radome for Gulfstream's large cabin business jets, starting with the Gulfstream G550. The agreement covers collaboration on both the new dual-band radome and associated Supplemental Type Certificate (STC) to ensure Gulfstream aircraft equipped with the new hybrid system can access the fastest, most robust satellite-based in-cabin internet system available. ViaSat has already developed and deployed a fuselage-mounted hybrid Ku-/Ka-band radome to the commercial and government aviation markets based on its fuselage-mounted Ka-band and Ku-/Ka-bands shipsets. ViaSat, in working with Jet Aviation St. Louis, will expand its advanced aviation materials and fabrication IP to build this tail-mounted Ku-/Ka-band radome. The radome will support both ViaSat's 30 cm Ku-band antenna and its advanced Ka-band antenna separately or in a dual configuration.

### **Yahsat Extends Partnership with Hughes for African Satellite Expansion**

November 17, 2015 - UAE-based satellite operator Yahsat and Hughes Network Systems, LLC (Hughes) announced the award of a major contract for Hughes to deliver its JUPITER System and related network operations services in support of Yahsat's planned expansion across Africa in early 2017 with the launch of its new Ka-band satellite, Al Yah 3. The multi-year contract calls for Hughes to supply its award-winning JUPITER System gateways and broadband terminals together with its Operating Support System (OSS) and Business Support System (BSS) solutions as a turnkey outsourced managed service. Yahsat's position will be further strengthened by the extended coverage of Al Yah 3 to wider parts of Africa. Al Yah 3 will bring additional connectivity into 18 African countries for consumers, SOHO and enterprise segments. The third Yahsat satellite, Al Yah 3, is scheduled for service launch in early 2017, extending the company's commercial Ka-band coverage to 60% of Africa's population. The procurement of the JUPITER platform is in preparation for the new satellite and is in line with Yahsat's strategy to widen and deepen its reach and continuously enhance its product offerings.

### **iDirect SatHaul Optimization Suite Helps Mobile Operators Enhance 4G/LTE Experience over Satellite**

November 17, 2015 - VT iDirect, Inc. (iDirect), a company of Vision Technologies Systems, Inc. (VT Systems), announced the release of the iDirect SatHaul Optimization Suite. This set of features is designed to enhance the cellular backhaul solution, iDirect SatHaul, which helps mobile operators create a highly efficient and cost-effective solution for connecting rural and remote locations over satellite. The iDirect SatHaul solution is designed to help mobile operators expand coverage in a smart and profitable way. When used for 4G/LTE networks, the iDirect SatHaul Optimization Suite enhances the end-user experience and at the same time reduces the amount of bandwidth needed for voice or data, redefining the business case for serving rural and remote markets or specialized environments like emergency services or mobile networks.

### **Intellian to Launch Latest Satellite TV Antenna**

November 17, 2015 - Intellian, the global leader in maritime satellite communication antenna technology, launched the latest innovation to join Intellian's i-Series antenna range, i5P. The all-new i5P creates a new size category of marine satellite TV systems, and is a direct result of Intellian's user-focused product approach. The innovative system allows inland and coastal craft across Europe as well as vessels in the Mediterranean cruise

sector to travel further and experience higher performance, while maintaining the aesthetic and physical requirements of their boat. The Intellian i5P includes an automatic skew function and is optimised for the Astra Satellite combining simultaneous reception for both the ASTRA I and II. The new design eliminates signal quality issues that had forced users to larger antenna sizes with the i5P the only sub 60cm antenna system available on the market with this level of performance.

### **Eutelsat Partners with Camusat to Deliver Turnkey Solutions to African Mobile Operators**

November 18, 2015 - Eutelsat Communications and Camusat entered into a partnership agreement that will enhance turnkey connectivity solutions for mobile operators in Sub-Saharan Africa. The agreement will drive growth of mobile communications that have dramatically expanded in sub-Saharan Africa but are still under-developed in remote rural areas where over half of Africa's population lives. In the vast territories yet to be covered terrestrial infrastructure would require heavy investment over several years to link unconnected communities to mobile networks. Eutelsat and Camusat are drawing on their respective expertise of connectivity markets in Africa to provide mobile operators with turnkey solutions. Eutelsat can deliver satellite coverage of all African territories while Camusat provides expertise in telecom infrastructure deployment, including building, providing electrical power and maintaining towers for mobile telephony networks via more than 1,000 employees in the African continent.

### **SES and Intersat to Expand Internet Service Offerings to East Africa**

November 18, 2015 - SES and Intersat announced that they have signed a multi-year contract to expand Intersat's internet service offerings to East Africa. Intersat, one of the largest and most respected providers of internet solutions in Africa, is utilising the Ku-band capacity on SES's NSS-12 satellite via the SES Djibouti teleport. The company will offer shared and dedicated internet services delivered via the latest and most advanced iDirect VSAT technology, with a capacity of up to 70Mbps. Intersat currently serves over 200 VSAT terminals using the SES service.

### **SES Launches High-Speed Customisable Broadband Service in Africa**

November 18, 2015 - SES announced the launch of SES Broadband, a flexible and customised high-speed broadband service, in five African countries – South Africa, Ethiopia, Ghana, Kenya and Nigeria. The two-way communications platform offers up to 1 Gbps for both customisable data rates and fixed packages, with more than 99.5% service availability, and is supported 24/7 by a highly-responsive operations team. SES Broadband empowers regions, countries, and businesses to maximise their potential by offering high-speed broadband.

### **SES Techcom Services and Newtec Expand Astra Connect Broadband Service**

November 18, 2015 - SES Techcom Services, a subsidiary of SES, announced it will be expanding its Astra Connect broadband service in Africa for the Enterprise and Oil & Gas markets via the Newtec Dialog multiservice platform on SES's Astra 2G satellite. SES is extending its current relationship with long-term partner Newtec by the new platform, which is due to be launched in Q1 2016 and will utilise the West Africa Ku-band beam of the Astra 2G satellite, located at 28.2 degrees East. The platform will broaden SES Techcom Services' current portfolio and flexibly support different services, be it for consumer, Small Office, Home Office and SME customers, or for Enterprise and Oil & Gas customers. Newtec Dialog supports MF-TDMA and SCPC technologies, as well as Newtec's Mx-DMA technology, increasing bandwidth efficiency and service reliability for enterprise applications and enabling those services to run more cost-effectively and reliably than before.

### **ViaSat Brings Advanced Integrated In-flight Cabin and Flight Deck Connectivity to Business Aviation**

November 18, 2015 - ViaSat is working with Rockwell Collins to integrate the ViaSat VMT-1500 terminal and its global Ku-band internet service with Rockwell Collins' eRouter (ERT-120) smart cabin routers and its ARINCDirect flight support services. Through this collaboration, business aircraft operators will obtain comprehensive cabin and cockpit connectivity capabilities. Designed to serve "office in the sky" applications, ViaSat's global Ku-band in-flight technology and internet service allows those on board to send and receive emails, establish VPN connections, watch streaming video and participate in video conferencing and high-quality Voice over Internet Protocol (VoIP) phone calls with the ADConnect VoIP app for iOS and Android - when in the air and on the ground for seamless gate-to-gate communications.

### **CRRG Selects Gilat to Bring Satellite Connectivity to All its Trains, Worldwide**

November 19, 2015 - Gilat Satellite Networks announced that China Railway Rolling Stock Corporation (CRRG), the world's largest railway transportation supplier and Gilat have agreed on a long-term strategic partnership, to jointly drive the development of satellite communications and managed services, and provide the best-in-class



service in the global railway transportation sector. The vision of the cooperation is to bring communication connectivity to every train powered by CRRC technology around the world. This agreement brings together CRRC's leading rail transit equipment technology and manufacturing capabilities with Gilat's advanced satcom on-the-move technology and its rich expertise in deploying and managing satellite networks globally, in over 90 countries. The companies will develop a solution that will provide passengers on CRRC high-speed trains with on-the-move satellite-based broadband internet access. The solution will also enable CRRC to monitor and perform maintenance services via satellite on trains wherever they are in the world, in real time via a cloud-based network operations center (NOC).

### **Inmarsat and Ericsson Cooperate for Transforming the Future of the Connected Ship**

November 19, 2015 - Inmarsat and Ericsson have signed a strategic maritime agreement to facilitate the sharing of cargo, logistics and vessel operational data to help streamline the maritime supply chain. The two companies will jointly develop services, solutions and applications to drive industry standards for satellite connectivity and application integration in the maritime industry. As a first step, Ericsson has signed a distribution contract to offer XpressLink, Inmarsat's combined L-band and Ku-band VSAT network for the maritime market. XpressLink offers an easy upgrade path to Inmarsat's Fleet Xpress service, powered by the new Global Xpress constellation, when it becomes available in the coming months. It is intended that the distribution agreement with Ericsson will be extended to Fleet Xpress at that time.

### **ViaSat and Cobham Bring Innovative Push-to-Talk System to the Mobile Satellite Services Market**

November 19, 2015 - ViaSat and Cobham Satcom announced a strategic agreement to introduce new and innovative product and service offerings to the Mobile Satellite Services (MSS) market. The first satellite terminal product from the Cobham/ViaSat collaboration is the Explorer 122, a compact, vehicle mount real-time IP satellite terminal, which will complement the Explorer PTT-II system for mission-critical voice and data communications. The proprietary Cobham PTT technology allows for the seamless handover of voice calls from cellular-to-satellite, when the terrestrial connection is lost, without interrupting the conversation. The new Explorer 122, operating over the all-IP ViaSat L-band Managed Service network, features a ruggedized terminal design in a small form-factor with omni-directional antenna architecture and no moving parts, thus increasing the reliability and reducing the structure-borne noise heard from inside the vehicle. The PTT satellite service utilizes ViaSat's new L-band waveform that offers true IP multicast voice over LightSquared's Skyterra-1 satellite, allowing for flat rate service plans while protecting the users' information with the most advanced commercial encryption available.

### **Intelsat General Awarded Contract to Provide Connectivity in Support of Mideast Operations**

November 23, 2015 - Intelsat General Corp., a wholly owned subsidiary of Intelsat, has been awarded a contract to provide satellite services to U.S. Air Forces Central Command (AFCENT). The one-year contract calls for 144 MHz of Ku-bandwidth to support U.S. military operations in the Central Command (CENTCOM) Area of Responsibility (AOR). The service, which began in September 2015, has three one-year renewal option periods and one six-month renewal option period. Under the previously disclosed contract, Intelsat General will provide coverage all across the Middle East as far eastward as Afghanistan and Pakistan, including reach-back to European teleport facilities.

### **RigNet and O3b Networks to Bring Low Latency Connectivity to the Gulf of Mexico**

November 23, 2015 - RigNet has signed an agreement with O3b Networks to bring high capacity, low latency connectivity to operations in the Gulf of Mexico. This agreement marks a major breakthrough in providing mission critical connectivity to the offshore market through the deployment of O3bEnergy, O3b's high-performance service specifically designed to meet the needs of offshore and remote site energy operators. The deal will enable significant improvements in productivity, operating efficiencies and safety for RigNet's customer.

### **Synertone Selects Gilat to Enable its Fixed and Mobile Offerings throughout China**

November 23, 2015 - Gilat Satellite Networks announced that Synertone, a Hong Kong satellite solutions provider, has selected Gilat's baseband equipment to enable fixed and mobility applications on its HTS IPSTAR-based network, offering coverage throughout China. Synertone placed orders totaling approximately \$12 million for Gilat's solutions. Powering Synertone's network will be Gilat's SkyEdge II-c platform with X-Architecture. The VSATs used are part of Gilat's Capricorn suite of ultra-high-speed IP routers. The network is estimated to go live within six to twelve months. Additionally, the MOU signed by Synertone and Gilat includes an option for advanced manufacturing and future R&D cooperation, should they agree to do so.

### **Addvalue and ViaSat to Offer New Products and Applications for ViaSat L-band Terminals**

November 23, 2015 - Addvalue Innovation has entered into a Memorandum of Agreement (MOA) with ViaSat to offer new products and applications for use over ViaSat L-band Managed Service Terminals. ViaSat offers a worldwide, two-way, fixed and mobile Internet Protocol (IP) satellite communications service, known as the ViaSat L-band Managed Service, with current operation in the regions covered by Lightsquared and Thuraya satellites where one terminal can be used for seamless roaming between satellite systems.

### **exactEarth Invests in Satellite Internet-of-Things Technology Company**

November 23, 2015 - exactEarth is investing AUD \$2M to secure a minority ownership position in technology company, Myriota Pty Ltd of Adelaide, Australia. The business focus of Myriota is to utilize advanced signal processing Intellectual Property developed at the University of South Australia (UniSA) in order to develop advanced terminals, infrastructure and applications for the fast growing Satellite Internet of Things (SIoT) global market. This core IP has been developed to create a disruptively low-cost solution for this marketplace which will have the capability of supporting many millions of global users. Myriota is particularly focused on the location tracking and sensor data applications markets. As part of the Myriota investment, exactEarth is also receiving an exclusive license to utilise this IP in the maritime market and in addition, exactEarth has the option to make further investments in Myriota in the future to increase its shareholding.

### **KBZ Selects Hughes JUPITER System as Foundation of New Nationwide Satellite Network in Myanmar**

November 24, 2015 - Hughes Network Systems, LLC (Hughes) announced that its JUPITER System has been selected by KBZ Gateway Co. Ltd., a subsidiary of Myanmar's KBZ Group of Companies Ltd., as the platform for a new high-availability satellite broadband network in Myanmar. Currently under construction, the JUPITER ground control gateways and remote terminals will operate over both Ku- and C-band satellite links to power broadband services for enterprises, consumers and cellular providers across Myanmar. The Hughes JUPITER System features flexible and robust gateway architecture with lights-out operation, enhanced IPoS air interface for bandwidth efficiency, and high-throughput terminals, enabling operators to achieve the highest possible capacity and efficiency for any satellite broadband implementation. The underlying technology is the powerful JUPITER System on a Chip (SoC), a custom-designed microprocessor employing a multi-core architecture and enabling 100 Mbps of throughput on every terminal in the JUPITER family.

### **SES Inaugurates ATF and SOC**

November 27, 2015 - SES announced the inauguration of its new Antenna Field Technical Facility (ATF) building - that hosts the Satellite Operations Centre (SOC). The new ATF is a result of the significant growth of the SES fleet controlled from the Betzdorf SOC. The 450 square metres SOC overlooks the new antenna field and displays state-of-the-art features, as well as the highest level of redundancy for infrastructure including power, cooling, network, security and computer systems. From this SOC, a team of highly-skilled satellite controllers provides 24/7 monitoring and management of 33 SES satellites, as they deliver a range of services including broadcasting high quality television channels; corporate networks for major global companies; high-speed connectivity for airlines and the maritime industry; and supporting multiple Government activities around the world. The SOC is sized to control up to 100 satellites and is organised in consoles, with one controller managing six to nine satellites from a single console. The remaining satellites from the SES fleet are operated from Gibraltar and Princeton (US).

### **Eutelsat Broadband Inks its First Distribution Agreement in Middle East**

November 30, 2015 - Eutelsat Communications announced a distribution agreement between its Eutelsat Broadband subsidiary and Ooredoo, Qatar's leading communications company, to deliver an enhanced VSAT service for businesses called "VSAT Internet". The new service will be based on the high-performance KA-SAT satellite dedicated to broadband services. By selecting the KA-SAT infrastructure, Ooredoo has chosen the fastest and highest-quality satellite broadband service in the Middle East. Ooredoo's "VSAT Internet" will deliver a reliable and competitively-priced solution that compares to terrestrial broadband, with download speeds up to 22 Mbps and upload speeds up to 6 Mbps. Through this service, Ooredoo aims to deliver communications support for a wide range of applications such as point-of-sale transactions, data processing, reservation systems and high-speed Internet access, ensuring business continuity.

### **Hughes Advanced TDMA Waveform Tested in Talisman Sabre Exercises by Australian Defence Force**

November 30, 2015 - Hughes Network Systems, LLC (Hughes) announced that its Defense and Intelligence Systems Division (DISD) has partnered with the Australia Defence Force (ADF) and the United States Military at Talisman Sabre 2015 to test its advanced TDMA waveform technology. The Australian Defence Force used the

Hughes HX System with advanced waveform technology during the exercises to deliver higher performance satellite connectivity than ever before and will also deploy it in future military exercises.

### **Lebanese Red Cross Selects Globalstar SPOT Gen3 to Enhance Safety of Volunteers**

November 30, 2015 - Globalstar Europe Satellite Services Ltd. announced that the Lebanese Red Cross, the sole provider of emergency medical services in Lebanon, is deploying 125 handheld SPOT Gen3 safety devices to enhance the safety of its workers. The Lebanese Red Cross will be using SPOT Gen3 to track the location of its volunteers and search and rescue teams as they respond to critical emergencies. In such situations, volunteers can simply press an SOS button to send their coordinates over the Globalstar satellite network. The SPOT Gen3 is a rugged, easy-to-use handheld device that uses the Globalstar next generation LEO satellite network ensuring communications even in areas where there is no mobile phone signal. Each SPOT can be quickly set up to automatically report the user's location at regular intervals using a 'check-in' button, which sends a prepared message to Lebanese Red Cross headquarters indicating that all is OK.

## BROADCASTING

### **Benin's Golfe TV AFRICA Favors EUTELSAT 16A Satellite for Transition into High Definition**

November 5, 2015 - On the occasion of Discop, Africa's premier event for the media and advertising industry, Beninese private news channel Golfe TV AFRICA announces it has chosen Eutelsat Communications to support its transition to high definition broadcasting. Golfe TV AFRICA has taken a three-year capacity lease on the EUTELSAT 16A satellite to broadcast Sub-Saharan Africa's first free-to-air High Definition channel. Broadcasts kicked off on October 1. Golfe TV AFRICA is operated by Golfe Gazette Press Group, which was established 30 years ago. The channel has been transmitting in Standard Definition in Benin, both terrestrially and by satellite. Its ambition is now to offer an enhanced viewing experience to a television audience both in Benin and beyond, in 20 Anglophone and Francophone countries from Senegal to Mozambique. Using new equipment and state-of-the-art HD and 3D studios, Golfe TV AFRICA is further bolstering its reputation as a reference news channel and strengthening its position among major broadcasters across Africa. The capacity booked on EUTELSAT 16A also enables Golfe TV AFRICA to offer live broadcast services to other channels in the region.

### **Hinduja Group's HITS Service on Thaicom 7**

November 12, 2015 - Thaicom announced its Thaicom 7 satellite is now fully booked following an order from Grant Investrade Ltd (GIL). The subsidiary of Hinduja Ventures Ltd., part of the global Hinduja Group, confirmed the order for the C-band transponders on the satellite, which it will use to provide digital cable TV services through a Headend-In-The-Sky (HITS) system. The HITS service – branded 'NXT Digital' – will help the distribution fraternity smoothly transition to digital and allow customers to choose channels through a satellite multiplex across India. The technology program manager for 'NXT Digital' is Castle Media which has set up several world class operations in broadcasting and digital networks in India and overseas. Castle Media has been tasked with the design-to-delivery of the HITS service including setting up a state-of-the-art next generation broadcast facility and a robust back-end facility for SMS, CRM, Billing, CAS and other mission critical components and services.

### **Yahlive Launches 43 Channel Bouquet**

November 16, 2015 - Yahlive announced the launch of a 43 channel bouquet for the Greater Arab Maghreb region, following the signing of a new partnership with Sahli Media Group in Paris. Yahlive viewers across Northern Africa will gain access to the new channels, 20 of which are only available exclusively through Yahlive. Yahlive viewers across the Maghreb region can now access the free-to-air channels, bringing them a wide-range of news, entertainment and lifestyle content. With a line-up of popular home-grown TV entertainment and a variety of local channels including; MasterChef, Showroom TV, Equo-Filahiaa, and many more, viewers can also access premium international channels including BBC Arabic, MBC and Fox Movies.

### **Broadcasting Authority of Zimbabwe Chooses Eutelsat to Accelerate Transition to Digital TV**

November 17, 2015 - Eutelsat Communications has sealed a three-year contract with the Broadcasting Authority of Zimbabwe (BAZ) for Ku-band capacity on the Eutelsat 3B satellite. The capacity will be used to deliver twelve free-to-view channels to a nationwide network of 48 Digital Terrestrial Television (DTT) transmitters so that Zimbabwean viewers can benefit from improved image quality and a wider choice of television programmes. The agreement between BAZ and Eutelsat will accelerate digital transition of Zimbabwe's national broadcasting network that was initiated in 2011, and reflects the general move across Africa to a fully digital environment. The

new service is currently being tested and is due to launch during first quarter 2016. The project is managed by BAZ that is also working with Transmedia, the country's national signal carrier, ZBC, the state broadcaster, and Huawei for sourcing of digital equipment, including set-top-boxes for user homes. Huawei will also uplink the digital multiplex from BAZ's teleport facilities in Harare to the Eutelsat 3B satellite.

### **Canal Holdings Selects SES to Distribute TV Content across West Africa**

November 18, 2015 - SES announced that Canal Holdings, a media production company based in Benin, has signed a multi-year contract to distribute Canal 3 TV channels across West Africa. Under the agreement, SES will be providing broadcast capacity to deliver a Canal 3 pay TV channels bouquet in Hausa, Savanna, Wolof and French languages across West Africa. Canal Holdings will be delivering its TV offerings to its direct-to-home subscribers via SES's Astra 2G satellite at 28.2 degrees East, and distributing the same channels to Benin and Niger via the SES-5 satellite located at 5 degrees East. This agreement provides Canal Holdings with extensive West Africa coverage and the optimal technical solution.

### **Intelsat and Next Step Team Up to Deliver HD Content to Thailand via a New DTH Platform**

November 19, 2015 - As the prices of High Definition (HD) satellite set-top boxes have become more affordable in Asia, larger numbers of viewers are demanding and switching over to HD services. With Direct-to-Home (DTH) TV platforms in Thailand expected to add more than 2.5 million new subscribers in the next 10 years, Intelsat S.A announced that Next Step, a multi-channel operator and distributor, is leveraging Intelsat's satellite solutions on Horizons 2 at 85 degrees East to launch a new Free-to-Air DTH platform in Thailand. Under its multi-year agreement with Intelsat, Next Step is utilizing Ku-band capacity on Horizons 2 to diversify its business offerings - moving from content provider to platform operator through its new Freeview HD platform, a platform positioned to serve an addressable market of approximately 67 million people. Given Intelsat's global, flexible fleet, Horizons 2 was moved to the 85 degrees East orbital location and its beam repositioned to enable Next Step to capitalize on the opportunity to support the HD trend in Thailand.

### **SkyVision Launches Two Broadcast Platforms on ABS-3A**

November 26, 2015 - SkyVision Global Networks Ltd. announced a partnership with ABS to launch two new video platforms on ABS-3A. This will provide quality DVB-S and DVB-S2 content, including HD, via satellite across Sub-Saharan Africa, including French speaking Africa and South Africa. The signing of this agreement will deliver vital communications services via ABS-3A located at the 3 degrees West orbital position, to effectively meet the growing demand for content and DTH services using 90cm dishes. The new platforms will support both SD and HD channels in MPEG-2 and MPEG-4 encoding. Coverage will focus on the Free-To-Air channels and Pay TV markets in Sub-Saharan Africa. SkyVision boasts more than ten satellite platforms and a network of high-capacity fiber optic cables via its gateways in Africa, Europe, North America and the Middle East as well as multiple points of presence (POPs) in Africa. SkyVision's contribution to this important project is to provide the company's global hybrid system of high-capacity network of fiber optic cables to the Internet backbone via ABS-3A. This will enable superior distribution services of special events, news and DTH channels from Asia and Europe to Africa.

## LAUNCH / SPACE

### **Thales Alenia Space Ships Orion Service Module Test Model to NASA**

November 9, 2015 - Thales Alenia Space, a joint venture between Thales and Finmeccanica, has shipped the structural test model of the Orion service module to NASA. The Orion capsule is NASA's new crew transport vehicle for deep space exploration. Lockheed Martin Space Systems is developing and building the space capsule for four or more astronauts as a prime contractor on behalf of NASA while Airbus Defence and Space is developing and building the European Service Module (ESM) for the Orion capsule as a prime contractor on behalf of ESA.

### **Arabsat Badr -7 Successfully Launched**

November 10, 2015 - Arabsat's first Satellite of the 6th generation, "Badr-7" was launched successfully from Kourou, French Guyana by the Ariane 5 Rocket. The Ariane 5 rocket blasted off carrying Badr-7, a Eurostar satellite, manufactured by Airbus Defense & Space with Thales Alenia Space, to be placed in ARABSAT exclusive orbital hotspot 26 degrees East. This Step Comes as part of ARABSAT ambitious expansion projects, and it is the 6th satellite launched during the past seven years on three deferent orbital positions to provide

diverse services of TV broadcasting and Telecommunications services. Badr -7 will join Arabsat satellites Badr -4, Badr-5 and Badr -6 on its exclusive TV Broadcasting orbital position 26 degrees East.

#### **Arianespace to Launch GSAT-17 and GSAT-18 Satellites for India**

November 10, 2015 - The Indian Space Research Organisation (ISRO) has chosen Arianespace to launch its GSAT-17 and GSAT-18 telecommunications satellites. The two satellites will be launched by Ariane 5 launch vehicles at the Guiana Space Center, Europe's Spaceport in Kourou, French Guiana, in 2016 and 2017. The GSAT-17 and GSAT-18 satellites, designed, assembled and integrated by ISRO, will each weigh around 3,400 kg at launch. They are planned as replacement satellites for the currently operational satellites providing key national services in multiple frequency bands including C, Extended-C and Ku Bands.

#### **International Launch Services Announces Multi-Launch Agreement with Intelsat**

November 11, 2015 - International Launch Services (ILS) announces a Multi-Launch Agreement with Intelsat for five ILS Proton missions through 2023 from the Baikonur Cosmodrome in Kazakhstan. The Multi-Launch Agreement is designed to provide Intelsat with increased flexibility in their fleet management and the necessary launch schedule assurance that they require. The five satellites, yet to be designated, will be launched using the Proton Breeze M launch vehicle, manufactured by Khrunichev State Research and Production Space Center (Khrunichev), the majority owner of ILS and one of the mainstays of the space industry. Proton has launched 407 missions since its maiden flight in 1965. Under the auspices of ILS, there have been 91 ILS Proton missions launched for global commercial satellite operators.

#### **Thales Alenia Space to Build Bangabandhu Telecommunication Satellite for Bangladesh**

November 11, 2015 - Thales Alenia Space has signed a contract with BTRC (Bangladesh Telecommunication Regulatory Commission) to build the telecommunications satellite, Bangabandhu. As program prime contractor of this turnkey system, Thales Alenia Space is in charge of the design, production, testing and the delivery in orbit of the satellite. Built on the upgraded Spacebus 4000B2 platform, Bangabandhu will be fitted with 26 Ku-Band and 14 C-Band transponders. The satellite's coverage zone encompasses the Bangladesh and the surrounding region. This system will offer capacity in Ku-Band over Bangladesh and its territorial waters of the Bay of Bengal, India, Nepal, Bhutan, Sri Lanka, Philippines and Indonesia; it will also provide capacity in C-Band over the whole region. Thales Alenia Space will also take charge of the ground segment, which will benefit of the SpaceOps Thales Alenia Space tools for the mission planning and monitoring. It includes two ground facility buildings gathering Satellite Control and Network Operations Center based on the SpaceGate Thales Alenia Space global solution. Spectra Engineers Ltd., Thales partner in Bangladesh, is in charge of the civil work of the ground facilities. To be launched in 2017, this Bangladesh's first satellite will be positioned at 119.1 degrees East longitude.

#### **Airbus Defence and Space Signs Contract with ESA for C/D Phase of NEOSAT Programme**

November 17, 2015 - Through a contract signed with the European Space Agency (ESA), Airbus Defence and Space continues to develop Eurostar Neo, its new generation of platforms for geostationary telecommunication satellites. Under phase C/D of the NEOSAT programme, this contract will lead to the development of the complete Eurostar Neo product line. The NEOSAT programme was initiated by ESA and the French space agency CNES through the Investments for the Future Programme (PIA) and continues today, with very strong support from the UK Space Agency and participation from 16 other ESA member states. The NEOSAT programme aims to support Airbus Defence and Space in providing a commercially attractive platform in the mid-range and high-end telecommunication satellite segments. Airbus Defence and Space will draw on an extensive network of industrial partners from across Europe to develop and provide this product line.

#### **MDA to Provide Communication Subsystem to Boeing**

November 17, 2015 - MacDonald, Dettwiler and Associates Ltd. (MDA), a global communications and information company, announced that it has signed a contract with a ceiling of CA\$9.7 million with The Boeing Company. MDA will provide a communication antenna subsystem to be installed on the Boeing 702MP satellite platform. The contract is inclusive of an initial firm commitment of CA\$7.6 million.

#### **NASA Orders SpaceX Crew Mission to International Space Station**

November 20, 2015 - NASA took a significant step toward expanding research opportunities aboard the International Space Station with its first mission order from SpaceX to launch astronauts from U.S. soil. This is the second in a series of four guaranteed orders NASA will make under the Commercial Crew Transportation Capability (CCtCap) contracts. The Boeing Company received its first crew mission order in May. Commercial crew missions to the space station, on the Boeing CST-100 Starliner and SpaceX Crew Dragon spacecraft, will

restore America's human spaceflight capabilities and increase the amount of time dedicated to scientific research aboard the orbiting laboratory. SpaceX's crew transportation system, including the Crew Dragon spacecraft and Falcon 9 rocket, has advanced through several development and certification phases. The company recently performed a critical design review, which demonstrated the transportation system has reached a sufficient level of design maturity to work toward fabrication, assembly, integration and test activities.

### **China Launches First Satellite for Laos on Long March 3B**

November 20, 2015 - The Chinese have launched the LaoSat-1 communications satellite for Laos. The launch was conducted by the Long March-3B/G2 (Y38) launch rocket, launching from the LC2 Launch Complex of the Xichang Satellite Launch Center. LaoSat-1 is based on the Dongfanghong series of satellite platforms, designed and developed by the China Academy of Space Technology (CAST). Sources state either a debut DFH-3B or a DFH-4S was used. The satellite is designed to provide communication links for government work, television transmission and a range of telecommunication applications in the mountainous, heavily forested country. The communications payload on LaoSat-1 is composed by 14 Extended C-band and 8 Extended Ku-band transponders. The satellite will be stationed at 128.5 degrees and it will have a service life of 15 years.

### **MHI Successfully Launches Telesat's Telstar 12 VANTAGE Satellite**

November 24, 2015 - Mitsubishi Heavy Industries, Ltd. (MHI) successfully delivered Telesat's Telstar 12 VANTAGE satellite into planned orbit on the H-IIA launch vehicle F29. The H-IIA launch vehicle F29 lifted off from the Yoshinobu launch pad at the Tanegashima Space Center. H-IIA F29 incorporates the outcome of the H-IIA Upgrade. The upgrade relates to improvements in the launch vehicle's upper stage and MHI has been implementing these improvements with strong support and oversight from the Japan Aerospace Exploration Agency (JAXA). Telstar 12 VANTAGE replaces and expands on Telesat's Telstar 12 satellite. Telstar 12 has long been valued by the satellite user community for its ability to seamlessly connect the Americas to Europe and the Middle East from 15 West, one of the few orbital locations that enables such coverage. With Telstar 12 VANTAGE, broadband customers in mobility, government, energy and enterprise markets will now have even greater service options between EMEA and the Americas along with powerful new beams over Brazil, Sub-Saharan Africa, the South Atlantic, the Mediterranean and North Sea.

### **SSL Selected to Provide New High Throughput Satellite to Telesat**

November 25, 2015 - Space Systems Loral (SSL) announced that it has been selected to build a powerful, high throughput communications satellite for Telesat. The new spacecraft, called Telstar 19 VANTAGE, will have two high throughput payloads, one in Ku-band and the other in Ka-band, to serve growing markets in Latin America, the North Atlantic Ocean, the Caribbean and Northern Canada. Telstar 19 VANTAGE will be the second of a new generation of Telesat satellites optimized to serve the types of bandwidth intensive applications increasingly being used across the satellite industry. Hughes Network Systems LLC (Hughes) has made a significant commitment to utilize the satellite's high throughput Ka-band capacity in South America to expand its broadband satellite services. The satellite, which will be located at 63 degrees West longitude, is based on the highly reliable SSL 1300 platform. The launch of Telstar 19 VANTAGE is planned for early 2018.

### **Thales Alenia Space to Build the ARSAT-3 Payload**

November 26, 2015 - Thales Alenia Space has signed a contract with ARSAT Empresa Argentina de Soluciones Satelitales SA, to supply the payload for the third geostationary telecom satellite manufactured in Argentina, ARSAT-3, as well as options for two additional payloads. ARSAT, with headquarters in Buenos Aires, acting as Main Contractor and leading the GEO communication satellite development in Argentina, is using a similar industrial organization with INVAP, the Rio Negro Province high-tech powerhouse located in San Carlos de Bariloche, acting as Prime Constructor, teaming with Thales Alenia Space in continuity of the successful partnership already took in place on ARSAT-1 and ARSAT-2 both operational in orbit. ARSAT-3 is slated to enter service in 2019, and will be positioned at 81 degrees West as a baseline. It will provide high speed data, Internet and television transmission services for South America. Weighing about 3 tons at launch, it will offer a design life of 15 years. The payload will be fitted with 12 Ku-band and 8 Ka-band operative transponders.

### **China Launches Yaogan-29 Remote Sensing Satellite**

November 27, 2015 - China's Yaogan-29 remote sensing satellite was launched from Taiyuan launch site in Shanxi Province, north China. The satellite will be used for experiments, land surveys, crop yield estimates and disaster relief. Yaogan-29 was carried by a Long March-4C rocket, the 219th mission for the Long March rocket family. China launched the first "Yaogan" series satellite, Yaogan-1, in 2006.

## EXECUTIVE MOVES

### **ILS Names Ralph Bauer as Vice President and General Counsel**

November 2, 2015 - International Launch Services (ILS) has appointed Ralph Bauer as Vice President and General Counsel. Bauer's appointment follows the departure of Tom Tshudy, who served as ILS Senior Vice President and General Counsel since 2012 and ILS General Counsel since 1998. Bauer, as ILS Vice President and General Counsel, will oversee the ILS legal, contracts and export control departments. Bauer joined ILS in October 2007 as ILS' Partnership Manager, serving as the primary interface with Khrunichev on all economic and contractual matters. In 2012, Bauer was reassigned to the Legal Department and also assumed responsibilities as Associate General Counsel. Prior to joining ILS, Bauer served for 24 years in the United States Air Force as a member of the Air Force Judge Advocate Corps. His final Air Force assignment was as Staff Judge Advocate for 14th Air Force, Vandenberg Air Force Base, California.

### **Intelsat Appoints Brian Jakins as Regional VP of Sales in Africa**

November 4, 2015 - Intelsat announced that Brian Jakins has been named as the company's Regional Vice President of Sales in Africa, effective immediately. Jakins will be based in Johannesburg, South Africa and report to Jean-Philippe Gillet, Vice President, Europe, Middle East and Africa. With over two decades of experience in the technology sector, including services to enterprises and mobile operators, Jakins will lead Intelsat's African sales team and support the growth of Intelsat's broadband, mobility and media customers operating in the region. He will also be responsible for the design and implementation of the company's sales strategy and business development across Africa.

### **Intelsat Bolsters its Strategic Planning and Business Development Team**

November 10, 2015 - Intelsat has appointed long-standing Intelsat executive Jay Yass to Vice President of Business Development and named Hazem Moakkit to the newly created role of Vice President of Corporate and Spectrum Strategy. Yass and Moakkit will report to Bruno Fromont, Intelsat's Senior Vice President of Strategy and Asset Management and be based in the company's McLean, VA office. In his new role, Yass will add to his market development responsibilities and lead Intelsat's global business development initiatives. He will oversee the company's business development team and work closely with Intelsat's corporate strategy, product management as well as its innovation and service architecture teams to identify and establish partnerships that will complement the type and value of the services delivered to customers. In his newly created role, Moakkit will lead the corporate strategy and spectrum teams, analyzing shifts in market trends to guide the strategic direction of the company. He will also be responsible for optimizing Intelsat's orbital spectrum rights to support the company's overall business plans. Bringing more than two decades of industry experience to Intelsat, Moakkit has held executive regulatory and spectrum affairs positions at O3b Satellite Networks and Yahsat.

### **United Launch Alliance Names Thomas Tshudy as Vice President and General Counsel**

November 18, 2015 - United Launch Alliance (ULA) named Thomas Tshudy as Vice President and General Counsel. Tshudy will replace Kevin MacCary, who announced his retirement earlier this year after serving in that role since the company began in 2006. Before joining ULA, Tshudy served as Senior Vice President and General Counsel for International Launch Services (ILS). Previously he served as Vice President and General Counsel at Lockheed Martin while ILS was a subsidiary to sell and market the Atlas II, III and V launch vehicles. Tshudy also served as division counsel for the Delta and Space Station programs at McDonnell Douglas Corporation in Huntington Beach. Tshudy began his career in 1983 with the United States Air Force as an assistant Staff Judge Advocate and later served as an Air Force reservist for more than 15 years until he retired in 2005.

### **Michael Schwartz Rejoining Telesat as Senior VP, Corporate & Business Development**

November 30, 2015 - Telesat announced that Michael Schwartz has rejoined the company as Telesat's new Senior Vice President, Corporate & Business Development. Schwartz will be based in Ottawa and report to Telesat's President and CEO, Dan Goldberg. He will also serve on the company's executive committee. Schwartz was Telesat's Vice President, Marketing, Corporate Development & Regulatory from 2007 to 2012. He left Telesat to join Sprint Corp. in the role of Senior Vice President, Corporate Strategy and Development, a position from which he resigned earlier this month. Prior to Sprint and Telesat, Schwartz held senior positions at SES New Skies and AT&T Wireless as well as other companies in the wireless and internet industries.

## REPORTS

### **2% Revenue Growth for Commercial FSS Operators**

November 4, 2015 - According to Euroconsult's newly published report, FSS Operators: Benchmarks & Performance Review, 2014 was positive for most FSS operators despite the fact that half of revenue-generating FSS operators experienced a slowdown in revenue growth. Industry growth was largely offset by the revenue decline recorded by ten operators including several large companies such as Intelsat, Telesat and JSAT. As a result, total FSS industry revenues nearly stabilized at \$12.3 billion in 2014. This trend is expected to continue in 2015 with industry revenues growing by 2% at constant exchange rates at the half year mark.

### **Key Trends and Indicators on Supply & Demand of the World Commercial Satellite Industry**

November 12, 2015 - Euroconsult's latest report, Satellite Value Chain: The Snapshot 2015, brings together a selection of key trends and indicators on supply and demand from Euroconsult's 2015 reports complemented by additional dedicated research on the commercial satellite business to give a snapshot of the commercial satellite value chain. Along with the introductory/overview section, the report includes sections on satellite manufacturing & launch services, satellite communications, Earth observation, and satellite navigation.

## UPCOMING EVENTS

**Asia-Pacific Regional Space Agency Forum (APRSAF-22)**, December 1-4, 2015, Bali, Indonesia, [www.aprsaf.org](http://www.aprsaf.org)

**ITU Telecom World 2015**, December 12-15, 2015, Budapest, Hungary, <http://telecomworld.itu.int/>

**PTC'16**, January 17-20, 2016, Honolulu, Hawaii, USA

PTC's annual conference is the Asia-Pacific's premier telecommunications event. *PTC'16: Reimagining Telecoms* will explore how ecosystem participants must reshape their strategies, revenue models, products and services, processes, customer relationships and regulatory strategies, and how every industry and organization adapts to an era of communications and computing abundance.

Join your colleagues at PTC'16 in Honolulu, Hawaii from 17–20 January 2015. [Register online today](http://www.ptc.org/ptc16). For more information please visit [www.ptc.org/ptc16](http://www.ptc.org/ptc16)

**Convergence India 2016**, January 20-22, 2016, New Delhi, India, [www.convergenceindia.org](http://www.convergenceindia.org)

Themed as *"Digital India"*, the forthcoming 24th edition of Convergence India expo will take place from 20 to 22 January 2016 in New Delhi, India. The expo will attract over 100 speakers, 1,500 conference delegates, 15,000 business visitors, and participation by 500+ companies from 30 countries showcasing latest trends and technologies. The three-day parallel conference will bring the entire ICT fraternity (industry leaders, investors, government officials and users) together on a single platform to discuss, network and share their valuable insights into the technologies and services of tomorrow.

**Global Space and Technology Convention**, February 11-12, 2016, Singapore, [www.gstcsingapore.com](http://www.gstcsingapore.com)

**SmallSat Symposium**, February 23-24, 2016, Silicon Valley, CA, USA, [www.smallsatshow.com](http://www.smallsatshow.com)

**ABU Digital Broadcasting Symposium 2016 (ABU DBS 2016)**, February 29-March 3, 2016, Kuala Lumpur, Malaysia, [www.abu.org.my/dbsymposium](http://www.abu.org.my/dbsymposium)

**Satellite 2016**, March 7-10, 2016, Washington DC, USA, [www.satshow.com](http://www.satshow.com)

**CABSAT 2016**, March 8-10, 2016, Dubai, UAE, [www.cabsat.com](http://www.cabsat.com)

An event with a 22 year history of engaging, innovating and disrupting with the industries decision makers involved in the Creation, Management, Distribution and Monetization of filmed entertainment and audio content. CABSAT is the number one event for the satellite, broadcast, digital media and content industries. Network with and join all the major industry stakeholders, the region's key influencers, buyers and innovators such as Arabsat, Fox, Dubai Film, Etisalat, MBC, Selelevision, Yahlive and many more at CABSAT 2016.



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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).*