

# APSCC Monthly e-Newsletter

## APRIL 2017

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 1 March to 31 March.*

### INSIDE APSCC

#### **SatComm2017, 23 May, Singapore**

APSCC invites you to check out how SatComm2017 is changing and impacting the world of **Future Connectivity**, how satellite will play a pivotal role in **Accelerating the Growth of M2M/IoT** and where we are at when it comes to **Next Generation Global Networks**. Gathering over 800 attendees at Asia's largest ICT Innovation festival hear from operators as well as these satellite players on how will all this pan out at the CommunicAsia2017 Summit.

#### **23 May, SatComm:**

- Keeping the Promise of HTS and its Commercial Value
- Growing the VSAT Potential: Deep-diving on Cellular Backhaul Capabilities
- Seizing Growth Opportunities in IoT and M2M Market – How will this Revamp the Role of the Satellite Industry?
- How is IP and Hybrid Networks Changing the Satellite Industry of Tomorrow?

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#### **APSCC 2017 Satellite Conference & Exhibition, 10-12 October, Tokyo, Japan**

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 major deals. Celebrating its 20th annual event APSCC 2017 #SATECHexplorer will incorporate industry veterans and new players through the 3-day of in-depth conference program to reach out to a broader audience. Join APSCC 2017 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. For more information, please visit [www.apscc2017.com](http://www.apscc2017.com)

### SATELLITE BUSINESS

#### **Thaicom and Intersat Partner to Offer Managed Satellite Services in Africa**

March 1, 2017 - Thaicom Public Company Limited and Intersat Limited, a leading VSAT provider of cost-effective, end-to-end satellite communications solutions, announced the launch of its Managed Satellite Network Service for Intersat and Thaicom enterprise and government customers over the iDirect satellite hub platform. The companies recently signed a multi-year deal for capacity on the THAICOM 6/AFRICOM 1 satellite. The service will provide a secure satellite network on the THAICOM 6/AFRICOM 1 satellite which is located at 78.5 degrees East, and an Intersat-owned, collocated iDirect hub at the company's Kenya-based teleport. Intersat will manage the end-to-end service from its Network Operations Center (NOC) in Nairobi, Kenya. The platform provides a fully managed, customized turnkey service, utilizing state-of-the-art Evolution<sup>®</sup> hub technology by iDirect which, when

combined with THAICOM 6/AFRICOM 1's powerful beams over Africa, leverages high degrees of efficiency to deliver cost-effective and competitive managed services to its customers.

### **GEE to Install Airconnect Global Satellite Connectivity System on Boeing 737NG Aircraft in China**

March 1, 2017 - Global Eagle Entertainment Inc. (GEE) received a vendor Supplemental Type Certificate (vSTC) from the Civil Aviation Administration of China (CAAC) to install GEE's Airconnect Global Satellite Connectivity System on Boeing 737 Next Generation ("B737NG") aircraft in China. The Airconnect product is GEE's satellite-based broadband internet connectivity system. GEE is the first major aircraft satellite connectivity service provider to receive CAAC approval on the Boeing 737 platform, representing a critical milestone for aviation connectivity development in China. GEE has pursued a long-term growth program in China, including the following: establishment of a Wholly Foreign-Owned Enterprise (WFOE) and GEE's China Technology Center; local engineering and software development teams; innovative and new revenue generating services that meet local regulations; partnerships with Chinese media and advertising firms; and establishment of multiple teleports with leading Chinese telecommunications partners.

### **Manage and Monitor Fleet's VSAT Connections with Globecom Connect**

March 1, 2017 - Globecom, one of the leading providers of global connectivity services, is enabling advanced monitoring of VSAT communications systems with a new service, Globecom Connect. Customers of Globecom VSAT can use Globecom Connect to gain visibility of their network's status and performance whether at sea or ashore. Maritime customers can use the Connect Ship portal to monitor performance at sea, while land-based users in any market vertical can use the Connect Customer portal. The Connect Ship portal provides visibility to the master and crew of network status, current beam in use, ship's course and speed and diagrams of beam direction and elevation enabling better communication's management.

### **Intelsat Upgrades to ViaLiteHD RF at Fuchsstadt Teleport**

March 1, 2017 - Intelsat has been using ViaLite RF over fiber links for over 15 years and during that time has installed more than 400 ViaLite links. The links at Intelsat's Fuchsstadt teleport in central Germany are from ViaLite's Classic product range, and connect the teleport's 70 antennas and control room. These Classic RF over fiber links have proven highly reliable so it is only now, in line with its pro-end-of-life policy, that Intelsat has started to upgrade the legacy links to high performance ViaLiteHD links.

### **O3b and Presta Bist Telecoms Sign Agreement to Significantly Increase Capacity**

March 2, 2017 - O3b Networks announced that its customer, Presta Bist Telecoms, has signed an agreement to significantly increase its contracted capacity in response to rising demand for reliable, high-speed broadband in the Republic of Chad. This upgrade is a 66% increase in capacity over the initial contract, enabling Presta Bist to continue to fulfill the growing connectivity needs of both consumer and business customers. Presta Bist is a growing Internet Service Provider (ISP) in the Chad market and has emerged as a leading provider of high-performance internet service in the region by offering high-throughput, low latency connectivity over the O3b satellite-enabled network. The service quality Presta Bist is able to provide because of O3b has been a major driver of economic development for Presta Bist and for the ISP's customers. In an effort to expand the reach of reliable broadband throughout Chad and the Sahel region, O3b and Presta Bist hosted a joint workshop and demonstration in 2016. This capacity upgrade comes as a direct result of that demonstration, and its impact on more than 80 attendees from across the telecommunications industry.

### **Comtech Secures \$4.5 Million Agreement for Navigation and Telematics Services**

March 2, 2017 - Comtech Telecommunications Corp. announced that during its third quarter of fiscal 2017, the Company's Commercial Solutions segment has received a \$4.5 million multi-year contract agreement from a major mobile network operator in the Republic of China for use of the Company's navigation and telematics APIs via their Location Studio Platform.

### **Gilat and HUGHES to Unveil High Performance Dual-Band Aero Antenna for In-Flight Connectivity**

March 2, 2017 - Gilat Satellite Networks Ltd. and Hughes Network Systems, LLC announced a new high-performance dual Ka- / Ku-band aero antenna agnostic to the underlying VSAT modem technology and service platform. The companies have been working together for nearly two years on the development of the antenna. The new antenna from Gilat and Hughes supports both Ka- and Ku-band on a single antenna platform while affording favorable weight and drag characteristics versus the use of two separate antennas. The dual band capability enables continuous broadband connectivity for commercial aircraft traveling air routes that require a combination of Ka and Ku coverage to serve the full air route. The antenna further meets the volume

requirements for radome line-fit installations on both Airbus and Boeing aircraft, while optimizing its aperture size under the available volume. Gilat and Hughes are both offering the antenna to their respective customers integrated with their own aeronautical VSATs. The antenna was developed in accordance with Hughes' RF and technical specifications and is compliant with open-standard specifications.

### **Orbit Provides Full Support for VT iDirect's Airborne Satellite Communications**

March 3, 2017 - Orbit Communications Systems Ltd., a leading provider of precision tracking-based communications solutions and airborne communications management systems, announced that its AirTRx VSAT solution now provides full support for iDirect's airborne satellite communications with a newly-developed ruggedized modem. The AirTRx ruggedized modem integrates iDirect's Evolution<sup>®</sup> Satellite Router Board with a weatherproof enclosure that complies with the Radio Technical Commission for Aeronautics (RTCA) DO-160G standard and complements Orbit's field-tested airborne VSAT terminal in X, Ku and Ka bands.

### **Eutelsat and ViaSat Close European Broadband Joint Venture**

March 6, 2017 - Eutelsat Communications and ViaSat Inc. closed their partnering arrangement combining Eutelsat's established European broadband business with ViaSat's broadband technology know-how and Internet Service Provider (ISP) business expertise. Building on a decade-long relationship, Eutelsat and ViaSat are creating a partnership that will expand Eutelsat's current wholesale broadband business and launch a new consumer retail service in Europe. Headquartered in Lausanne, Switzerland, the joint venture will consist of two businesses coordinating efforts to expand the European broadband market. Wholesale Services will focus on providing wholesale broadband and mobility services in the European and Mediterranean regions to the newly established retail services business and existing Eutelsat distributors. Eutelsat is contributing its current European broadband business including the KA-SAT satellite to the newly formed entity, owned 51% by Eutelsat. ViaSat has acquired a 49% interest in the business for a consideration of €132.5 million. Retail Services will focus on offering retail broadband services in the European and Mediterranean regions. Enhanced service plans are expected to be introduced in select European countries from 2017 onwards, setting a foundation for growth in the retail services business with the availability of future satellite capacity. This business is owned 51% by ViaSat and 49% by Eutelsat.

### **iDirect Government Unveils 9-Series Airborne Satellite Remote with Enhanced Features**

March 7, 2017 - iDirect Government has unveiled its high-speed 9-Series Airborne Satellite Remotes providing enhanced functionality in a variety of form factors, enabling government organizations to utilize the best options for their military missions. Whether coordinating with ground elements, transmitting high-definition intelligence, surveillance and reconnaissance (ISR) video or conducting in-flight mission planning, the 9-Series airborne product line is fast, secure and efficient. The 9-Series, which includes the 980 Airborne Satellite Router Board, the 9800 AE (ARINC 600 enclosure) and the 9800 AR (1RU enclosure), delivers as much as 45 Msps downstream and as much as 29 Msps upstream. These products incorporate transmission security (TRANSEC), designed to meet Federal Information Processing Standards (FIPS) 140-2 Level 3 and AES 256-bit link encryption standards. The Airborne Satellite Routers are compatible beginning with iDirect Evolution and Velocity 1.3. They incorporate the OpenAMIP standard, which gives users the ability to select a variety of airborne antenna systems for their missions.

### **Hughes Launches World's Largest and Fastest Broadband Satellite Network**

March 7, 2017 - Hughes Network Systems, LLC (HUGHES) announced the launch of the world's largest and fastest satellite broadband network. The new network will support a variety of consumer, business, enterprise, in-flight and cellular backhaul applications across two continents. The network utilizes the latest JUPITER<sup>™</sup> System technology operating on the recently launched Hughes EchoStar XIX satellite, the world's highest capacity broadband satellite. It will also operate over EchoStar XVII and the Hughes hosted payload on the Eutelsat 65W satellite. With next year's launch of Hughes hosted payload on the Telstar 19V satellite, the network will be further enhanced and provide additional coverage in South America. Supported by 49 gateways and hundreds of spot beams, the network will deliver more than 400 Gbps of capacity for use by consumer and business customers across North and South America.

### **Bansat to Roll out Cellular Backhaul Network Using ND SatCom's SKYWAN 5G Technology in Columbia**

March 7, 2017 - ND SatCom has announced that its partner Bansat will install cellular backhaul solutions for a leading mobile service provider in South and Latin America. Bansat will use ND SatCom's SKYWAN platform to extend Ku-band connectivity and deliver 3G voice and data services with upgrade capability to support 4G/LTE. Bogota-based Bansat operates the teleport from its own premises in the capital and offers service coverage of

Colombia and Central America countries. Bansat is a certified partner of ND SatCom with experience in SKYWAN technology. Initial deployment of the SKYWAN 5G-based technology will connect a major city in the Amazonas region to the core network of the mobile service provider in Bogota. During field tests with live cellular traffic, Bansat successfully demonstrated high-quality voice performance and excellent link stability throughout. SKYWAN 5G, the ONE solution from ND SatCom, is a MF-TDMA VSAT satellite router with unique bidirectional transmission capabilities to quadruple the throughput per node by cascading. With SKYWAN 5G's load balancing feature, overbooking of traffic in all TDMA channels is avoidable.

### **Intelsat Acquires Equity Stake in Kymeta**

March 7, 2017 - After achieving critical development milestones for the mTenna® antennas combined with the introduction of KALO services, Intelsat has acquired an equity stake in Kymeta. Additionally, it was announced that Stephen Spengler, Intelsat's Chief Executive Officer, has joined Kymeta's board of directors. Stephen Spengler said: "Intelsat is developing and supporting the innovative new technologies that will unlock new applications for our sector. The demand for fast, reliable broadband connectivity requires innovation in-orbit and across the entire satellite ecosystem to unlock new growth opportunities. Our partnership with Kymeta provides a real game changer and a high performance, cost-effective alternative for the industry. As noted by our increased equity stake, we value our partnership with Kymeta and look forward to capturing exciting opportunities in fast growing new vertical markets together."

### **Comtech EF Data Announces Ground Breaking Heights™ Dynamic Network Access Technology**

March 7, 2017 - Comtech EF Data Corp. has announced the revolutionary Heights™ Dynamic Network Access (H-DNA) technology. With H-DNA, the Heights platform offers an uncompromised step change in performance and a vehicle to provide an exceptional end user Quality of Experience, clearly differentiating the networking solution from all others. The Heights Networking Platform is engineered to elevate service levels, via unparalleled horsepower, efficiency, application optimization and intelligence, addressing the needs of satellite operators and service providers of all scales. Heights meets the demands of traditional Fixed Satellite Services (FSS) wide beam operation while providing distinct advantages for those using or considering migrating to High Throughput Satellite designs. Heights Dynamic Network Access is a revolutionary, dynamic network access technology designed for the Heights Networking Platform's return links. It is fast, flexible and uncompromised, delivering unprecedented benefits to users, service providers and satellite operators alike. The culmination of new waveforms, enhanced bandwidth management algorithms and robust multi-layer Quality of Service (QoS) make this return access scheme highly dynamic and automatically able to react to real-time traffic demand, providing best fit solutions based on customers' service level agreements and network policies.

### **Hughes Announces HughesNet Gen5 High-Speed Satellite Internet Service**

March 7, 2017 - Hughes Network Systems, LLC (HUGHES) announced HughesNet® Gen5, the first and only U.S. satellite Internet service to offer Federal Communications Commission (FCC) defined broadband speeds – 25 Mbps download and 3 Mbps uploads – from coast-to-coast. When it goes live on March 16, 2017, HughesNet Gen5 will deliver faster speeds, more data, and built-in Wi-Fi for consumers and small businesses across the entire continental U.S. and key areas within Alaska. HughesNet Gen5 will be powered by the Hughes JUPITER™ System, the most widely deployed satellite networking platform globally, operating over EchoStar XIX, the world's highest-capacity broadband satellite, as well as EchoStar XVII currently in orbit. HughesNet Gen5 is available in a variety of affordable consumer and business plans to suit customer's specific requirements, featuring from 10 to 250 GB/month of data, and all with download speeds of 25 Mbps and upload speeds of 3 Mbps.

### **Intellian to Introduce World's First Convertible 60cm Class Antenna**

March 7, 2017 - Intellian Technologies, the world's leading provider of maritime satellite communications and entertainment systems, introduces the v65; a 60cm class Ku/Ka convertible satellite communications system. The v65 is poised to drive adoption of new connectivity solutions in the mobility market by making access to both Ku- and Ka-band on the same antenna system simple and cost-effective. In the Maritime sector, digital transformation across the industry is a likely antidote to today's challenging economic climate. New satellites and services seem to emerge all the time, some operating in Ku-band and others in Ka-band. Fleet Managers are challenged with limited funds and the responsibility to choose a solution that enables the digital ship while delivering the best ROI.

### **SKY Perfect JSAT and Kymeta Sign Strategic Partnership & Investment Agreement for Moving Vehicles**

March 8, 2017 - SKY Perfect JSAT Corporation announces that SJC and Kymeta have signed a strategic partnership agreement to provide new mobile satellite communications technology to the Japanese market and for SJC has also recently become an investor in Kymeta. Kymeta has developed a satellite antenna technology

that harnesses the traits of metamaterials. This electronic beamforming mTenna (Kymeta mTenna™) technology enables moving vehicles to leverage high throughput connectivity via satellite. SJC expects Kymeta mTenna™ technology will make it possible to provide high-throughput connectivity to mobile platforms such as emergency first response vehicles, transportation, IoT applications and more. SJC and Kymeta will pursue business development. As a part of this engagement, Kymeta will create solutions for SJC's current and future customer needs. The two companies are planning a Kymeta product demo in Japan around 2017 summer which will be the first opportunity for Kymeta to demonstrate in Asia Pacific

#### **Cobham Showcases New 1.2m Stabilized VSAT Antenna**

March 8, 2017 - Cobham is showcasing its new, state-of-the-art 1.2 meter EXPLORER 8120 VSAT antenna system with unique stabilization technology at Satellite 2017. The EXPLORER 8120 is an Auto-Acquire, Drive-Away Antenna System providing 'Comms-On-The-Pause' operation with high-speed connectivity and link stability for professional users from a wide range of industries including news & broadcasting, oil & gas and utilities management. The EXPLORER 8120 combines a larger antenna reflector with the unique Dynamic Pointing Correction system introduced on the EXPLORER 8100, giving users the opportunity to enjoy even higher bandwidth and availability of service anywhere within the coverage area. The EXPLORER 8120 retains the unique ability to maintain a strong link to the satellite should the vehicle move on its suspension due to people getting in and out, high winds, earth tremors, and percussive shock events such as the local use of heavy military ordinance, for example.

#### **Thales Launches MissionLINK for Land-mobile Satellite Communications**

March 8, 2017 - Thales has launched its latest land-mobile satellite communications solution. As a newly available product, MissionLINK will provide the entire land-mobile community with a truly global broadband connectivity solution enabled by Iridium Certus. MissionLINK will provide reliable satellite communications for terrestrial customers regardless of the landscape through an affordable, commercialized, enterprise-grade solution designed to meet the unique challenges of any environment. The lightweight solution also affords a simple, adaptable and robust design and easy to use interface. The MissionLINK solution will deliver highly reliable connectivity for all mission critical communications whether operated for an individual or for fleet-wide needs. It can support a variety of terrestrial operations, including commercial transport, fleet services, recreational and off-road vehicles, and fixed station needs – both for remote and deployable services. It will also be available to military customers as a commercial off-the-shelf solution or be adapted to meet the needs of diverse military operations. MissionLINK on Iridium 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.

#### **Gilat Announces Availability of Mobility-ready Solution for On-the-Move Applications**

March 8, 2017 - Gilat Satellite Networks has announced the availability of its revolutionary mobility solution for its multi-application SkyEdge II-c platform. The comprehensive mobility feature-set supports unprecedented spectral efficiency and availability while delivering throughput of up to 400Mbps. Gilat's multi-application platform powered by its distributed X-Architecture is now optimized and enhanced to meet the most challenging satellite mobility communication requirements. SkyEdge II-c, already successfully deployed worldwide, is now available with new mobility technologies including unprecedented throughput, significant bandwidth efficiency, highest service availability and substantial operational advantages. Gilat's Taurus and Capricorn family of VSATs achieve unprecedented throughput reaching up to 400 Mbs while enabling transmission at supersonic speeds with Doppler timing compensation. SkyEdge II-c VSATs are powered by a multi-core ARM CPU and deliver excellent user experience over satellite.

#### **Thales Enters Commercial Maritime Market with VesseLINK**

March 8, 2017 - Thales has announced it will enter the commercial maritime communications market. The newly available satellite communications solution, VesseLINK, will provide commercial maritime vessels with a truly global broadband connectivity solution for the entire maritime ecosystem. VesseLINK will provide critical marine operations with a lifeline to shore whenever or wherever a vessel may be 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. The solution will deliver essential communications for enhanced safety features and critical operations ensuring that customers have the most reliable capabilities for their individual vessel or fleet-wide needs. It can be equipped on all marine platforms, including commercial shipping, workboats, fishing vessels, leisure and luxury boats, and cruise ships. It will also

be available to military customers as a commercial off-the-shelf solution or be adapted to meet the needs of diverse military operations.

#### **Thales and SES Select Hughes for Next-Generation Aviation Connectivity Network for the Americas**

March 8, 2017 - Thales, SES S.A. and Hughes Network Systems (HUGHES) announced a set of strategic agreements to enhance the delivery of FlytLIVE™ – Thales' connected inflight experience solution, offering the most advanced and efficient aeronautical connectivity solution available in the Americas. Under the agreements, SES contracts capacity on Hughes EchoStar XVII and EchoStar XIX high throughput (HTS) Ka-band satellites to complement its AMC-15 and AMC-16 network giving FlytLIVE the only redundant coverage network in North America. SES will also purchase multiple JUPITER™ System gateways from Hughes to qualify Thales to deploy its FlytLIVE service on Hughes JUPITER Aeronautical platform. This will allow Thales to initiate its next-generation connected in-flight experience offering in North America this year. Furthermore, the system being deployed is forward compatible with SES-17, SES' powerful Ka-band HTS satellite optimized for aviation connectivity and expected to launch in 2020, thus ensuring Thales' airline clients have a clear and effective path for accommodating the ever-growing traffic demands of their passengers.

#### **Intelsat General Becomes Airbus Channel Partner for Military Satellite Communications**

March 8, 2017 - Airbus Defence and Space has signed Intelsat General to its channel partner program for Skynet 5 military satellite communication services. Under this channel partner agreement, Intelsat General will be offering Skynet X-band and UHF services as part of their mobile and fly-away communications portfolio, to the U.S. government. Airbus Defence and Space is working with service providers to develop new partnerships to deliver highly resilient Skynet military satellite communication services to Asia Pacific region, following the move of its Skynet 5A satellite from 6° East to 95° East to provide global X-band and UHF coverage in this region. Since the move of Skynet 5A in September 2015, Airbus Defence and Space has signed nine channel partner agreements with companies in the Asia Pacific region and in the USA. The relocation of Skynet 5A was initiated to extend the X-band coverage and services from 178 West to 163 East, including the Indian Ocean and Western Pacific region. The Skynet network now offers global military coverage, expanding core service reach for the UK military and augmenting coalition capabilities in the region.

#### **Thuraya's XT-PRO DUAL Recognized by Mobile Satellite Users Association**

March 8, 2017 - Thuraya Telecommunications has announced that its Thuraya XT-PRO DUAL has been selected as the winner of the "Top Land Mobility Satcom Innovation" category in the Mobile Satellite Users Association's (MSUA) 2017 Mobility Innovation Awards. Thuraya's XT-PRO DUAL is the world's first dual mode, dual SIM phone that unlocks the power of convergence and sets new standards for the industry. Designed for users who move in and out of terrestrial coverage frequently, it can be used for government missions; and both on and offshore by oil and gas refinery and exploration companies. Thuraya XT-PRO DUAL also appeals to NGOs, SMEs and large scale enterprise companies, VIPs and consumers. With a dedicated SIM slot for satellite communications and a second one for GSM communications, Thuraya's latest handset transforms usability and choice. Supported by Thuraya's robust network, users can enjoy clear communications and uninterrupted coverage across two thirds of the globe by satellite and across the whole planet through unique GSM roaming capabilities, with 389 agreements already in place.

#### **Globalstar and Inmarsat to Form Partnership to Cross-Sell Satellite Services**

March 8, 2017 - Globalstar and Inmarsat announced their intention to form a new partnership to cross-sell their respective products and services, increasing their global reach. The future partnership aims to provide additional service options for the growing and diverse needs of the companies' expanding international customer bases. Inmarsat and Globalstar are working towards a formal agreement, which will provide both companies with new and complementary capabilities. Both organizations own and operate their own satellite constellations, with Globalstar using a new low-earth orbiting (LEO) type that launched in 2013, and Inmarsat using geostationary (GEO) satellites, including its Global Xpress high-speed mobile broadband constellation, which entered global commercial service at the end of 2015. This partnership combines the best of both proven satellite technologies, making it a mutually beneficial alliance. Both companies will continue to operate independently of each other and the completion of the agreement will be effective in the coming weeks.

#### **IAG Signs Contract to be Launch Customer of Inmarsat's European Aviation Network**

March 8, 2017 - Inmarsat announced International Airlines Group (IAG) as the launch customer for its European Aviation Network (EAN) high-speed in-flight broadband service, which Inmarsat will jointly operate with its partner Deutsche Telekom. This contract is a flagship achievement in Inmarsat's strategy to revolutionize the onboard

experience for airline passengers with purpose-built next-generation connectivity solutions. EAN allows European passengers to use their personal devices for internet browsing, video streaming, gaming and other online services, with unmatched high capacity, low-latency performance. EAN's robust and ultra compact technology makes it uniquely qualified for the European airspace, where aircraft size, flight density and frequent aircraft manoeuvring are challenging to broadband satellite-only systems. EAN is the first solution in the world to integrate connectivity from a satellite, operated by Inmarsat, and a complementary LTE-based ground network, operated by Deutsche Telekom. IAG plans to equip in excess of 300 aircraft with EAN and aims to have 90% of its short haul fleet complete by early 2019.

#### **Velconet Selects EUTELSAT 115 West B to Provide Broadband across the Southern Cone**

March 8, 2017 - Velconet SA has signed a multi-year agreement with Eutelsat Americas, a subsidiary of Eutelsat Communications, to provide broadband services across Argentina, Peru, Paraguay and Chile via the EUTELSAT 115 West B satellite. Velconet will use EUTELSAT 115 West B's robust Ku-band coverage and exceptional power levels across the Southern Cone to provide broadband connectivity in areas located beyond the reach of terrestrial networks. The service will target corporate customers mainly in the agricultural industry, which represents one of the largest economic sectors in Argentina with over 250,000 farms, in addition to Tourism, Construction, Banking, and Small Businesses.

#### **Telenor Satellite, Cobham Sign THOR 7 Antenna Supplier Deal**

March 8, 2017 - Norway's Telenor Satellite and Cobham have signed an agreement for the supply of SAILOR Ka-band antenna systems to support growth of the new generation High Throughput Satellite (HTS) service, THOR 7. Bergen, Norway-based Cobham partner Pyxisat will provide delivery, installation and maintenance services to Telenor as part of the agreement. THOR 7 features up to 25 simultaneously active spot beams providing coverage for high-speed maritime broadband across the North Sea, Red Sea, Baltic Sea, North Atlantic, Persian Gulf and the Mediterranean. The agreement with Cobham enables Telenor to secure high performance and reliability on THOR 7 by providing the most advanced Ka-band antenna systems available today to its diverse user-base, which spans the offshore, shipping and superyacht segments.

#### **Marlink and Intelsat Partner for the Growing Connectivity Demands of the Maritime Passenger Sector**

March 13, 2017 - Intelsat S.A. and Marlink announced that their partnership to deliver high throughput satellite (HTS) services to cruise and passenger vessels using Intelsat Epic<sup>NG</sup> has contributed to an increase in bandwidth delivered on Marlink's Sealink VSAT service of more than 220 percent during 2016. This growth in bandwidth enabling broadband connectivity for Marlink cruise and passenger segment customers is more than three times larger than what Marlink was delivering at the beginning of 2016. This has been driven by the global services capability that Marlink offers on its Sealink VSAT service portfolio, enabled using the Intelsat Globalized Network, including the Intelsat Epic<sup>NG</sup> platform and strategically located teleports around the world. The Intelsat-Marlink strategic agreement for services on the Intelsat Epic<sup>NG</sup> platform began in 2014. Marlink is already providing services via Intelsat 29e and Intelsat 33e, which combined, cover the Americas, Caribbean, and the heavily traveled North Atlantic route, Europe, Africa and Asia. Marlink will add coverage via Intelsat 35e when it begins operations later in 2017, and will complete global coverage when Horizons 3e is launched in the second half of 2018.

#### **ORBCOMM's Partner Kordia Awarded Multi-year Contract by Australian Maritime Safety Society**

March 13, 2017 - ORBCOMM Inc., a global provider of Machine-to-Machine (M2M) and Internet of Things (IoT) solutions, announced the award of a multi-year contract with the Australian Maritime Safety Authority (AMSA) through ORBCOMM's partner Kordia Pty Ltd (Kordia). ORBCOMM and Kordia, a leading provider of mission-critical networks in New Zealand, will provide satellite Automatic Identification System (AIS) data used for ship tracking and other maritime navigational and safety efforts to AMSA for designated regions and specific maritime projects. The AMSA contract award, which was the result of a competitive bid among providers of space-based AIS data service, is funded for two years. Headquartered in Canberra, Australia, AMSA is responsible for promoting maritime safety of navigation and protection of the marine environment as well as providing a national search and rescue service.

#### **Advantech Wireless Releases Second Generation ASAT II™ Multiservice VSAT System**

March 13, 2017 - Advantech Wireless ASAT II™ System and its 3D BoD™ and WaveSwitch™ technologies delivers the best possible service, highest quality and most efficient bandwidth utilization. This new system has been developed to satisfy the most demanding operators' needs, built with flexibility and scalability in mind, allowing operators to run multi-application services. The ASAT II™ System ability to assign all waveforms and

access methods from a common bandwidth pool, avoids the need to partition the bandwidth space segment for each waveform as in other VSAT systems, and eliminates the associated network inefficiencies and bandwidth wastage.

#### **Global Eagle Launches New Entertainment and Wi-Fi Portal for Cruise Ships**

March 13, 2017 - Global Eagle Entertainment Inc. is unveiling its new Airtime Portal for cruise ships this week. The Airtime Portal platform enables cruise ship operators to deliver Wi-Fi, instant messaging, social media, live TV, movies, games, news and more directly to passengers' own mobile devices anywhere on the ship. Guests can access and post to their favorite social media sites, send "selfies" to their friends and families back home and keep up with the latest news at sea. The Airtime Portal is derived from Global Eagle's highly successful and proven platform which has been deployed on hundreds of commercial airlines. The company will transition its existing cruise ship portals to the new technology over the next 12 months in a way that minimizes disruption for ship operators.

#### **COMSAT Awarded Contract to Provide Department of Defense with Global Xpress SATCOM as a Service**

March 14, 2017 - COMSAT announced that it has been awarded a contract with the U.S. Department of Defense (DoD) to support communication activities on the African continent with Inmarsat's Global Xpress SATCOM as a Service capability. Delivering end-to-end managed high-throughput service everywhere, Global Xpress SATCOM as a Service provides 24/7/365 management, monitoring and support globally. SATCOM as a Service delivers guaranteed data rates to satisfy mission requirements at a moment's notice. Importantly, it allows users to leverage COMSATCOM for core functions, while seamlessly integrating with MILSATCOM for optimal redundancy, diversity, protection, scalability and global portability; the ultimate resilience approach. Government users travel from one location to another, and simply "plug in" to get what they need, when they need it. With solid service level agreements and committed information rates, users get what they ask for via easy to use terminals, and receive an assured quality of service.

#### **Kymeta and Intelsat Announce New Service to Revolutionize How Satellite Services Are Purchased**

March 14, 2017 - Kymeta, the company delivering on the promise of global, mobile connectivity, and Intelsat S.A. have joined forces to offer a new, groundbreaking, satellite service offering that is easy to buy and use. The new KĀLO service, which will become available in Q3 2017, will introduce a simplified way to buy and sell connectivity to customers and sectors that are currently unreached or underserved by terrestrial networks. KĀLO will change the way satellite services are purchased by direct users, integrators and service providers because it will be sold much like cellular services are purchased. Using Kymeta mTennau7 antenna subsystem modules (ASMs) and fully integrated KyWay Terminals, KĀLO will provide easy, flexible satellite connectivity for both fixed and mobile applications, further reducing communication barriers. KĀLO will provide a fully provisioned end-to-end connectivity solution that will unlock fast growing vertical sectors that have been historically difficult to support, including rail, energy, IoT, first responders, buses, connected car and more.

#### **SpeedCast Returns Internet Services to Christmas Island**

March 15, 2017 - SpeedCast International Ltd. has reached an agreement with the Australian Government to deliver Wireless and 4G network services on Christmas Island until June 30, 2017, to allow a transition period for Australia's National Broadband Network services to be installed more widely on the island. The local ISP ceased to provide internet services to 1,000 locals and businesses on March 1, 2017, disconnecting one of Australia's most remote islands. SpeedCast, as a full service communications provider, was notified one week ago and rapidly initiated discussions with partners and the Australian Government to meet the needs of islanders. In order for Christmas Island residents and businesses to get internet access back rapidly, SpeedCast has arranged for disconnected internet accounts to be reactivated. All account holders will then migrate to a SpeedCast internet account over the coming weeks. In addition, SpeedCast will be working closely with community members to evaluate providing Ka-band internet service on Christmas Island over a longer term. SpeedCast's commercial satellite approach would complement the services of NBN. Local businesses will be able to subscribe to internet services with SpeedCast providing different speed options and committed levels of network availability.

#### **AsiaSat Transmits Live Heart Surgery**

March 15, 2017 - AsiaSat was proud to support live transmissions of a heart surgery earlier this year in Hong Kong, providing medical practitioners attending a conference in Singapore the opportunity to see the procedures and techniques shown by some experienced and skilled cardiologists. Five cardiologists were present at the surgery to consult on the operation, and the satellite transmission provided access for doctors in Singapore to witness the procedures in real time, as part of a study to share knowledge, experience and practices among the

medical community. Quality is one of the most distinct advantages that Satellite transmissions have over the internet, as the highest definition possible can be broadcasted to recipients via Satellite. This is especially important in circumstances such as this live surgery transmission, where a clear display of very fine details is necessary. AsiaSat provided a one-stop solution for this live transmission, including the on-site uplink equipment and AsiaSat 5's C-band satellite capacity. The process also required on-site support service from a professional OU team, due to Hong Kong and Singapore's rich landscape of high-rise buildings, but with AsiaSat 5's supreme orbital slot, uplink and downlink antennas had clear line of sight with an excellent elevation angle of 59.58 degrees to transmit from Hong Kong, and 85.78 degrees to receive in Singapore.

#### **CETel Expansion on Extended C-band on Arabsat 5C**

March 16, 2017 - CETel, German provider of global satellite, fibre and wireless enabled communications solutions, upgrades its extended C-Band service for Africa to meet the increasing demand in the raw material extraction sector. With more than 50MHz on Arabsat 5C extended, CETel delivers connectivity to rural areas in many African countries, especially Mali, Niger, Nigeria, DRC and South Africa. CETel's Managing Director Guido Neumann announced the upgrade by March 2017, "CETel expands this customer network serving up to 200Mbps to critical and sensitive operations in the natural resources industry", and further explains "the increased bandwidth demand is realized via a hub-based solution from our Teleport in Germany providing dedicated as well as shared services." Arabsat, a long-term strategic partner of CETel Germany delivers the designated space segment. Jointly, CETel and Arabsat deliver reliable and economic managed end-to-end services across Africa for the oil & gas, mining and construction sector.

#### **Fleet Management Limited Selects Inmarsat's Fleet Xpress**

March 16, 2017 - Inmarsat's Fleet Xpress, which delivers game-changing maritime connectivity, has been specified by Hong Kong-based Fleet Management Limited, one of global shipping's largest independent third-party ship managers. Fleet Management Limited (FML), which manages a large fleet of over 400 vessels consisting of bulk carriers, container vessels, general cargo ships, oil tankers, gas carriers and chemical tankers, with over 14,000 crew, has successfully upgraded all vessels previously equipped with Inmarsat's XpressLink Ku-band service to Fleet Xpress. FML expects to roll out Fleet Xpress to the majority of its fleet globally by 2018. The service will use a Cobham 1m GX antenna for Ka-band connectivity combined with a FleetBroadband terminal for L-Band back-up. Launched in 2016, Fleet Xpress sets a new standard in maritime communications. The service enhances vessel efficiency, crew welfare and safety, and facilitates 'connected ship' applications by delivering the highest levels of reliable high-speed broadband connectivity available from a single supplier on a global scale.

#### **Cobham Space Grade Products Launch aboard Iridium NEXT**

March 16, 2017 - Cobham's products and services contributed to the recent successful orbital deployment of Iridium NEXT satellites. Cobham's antennas, motion control solutions, and RadHard microelectronics enable various Iridium NEXT systems. Iridium NEXT is the company's next-generation satellite constellation which replaces and enhances Iridium's existing network of low-Earth orbit satellites. Cobham motion control solutions on Iridium NEXT include actuators for the solar array drive and solar array second axis, while flat plate antennas are used for the inter-satellite links, providing communications between satellites of the Iridium NEXT constellation. Cobham RadHard microelectronics contributing to Iridium NEXT include power supply solutions, Field Programmable Gate Arrays (FPGA), LEON microprocessors and intellectual property, SpaceWire transceivers, 1553 transceivers, NOR flash and SDRAM memories, clock drivers, and MSI Logic. Additionally, four separate Application Specific Integrated Circuits (ASIC) perform control and data switching for various aspects of Iridium NEXT.

#### **ND SatCom Launches Ka2Go – The New Generation of Ka-band Terminals**

March 20, 2017 - ND SatCom has launched the latest plug and play Ka-band satcom terminal with Eutelsat approval. This new version of the field-tested and -proven Ka2Go – Terminal is ready for fast and easy transmissions in Ka-band. The major highlight is the new RF module eTRIA, where motors are no longer required for polarization changes, thus providing higher reliability. Other improvements are the thermal design and integrated Encoder/GSM options, plus the new user-friendly operations application designed for tablet or smartphone use. Current Ka2Go customers can use the migration kit to upgrade and fully benefit from these sought-after features. The new generation of Ka2Go is fully KA-SAT compatible, ready for existing Ka-band service offerings on the market. It provides fast and stable transmissions with up to 10 Mbps data rate throughput. ND SatCom's user-friendly integrated solution, Ka2Go – Terminal, is the most advanced vehicle-mounted antenna system within ND SatCom's SKYRAY antenna family. It is designed to fulfill the most demanding broadcasting requirements and is based on a proven lightweight and robust design. The terminal includes a

patented motorized positioner and automatic pointing system to the satellite, making handling easy. The antenna consists of a high-precision offset Ka-band reflector, GPS receiver, and a compass enabling auto-pointing and auto-network acquisition. In addition, the terminal integrates a KA-SAT modem, IP router, and antenna controller. The Ka2Go – Terminal fits on vehicles of all sizes and is an ideal solution for permanent or ad-hoc transmissions in Ka-band.

### **Kratos to Support Yahsat Satellite Fleet with Broad Suite of Ground System Solutions**

March 20, 2017 - Kratos Defense & Security Solutions, Inc., a leading National Security Solutions provider, announced that Yahsat has selected Kratos to support its expanding satellite fleet with command and control (C2), signal monitoring and data analysis solutions. Kratos' EPOCH<sup>®</sup> Integrated Product Suite (IPS) will provide C2 for Yahsat's Al Yah 3 satellite, an HTS satellite with a global reach over three continents scheduled for launch this year; as well as for Yahsat's existing Al Yah 1 and Al Yah 2 satellites, where it is replacing legacy systems. EPOCH IPS' ability to simultaneously control multiple satellites from different manufacturers with a single consolidated system gives Yahsat a control platform that can scale to support any future fleet expansion. Additionally, Kratos' Monics<sup>®</sup> Carrier Monitoring System will provide advanced carrier monitoring and interference detection services to support Al Yah 3, which will provide multipurpose satellite solutions for broadband, broadcast, government and communications use across the Middle East, Africa, Europe, South America, Central and Southwest Asia. EPOCH and Monics join Kratos' Compass<sup>®</sup> Monitoring and Control (M&C) system, currently being used by Yahsat, to proactively monitor and manage their satellite network devices to reduce costly downtime.

### **SpeedCast Opens the World to the People of Rural Afghanistan by Providing Satellite and Off-Grid Small Cell Communications Solutions**

March 21, 2017 - SpeedCast International Limited announced that it is connecting residents in remote villages in Afghanistan through a partnership with one of the country's largest CDMA operators, Wasel Telecom. Connectivity is provided through a fully managed, off-grid small cell end-to-end solution that includes satellite communications, solar panels, base transceiver stations (BTS) and accompanying towers. After completing a successful proof of concept with Wasel Telecom to connect three rural villages, SpeedCast and Wasel Telecom agreed to collaborate on a bid for an upcoming project for the Afghan government. The work would extend the solution to more than 200 villages in the hardest-to-reach areas of the country. An off-grid small cell solution is a radio access network that includes outdoor small cells (low-powered radio access nodes that operate in licensed and unlicensed spectrum supporting 2G, 3G and 4G LTE) and a base station controller. Satellite backhaul completes the solution. The network is enabled by a solar power system and battery bank with a self-supporting tower and has a range of up to 5km.

### **SES and Intersat to Provide Internet Connectivity across Africa**

March 21, 2017 - SES and Intersat announced that they have signed a multi-year agreement to deliver internet services across Africa. Intersat, one of the largest providers of internet solutions on the African continent, will be providing broadband connectivity to businesses and consumers via SES's NSS-12 satellite, located at 57 degrees East. The latest agreement with SES includes a new C-band capacity lease, infrastructure services out of the SES Betzdorf teleport and a renewal of upgraded Ku-band capacity out of the SES Djibouti Teleport. Intersat will also use the SES Enterprise+ Broadband service to deliver high-speed broadband connectivity across Africa, serving industries such as banking, corporate customers, and internet service providers. Launched in 2015, SES's Enterprise+ is a managed, ready-to-deploy, customized satellite connectivity solution providing carrier grade services and allowing a wide range of applications including connectivity for Enterprise Resource Planning (ERP), Virtual Private Networks (VPN), Voice over IP (VoIP) services, remote data traffic and video multi-casting.

### **Inmarsat Maritime Secures Fleet Xpress Commitment from Hapag-Lloyd**

March 21, 2017 – Inmarsat has signed a five-year contract with Hapag-Lloyd to migrate all ships directly managed by the shipping line to services enabled for Fleet Xpress. Hapag-Lloyd, the sixth largest container shipping operator in the world by Twenty Foot Equivalent Unit (TEU) capacity, will transition all existing ships that it manages in-house from Inmarsat FleetBroadband services to Fleet Xpress. The agreement also covers five 10,500 TEU vessels as latest new builds. Hapag-Lloyd has been an Inmarsat customer for more than a decade, and the transition commitment to Fleet Xpress coincides with the expiry of a service contract based on FleetBroadband with VSAT back-up via Ku-band. The new agreement reflects the ship owner's requirement for a fully managed migration to high-speed broadband and support it can trust from a single service provider. The agreement also stipulates redundant service provision that would be scalable for any future fleet growth. The deal includes terminals from both Inmarsat approved manufactures Intellian and Cobham SATCOM.

### **SES Enables Disaster Response and Connecting Affected Communities**

March 22, 2017 - SES S.A. offers a broad range of solutions to support humanitarian and disaster relief efforts across the globe. SES's satellite solutions can help to restore essential communication links, ensuring immediate coverage via capacity reserved for relief efforts and support for multiple end-to-end humanitarian services. Emergency.lu, a multi-layer platform, which includes a portable Rapid Deployment Kit delivering connectivity via SES satellites, has been devised to support first responders' efforts. In past years, the platform, which is supported by a public private partnership between the Luxembourg government and three Luxembourg-based companies (SES, HITEC Luxembourg and Luxembourg Air Ambulance), and in collaboration with the World Food Programme (WFP), Emergency Telecommunications Cluster and Ericsson Response, has been deployed in many emergency situations around the world, including Haiti, Nepal and Vanuatu, and earlier in Mali, the Philippines, South Sudan, Venezuela and Ebola-affected countries in West Africa.

### **SpeedCast Opens Papua New Guinea Office**

March 22, 2017 - SpeedCast has opened an office in Port Moresby, Papua New Guinea (PNG), to support the company's growing customer base in the energy and enterprise markets. SpeedCast has been operating in the country for more than 10 years with an international gateway and self-sufficient standalone teleport, but this is its first office facility in PNG. The team includes 10 employees who focus on operations, engineering, sales and local support. Through the years, SpeedCast has built a strong presence in PNG through the installation of communication infrastructure and a number of acquisitions including Pactel International in 2013 and Oceanic Broadband in 2014. SpeedCast installed one of the first licensed international gateways since the ICT bill was introduced in 2009, which enacted de-regulation of mobile telephony including international calling and retail price-setting. In 2015, SpeedCast installed two O3b terminals in Port Moresby and Lae and extensive wireless networks to provide ultra-low latency, fibre-speed connectivity to businesses in these two capitals.

### **Talia Announces "OnDemand" Business Continuity Service Built on iDirect's Satellite Platform**

March 24, 2017 - Talia has introduced a business continuity service that will be built on iDirect's satellite ground infrastructure platform. Talia OnDemand has been designed for organisations operating in regions where fixed line services can be unreliable or where occasional use, backup, redundancy or disaster recovery solutions are required. The service will initially focus on the Middle East and African regions, which represents the most promising VSAT growth opportunities in the world. Improved service economics, enabled by High Throughput Satellites, will make satellite connectivity more competitive to alternative solutions and increasingly part of the global end-to-end network. The Talia OnDemand service is powered by ConnectPlus, the Talia designed and developed, patent pending connectivity solution working in conjunction with the iDirect Satellite Platform. ConnectPlus is a network edge appliance connecting a customer's network to the Talia OnDemand service.

### **Cobham SATCOM Shows New Technology Innovations**

March 28, 2017 - Cobham SATCOM's IWCE 2017 booth will host a number of brand new technology developments including interoperability functionality with the MSAT satellite-based mobile telephony service on its eagerly awaited EXPLORER MSAT-G3 terminal, an innovative LTE modem for the EXPLORER 540 BGAN M2M terminal and the cutting-edge EXPLORER 8120 Auto-Acquire, Drive-Away VSAT Antenna System featuring unique stabilization technology. The EXPLORER MSAT-G3 is an IP-based Push-To-Talk (PTT) communications system that uniquely supports Satellite/3G/LTE/LAN backhaul and Land Mobile Radio (LMR) integration to provide seamless voice communication in any situation. It is the only terminal compatible with the next generation hybrid Push-To-Talk MSAT-G3 service, which integrates Land Mobile Radio (LMR) networks, the Ligado Networks SkyTerra 1 satellite and ViaSat's low-latency, IP-based L-band Mobile Satellite Services network to deliver feature rich, high availability communications for US emergency response services and utilities sectors.

### **GENBAND and Vodafone Fiji Deliver Unified Communications (UC) over Satellite to Pacific Nations**

March 27, 2017 - GENBAND, a leading provider of real-time communications solutions, has partnered with Vodafone Fiji to deploy a hosted solution that delivers next-generation cloud and UC services across the Pacific. Designed as an upgrade to the Republic of Kiribati's fixed and mobile network infrastructure, the fully operational deployment leverages the GENBAND Application Server and Kandy Business Solutions for enhanced cloud-based applications. This hybrid offer enables Vodafone Fiji to deliver compelling hosted UC services via satellite links to Kiribati through local provider Amalgamated Telecoms Holdings Kiribati Limited (ATHKL). GENBAND is providing Vodafone Fiji with enhanced SIP Trunking services, voice over satellite, local media anchoring and PRI gateways. Vodafone Fiji leverages GENBAND's Application Server to deliver country-specific hosted billing from its Suva base while web collaboration, auto-attendant, voicemail and WebRTC applications are provided via Kandy Business Solutions.

### **Hytera to Acquire Norsat**

March 27, 2017 - Norsat International Inc., a provider of unique and customized communication solutions for remote and challenging applications, today announced that it has entered into an arrangement agreement with Hytera Project Corp. (“Hytera”) a subsidiary of Hytera Communications Co., Ltd. pursuant to which Hytera will acquire all the issued and outstanding shares of Norsat for \$10.25 in United States dollars in cash per share, pursuant to a court-approved plan of arrangement. All unexercised options and restricted share units will also be acquired under the Arrangement. The proposed transaction values Norsat at an equity value of approximately \$62 million USD.

### **ViaSat Selects eXtremeDB to Optimize Metrics Data from its Satellite Ground Network**

March 28, 2017 - McObject, developer of the eXtremeDB® Financial Edition database management system, announced that ViaSat, Inc., a global broadband services and technology company, has chosen eXtremeDB in order to implement a new physical layer satellite debugging application known as the Data Metric Aggregation System (DMAS) project. DMAS ingests metrics feeds from satellite ground-system elements at a very high rate and conducts analysis of the data to identify trends and abnormalities to help enhance network speed, quality and reliability. Today approximately 1 million metric entries per second are captured from the ViaSat ground system using eXtremeDB. It is expected that DMAS, using eXtremeDB’s capabilities, will significantly improve the flow rate, performance and quality of the metrics data. Analytics performed on the DMAS data can then be leveraged across market segments and geographic regions of the ViaSat network.

### **Teledyne Completes Acquisition of e2v**

March 28, 2017 - Teledyne Technologies Incorporated (“Teledyne”) and e2v technologies plc (“e2v”) jointly announced the successful completion of the previously announced acquisition by Teledyne of e2v by means of a Scheme of Arrangement. For the machine vision market, e2v provides high performance image sensors and custom camera solutions and application specific standard products. In addition, e2v provides high performance space qualified imaging sensors and arrays for space science and astronomy. e2v also produces components and subsystems that deliver high reliability radio frequency power generation for healthcare, industrial and defense applications. Finally, the company provides high reliability semiconductors and board-level solutions for use in aerospace, space and communications applications.

### **eProcess to Use Intelsat Epic<sup>NG</sup> C-band Spot Beam to Expand Banking Services Across Africa**

March 30, 2017 - Intelsat S.A. announced that eProcess International SA, an affiliate of pan-African banking conglomerate Ecobank Group, has signed an agreement to use the Intelsat Epic<sup>NG</sup> high-performance platform to expand and strengthen its corporate banking services throughout Africa. eProcess International connects head offices and affiliates across 27 countries in Africa, enabling banking transactions and corporate data exchanges through its network. Given the growth in commerce across the African continent, eProcess sought to enhance its network to address increasing transaction volumes for its customers. The solution incorporates high-throughput Intelsat Epic<sup>NG</sup> C-band spot beam capacity available exclusively on Intelsat 35e. This complements the existing eProcess network, which is based on wide beam C-band connectivity on Intelsat 903. Leveraging the backwards compatibility of the Intelsat Epic<sup>NG</sup> solution and the higher efficiency of the spot beams, eProcess is able to accommodate its growing bandwidth demand across its pan-African network.

### **Global Eagle Opens Sydney Office**

March 30, 2017 - Global Eagle Entertainment Inc. has opened a new office in Sydney to support its burgeoning airline business in the South Pacific. This month, Global Eagle signed an exclusive content service agreement with Australia’s flagship carrier Qantas Airways and Qantas’ low-cost subsidiary Jetstar Airlines. Global Eagle will provide a full lineup of movies, TV shows and music via seatback, overhead and wireless inflight entertainment (IFE) systems on Qantas’ 200-plus entertainment-equipped aircraft. Jetstar passengers will enjoy the feature-rich lineup on seatback screens aboard the airline’s growing fleet of 787s. Moving forward, Global Eagle will work closely with Qantas Group to enhance passenger quality of experience through traditional and new media offerings. Fiji Airways and regional carrier Air Niugini have also recently signed on with Global Eagle. As the airlines’ exclusive IFE content service provider, Global Eagle will deliver a full suite of seatback, overhead, tablet and wireless IFE movies, TV and music content on multi-year arrangements.

## BROADCASTING

### **Thaicom Picks V-Nova PERSEUS to Showcase UHD Premium Sports over Satellite**

March 1, 2017 - Thaicom PLC and V-Nova Ltd announced that they will show UHD distribution of premium sports over satellite at a breakthrough low data rate to enable operators to offer cost effective premium live sports services in Ultra HD. The demonstration showcases V-Nova PERSEUS video decoded on a COTS computer to display the quality of UHDp50 footage of football content delivered within the tight constraints of satellite bandwidth. This is also a step towards an integrated workflow for UHD content transiting over the Thaicom satellite infrastructure in order to offer the best quality content in real-time to consumers, regardless of their location.

### **DISH Completes Acquisition of DBS and OTT Assets from EchoStar**

March 1, 2017 - DISH Network Corporation announced the consummation on February 28, 2017 of the agreement executed in January with EchoStar Corporation that will transfer certain EchoStar assets and operations, including its EchoStar Technologies hardware and software development group, its national and regional uplink business, its managed fiber backhaul network serving all U.S. DMAs and its OTT development group to DISH in exchange for DISH's 80 percent economic interest in Hughes Retail Group held in the form of a tracking stock.

### **Arabsat Teams with Globecast to Launch TRT World HD from the 26°E Neighborhood**

March 2, 2017 - Arabsat has been selected by Globecast, a global media solutions provider, to broadcast TRT World, the international news platform of Turkey, in high definition over the MENA region on Arabsat's Badr-6 satellite at 26°E. Globecast is the worldwide distributor of the TRT news platform. Building on its existing relationship with Arabsat, Globecast is supplying global packaged services to TRT World for this project. The company is providing connectivity through its fully redundant fiber network and its Paris NOC, which enables the uplinking of the channel to Arabsat's Badr-6 satellite. With this new Arabsat announcement, TRT World will be able to be viewed in the Middle East and North Africa.

### **New DVB Video & Audio Coding Specification Enabling Future UHD Services Published by ETSI**

March 2, 2017 - Following the approval by the DVB Steering Board for TS 101 154 V2.3.1 – "Specification for the use of Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream", ETSI (European Telecommunications Standards Institute) has officially published the DVB specification as an ETSI standard. The timely move by ETSI facilitates the necessary interoperability that will enable broadcasters and CE manufacturers to provide UHD-1 Phase 2 products and services. This could mean that the first DVB UHD-1 Phase 2 services, that include the new features, would be available later this year. The new standard covers various elements for the improvement of video and audio quality for broadcast TV services including High Dynamic Range (HDR) which significantly increases the contrast ratio and results in pictures with more 'sparkle'. The DVB solutions for HDR include both Hybrid Log Gamma (HLG) and Perceptual Quantizer (PQ) transfer functions. Furthermore, the new standard defines Higher Frame Rates (HFR), offering sharper images of moving objects by going beyond the current 50/60 frames per second. When it comes to audio, DVB has added the latest Next Generation Audio (NGA) schemes to provide immersive and personalized audio content using object- or scene-based audio coding.

### **SES and SPI/FILMBOX Sign Capacity Deal to Distribute HD Channels in Latin America**

March 7, 2017 - SES S.A. has signed a multi-year capacity agreement with SPI International/FILMBOX Channels Group, a global media company that operates more than 30 TV channels, to support the company's expansion in Latin America and distribute its HD channels in the region. SPI will extend its reach in Latin America thanks to the C-band capacity of NSS-806, which covers the entire region in one single beam and is capable of reaching about 90% of all pay TV subscribers in South America. SPI will broadcast its premium content to cable operators and DTH providers from the U.S., bringing up to 10 HD channels to the region: FightBox HD, FashionBox HD, DocuBox HD, Fast&FunBox HD, 360TuneBox HD, FilmBox Art House, Gametoon, NatureVision TV, Eroxx HD and Eroxxx HD. NSS-806 is located at the prime orbital position 47.5 degrees West and was one of the key satellites to transmit the Olympics Games from Rio de Janeiro to the rest of the world last year. The SPI channels are eventually expected to move to SES-14, which is scheduled for launch this year and will replace NSS-806.

### **ASBU Goes MENOSPLUS+ Powered by Newtec Dialog**

March 20, 2017 - Newtec, a specialist in designing, developing and manufacturing equipment and technologies for satellite communications, announced its Newtec Dialog® platform technology will be used by Arab States

Broadcasting Union (ASBU) for the upgrade of its satellite multimedia exchange platform MENOS. Installed by Newtec in 2008, the ASBU Multimedia Exchange Network over Satellite (MENOS) is a revolutionary networking concept which allows broadcasters to exchange multimedia content, including video and audio material, over satellite across several sites scattered across a large geographical area. The platform has continued to gain momentum, with an increasing number of member terminals and national deployments using MENOS and a growing volume of content being shared, including news, radio, television programs and sports. Work to upgrade the architecture has already started, with MENOSPLUS+ due to go live later in 2017. The new system – which is based on the Newtec Dialog multiservice broadcast solution – will create up to 50% additional capacity for HD exchanges. HD mesh contributions to other MENOSPLUS+ terminals will also be enabled. Additionally, the quality of the Fast News Gathering (FNG) content will be drastically improved from 1 Mbps to 2 Mbps using the same space segment (Arabsat 5A). HD contributions will be enabled with Newtec's new high-speed MDM5000 Satellite Modems.

### **SES and Media Broadcast Satellite Extend Partnership for TV Distribution**

March 20, 2017 - SES announced the extension of a capacity agreement with Media Broadcast Satellite, one of the leading providers of broadcast services, on SES's prime orbital position at 19.2 degrees East. With the multi-year extension, Media Broadcast Satellite will continue to use a full transponder on a pan-European ASTRA satellite to serve its customers in Germany, Austria and Switzerland.

### **Intelsat and Orion Express Extend Agreement to Deliver Media Services across Russia Using Intelsat 15**

March 20, 2017 - Intelsat announced that Orion Express signed a multi-year extension with Intelsat for satellite services supporting direct-to-home (DTH) and media distribution services in Russia via the Intelsat 15 satellite. Orion Express, a major satellite television provider and operator of the second largest DTH platform in Russia, uses multiple Ku-band transponders on Intelsat 15 and Horizons 2, co-located at 85° East, to deliver DTH services to customers and TV content to cable and IPTV head ends. Under the new agreement, Orion Express extended its use of Intelsat 15 well into the next decade and expanded its operations by consolidating services with Intelsat that had been with another satellite operator.

### **AsiaSat and Eurovision Extend Partnership to Deliver Top Quality Content to Asia Pacific Region**

March 21, 2017 - Eurovision, the operational arm of the European Broadcasting Union (EBU), and Asia Satellite Telecommunications Co. Ltd. (AsiaSat) announced an expansion of their partnership for use of multiple C-band transponders on AsiaSat 5 and a teleport service from AsiaSat's Tai Po Earth Station in Hong Kong. The C-band transponders will be used for occasional live sports and news transmissions in the Asia Pacific region. They will also support permanent TV channel distribution in Asia for EBU Members and customers. Eurovision and AsiaSat have partnered together since 1999 to deliver top quality sports events to broadcasters holding the rights in the Asia-Pacific region, including major football leagues and tournaments. The collaboration has recently expanded to 4K transmissions of major events successfully delivered to the international broadcasting community. Over the years, AsiaSat's space and ground facilities have been a key part of the Eurovision Global Network. Connecting AsiaSat's Tai Po Earth Station in Hong Kong to the Eurovision FiNE (fiber network) allows Eurovision to provide enhanced value-added services, including equipment hosting, turnaround and uplink services to EBU Members and customers.

### **Intelsat and Sentech Expand Media Distribution Relationship to Deliver More Content across Africa**

March 21, 2017 - Intelsat announced that Sentech, a leading broadcasting signal distributor in Africa, has extended and expanded its relationship with Intelsat to bolster delivery of media services in sub-Saharan Africa. Sentech has been leveraging Ku-band services from Intelsat 20, located at 68.5° East, for decades to cost-effectively deliver Direct-to-Home (DTH) and Digital Terrestrial Television (DTT) services in South Africa. Sentech, which reaches 8.5 million TV households, has contracted additional services on Intelsat 20, Africa's top video neighborhood, to power its growth in the region.

### **Eutelsat 7/8° West Neighbourhood Sets the Pace for HDTV across Middle East and North Africa**

March 21, 2017 - New data from Eutelsat Communications shows that the trend towards High Definition broadcasting is accelerating in the Middle East and North Africa, reflecting consumer appetite for an enhanced viewing experience. With 175 HD channels, of which 100 are exclusive, the 7/8° West position is setting the pace for HD broadcasting in the Middle East and North Africa. Free-to-air Arabic HD content now outnumbers pay, with almost 100 channels, compared to 77 pay-TV channels. The demand for HD reflects the increasing penetration of HD screens in MENA homes which has crossed the tipping point of 50% on average per country.

### **TeamCast Supports Vietnamese VTC Broadcaster to Migrate from DVB-T to DVB-T2**

March 21, 2017 - TeamCast, the world-renowned leader in digital modulation technologies for Digital Terrestrial Television (DTT), Wireless Transmission and Satellite Applications, is contributing to the migration of DTT from DVB-T to DVB-T2 in Vietnam. Vietnam started Digital Terrestrial TV with a first trial in 2000. After a simulcast period from 2011 to 2015, the analogue switch-off has been scheduled from 2015 to 2020. While the first networks used the DVB-T system and MPEG-2 encoding, the networks are now progressively converted to DVB-T2 and MPEG-4. Vietnam Television Corporation (VTC), one of the three nationwide broadcasters in Vietnam, initiated the conversion in 2016, with the upgrade of six high power sites in six major cities. To perform this upgrade on six existing 10 kW IOT based transmitters, VTC selected TeamCast's DVB-T/T2 TWISTER excitors, because of their high adaptability to existing transmitter architectures and their high level of performance. After the high power sites are converted, it is expected that the process will continue in 2017 with medium and low power sites.

### **HorizonSAT Chooses Irdeto to Secure New MENA Pay TV offering**

March 21, 2017 - Irdeto, the world leader in digital platform security, announced it will provide security solutions and services to HorizonSAT, a leading satellite service provider, covering the Middle East, Asia, Africa and Europe. Part of the Irdeto 360 Security suite, Irdeto Cloaked CA with Irdeto FlexiCore will enable HorizonSAT to securely launch and deliver new pay TV services to the Filipino population in the MENA region. The new bouquet will be launched this year as HTV Pinoy. HTV Pinoy will serve over two million people in the Filipino community in MENA, whose native language is Tagalog. Irdeto Cloaked CA provides fully robust and effective security for both broadcast networks and connected IP environments and has been successfully deployed across the globe. The inclusion of Irdeto FlexiCore will give HorizonSAT the ability to renew SOC security, even on already-deployed chips, via software updates over-the-air. This enables them to stay ahead of upcoming threats in a fast-changing technology environment.

### **Eutelsat's Sat.tv App Expands to Vibrant 7/8° West Video Neighbourhood**

March 22, 2017 - Eutelsat Communications announced that Sat.tv, its mobile programme guide, is expanding to include free-to-air channels broadcasting from its popular 7/8° West neighbourhood. Sat.tv was launched in April 2016, targeting the 65 million homes equipped for DTH reception from Eutelsat's HOTBIRD neighbourhood. The app has already registered almost one million downloads and is now available to the more than 52 million DTH-equipped homes in the Middle East and North Africa that receive free-to-air channels from 7/8° West. Sat.tv now gives viewers in the Middle East and North Africa the opportunity to browse through the detailed programme schedules of around 400 free-to-air channels, with options to search by time, channel or type of content. Viewers benefit from a user-friendly programme guide interface available in five languages (Arabic, English, French, Italian, Russian) and can access programme details in up to 40 languages.

### **Vivacom to Deliver Digital Terrestrial Television via Intelsat 33e**

March 22, 2017 - Intelsat announced that telecom provider Vivacom, the leading telecommunication service provider in Bulgaria, will use the Intelsat 33e satellite to distribute digital terrestrial television (DTT) services throughout the country. Intelsat 33e, located at 60° East, the first HTS Ku-band satellite to serve Eastern Europe, provides Vivacom access to higher performance bandwidth over Bulgaria – well-suited for supporting its growing DTT business as well as supporting Vivacom's expansion beyond its traditional broadband and government applications. Intelsat 33e also carries the most advanced digital payload available commercially, which allows for connectivity between spectrum types, in any bandwidth increment and from any beam to any beam. This offers Vivacom the capability to use its existing 18.3-meter C-band antenna at Teleport Plana for uplink to increase availability while delivering the content via Ku-band to several hundred DTT retransmission sites. The digital payload technology is available exclusively on the Intelsat Epic<sup>NG</sup>. Vivacom is transitioning the DTT service to Intelsat 33e, which entered service in January, from Intelsat 12 at 45° East. Vivacom will continue to use Intelsat 12 and the 45° East location to further expand direct-to-home (DTH) offerings in Bulgaria, uplink business and complement the DTT services.

### **Eutelsat and Gulfsat Welcome Kuwait TV's Al-Qurain TV in HD to EUTELSAT 8 West B Satellite**

March 23, 2017 - Kuwait TV, the official Kuwaiti state broadcaster and part of the Kuwaiti Ministry of Information, announced that the new Al-Qurain TV channel has launched in its free-to-air HD platform hosted on the EUTELSAT 8 West B satellite. The capacity used by Kuwait TV is provided by Gulfsat, Eutelsat's long-term partner. Launched one month ago, Al-Qurain TV is a heritage-based channel specializing in vintage Kuwaiti series and programs. Kuwait TV, that amasses over 50 years of experience, broadcasts Kuwaiti-produced programs in the Middle East and around the world. It completed the switch to HD through Gulfsat in 2015,

coinciding with the arrival of EUTELSAT 8 West B. With the launch of this latest channel there are now nine Kuwait TV channels available free-to-air exclusively from EUTELSAT 8 West B in both SD and HD versions.

#### **Imagine Communications Initiates Next-Generation Payout for Abu Dhabi Media**

March 23, 2017 - Imagine Communications, empowering the media and entertainment industry through transformative innovation, has successfully implemented a business continuity payout site, with full premium channel functionality, for Abu Dhabi Media (ADM). The disaster recovery solution uses Imagine Communications' payout, automation and other software products running on du's Media Cloud platform. du is one of the leading ICT service providers in the United Arab Emirates. In addition to providing ADM with a cost-efficient and fully functional disaster recovery facility, the cloud-based deployment has prompted the media company to revitalize its premises-based payout operations to match the performance and flexibility of the new cloud-based facilities.

#### **AsiaSat and Globecast to Deliver TRT World in HD across the Asia-Pacific Region via AsiaSat 7**

March 24, 2017 - Asia Satellite Telecommunications Company Limited (AsiaSat) and global media solutions provider Globecast have reached an agreement to deliver international Turkish news platform TRT World in HD to viewers across the Asia-Pacific region via AsiaSat 7. The deal expands TRT's reach and strengthens its position in the Asian market. TRT World is owned by Turkish national public broadcaster TRT and is Turkey's first English language international news platform, providing news coverage in English 24/7 from Istanbul. Globecast and TRT World chose AsiaSat 7 because of its extensive Asian coverage, international channel neighbourhood and excellent audience access. AsiaSat 7 has a region-wide C-band footprint covering Asia, the Middle East, Australasia and Central Asia, as well as high-power Ku beams dedicated to serving East and South Asia. Globecast is providing TRT World with a global packaged service for the DTH distribution of the news platform including worldwide connectivity and uplink distribution services using its unique reach to access 10 satellites.

#### **Es'hailSat and JASCO Media City to Launch New MCPC Platform**

March 26, 2017 - Es'hailSat, the Qatar Satellite Company and JASCO Media City announced the signing of framework agreement to launch a new MCPC platform to support the growing broadcast market in the Middle East. Under the terms of the agreement JASCO will provide bundled services including payout, compression and uplink together with satellite bandwidth on Es'hailSat Satellite. Operating from the MENA broadcast hotspot of 25.5° E / 26° E, covering key consumer markets in GCC and North Africa, Es'hailSat's high powered satellites provide the key infrastructure to media networks and broadcasters to distribute TV channels directly to consumers via small satellite dish. Customers are able to leverage on Es'hailSat's satellites to provide services such as linear TV, video on demand, high definition TV and 4K TV among others. JASCO Media City based in the Free Zone in Na'ur, Jordan is a teleport operator providing satellite TV and radio consultation, channel operations including payout, montage and graphics services, studio operations and satellite capacity management.

#### **SES and Verizon Trial Ultra HD Delivery**

March 27, 2017 - SES S.A. announced a collaborative agreement with Verizon aimed at driving the overall development of Ultra HD delivery solutions for Verizon Fios subscribers throughout the U.S. Verizon is among a recent wave of multichannel video programming distributors (MVPDs) evaluating the SES satellite-based Ultra HD solution during milestone trials aimed at accelerating Ultra HD home delivery. As part of the collaboration, Verizon will receive and test content from SES's pre-packaged Ultra HD platform, which combines a growing lineup of Ultra HD channels and reception equipment in a cost-effective service delivered over scalable satellite capacity. SES's managed Ultra HD platform is delivered over dedicated satellite bandwidth, which provides a much higher quality viewer experience compared to current Internet-delivered 4K offerings, which can be susceptible to bottlenecks, buffering and network congestion. Home to nine linear Ultra HD channels, the platform provides the largest bouquet of Ultra HD programming available in North America.

#### **SES Achieves Major Performance and Efficiency Gains Over VT iDirect's DVB-S2X Technology**

March 29, 2017 - iDirect announced another successful over-the-air (OTA) test of its next-generation DVB-S2X technology. The test was conducted with the world-leading satellite operator, SES, over C-Band and achieved 5.7 bps/Hz. The DVB-S2X forward channel and Adaptive TDMA return channel OTA testing was conducted on the SES-4 satellite and leveraged iDirect's next-generation iQ Desktop Remote, Universal Line Cards and Intelligent Gateway appliance. VT iDirect recently announced its next-generation DVB-S2X technology, which is based on a powerful, customized ASIC (Application-Specific Integrated Circuit) chipset and powers the new iQ Series family of remotes. iDirect's iQ Series, which will operate in both DVB-S2X and DVB-S2 mode, is targeted for broadband, enterprise, and mobility applications and packaged in desktop, rack-mount, board level and embedded compute form factors that will become available over the course of this year.

## LAUNCH / SPACE

### **Aerojet Rocketdyne Supports Launch of Classified Satellite for the U.S. Government**

March 1, 2017 - Aerojet Rocketdyne, Inc. successfully supported the launch of a classified payload for the U.S. National Reconnaissance Office. The mission was launched from Vandenberg Air Force Base in California aboard a United Launch Alliance Atlas V rocket. Aerojet Rocketdyne propulsion systems on the Atlas V included the RL10C-1 upper-stage engine, six helium pressurization tanks, and 12 Centaur upper-stage Reaction Control System (RCS) thrusters. The RL10C-1 was developed from the RL10 family of upper-stage engines, which has accumulated one of the most impressive track records of accomplishments in the history of space propulsion. More than 475 RL10 engines have supported launches over the last 50 years, playing a vital role in placing military, government and commercial satellites into orbit, and powering scientific space probes on every interplanetary mission in our solar system. The 12 MR-106 RCS thrusters are assembled in four rocket engine modules and provide pitch, yaw and roll control for the Centaur upper stage as well as settling burns prior to firing the RL10C-1 engine. ARDÉ, a subsidiary of Aerojet Rocketdyne based in New Jersey, manufactures the pressure vessels on the first and second stages of the launch vehicle.

### **Taqnia Space & Arabsat Sign an Agreement for Manufacturing 6-D Satellite**

March 3, 2017 - Taqnia Space, a subsidiary of the Saudi Taqnia Holding for technological investment and Arab Satellite Communications Organization (Arabsat) have signed a new satellite manufacturing agreement "6-D" on the orbital position 44.5° East, owned by both King AbdulAziz City for Science and Technology and Arabsat. The new satellite "6-D" will provide all Ka, Ku satellite telecommunication services, such as the internet, fixed and mobile TV broadcast services and all satellite services on board aircrafts. This agreement is the culmination of the strategic partnership between Arabsat, King AbdulAziz City for Science and Technology and Taqnia Space, which started with satellite SGS-1 on the orbital position 39° East, scheduled to be launched early 2018, with estimated investments of more than 650 \$ million for manufacture, launch and orbit tests for both satellites.

### **Eutelsat Engaged by European Global Navigation Satellite Systems Agency (GSA) to Provide Payload and Services for Next-generation EGNOS**

March 6, 2017 - The European Global Navigation Satellite Systems Agency (GSA) has selected Eutelsat Communications for the development, integration and operation of the next-generation EGNOS payload to be hosted on the EUTELSAT 5 West B satellite that is due for launch end of 2018. The new payload marks a replenishment of current EGNOS capacity and is scheduled to start service in 2019 for duration of 15 years. With the addition of the EGNOS payload, Eutelsat is further optimising the EUTELSAT 5 West B satellite that was commissioned in October 2016 on a design-to-cost basis from Airbus Defence and Space and Orbital ATK. Airbus Defence and Space is building the satellite's commercial Ku-band payload and the EGNOS payload while the platform is being manufactured by Orbital ATK. EGNOS is a European Geostationary Navigation Overlay Service that acts as an augmentation service to Global Positioning Systems to improve the accuracy and reliability of positioning information. EGNOS also provides a crucial integrity message regarding the continuity and availability of a signal which is essential in aviation where GNSS alone does not satisfy strict operational requirements set by the International Civil Aviation Organisation (ICAO) for use in critical flight stages such as final approaches. With the addition of EGNOS, which has been certified for civil aviation since 2011, systems such as GPS and Galileo can satisfy ICAO standards. The GSA has been in charge of EGNOS exploitation since 2014.

### **Aireon and Thales Begin Validation of Space-Based ADS-B Data**

March 6, 2017 - Aireon announced that Thales has officially begun the testing and validation of the Aireon space-based Automatic Dependent Surveillance – Broadcast (ADS-B) data. Initially signing a Memorandum of Understanding (MOU) in June of 2015, the start of data validation marks a major milestone for Aireon and Thales' efforts to ensure the successful integration of space-based ADS-B into the TopSky–ATC automation platform. The MOU was also designed to pave the way for Aireon data to be efficiently and effectively distributed to TopSky-ATC end-users. With the Aireon system now receiving initial air traffic information from its first orbiting satellites, Thales will independently validate the space-based ADS-B air traffic surveillance data. This collaboration will include an assessment of technical performance, defining requirements associated with utilization of the data safely and reliably, as well as determining the impact the service will have on existing maintenance and operational processes. The MOU was the first agreement signed between Aireon and an air traffic management automation platform provider.

### **Eutelsat Signs up for Blue Origin's New Glenn Launcher**

March 7, 2017 - Eutelsat Communications has announced the conclusion of a contract with Blue Origin for a launch on the New Glenn rocket that is expected to initiate flights in 2020. The new partnership with Blue Origin reflects Eutelsat's longstanding strategy to source launch services from multiple agencies in order to secure access to space and partner with launch agencies that combine the highest levels of performance, flexibility and competitiveness. The agreement with Blue Origin covers the launch of a geostationary satellite in the 2021-2022 timeframe. The New Glenn launcher will be compatible with virtually all Eutelsat satellites, giving flexibility to allocate the mission 12 months ahead of launch.

### **Arianespace Successfully Uses VEGA to Launch Sentinel 2B**

March 7, 2017 - Arianespace has successfully launched the Sentinel-2B satellite for the European Commission within the scope of a contract with the European Space Agency (ESA). The launch took place on March 6, at 10:49 p.m. local time from the Guiana Space Center (CSG), Europe's Spaceport in Kourou, French Guiana. This was the third launch of the year for Arianespace and the first in 2017 with the Vega light launcher. It also marked the ninth successful launch in a row for Vega, which made its debut at the Guiana Space Center in 2012. The ESA-developed Sentinel-2B satellite is doubling the coverage of high-resolution optical imaging in the Sentinel-2 mission for the European Union Copernicus environmental monitoring system. Telemetry links and attitude control were then established by controllers at ESA's operations centre in Darmstadt, Germany, allowing activation of Sentinel's systems to begin. The satellite's solar panel has already been deployed. After this first 'launch and early orbit' phase, which typically lasts three days, controllers will begin checking and calibrating the instruments to commission the satellite. The mission is expected to begin operations in three to four months.

### **ILS Announces the Availability of 5 Meter Diameter Payload Fairing (PLF)**

March 7, 2017 - International Launch Services (ILS) has announced the availability of a 5 meter diameter payload fairing (PLF) for use with both the Proton Breeze M and Proton Medium launch systems for commercial launch services beginning in first quarter of 2020. The 5 meter PLF addresses the increased volume of today's larger satellites required to satisfy High-Throughput Satellite (HTS) broadband capacity demands, stacked satellite height requirements, and supports multiple satellites for efficient deployment of large LEO constellations. The introduction of the 5 meter fairing is in direct response to our customers' request for additional payload envelope capability to accommodate their evolving spacecraft designs. The 5 meter fairing in combination with optimized mission designs and the performance flexibility provided by the Proton M and Proton Medium launch vehicles, allows ILS to provide our customers with innovative, cost effective launch solutions that maximizes their satellites expected operational lifetime. Khrunichev State Research and Production Center (Khrunichev) has successfully completed their planned 2016 feasibility study which focused on developing the required technologies and design needed to support the 5 meter PLF development. The next phase of the program has begun with the start of detailed design activities for a 5 meter PLF with a selected baseline length of 16.25 meters to envelope the projected commercial satellite market requirements while minimizing Proton vehicle impacts. The 5 meter PLF will undergo a rigorous test program including aerodynamic modeling, static and dynamic structural tests, PLF separation and jettison tests, and acoustic testing

### **SSL Demonstrates Innovative Use of Advanced Technologies**

March 8, 2017 - Space Systems Loral (SSL) has successfully introduced next-generation design and manufacturing techniques for structural components into its popular SSL 1300 geostationary satellite platform. Its first antenna tower designed using these techniques, which include additive manufacturing, more commonly known as 3D printing, was launched last December on the JCSAT-15 satellite, which was designed and built for SKY Perfect JSAT, a world leading satellite operator based in Japan. The satellite, renamed JCSAT-110A, has completed in orbit testing and is performing according to plan. The highly optimized strut-truss antenna tower used on JCSAT-110A consisted of 37 printed titanium nodes and more than 80 graphite struts. The strut-truss design methodology is now standard for SSL spacecraft, with 13 additional structures in various stages of design and manufacturing, and has resulted in SSL using hundreds of 3D printed titanium structural components per year. For SSL, optimizing at the system level with additive manufacturing has enabled an average of 50 percent reductions in mass and schedule for large and complex structures. The savings over conventionally manufactured structural assemblies is much greater than what is possible with the optimization of an individual part. Since the launch of JCSAT-110A, SSL has completed assembly and testing on several other strut-truss structures and continues to expand its use of additive manufacturing and other next-generation design and manufacturing techniques.

### **Mohammed bin Rashid Space Centre Signs MoU with KARI for Cooperation on Space-related Activities**

March 8, 2017 - UAE's the Mohammed bin Rashid Space Centre (MBRSC) has signed a Memorandum of Understanding (MoU) with the Korea Aerospace Research Institute (KARI) in South Korea with the goal of cooperating on various space-related activities and transferring expertise. The MoU was signed by His Excellency Yousuf Hamad Al Shaibani, Director General of MBRSC and Dr. Gwang-Rae Cho, president of KARI. Commenting on the signing of the MoU, H.E. Yousuf Al Shaibani, Director General of MBRSC, stressed the importance of the close relationship between MBRSC and KARI. He also referred to the knowledge transfer programme with MBRSC's strategic partner Satrec Initiative, which started back in 2006 with the launch of the first ever UAE satellite project DubaiSat-1. This MoU provides a concrete basis for the ongoing cooperation and partnership between the UAE and South Korea with respect to transferring the know-how of space technology, within coherent frameworks that will boost the UAE's position in this regard, especially knowing that South Korea currently has a high profile with its notable achievements in the world space society.

### **SDA and AGI to Launch Next Generation Space Traffic Management Service**

March 8, 2017 - The Space Data Association (SDA) and Analytical Graphics, Inc. (AGI) have entered into a long term agreement to launch an upgraded Space Data Center (SDC) Space Traffic Management (STM) service, powered by ComSpOC. SDC 2.0, which will be available to all members of the SDA, has a highly accurate, independently generated catalogue of space objects which will grow to include objects larger than 20cm in and traversing the GEO arc, and will allow for transparent and actionable collision warnings. The service also features functionality to combat Radio Frequency Interference (RFI), including the construction of geolocation scenarios and a Carrier ID database.

### **SpaceDataHighway to Reach Asia-Pacific**

March 9, 2017 - Airbus Defence and Space has announced the kick-off of EDRS-D, the third communication node of the SpaceDataHighway. Airbus Defence and Space will expand the EDRS-SpaceDataHighway with a third node, EDRS-D, to be positioned over the Asia-Pacific region by 2020. This third node will be the next step towards global optical fiber in the sky and will support the Pacific Rim region, which has witnessed its communication needs for airborne missions rise dramatically. EDRS-D will include several major innovations to be developed in partnership with ESA. Following the ESA Ministerial Council in December 2016, critical activities dedicated to laser communication in space are being initiated. EDRS-D will be equipped with multiple laser communication terminals performing optical bi-directional links in order to serve a number of satellites, drones and aircraft simultaneously. It will also be able to establish a laser communication link with another geostationary relay satellite of the SpaceDataHighway, in order to relay data to the other side of the globe, while being at the cutting-edge of security standards.

### **MDA Recognized by NASA for Robotic Servicing of ISS**

March 15, 2017 - Space Systems Loral (SSL) announced that MDA US Systems, a division of MDA managed by SSL, was recognized by NASA's Johnson Space Center for its outstanding support of a robotic upgrade to the International Space Station's (ISS) power system which took place in January. The MDA team based in Houston played a critical role in planning and validating the robotic maneuvering both before and during the mission. NASA JSC Ground Controllers used the 15-degrees-of-freedom Special Purpose Dextrous Manipulator (Dextre) arm to install six new 430-pound lithium-ion batteries in two power channel Integrated Electronics Assembly pallets. Dextre first removed twelve older and depleted 740-pound nickel-hydrogen batteries from the pallets, nine of which were put on the Japanese H-II Transfer Vehicle's external pallet to burn up on re-entry with it.

### **SpaceX Successfully Launched EchoStar XXIII Satellite**

March 16, 2017 - On March 16, 2017, SpaceX's Falcon 9 successfully delivered EchoStar XXIII, a commercial communications satellite for EchoStar Corporation, to a Geostationary Transfer Orbit (GTO). EchoStar XXIII is a highly flexible, Ku-band broadcast satellite services (BSS) satellite with four main reflectors and multiple sub-reflectors supporting multiple mission profiles. Initial commercial deployment of EchoStar XXIII will be at 45° West, and the Satellite End of Life (EOL) Power is 20 kilowatts (kW).

### **SSL-built Highly Flexible Satellite for EchoStar Begins Post-launch Maneuvers**

March 16, 2017 - Space Systems Loral (SSL) announced that the EchoStar XXIII satellite, designed and built for EchoStar Corporation is successfully performing post-launch maneuvers according to plan. The satellite deployed its solar arrays on schedule following its launch aboard a SpaceX Falcon 9 and will begin to fire its main thruster tomorrow night to propel itself toward its final circular orbit in the geostationary arc. EchoStar XXIII is a highly flexible Ku-band satellite capable of providing service from multiple orbital slots. Based on the SSL 1300 platform,

the satellite will be deployed at the 45 degrees West orbital location, providing high-power Direct-to Home services into Brazil. The satellite is designed to provide service for 15 years or more. SSL has built more than a dozen satellites for EchoStar and its affiliates, including the high capacity EchoStar XIX satellite for HughesNet® high-speed satellite Internet service in North America, which was successfully launched in December, and EchoStar XVIII for DISH Network, which launched last June.

### **Japan Launches Radar-5 Reconnaissance Satellite**

March 17, 2017 - Japan launched a reconnaissance satellite aboard a H2A rocket on March 17. The rocket took off at 10:20 a.m. local time from the Tanegashima Space Center in southwestern Japan, some 24 hours later than the original schedule due to bad weather. The satellite separated from the rocket about 20 minutes after the launch and entered into the preselected orbit, according to the Japan Aerospace Exploration Agency. The launch was the 33rd flight of an H-2A rocket, and the second H-2A launch this year. The satellite, built by Mitsubishi Electric and launched by Mitsubishi Heavy Industries, is to replace the Radar 3 launched in 2011 and will be run by Japan's Cabinet Satellite Intelligence Center. Japan has built a reconnaissance satellite network comprising two radar satellites, a spare and three optical satellites. The Japanese government is planning to bring the number of reconnaissance satellites in operation to ten in an effort to increase the frequency of photographing.

### **Orbital ATK Technologies Support Delta IV Launch of WGS-9 Spacecraft**

March 20, 2017 - Orbital ATK, a global leader in aerospace and defense technologies, provided propulsion, composite and spacecraft technologies to enable the successful launch of both the United Launch Alliance (ULA) Delta IV rocket and the ninth Wideband Global SATCOM (WGS-9) satellite that was launched yesterday from Cape Canaveral Air Force Station, Florida. Both the satellite and Delta IV launch vehicle use cutting-edge technologies from multiple Orbital ATK facilities. For the WGS-9 satellite, Orbital ATK produced both loop heat pipes and standard heat pipes, which provide payload, spacecraft bus and battery thermal management, at its Beltsville, Maryland, facility. Additionally, Orbital ATK manufactured the payload pallet boom tubes at its Magna, Utah, location and the payload module at its San Diego, California, site. For the Delta IV rocket, Orbital ATK provided four 60-inch diameter Graphite Epoxy Motors (GEM-60). The 53-foot-long solid rocket boosters burned for 90 seconds and provided more than 1.1 million pounds of thrust, more than the combined thrust of four 747 jet aircraft. Orbital ATK produced the solid rocket motors at its Magna, Utah, facility, where it has manufactured 84 GEM-60s in support of the 36 Delta IV launches since the initial flight in 2002.

### **PAZ to Extend Airbus Radar Satellite Constellation for Improved Monitoring Capabilities by End of 2017**

March 21, 2017 - PAZ, the satellite owned by the Spanish company Hisdesat, will soon increase the monitoring resources of the Airbus radar satellites constellation. Following its launch during the last quarter of 2017, PAZ will be positioned in the same orbit as the German owned TerraSAR-X and TanDEM-X satellites and form a high-resolution SAR satellite constellation with them. The addition of this third satellite will reduce revisit time and increase acquisition capacity, leading to subsequent benefits to various applications. All three satellites will feature exactly identical ground swaths and acquisition modes. The new setup will be jointly exploited by Hisdesat and Airbus Defence and Space. This SAR constellation will offer improved capabilities for precise monitoring of highly dynamic surface movements thanks to an interferometric repeat cycle reduced to an average of four to seven days, instead of eleven days currently. In addition, numerous data-intensive and time-critical tasks, as in the areas of defence and security, will directly benefit from this new constellation with daily revisits. Additionally, PAZ will also be equipped with an Automatic Identification System (AIS), allowing, for the first time, to simultaneously capture ships AIS signals and SAR imagery, increasing maritime domain monitoring capacities worldwide.

### **MAXUS - Europe's Largest Sounding Rocket, to be launched from Esrange**

March 22, 2017 - In the beginning of April, Europe's largest sounding rocket will blast off from Esrange Space Center located in the very north of Sweden. For the first time in seven years, SSC is launching a MAXUS rocket carrying a payload that will provide microgravity conditions during 12 minutes to scientific research experiments. MAXUS 9 rocket measures 15.5 meters long, including payload and motor. The motor is now in place on the launch pad at Esrange Space Center, waiting to lift off. Planned launch date is 6 April. MAXUS 9 will carry four scientific experiment modules. The main purpose of the different experiments is to investigate different materials and processes in microgravity. One example is the XRMON experiment. Two small furnaces containing metal samples are mounted in the rocket module. The samples are melted before flight and as soon microgravity is reached the different melts are set in contact with each other so that the mixing can be observed. Six such sample pairs will be processed during flight, at two different temperatures, 1200 and 1560 C. The metal samples are X-rayed and thus we can observe the process in real time during the flight as we will be sending parts of the

digital image down to the ground over radio link. The aim of the research is to understand fundamental processes in metal alloys, to be able to develop materials that are very light and sustainable. The MAXUS programme is a joint venture between SSC and Airbus DS. The principle customer is the European Space Agency (ESA). The rocket provides an efficient and reliable access to high quality microgravity.

### **Lockheed Martin-Built SBIRS Satellite Successfully Transmitting Images**

March 22, 2017 - From its final orbit location 22,000 miles above the equator, the third Lockheed Martin-built Space Based Infrared System (SBIRS) satellite recently sent its first images back down to Earth, a milestone known as "first light." The satellite was launched on Jan. 20 aboard a United Launch Alliance Atlas V rocket and is the third in a series of Geosynchronous Earth Orbit (GEO) satellites that the U.S. Air Force uses to provide faster and more accurate missile warning data to the nation and its allies. The satellite reached orbit, where it successfully completed deployments of its sun-tracking solar arrays, antenna wing assemblies and light shade. The constellation is operated by the next-generation SBIRS ground station at Buckley Air Force Base, Colorado. GEO Flight 4, the next satellite in the series, will undergo final assembly, integration and test at Lockheed Martin's satellite production facility in Sunnyvale, California, prior to its launch planned for later this year.

### **Rocket Lab Raises \$75 Million in Funding for Production of Electron Rocket**

March 22, 2017 - Rocket Lab has closed a \$75m Series D financing round, led by Data Collective, with additional investors Promus Ventures and an undisclosed investor. Rocket Lab partnered with this esteemed group of investors because of their experience in the space industry. Rocket Lab also had renewed participation in this round from our existing investors - Khosla Ventures, Bessemer Venture Partners and K1W1 - who have provided continued expertise and support as we work to make space accessible to everyone. The closure of the round brings the total funding Rocket Lab has received to date to \$148 million, with the company value now in excess of \$1 billion (USD). Currently, small satellite companies wait years to get on orbit, often at the mercy and schedules of larger payloads. With Electron, they will be provided a high-frequency, quality launch service that will take customers where they want to go, when they want to fly. The commercial and humanitarian applications this will open up are endless. The satellites Electron will launch are used to provide optimized crop monitoring, natural disaster prediction, Internet from space, improved weather reporting, up-to-date maritime data and search and rescue services.

### **China to Launch New Weather Satellite in Second Half of 2017**

March 27, 2017 - China Aerospace Science and Technology Corporation (CASC) announced that China will launch a new meteorological satellite in the second half of this year, which will be capable of detecting auroras. The satellite, the country's fourth Fengyun-III meteorological satellite, is expected to improve weather disaster forecasting ability as well as environmental monitoring. Compared with its previous three Fengyun-IIIs, the new one will be more reliable, stable and accurate, as it will be equipped with several new remote sensors. The new satellite will carry sensors to detect changes in auroras and the ionosphere, and a microwave imager to provide constant all-weather monitoring of global weather indicators.

### **SES-10 Launched Successfully on SpaceX's Falcon 9 Rocket**

March 30, 2017 - SES announced that the SES-10 satellite was successfully launched into space onboard a flight-proven SpaceX Falcon 9 rocket from NASA's Kennedy Space Centre, Florida. SES-10 is the first geostationary commercial satellite to ever launch on a flight-proven first-stage rocket booster. With a Ku-band payload of 55 36MHz transponder equivalents, of which 27 are incremental, the multi-mission spacecraft is the first SES satellite wholly dedicated to providing service to Latin America. SES-10's high-powered beams will augment SES's capabilities across the region providing direct-to-home broadcasting, enterprise and mobility services. SES-10 will replace capacity currently provided by other SES satellites at 67 degrees West, as well as bring additional capacity to Mexico, Central America, South America and the Caribbean. Pursuant to an agreement with the Andean Community (Bolivia, Colombia, Ecuador and Peru), the satellite will operate as the Andean Community's Simón Bolívar 2 providing satellite capacity for each Andean Member State. The Andean satellite project comes from the shared Member States' interests of having a common satellite network taking advantage of the Andean spectrum resources at 67 degrees West. SES-10 is built by Airbus Defence and Space and is based on the Eurostar E3000 platform. The satellite will utilize an electric plasma propulsion system for on-orbit manoeuvres and a chemical system for initial orbit raising and some on-orbit manoeuvres.

### **Orbital ATK Successfully Concludes 17 Years of EO-1 Mission Support**

March 30, 2017 - Orbital ATK announced it successfully concluded 17 years of mission support for NASA's Earth Observing-1 (EO-1) satellite. The spacecraft, built by Orbital ATK for NASA's Goddard Space Flight Center in

Greenbelt, Maryland, was decommissioned under NASA's direction on March 30, 2017. The EO-1 satellite, launched on November 21, 2000, had an initial design and mission life of one year, but continued successful operations for more than 16 years beyond the initial mission. Orbital ATK served as the mission's prime contractor, satellite mission integrator and bus developer. The EO-1 mission developed and validated a number of instrument and spacecraft bus breakthrough technologies designed to enable the development of future earth imaging observatories.

### **GMV Provides Critical Support to METEOSAT-7 End-of-Life Operations with Optical Telescopes**

March 31, 2017 - Meteosat-7 was launched in September 1997 and is operated by EUMETSAT, the European Organisation for the Exploitation of Meteorological Satellites. It is the last satellite of the first generation of Meteosat. First over Europe and next from its current orbital location over the Indian Ocean region at 36000 Km above our heads, Meteosat I has been providing a fruitful service for almost two decades, a period that is now coming to an end. To avoid the proliferation of space debris in the crowded geostationary ring, EUMETSAT will conduct a safe re-orbiting into a so-called "graveyard" orbit, located at least 250 km above the current location. These end-of-life operations will be carried out in compliance with the latest recommendations included in the 24113 standard of the International Organization for Standardization (ISO) concerning space debris mitigation. In order to support these critical operations, GMV will task observations from 9 different telescopes worldwide to follow the spacecraft trajectory evolution every night. These telescopes, operated by GMV's partner ISON (International Scientific Optical Network), are placed in distant locations in 6 different countries to ensure the highest redundancy in case of bad weather conditions or contingencies. As part of this activity, and in parallel with these operations at EUMETSAT, GMV will make use of its internal state-of-the-art flight dynamics tools to perform an independent checking and monitoring of the maneuvers and orbital evolution of the spacecraft. GMV solutions, making use of all telescopes and ranging stations involved, will verify the correctness of EUMETSAT operational data.

## **EXECUTIVE MOVES**

### **Comtech Announces Michael Atcheson as President of Command and Control Technologies**

March 8, 2017 - Comtech Telecommunications Corp. has announced the appointment of Michael Atcheson as President of Comtech's Command and Control Technologies group. Comtech's Command and Control Technologies group is part of Comtech's Government Solutions segment which serves large U.S. and foreign government end-users that require mission critical technologies and systems. Atcheson succeeds Richard Burt, Senior Vice President of Comtech and President of Comtech Systems, Inc. who was acting President and who successfully completed the integration of Comtech's legacy Mobile Data Communications group with the Command and Control Technologies group of TeleCommunication Systems, Inc., which Comtech acquired last year. Burt, will continue in his roles as Senior Vice President of Comtech and President of Comtech Systems, Inc. and focus on a number of large troposcatter system opportunities that we believe will result in meaningful order flow in future periods.

### **Imagine Communications Names Anas Hantash as MENA Sales Director**

March 20, 2017 - Imagine Communications, empowering the media and entertainment industry through transformative innovation, has appointed Anas Hantash as its new director of sales for the MENA region, effective immediately. Hantash takes over from Paul Wallis, who led the region since 2014. Hantash brings more than 12 years of extensive technical, sales and business development experience to the role, having previously held the position of deputy director for the Middle East and Africa at Imagine Communications, where he was a key player behind several major broadcast projects in the region. Before joining Imagine Communications as a senior solutions sales architect in 2009, Hantash held senior broadcast engineering and operations roles in Arab Media Group (AMG) and National Broadcast Centre (NBC) Group.

### **Airbus Defence and Space Appoints Four New Executive Committee Members**

March 27, 2017 - As part of its reorganisation following the division's strategy update, Airbus Defence and Space has appointed Jana Rosenmann, Grazia Vittadini, Bernhard Brenner and Peter Weckesser as new Executive Committee members. Airbus Defence and Space has been working in recent months on a functional organisation that lays the foundation for its future competitive set-up. The new organisation focuses on four programme lines: Military Aircraft, Space Systems, CIS (Communications, Intelligence and Security) and Unmanned Aerial Systems. The latter was added as a result of the strategy update and is led by Jana Rosenmann.

### **Evolution of Ariespace Governance Ensures Greater Coherence with Airbus Safran Launchers**

March 29, 2017 - Ariespace shareholders voted unanimously to convert the launch operator and subsidiary of Airbus Safran Launchers to an SAS (simplified joint-stock company) at the company's Annual General Meeting, held in Paris on Monday, March 27. The modification aims to streamline and modernize Ariespace's governance to achieve greater responsiveness, facilitate relationships with industrial prime contractors, and be coherent with the new shareholder structure of Ariespace Participation. The new legal form also comes with changes to the governance of Ariespace, allowing for more cohesive working coordination between the launch operator and its parent company, the Ariane launcher prime contractor. With these changes, Airbus Safran Launchers CEO, Alain Charneau, also becomes Chairman of the Board of Directors of the holding company, Ariespace Participation. Stéphane Israël, CEO of Ariespace SAS, and CEO of Ariespace Participation, joins the Executive committee of Airbus Safran Launchers as Director of Ariane 5 and Ariane 6 commercial launcher programs. This position had been held provisionally by Alain Charneau.

### **Globecast appoints Ken Fuller as CTO in the US**

March 29, 2017 - Globecast, the global solutions provider for media, has announced the appointment of Ken Fuller to the post of Chief Technology Officer (CTO) of Globecast Americas, effective immediately. Ken will lead all aspects of the company's technical development and will work closely with the executive management team to establish a clear and strategic technical vision. In his new role, he will oversee key vendor relationships and investigate, purchase, and implement new technologies. On top of this, Fuller will manage a team of 30 in the US. He reports to Globecast COO Philippe Fort who is based in Paris. Prior to joining Globecast, Fuller held the post of Senior Vice President of Operations at Deluxe Entertainment Services Group in Burbank, CA, where he was responsible for several integration groups that focused on ingest, QC, metadata management of packaging and delivery of SVOD, TVOD, and streaming content.

### **Thuraya Appoints Acting CEO**

March 30, 2017 - Thuraya Telecommunications Company announced that Ahmed Al Shamsi, Chief Technology Officer has been appointed as temporary Acting Chief Executive Officer of the company, assuming the role immediately. Al Shamsi has been a key member of Thuraya's leadership team since its inception in 1997. He was directly involved in all phases of its development, from concept initiation to complete deployment, operation and evolution. Thuraya is the leading L-Band Mobile Satellite Service (MSS) operator and a global telecommunications provider, offering innovative solutions to a variety of sectors including consumer, energy, broadcast media, maritime, military, other government and humanitarian non-governmental organizations.

### **Kratos Appoints Frank Backes as Vice President of Business Development**

March 31, 2017 - Kratos Defense & Security Solutions, Inc., a leading National Security Solutions provider, announced that Frank Backes has been named Vice President of Business Development for Kratos SATCOM Products and Federal Satellite Solutions. Long a leader in the satellite industry, Backes was most recently Chief Executive Officer for Braxton Technologies LLC and Braxton Science and Technology Group, LLC, leading manufacturers of command and control software for intelligence, military and commercial applications based in Colorado Springs, CO. As CEO, he grew Braxton revenue from \$6 million to more than \$55 million.

## REPORTS

### **Commercial Military Satellite Communications Capacity Revenues & Demand Stabilizing After Period of Decline**

March 2, 2017 - According to Euroconsult's soon-to-be-released report, SatCom for Defense & Security: Strategic Issues & Forecasts, global military demand for commercial satellite capacity has fallen by an estimated 20% from a peak of 12.5 GHz in 2011 following tremendous growth over the previous decade, due in large part to lower usage of the U.S. DoD. Looking forward, heightened global instability and security concerns are translating into prospects for an acceleration in defense spending globally, presenting opportunities through modernization of communications systems aboard military assets. Launches of next generation commercial satellites and procurements of next generation military satellite systems in the 2020-2022 time-frame represent potential game-changers for the milsatcom eco-system.

### **NSR Releases Report on Linear TV via Satellite**

March 2, 2017 - NSR's Linear TV via Satellite, 9th edition (LTVvS9) provides deep insight into the rapidly changing satellite video markets. LTVvS9 assesses the long-term profitability of the linear video markets in the

'new normal' of endless video and entertainment options over the next decade. Providing a global perspective with regional-centric analysis, NSR's Linear TV via Satellite, 9th Edition builds on the previous editions, providing the most complete breakdown of video data yet. LTVvS9's depth enables decision makers to create well informed long term business strategies to align with regional and global trends.

### **Satellite Video Markets in State of Flux**

March 22, 2017 - NSR's recently released Linear TV via Satellite, 9th Edition report found that an additional 12,200 new channels will be broadcast in 2026 over 2016 levels on both DTH and Video Distribution. However, growth will not be spread evenly across the regions, with significant variation in changes in channel counts between developed and under-developed regions; i.e. mature vs non-mature video markets. Growth over the past year has been driven by a handful of new platforms being broadcast in the developing world, with countries such as Myanmar and Indonesia showing particularly strong growth.

## UPCOMING EVENTS

**33<sup>rd</sup> Space Symposium**, 3-6 April 2017, Colorado Springs, USA, [www.spacesymposium.org](http://www.spacesymposium.org)

**India Satcom 2017**, 10-12 April 2017, New Delhi, India, [www.indiasatcombroadband.com](http://www.indiasatcombroadband.com)

**Broadband Forum Asia**, 11-12 April 2017, Hong Kong, <https://tmt.knect365.com/broadband-tv-connect-asia/>

**Satellite Connectivity Workshop**, 22 April 2017, Nadi, Fiji, <http://casbaaevent.com/events/satellite-connectivity-workshop/>

**The 6th Inflight Connectivity Technology Conference (ICT 2017)**, 10-11 May 2017, Shanghai, China, [www.iricht.com](http://www.iricht.com)

**MilSatCom Asia Pacific 2017**, 15-16 May 2017, Singapore, [www.milsatcomasia.com](http://www.milsatcomasia.com)

As space is becoming more congested, contested and competitive, it is critical to look at how SatCom is utilized to gain the upper hand in the frontier that is crucial for future combat. By bringing you latest updates from regional experts such as The Republic of Korea Armed Forces, US Air Force, Indian Armed Forces, Indonesian MoD, New Zealand Defence Force and Canada Maritime Forces Pacific Headquarters among others, as well as key industry vendors such as Hughes Network Systems, this year's conference will equip you with the tools to enhance your SatCom capabilities for effective military communications.

**CASBAA Satellite Industry Forum**, 22 May 2017, Singapore, <http://casbaaevent.com/events/casbaa-satellite-industry-forum/>

**CommunicAsia2017**, 23-25 May 2017, Singapore, [www.communicasia.com](http://www.communicasia.com)

**SatComm2017 @ CommuicAsia2017**, 23 May 2017, Singapore, [www.communicasia.com](http://www.communicasia.com)

**Global Space Exploration Conference (GLEX)**, 6-8 June 2017, Beijing, China, <http://glex2017.org/>

**VIETNAM ICT COMM 2017**, 7-9 June 2017, Ho Chi Minh City, Vietnam, [www.ictcomm.vn](http://www.ictcomm.vn)

**World Satellite Business Week**, 11-15 September 2017, Paris, France, [www.satellite-business.com/en](http://www.satellite-business.com/en)

**IBC 2017**, 14-19 September 2017, Amsterdam, the Netherlands, [www.ibc.org](http://www.ibc.org)

**APSCC 2017 Satellite Conference Exhibition**, 10-12 October 2017, Tokyo, Japan, [www.apsc2017.com](http://www.apsc2017.com)

**Communic Indonesia 2017**, 25-27 October 2017, Jakarta, Indonesia, [www.communicindonesia.com](http://www.communicindonesia.com)

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## About APSCC

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