

APSCC Monthly e-Newsletter

August 2020

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

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

INSIDE APSCC

APSCC 2020 Conference Series Starts from August 18: LIVE Every Tuesday 9AM HK I Singapore Time from August 18 to November 17

APSCC 2020 is the largest annual event of the Asia Pacific satellite community, which incorporates industry veterans, local players as well as new players into a single platform in order to reach out to a wide-ranging audience. Organized by the Asia Pacific Satellite Communications Council (APSCC), APSCC 2020 this year is even stretching further by going virtual and live. Every Tuesday mornings at 9 AM Hong Kong and Singapore time, new installments in APSCC 2020 will be presented live - in keynote speeches, panel discussions, and in presentations followed by Q&A format. Topics will range across a selection of issues the industry is currently grappling with globally, as well as in the Asia-Pacific region. Register now and get access to the complete APSCC 2020 Series with a single password. To register go to <https://apscsat.com>.

APSCC Summit@ConneCTechAsia (SatelliteAsia)

September 29 ~ October 1, Online Event, <https://www.connectechasia.com/satellite-asia/>

The Asia-Pacific Satellite Communications Council (APSCC), in conjunction with Informa Markets, will present interactive online sessions at ConneCTechAsia 2020, Asia's biggest telecom industry event. The program will be focused on customer verticals, and will feature case studies, executive interviews, presentations and themed interactive sessions - all intended to showcase APSCC members, and provide a value-added experience for participants.

SATELLITE BUSINESS

Eutelsat to Acquire European Satellite Broadband Activities of Bigblu Broadband

July 31, 2020 - Eutelsat Communications has reached an agreement with Bigblu Broadband to acquire its European satellite broadband activities. Bigblu Broadband is the largest distributor of satellite broadband packages in Europe with a proven track record, as evidenced by its success as the main Gold member of Euro Broadband Infrastructure's Preferred Partnership Programme since 2019. Bigblu Broadband has developed a well-established platform for satellite broadband, relying on a unique network of installers and resellers. The activities to be acquired by Eutelsat (BBB Europe) currently count around 50,000 subscribers across an expanding pan-European footprint which includes operations in the UK, Ireland, France, Germany, Italy, Spain, Portugal, Poland, Hungary and Greece. The agreement coincides with the entry into service of EUTELSAT KONNECT, due to start gradually from fall 2020 with operation at full capacity expected from early 2021, bringing capacity in high-demand areas, improved end-user experience and unparalleled economics and flexibility.

Hisdesat and XTAR Complete Transaction for XTAR-Eur Satellite

July 31, 2020 - Hisdesat and XTAR have completed a transaction whereby Hisdesat purchased the communications satellite, XTAR-EUR. XTAR-EUR is positioned at 29 degrees east longitude and provides commercial X-band coverage over a wide geographic region from eastern Brazil and the Atlantic Ocean, across Europe, Africa, the Middle East and Southeast Asia to as far east as Singapore. Hisdesat's purchase will streamline satellite services operations, allowing both organizations to focus on optimizing solutions for the Spanish Ministry of Defence, the US Department of Defense (DoD) and other government and European clients. XTAR will continue providing secure satellite communications capabilities and services to various departments and agencies of the US Government.

Eutelsat and Intelsat Sign Multi-year, Strategic Agreement to Secure the 48°East Orbital Position for EUTELSAT QUANTUM

July 30, 2020 - Eutelsat Communications and Intelsat have signed a long-term partnership agreement securing the 48°East orbital position. EUTELSAT QUANTUM will be located at the position, where the operators both have orbital rights. Expected to be launched by the end of 2020, EUTELSAT QUANTUM is a full expansion satellite providing premium capacity with unprecedented flexibility features. Its ground-breaking software-based design enables users to actively define and shape performance and reach to meet their specific requirements. The 48°East position, with its extensive coverage, notably of the MENA region, is ideally placed to address, amongst others, the unique needs of government users. Under the agreement, the capacity on EUTELSAT QUANTUM will be distributed by Eutelsat and its subsidiary, Eutelsat Americas Corp. and Intelsat and its subsidiary, Intelsat General Communications LLC (IGC), thereby maximizing the commercial potential of the satellite and creating conditions for the fastest possible ramp-up of the satellite. Each partner will benefit from the commercial reach of the other, notably in the government vertical, where IGC plans to offer the EUTELSAT QUANTUM satellite payload with additional security enhancements including secure and protected payload management, customized power allocation and on-demand beam forming. The resulting collaboration will enable the EUTELSAT QUANTUM payload to meet the U.S. government's most demanding Information Assurance (IA) and Cybersecurity requirements.

Kratos Releases Latest RF Channel Simulator

July 30, 2020 - Kratos Defense & Security Solutions announced the release of the latest RF Channel Simulator with the widest bandwidth and most realistic testing to address the needs of today's highly dynamic and data intensive communication systems. As more and more data is being transmitted with High Throughput Satellites (HTS), Low Earth Orbit (LEO) constellations, aircraft, UAVs, missiles and a range of other applications, it is more critical than ever to realistically test the devices used in these systems, especially the modems and general receiver/transmitter subsystems thoroughly to assure communication systems will operate as planned. Kratos' wideband Channel Simulator is a hardware-in-the-loop instrument that can be inserted between modems, receivers and transmitters, or other communications devices to replicate the most challenging RF conditions without ever leaving the lab. RF engineers are able to test and simulate a wide variety of operational conditions, including multi-path, fading, phase noise, Doppler shifts, and other channel effects to facilitate ground based testing before any live operational missions occur. This in turn reduces costs and program risk by assuring reliable communications.

Hughes Announces New JUPITER System Features to Power Higher Efficiencies and Performance

July 29, 2020 - Hughes Network Systems announced the release of the newest set of features for the JUPITER System, the company's Very Small Aperture Terminal (VSAT) platform for broadband satellite services. Already the most widely used VSAT system in the world, the JUPITER platform is the system of choice for network operators, governments, mobile networks, and aeronautical and maritime service providers. Packaged into Release 7.4 are the company's latest improvements in return channel performance and efficiency as well as new functionality supporting Layer 2 network implementations.

Speedcast Executes New Bandwidth Agreement with Intelsat

July 29, 2020 - Speedcast International announced that it has signed a new contract with Intelsat, operator of the world's largest integrated satellite and terrestrial network. Under the new multi-year contract, Speedcast will leverage the unparalleled reach and reliability of Intelsat's global connectivity infrastructure and innovative service offerings to support Speedcast's customer operations across the energy, maritime, cruise, mining, enterprise, media, humanitarian, and government sectors. Intelsat's advanced global fleet includes more than 50 satellites that operate seamlessly with the IntelsatOne ground network, offering the world's most extensive, flexible, reliable, and secure communications network. This agreement marks a significant milestone for Speedcast as the company looks towards emergence from its chapter 11 proceeding and seeks to cement renewed relationships with key suppliers. It will provide increased capacity to assist customers with critical short-term requirements as the industry continues to adapt to the current environment. The agreement was approved by the U.S. courts overseeing the financial restructuring cases for both Speedcast and Intelsat. Speedcast maintains long-standing partnerships with more than 20 satellite fleet operators, including Intelsat, to ensure seamless managed network services for customer operations, utilizing C-, Ku-, Ka-, L-, and X-band capacity. Speedcast's comprehensive global network portfolio includes access to 200+ beams across more than 100 satellites, totaling 16GHz of satellite capacity.

Gilat Awarded Cellular Backhaul Project in Kazakhstan by Kcell

July 29, 2020 - Gilat Satellite Networks has announced the award of a cellular backhaul project for Kcell, Kazakhstan's largest Mobile Network Operator (MNO). Gilat will provide connectivity starting with hundreds of rural villages, in partnership with Kazakhstan's recognized service provider, TelService. Kcell provides mobile voice telecommunications services, messaging services, value-added services such as multimedia and mobile content services, as well as data transmission services including internet access. It has two brands: the Kcell brand, which is targeted primarily at corporate subscribers (including government subscribers), and the Activ brand, which is targeted primarily at mass market subscribers. The Company offers its services through its extensive, high quality network, which covers substantially all of the populated territory of Kazakhstan. TelService LTD provides digital satellite channels since 2005 for Kazakhstan Mobile Operators, Gaz&Oil Companies and has more than 300 VSAT terminals. Since May 2017, TelService has been providing satellite services in order to make the Internet available for railway passengers. TelService plans to continue providing satellite services for the Digital Kazakhstan government program.

Hughes to Join UK Government and Bharti Enterprises in New OneWeb Consortium

July 27, 2020 - Hughes Network Systems announced its participation in the winning consortium, led by the U.K. Government and Bharti Enterprises, that will acquire OneWeb out of bankruptcy. Hughes has agreed in principle to invest \$50 million in the consortium. Additionally, Hughes will continue as a trusted technology and distribution partner to OneWeb, the Low Earth Orbit (LEO) satellite operator which had launched 74 satellites before filing for Chapter 11 protection in March. Consummation of the consortium is contingent upon execution and effectiveness of definitive agreements. Confirmation of OneWeb's reorganization is contingent on certain conditions established by the Bankruptcy Court. Through its Hughes Europe division, which is headquartered outside of London, and sister company EchoStar Mobile Limited, Hughes has worked closely with the U.K. Government. Furthermore, Hughes Communications India Ltd, (HCIL), a majority-owned subsidiary of Hughes, and Bharti Airtel Limited ("Airtel"), a leading Indian telecom provider affiliated with Bharti, are in the process of combining their satellite broadband operations in India. The merger, which was announced in 2019, is pending regulatory approvals and is expected to bring greater scale, operational efficiencies and market reach to deliver solutions for enterprise and government networks.

Paradigm's SWARMKu Certified for Operations on Intelsat's FlexMove Satellite Network

July 27, 2020 - Paradigm Communication Systems announced that their ultra-portable and compact SWARMKu X7 VSAT is now an approved Intelsat Qualified Terminal and fully qualified on the Intelsat FlexMove service. The Intelsat FlexMove managed service is specifically designed to support portable and lightweight terminals such as the SWARM. It enables fast, flexible and secure communications for mobility applications all over the world. In particular, it gives ground forces and emergency responders the mission agility they need to stay connected, however remote their location is, whilst only paying for the data they use. The field-proven, 'broadband in a backpack' SWARM supports the need for rapid transport and setup being IATA compliant, and is PIM Powered for quick and simple pointing and optimised terminal performance. FlexMove is powered by Intelsat's award-winning global Epic high-throughput satellite (HTS) fleet, the world's largest fixed satellite network, and the IntelsatOne ground network to provide users with a seamless global connectivity experience.

Comtech EF Data Receives \$1.3m in Orders to Support Cellular LTE Backhaul in the Middle East

July 23, 2020 - Comtech Telecommunications Corp. announced that during its fourth quarter of fiscal 2020, its Tempe, Arizona-based subsidiary, Comtech EF Data Corp., which is part of Comtech's Commercial Solutions segment, received \$1.3 million in orders for advanced satellite modems, WAN optimization and redundancy switches. The equipment will be utilized to support cellular LTE backhaul for a service provider in the Middle East. The CDM-760 Advanced High-Speed Trunking and Broadcast Modem is the most widely deployed high-speed trunking modem in the industry, and supports GEO, MEO and LEO operation at up to 1.4 Gbps per second. The service provider will utilize the CDM-760 and the FX WAN optimizers to support its LTE traffic. This integrated and unique solution automatically adapts in real-time to changing end user demands on the ground and to link conditions over the satellite.

Viasat to Bring Enhanced Cabin Connectivity to Bombardier Challenger Business Jets

July 23, 2020 - Viasat Inc. announced its high-speed Viasat Ka-band in-flight connectivity (IFC) business aviation service will be available aboard new and in-service Bombardier Challenger 350 aircraft, as well as on in-service Challenger 300 aircraft. The Viasat service will provide an enhanced internet experience

over the most heavily traveled flight routes and regions. Viasat service packages offer the fastest available download speeds in the super mid-size business jet segment, enabling passengers and crew to simultaneously enjoy data-rich, business-critical productivity and entertainment apps from video-conferencing and accessing VPN/cloud content to email, high-definition streaming services, live TV and more. Viasat recently announced it removed internet speed limits delivered to the aircraft across all of its business aviation Ka-band service plans. The move represents an industry-first and provides an entirely new premium IFC experience for its Ka-band business jet customers. The new service plans offer uncapped speeds made possible by the world's highest-capacity satellite network combined with Viasat's compact and lightweight hardware. In recent speed tests, Viasat customers have seen 40 Mbps and higher download speeds across the new service plans, allowing for a more enriched in-flight connectivity experience.

Comtech Awarded \$1.5 Million of Orders from International Space and Communications Customer

July 22, 2020 - Comtech Telecommunications Corp. announced that during its fourth quarter of fiscal 2020, Comtech's Government Solutions segment, was awarded in excess of \$1.5 million in new orders by an international space and communications customer. The orders consolidate requirements for high reliability electrical, electronic and electromechanical (EEE) parts and engineering services in support of several Japanese spacecraft missions, two of which are the Quasi-Zenith Satellite System (QZSS) and Greenhouse Gases Observing Satellite (GOSAT-3).

Gilat Selected to Extend and Expand Managed Service Cellular Backhaul Project in Mexico

July 22, 2020 - Gilat Satellite Networks Ltd., a worldwide leader in satellite networking technology, solutions and services, announces that Gilat received an extension for an 18-month managed service cellular backhaul project from a leading Mobile Network Operator (MNO) in Mexico. The leading MNO will provide 3G and 4G services over Gilat's satellite backhaul to remote regions where terrestrial means such as fiber and microwave are not available. In addition, Gilat's satellite platform will allow the mobile operator to use transportable VSATs, for disaster recovery, thus ensuring connectivity anywhere in Mexico at all times. The capacity increase of 40% will enable Gilat to provide a superior end-to-end solution for the operator to expand its service into remote villages cost-effectively.

Tuvalu Government Signs Agreement with Kacific for Wide-ranging Suite of Connectivity Services

July 22, 2020 - Kacific Broadband Satellites Group (Kacific) has signed a five-year agreement with the Government of Tuvalu to provide the Pacific Island nation with high-speed broadband internet connectivity via satellite. The bandwidth, supplied by Kacific's high-throughput satellite Kacific1, will connect agencies, businesses, and communities across Tuvalu's nine islands with high-quality internet. Under the agreement, Tuvalu, through the Ministry of Justice, Communication and Foreign Affairs, will take all available capacity – a total commitment of 150MHz – from the dedicated high-throughput beam Kacific has positioned over Tuvalu's Exclusive Economic Zone. This will give Tuvalu unprecedented volume and flexibility for communications and create an immediate step change in internet availability and affordability for the nation's citizens.

Global Eagle Commences Voluntary Chapter 11 Bankruptcy Proceedings

July 22, 2020 - Global Eagle Entertainment announced that it has agreed upon a definitive "stalking horse" asset purchase agreement under which substantially all of the Company's assets will be acquired for total consideration of \$675 million by an entity established at the direction of holders of approximately 90% of the Company's senior secured first-lien term loans. The proposed transaction will have no material impact on Global Eagle's global operations as the Company continues to provide services to all of its customers in the ordinary course, before and after the transaction. As a result of the proposed transaction, the Company will reduce its total debt by approximately \$475 million and obtain significant additional liquidity, positioning it to continue driving long-term innovation and growth and serving its customers around the world.

Airbus, GRC, Avanti and Get SAT to Provide High-speed, Secure Satcom-on-the-Move Connectivity

July 21, 2020 - Airbus Defence and Space, GRC Ltd., Avanti Communications Group plc and Get SAT Ltd. have signed a significant contract to deliver high-speed, secure satcom-on-the-move connectivity to a UK customer. GRC have partnered with Airbus to deliver hardware, training and support for GetSat Microsat terminals on Avanti airtime, allowing users to access high-speed voice and data in some of the most challenging environments on the planet. The solution was selected following extensive trials by Airbus and GRC together with the customer, ensuring terminals were robust enough and able to provide the required

Committed Information Rate (CIR) to the user, on a high-throughput service using Ka-band satellite capability. Incorporating GRC's mag-mount system, the Microsat can be securely mounted as a walk-on-fit, without permanent vehicle modifications, allowing users to be connected within minutes and be moved between vehicles as required.

Maxar Renews Four Multi-Million Dollar International Defense and Intelligence Contracts

July 20, 2020 - Maxar Technologies announced it renewed four contracts and expanded a fifth contract in the second quarter of 2020—together valued at more than \$120 million—with international defense and intelligence customers for uninterrupted access to Maxar's current satellite constellation. These contracts, including a one-year agreement and four multi-year agreements, will allow the customers to continue serving their countries' national security and domestic missions, natural disaster responses and maritime surveillance. One customer has also contracted Maxar to upgrade its satellite ground station and antenna.

Telefonica TIWS Selects Gilat for Broadband and Cellular Backhaul Project in Argentina

July 15, 2020 - Gilat Satellite Networks Ltd. announced the selection of Gilat by Telefonica International Wholesale Services (TIWS), a subsidiary of Telefonica Group, for a satellite communication project in Argentina including rural broadband services and cellular backhaul. Gilat's expertise and presence complemented by its local partner, Planex, enabled fast delivery during these challenging times imposed by the COVID-19 pandemic. Gilat's SkyEdge II-c multi-service platform was selected due to its ability to adjust to the technical / business needs of the project. For the current project in Argentina, Gilat was able to adapt to TIWS requirements in record time. Obstacles stemming from the COVID-19 pandemic were overcome and delivery of the SkyEdge II-c hub and 1700 VSATs was supplied in a couple of weeks. Gilat provides a significant advantage in Latin America, due to its local presence and expertise, as well as strong established local partnerships and past investments, thus accelerating time to market and reducing risk.

Thuraya and Ground Control Expand Satcom Connectivity Options for the US Market

July 14, 2020 - Thuraya has signed partnership agreement with the US-based Ground Control Systems to distribute its products and services within the country and the rest of the world. Thuraya is already a well-established brand in the United States, working closely with leading enterprises such as Hughes, Boeing, Viasat and SRT Wireless. The new partnership not only helps Ground Control customers benefit from Thuraya's award-winning technology but also gives them access to its satellite communications services in more than 160 countries across Europe, Asia, Africa and Australasia. For over 18 years, Ground Control has provided specialized, end-to-end satellite communications solutions to government, energy, maritime and leisure sectors. Thuraya's IoT and M2M services are available in the US through its FT2225 terminal, which works on both Thuraya and Viasat networks. It is the only satellite company to have more than 400 roaming agreements with mobile network operators (MNOs) including AT&T and T-Mobile in 178 countries.

Av-Comm Announces Acquisition of STEP Electronics

July 14, 2020 - Av-Comm has announced its acquisition of STEP Electronics from Hills Industries. STEP Electronics will become a division of Av-Comm. The acquisition will complement and extend Av-Comm's current business by expanding key strategic verticals in Government and Defence business, helping to fuel its growth strategy. It will also accelerate the technological evolution of both companies by offering Av-Comm's customers and partners access to a broader range of the latest innovations in satellite communications hardware and integrations solutions. STEP Electronics to continue to operate as a distinct and successful brand within a more industry-focused company, and the integration will enable the STEP team to take full advantage of Av-Comm's robust resources, scale and capabilities to expand the reach of product lines and grow the division.

Restoring Communications Lifelines to the South Pacific

July 14, 2020 - Av-Comm, in partnership with Intelsat, has restored critical communications to remote communities as part of the United Nations Emergency Telecommunications Cluster (ETC) responding to the April 2020 landfall of Tropical Cyclone Harold on the Solomon Islands, Vanuatu, Fiji, and Tonga. With extensive damage to primary infrastructure, the many unique communities throughout the region were disconnected from vital communications when telephone, internet, television, and broadcast radio networks were cut off, leaving more than 300,000 people disconnected from vital emergency information. Av-Comm provided teleport infrastructure and services for a network of VSAT terminals deployed close to heavily affected areas in Santo, Malekula and Pentecost, to assist the United Nations and NGO teams in the recovery and rebuilding of critical community infrastructure.

COMSAT Bolsters Inmarsat Network with Increased C-band and L-band Capabilities

July 13, 2020 - COMSAT, the global satellite connectivity solutions provider, is extending the life of Inmarsat's existing satellites through the leasing of an additional antenna at COMSAT's Santa Paula, CA. Teleport. The newly leased 12.8m antenna is transmitting and receiving in both C-band and L-band frequencies, bolstering capacity for the Tracking, Telemetry and Command (TT&C) and traffic operations of the Inmarsat satellite network. The Santa Paula teleport hosts Inmarsat's Standard C equipment, supporting Inmarsat in delivering the most reliable global-standard maritime safety service. The additional C-band and L-band capacity is a key part of Inmarsat's global network, providing robust, reliable life and safety communications for more than 1.6 million seafarers worldwide. The renewal of the existing agreement strengthens the long-standing business relationship between the two companies and builds on their heritage of providing the maritime industry with an invaluable communication lifeline that is unaffected by inclement weather.

Intellian Launches Next-Generation 2.4m Dual-Band VSAT Antenna and Intelligent Mediator

July 13, 2020 - Intellian has launched the next generations of its v240M dual-band 2.4m antenna and Intelligent Mediator. Together, the new v240M Gen-II and Intelligent Mediator Gen-II enable auto-switching between C- and Ku-band communications, GEO and MEO satellite tracking, and management of up to eight antennas and modems. Developed from the v240M – the world's first antenna to provide auto-switching 2.4m performance in both C- and Ku-band on a single reflector – the new v240M Gen-II delivers best-in-class RF performance across both bands without any need for hardware modification. The antenna can be easily adapted to Ka-band for tri-band operation if required. With support for BUCs from 40W to 400W, the v240M Gen-II allows high bandwidth demands to be met, and may also use Intellian's Fiber Link cable between the above- and below-deck units, minimizing signal loss and simplifying installation. Combining the v240M Gen-II with the new Intelligent Mediator Gen-II immediately adds support for MEO satellites, in addition to the antenna's core GEO capability.

Middle East Airline Select Panasonic Avionics for A321 Family IFE and Connectivity

July 13, 2020 - Panasonic Avionics has been selected by Middle East Airlines-Air Liban (MEA) to provide inflight entertainment and connectivity (IFEC) solutions for 15 of its Airbus A321 family aircraft. Upon delivery from July 2020 onwards, 9 A321neos will become the first connected aircraft to join MEA's fleet. They will be linefitted with Panasonic's eX1 seatback IFE solution, designed specifically for narrowbody aircraft. eX1 offers elegant full HD seatback monitors, complete with touch displays and handsets, and an intuitive, personalized interface. Passengers will have access to USB and laptop charging power points at every seat as well. MEA's A321neos will also be fitted with Panasonic's inflight Wi-Fi service, with a host of next generation connectivity benefits from fast internet to video streaming, all powered by its new satellite modem which offers bandwidth up to twenty times greater than previously available. Panasonic's high-performance connectivity is a powerful way for airlines to build brand loyalty by delivering new and personalized content to passengers in flight.

IMSO Signs Agreement to Assess BeiDou Message Service System

July 9, 2020 - The International Mobile Satellite Organization (IMSO) signed an agreement with the China Transport Telecommunication and Information Group Co. (CTTIC) to perform a technical and operational assessment of the BeiDou Message Service System (BDMSS). The assessment process will evaluate the technical and operational capability of BDMSS to provide mobile satellite communication services, in particular, the Global Maritime Distress and Safety System (GMDSS). BeiDou is the second new satellite service provider to undergo this assessment process, following last year's integration of Iridium satellite system. If successful, it (BeiDou) would become the third provider of satellite services for GMDSS, alongside Inmarsat and Iridium, following the transition of the system to a multi-provider environment.

Viasat Eliminates Ka-band Speed Limits for Business Aviation In-flight Connectivity

July 8, 2020 - Viasat Inc., a global communications company, has announced it has removed internet speed limits delivered to the aircraft across all of its business aviation Ka-band service plans. Additionally, the company has doubled its minimum committed internet speed to the aircraft for the same Ka-band service plans. The move, an industry-first, demonstrates the Company's leadership in the business aviation market by unleashing an entirely new premium in-flight connectivity (IFC) experience for its Ka-band business jet customers. A recent report by Euroconsult, *Prospects for In-Flight Entertainment & Connectivity, 2019*, found that the growing demand for applications including video-conferencing and high-definition video streaming, which are expected to drive IFC terminal demand, require faster high-speed connectivity. Viasat's elimination of Ka-band speed maximums enables an even better experience

for passengers and crew to simultaneously use business-critical productivity and entertainment apps such as video-conferencing, accessing VPN/cloud content, email, high-definition streaming services, live TV and more – through all phases of flight - across the world's most heavily traveled flight routes. Ka-band customers also have the option to subscribe to Viasat Unlimited Streaming, which allows passengers to access online media services without impacting monthly data allowances.

IHS Markit Extends Contract with Orbcomm for Satellite AIS data

July 8, 2020 - Orbcomm announced that IHS Markit, a world leader in critical information, analytics and solutions, has extended their contract for Orbcomm's satellite Automatic Identification System (AIS) data used for ship tracking and other maritime navigational and safety efforts. IHS Markit's new, multi-year contract was the result of a competitive procurement evaluation among providers of space-based AIS data services. IHS Markit, which has been an Orbcomm partner since Orbcomm's inception of commercial space-based AIS data in 2009, will continue to provide Orbcomm's AIS data services to their government and commercial customers, enabling maritime domain awareness, sanctions compliance and commodity trading applications. In addition, IHS Markit is using Orbcomm's AIS data to support their web-based maritime and trade solutions, including Maritime Portal Gold/MIRS, AISLive Premium, Trade Compliance Service, MINT and Commodities@Sea. By leveraging Orbcomm's comprehensive AIS service, IHS Markit delivers the information, analytics and insight to help customers identify growth opportunities, reduce global supply chain risk, make more effective business decisions and improve operational efficiency.

Marlink to Deliver Upgraded and Optimised Connectivity Services to Stolt Tankers

July 8, 2020 - Marlink, the industry's leading provider of end-to-end managed connectivity and IT solutions, has signed a major new service agreement with Stolt Tankers. The contract cements the ongoing and substantial enhancements that Stolt Tankers has enjoyed since joining forces with Marlink to improve business and crew communications in 2011. Under the new agreement Marlink will provide Stolt Tankers' fleet of chemical and parcel tankers with a bandwidth upgrade, enabling even greater digitalization of its operations focusing on quality, safety, security and client satisfaction. The package includes version 5.0 of Marlink's XChange communications management system, which will deliver greater efficiency in IT management processes as well as reinforced cyber security. Marlink's new 4G connectivity option will also be added to Stolt Tankers' service package, contributing even more resilience and availability of service with cost-effective, low-latency and high-bandwidth services in coastal regions. A new VPN to shoreside operation centers will enable further improvements in business and operational efficiency by securely streamlining data sharing.

Airbus Brings Satellite Imaging Down to Earth for Sustainable Farming

July 8, 2020 - While farming may seem a world away from Airbus' typical business activities, the company's imaging capabilities with satellites is helping farmers increase crop yields and the quality of their harvest – all in a sustainable and environmentally friendly manner. Called Farmstar, this decision-support tool is the result of a joint effort that combines Airbus' expertise in remote sensing imagery from satellites with the expertise of two French-based agronomic institutes: Arvalis-Institut du Végétal and Terres Inovia. From seeding to harvest, Farmstar enables farming professionals to understand exactly how much fertiliser their crops need – providing comprehensive advice for wheat, barley, and rapeseed that is perfectly timed with the crop cycle. This insight also helps farmers limit the use of fertiliser, which is consistent with the United Nations' call to minimise nitrous oxide (N₂O) emissions from nitrogen fertilisers in farming. N₂O is 200-times more potent than CO₂ as a greenhouse gas, and the United Nations anticipates the continued widespread use of nitrogen fertilisers could contribute to a doubling of N₂O emissions by 2050. Using the remote sensing imagery from Airbus, the Arvalis-Institut du Végétal develops agronomic models related to cereal crops; while Terres Inovia specialises in agronomic models for rapeseed. These agriculture institutes then develop corresponding recommendations – which are delivered to the customer for immediate implementation.

Gilat's Airborne Technology Enables Opening-up of the Chinese Ka-band IFEC Market

July 7, 2020 - Gilat Satellite Networks has announced that its aero modem, Taurus, is powering In-flight Entertainment and Connectivity (IFEC) service to China's Qingdao Airlines. The service is provided by China Satcom, over CS-16 Ka-HTS satellite together with its partner China TDT LINK (contents/service provider to passengers). The whole Ka-band IFEC system was integrated by FTS, a leading Chinese system integrator, who received the STC/VSTC for this IFEC early this year. This milestone of opening-up of the Chinese Ka-band IFEC market is the driver for a multi-million-dollar market opportunity. The Qingdao Airlines' A320 aircraft has started to provide the Ka band satcom based IFEC commercial service, after a

very successful flight from Qingdao to Chengdu on July 7, 2020, with its IFEC system formally open to the passengers for the first time. As of today, there are more than 3,500 commercial aircraft operating in China and this aircraft is the first one retrofitted with a Ka band IFEC system.

Viasat Launches Premium Residential Internet Service in Brazil

July 7, 2020 - Viasat announced the availability of reliable, high-speed, high-quality internet service for residential customers in Brazil. Viasat expects to be the only satellite internet service provider (ISP) that will be capable of making high-speed internet available in 100 percent of the country, upon completion of the residential launch rollout. Brazilian residents across the initial launch states can now subscribe to a home satellite internet service with speeds up to 20 Megabits per second (Mbps) and data rich packages that go up to 80 Gigabytes (GB) of data per month, enabling them to enjoy online access for daily activities including social media, video streaming content, video call services, work-from-home, online education, sending/receiving emails and using unlimited chat and web browsing. Viasat's new residential internet service for Brazil uses bandwidth from the Telebras SGDC-1 satellite to deliver satellite internet services. The service is launching today across eight states including São Paulo, Rio de Janeiro, Minas Gerais, Pernambuco, Paraná, Rio Grande do Sul, Federal District and Amazonas. The service will be rolled out across the country, with an expected completion date before the end of 2020.

Blue Sky Network Enables Mission-Critical Operations Monitoring for Vehicle Fleets with the New HawkEye 5500

July 7, 2020 - Blue Sky Network has introduced the HawkEye 5500 (HE5500) vehicle management solution featuring first-of-its-kind full integration of on-board vehicle systems. The device utilizes 2G/3G/LTE and the Iridium satellite network in order to provide truly global coverage, with high resolution tracking and communications. As the first vehicle tracking system to offer such a comprehensive set of features, the HE5500 supports both light and heavy-duty vehicles, two-way messaging, a remote emergency switch, audible alerts, and customizable application integration. These capabilities facilitate mission-critical operations for vehicle fleets of all sizes including those supporting mining operations, defense, security, public safety, search and rescue, and executive transport in remote environments. The HE5500 can generate automatic monitoring and alerting on driver safety, proactive monitoring of vehicle health, and analytics about usage, performance, and behavior. This allows vehicle fleets to gain valuable insights while improving safety, reducing operating costs, and streamlining compliance.

Comtech Awarded a \$1.5 Million Contract for New Ka-band Gateway TWTAs

July 6, 2020 - Comtech Telecommunications Corp. has announced that during its fourth quarter of fiscal 2020, its Santa Clara, California-based subsidiary, Comtech Xicom Technology, Inc., which is part of Comtech's Commercial Solutions segment, received a contract valued at more than \$1.5 million for 500W Ka-band traveling wave tube amplifiers (TWTAs) for a Tracking, Telemetry, and Command (TT&C) application. These amplifiers will ship later this calendar year and will be deployed globally by a major satellite service provider for a new Ka-band network.

exactEarth Announces \$7.0 Million Expansion of Channel Partner Agreement

July 6, 2020 - exactEarth Ltd., a leading provider of Satellite-AIS data services announces an expanded alliance agreement with one of its existing channel partners. All financial figures are in Canadian dollars unless otherwise stated. The Amended Agreement extends the current agreement between the companies by three-and-a-half years through to December 2023. exactEarth estimates that this Amended Agreement will generate additional incremental revenues of approximately \$7.0 million, or \$2.0 million per year on an annualized basis. Under the terms of the Amended Agreement, the Partner is able to deploy exactEarth's exactView™ RT advanced real-time Satellite-AIS data services into their full range of advanced maritime analytics products, derived services and international data customers. The agreement also provides both Parties with expanded reseller rights which enable further sales potential over the term of the agreement.

OneWeb Announces HMG and Bharti Global Limited Consortium as Winning Bidders in Court-supervised Sale Process

July 3, 2020 - OneWeb has entered into an agreement with a consortium led by HMG (through the UK Secretary of State for Business, Energy, and Industrial Strategy) and Bharti Global Limited ("Bharti") for the acquisition of the OneWeb business in connection with its court-supervised sale process. The bid is designed to capitalise the company sufficiently as a going concern to effectuate the full end-to-end deployment of the OneWeb system. Following a competitive process, the consortium's winning bid

represents a strong offer that will enable OneWeb to successfully emerge from the Chapter 11 process with a robust foundation on which to continue its progress towards commercial operations and secure OneWeb's position as a global leader in low latency connectivity. The consortium brings immediate commercial value to OneWeb. Bharti, through Bharti Airtel, is the third largest mobile operator in the world, with over 425 million customers. Bharti Airtel has its own extensive mobile broadband networks and enterprise business, which will act as the testing ground for all OneWeb products, services, and applications. Bharti will contribute significant contract value to OneWeb through its presence across South Asia and Sub-Saharan Africa, where the terrain necessitates the use of satellite-based connectivity, providing a near-term anchor customer for large-scale global deployment of OneWeb's services.

Thuraya Users to Benefit from Ericsson Core Network Modernization

July 2, 2020 - United Arab Emirates-based mobile satellite services operator Thuraya has signed an agreement with Ericsson for a core network modernization and upgrade to a 4G and 5G ready infrastructure. Ericsson will modernize and optimize Thuraya's network to a virtualized core that supports existing and new features and services in the future. The deal will ensure that Thuraya can continue to offer its users the best possible user experience in the most efficient way. Ericsson will also migrate the existing Thuraya users to the new platform and oversee its integration with existing systems. The operator's mobile-data users, especially those in remote locations or areas where traffic is dense, will benefit from higher availability and reliability. As a result, Thuraya can provide consumers more flexible and easy-to-use communication services integrated with various terminals, which will work seamlessly when they move between different access points. By selecting Ericsson for the modernization of its existing mobile-core, Thuraya extends its existing partnership, in which Ericsson has been the sole vendor for its circuit-switched core network.

HISPASAT Expands the Agreement with SYNTELIX to Offer Satellite Connectivity to the Maritime Sector in the Mediterranean and Latin America

July 2, 2020 - HISPASAT, the Spanish telecommunications satellite operator, and Syntelix, a satellite telecommunication solutions provider, specialising in remote environments and mobility settings, have extended their agreement until 2022 to strengthen their growth in the European and American maritime market. The agreement allows Syntelix to expand its multiregional capacity over the American coverage of the H30W-6 satellite, located in the 30^º West orbital position, in order to attend to the growing demand in the region, principally coming from the fishing and coastal merchant sector (freight ferries) that operates throughout the Southern Cone, as well as yachts that sail in the Caribbean and the Mediterranean. The agreement also reinforces the cooperation between the two companies by implementing a shared action plan in order to build and develop specialised distribution channels in maritime connectivity services in several countries in Latin America, including Argentina, Peru, Paraguay, and Chile, among others.

Advantech Wireless Technologies Provides Solution for Satcom Operators Migrating from Low C-Band Due to Roll Out of 5G

July 1, 2020 - Advantech Wireless Technologies Inc. is supplying its Insat C-band 1000W Redundant, GaN-based Solid State System (SSPB) Solution to a Major Network provider in LATAM. The System includes an on-line Taurus SSPA with a dedicated backup amplifier to ensure maximum availability. Packaged for outdoor applications, Taurus optimizes useable output power by eliminating IFL insertion loss, making it the ideal solution for both mobile and fixed Communication terminals. Specifically designed for high power and high linearity in 6.725-7.025 GHz, these 1,000W units are perfect for migrating to the upper end of the C-band spectrum for better separation from interfering 5G traffic. The units are designed to support higher modulation and error correcting codes, which will allow more users in less spectrum. That in exchange will generate increased revenue for satellite operators, in parallel with OPEX reduction for users. The tremendous backhaul capacity that 5G will require, will need as high as possible power and linearity, and that is what these units provide.

Hughes Launches High-Speed Satellite Internet Service for Micro, Small and Medium-sized Enterprises in Mexico

July 1, 2020 - Hughes Network Systems, LLC (HUGHES), the world leader in broadband satellite technology and services, has announced the launch of HughesNet[®] for Business in Mexico. A high-speed, satellite Internet service designed for micro, small and medium-sized enterprises (MSMEs), the HughesNet for Business service is now available to 97% of Mexico, including places where fiber and cable Internet are not available. The National Institute of Statistics and Geography (INEGI) measures Internet penetration in rural communities at only 23%, compared to 65% in urban areas – putting MSMEs in remote areas at a

competitive disadvantage. Add to that the demand for connectivity across Mexico has risen dramatically due to the COVID-19 pandemic, with more business owners turning to the Internet to conduct marketing, sales, customer service and daily operations like accounting and payroll. With speeds of 25 Mbps down and 3 Mbps up, HughesNet for Business is suitable for web surfing, social media marketing, online banking, sending and receiving email and more. In addition, the service comes with built-in Wi-Fi to connect multiple devices to the Internet.

BROADCAST

Eutelsat 8 West B Selected by Strong Roots for New DTH Platform in Ethiopia and the Middle East

July 29, 2020 - Eutelsat Communications and Strong Roots Ethiopia Broadcasting Service have concluded a Master Service Agreement for a Ku capacity on a 36 MHz transponder on Eutelsat's EUTELSAT 8 West B satellite. The capacity will enable Strong Roots to launch a new free to air DTH platform covering Ethiopia as well as Ethiopian diaspora in zones within the satellite's footprint, notably the Middle East. Part of the Ethiopian-owned Strong Roots Group, Strong Roots Ethiopia Broadcasting Services PLC is an upcoming player in the Ethiopian broadcast market. Its new DTH Platform will distribute high quality content on news, entertainment, education, kids, documentary, movies and sport in SD or HD. Eutelsat 8 West B is a state-of-the-art satellite with dedicated coverage of Ethiopia on its East beam, and is part of the 7/8° West video neighborhood, one of the most dynamic in the global satellite TV market.

CANAL+ to Launch First Premium DTH Platform over Ethiopia, Broadcast from EUTELSAT 7C

July 28, 2020 - Eutelsat Communications and CANAL+ have signed a multi-year, multi-transponder contract for Ku capacity on EUTELSAT 7C to support the launch by CANAL+ of a premium DTH platform in Ethiopia at the beginning of 2021. Leveraging Eutelsat 7C's incremental capacity dedicated to Ethiopia, CANAL+ will launch a comprehensive broadcast offer encompassing a DTH pay-TV offer of some 50 premium channels in a mix of standard and high definition, enriched by the addition of a selection of Ethiopian Free-to-air content. EUTELSAT 7C is a high-power broadcast satellite which entered into service in January 2020 and is co-positioned with EUTELSAT 7B at the 7° East position to form a two-satellite constellation with unparalleled flexibility and connectivity. Eutelsat is already the leading carrier of Ethiopian channels through its 7/8° West video neighborhood.

SES and Harmonic Partner for Transition of C-band Spectrum to Enable 5G Advanced Video Compression Accelerates the Path to 5G in the U.S.

July 28, 2020 - Harmonic announced that it will partner with SES for technology upgrades associated with the SES transition plan filed with the Federal Communications Commission on June 19, 2020. SES and Harmonic will work together to fast-track this deployment, freeing up spectrum for 5G while simultaneously enabling SES's C-band customers to maintain the quality and resilience of their critical video services. This network transformation is based on Harmonic's powerful software solutions for satellite video delivery. SES and Harmonic will work jointly to deploy Harmonic's XOS advanced media processing in the headend and XOS Edge transcoding solutions in remote sites for primary distribution of video feeds. The XOS solutions are based on Harmonic's widely deployed streaming platform, bringing unique OTT capabilities to satellite delivery.

Azercosmos Signs Agreement with Prime African Media Systems

July 28, 2020 - Azercosmos has signed a cooperation agreement with Canada's Prime African Media Systems company. Prime African Media Systems operates in the field of telecommunications, providing satellite solutions and teleport services. According to the agreement, Prime African Media Systems will broadcast ATN TV in the West African region using the capacity of Azerspace-2 satellite. Azercosmos is the satellite operator in the South Caucasus. Azerspace-1, the telecommunication satellite operated by Azercosmos, provides highly-reliable broadband and broadcast solutions to its customers in Europe, Africa, Middle East, the Caucasus, and Central Asia. The satellite was launched in February 2013 and is equipped with 24 C-band transponders and 12 Ku-band transponders and is located at 46° East longitude.

Optus Satellite's Foxtel Partnership Extended to 2031

July 27, 2020 - Optus has extended its longstanding partnership with media company Foxtel, with an extension for the provision of satellite services until 2031. Optus Satellite owns and operates Australia and New Zealand's largest fleet of spacecraft with five satellites currently in geostationary orbit that service our broadcast, corporate, and government customers. The contract extension, along with efficiencies agreed with Foxtel, reaffirms Optus Satellite's leading position in the ANZ satellite market. Foxtel has

partnered with Optus since 1998 to deliver their premium live sport, movies, drama, news and entertainment content including Australia's only dedicated, live 4K broadcast channel to both regional and metropolitan areas across two Optus satellites in orbit over Australia.

Orange Partners with Eutelsat to Provide Broadband via Satellite throughout France

July 22, 2020 - Orange has purchased from Eutelsat Communications all available capacity on the EUTELSAT KONNECT satellite to cover the entire French territory. It will enable Orange's consumer customer base, even those living in the most isolated areas, to benefit from very high-speed fixed broadband via satellite from January 2021. The agreement comes against the backdrop the 'Plan France Haut / Très Haut Débit', adopted by the French government with the aim of rolling-out high-speed broadband of at least 30 mbps to the entire French territory by 2022. The service will be distributed by Orange's Nordnet subsidiary, the leading French distributor of satellite Internet services since 2008, enabling it to offer unlimited very high-speed Internet access to individuals throughout France. The agreement will apply until the entry into service of the KONNECT VHTS very high-speed satellite, including a transition period during which the installed base will be gradually transferred to the new satellite. Launched in January 2020, EUTELSAT KONNECT has total capacity of 75 Gbps and is able to assure full or partial coverage of up to 15 countries in Europe and 40 in Africa, offering speeds of up to 100 Mbps to both companies and individuals in the digital divide at competitive monthly rates.

ATEME Provides MOVISTAR+ with a Complete Video Headend for Live DTH/OTT Distribution

July 22, 2020 - ATEME, the leader in video delivery solutions for broadcast, cable TV, DTH, IPTV and OTT, announced that Movistar+, the audiovisual entertainment arm of Spanish media leader, the Telefónica Group, has chosen to implement ATEME's TITAN solution, a future-proof converged software headend, for distribution of its live DTH/OTT services. By choosing ATEME's powerful transcoding technology, Movistar+ is enhancing its video quality and user experience, reinforcing its position as the leading platform in the Spanish market. ATEME's TITAN solution provides Movistar+ with a number of benefits, including simple migration to the virtual video headend. This is due to TITAN being a pure software-based encoder that can run on any COTS or virtualized server leveraging the broad support of inputs/output formats and enabling customers to quickly deploy high quality live channels. TITAN also provides Movistar+ with outstanding bandwidth savings in MPEG-2 and H.264, resulting in significant satellite transponder usage, as well as delivering the highest video quality at the lowest possible bitrate which is crucial to get the best user experience.

SES Launches Free-to-Air Satellite Channel to Fight Spread of COVID-19

July 14, 2020 - Millions of households across Africa, Europe, and Asia-Pacific will be able to access a free-to-air TV channel via SES satellites dedicated to delivering reliable, informative content about COVID-19. The channel - Fight COVID-19 - broadcasts content that is aimed at providing underserved and rural communities with critical information about how to limit the spread of the virus. The content is provided by trusted organisations such as UNICEF and AFP as well as global EdTech social enterprise www.Potential.com. The content aims to impartially inform TV viewers about identifying COVID-19 symptoms, the recovery process, and how to manage the effects of a global pandemic and social distancing, such as managing a household, children or mental health. SES welcomes additional content providers from international and regional organisations to contribute to the COVID-19 channel.

SES Delivers Video Services for BBC Studios

July 8, 2020 - BBC Studios (BBCS) and its subsidiary UKTV have selected SES to manage the playout and distribution of over 50 linear channels, and their associated video on demand (VOD) services, SES has announced. SES will provide playout, content processing, distribution, and VOD services, delivering BBCS and UKTV content to a network of affiliates globally and in the UK. These services will be based on SES's European global delivery services with technical playout infrastructure provided from SES's new Stockley Park facility in London and with SES's Munich playout facility overseeing operational management. BBCS is the commercial production and distribution arm of the BBC, crafting over 2,500 hours of content every year. BBCS is focused on promoting the creative talent of the BBC and the UK internationally and operates a global content distribution and branded services business. UKTV is a wholly owned subsidiary of BBCS. It has been at the forefront of UK branded television for over 25 years and its channels span comedy, entertainment, natural history, factual and drama. The broadcaster is a significant investor in British creativity and is committed to working with new and established writers, directors and programme-makers. SES has been awarded the multi-year contract after responding to a BBCS and UKTV RFP where its service offering aligned with the BBCS and UKTV performance, business and commercial requirements.

The new deal also builds on BBCS and UKTV's desire for cloud innovation in the media industry.

Promethean TV Introduces New Sports Stats Overlay

July 7, 2020 - Promethean TV, a digital solution to drive ROI from broadcast and interactive video, has introduced a new Sports Stats Overlay that will allow audiences to "lean in" to the match experience from the comfort of their own home, as passionately as they might in the seat of a stadium. With an immersive set of touchscreen statistics, viewers will be able to feel every second, diving deeper into a player's performance across each game. With stadium sports returning from hiatus or waiting for the whistle to recommence, it's up to broadcasters to create the atmosphere of a packed stadium and drive engagement for adrenaline-starved fans. With that core thesis in mind, Promethean TV has developed overlays that allow users to access real time statistics for the game or league they are watching without leaving the video stream. Available stats include: live scores and league table updates, team line-ups, individual player statistics, and detailed head to head statistics for the teams featured in the broadcast.

Milestones for Native IP and DVB-I over 5G

July 3, 2020 - Two recently initiated DVB work items reached important milestones at this week's Steering Board meeting. The commercial requirements for native IP video delivery over broadcast satellite were approved; and work will proceed on the creation of commercial requirements for the use of DVB-I as a service layer on top of 5G technologies. The 95th meeting of the DVB Steering Board took place completely online for the first time, as was the case for the meetings of the Commercial and Technical Modules in the preceding weeks. Peter MacAvock (EBU) was re-elected as DVB Chair for a further two-year period. The commercial requirements for DVB Native IP were created in the CM-S (Satellite) working group under the chairmanship of Thomas Wrede (SES). The vision is a system that provides television, radio and data services in a native IP format, directly tailored for IP-enabled end-user devices, over broadcast links. Applications of native IP video delivery via satellite are numerous, spanning from multiscreen consumption of pay-TV content at home, to e-learning in remote places, as well as content distribution to communities, hospitals, cruise ships, airports, shopping centres, planes and many more. A DVB study mission on 5G had previously noted three areas of particular interest for DVB services: 5G unicast, 5G broadcast, and 5G fixed wireless access. With the work on broadcast and media streaming in 3GPP Release 16 nearing completion, the DVB Steering Board has tasked the CM-I working group with the capture of commercial requirements for the use of DVB-I as a 5G media service layer. The end goal would be an integrated solution that permits the distribution of a DVB-I service over multiple distribution means, in the context of, but not limited to, 5G delivery.

LAUNCH / SPACE

Russian Express-80 and Express-103 Communications Satellites Carrying Thales Alenia Space Payloads, Successful Launched

July 31, 2020 - The Express-80 and Express-103 communications satellites have been successfully launched by the launcher Proton from the Cosmodrome of Baikonour in Kazakhstan. The satellites are the result of the partnership between the Russian company ISS Reshetnev, providing the H1000 platforms and Thales Alenia Space providing the payloads. The mission of both Express-80 and Express-103 satellites, which will last 15 years, is to provide fixed and mobile communications, digital television and radio broadcasting, high-speed Internet access and data transmission services in the Russian territory, the operator is RSCC (Russian Satellite Communication company). Express 80 will operate at 80°E, the payload consists of 18 C band active transponders and 20 Ku-band active transponders, covering the Russian territories, in addition, 2 L-band active transponders will provide global coverage. The Payload power is 6,3 kW. Express 103 will operate at 103° E (or 96.5° E), the power, also in this case, is 6.3 kW. The payload consists of 18 C band active transponders and 20 Ku-band active transponders covering Russian and South-Eastern Asiatic territories, in addition 1 L-band active transponder will provide global coverage.

Thales Alenia Space to Partner with OHB System to Build Copernicus CO2M Satellites

July 31, 2020 - Thales Alenia Space has signed a €72 million first tranche contract with OHB System, prime contractor of the project, to develop the payload for the 2 satellites of the CO2M mission, as part of Europe's Copernicus program. Copernicus is the core satellite Earth observation program of the European Commission and a cornerstone of the European Space Agency (ESA) activities in the field as well. It provides Earth observation data for environmental protection, climate monitoring, natural disaster assessment and other social tasks. The goal of the CO2M mission is to measure atmospheric carbon dioxide produced by human activity. These measurements will reduce current uncertainties in estimates

of emissions of carbon dioxide from the combustion of fossil fuel at national and regional scales. This will provide the EU with a unique and independent source of information to assess the effectiveness of policy measures, and to track their impact towards decarbonising Europe and meeting national emission reduction targets.

Open Cosmos to Build and Operate Sateliot's Nanosatellite Constellation

July 30, 2020 - Open Cosmos has sealed a deal with satellite communications operator Sateliot to build and operate their nanosatellite constellation, enabling continuous global connectivity for Internet of Things (IoT) under 5G architecture. Open Cosmos is already underway in the manufacturing, mission management and launch of the first satellites, out of the one hundred which comprises the full constellation, that Sateliot has scheduled for construction before the end of 2022. These microwave oven sized satellites operate in low Earth orbit, flying at an approximate altitude of 500km to guarantee IoT connectivity at a global scale and in almost real time. The forecast for the next two years is that there will be more than 50 billion IoT devices globally and with this constellation Sateliot is perfectly positioned to partner with conventional telecommunication providers to ensure ubiquitous coverage. Sateliot will also offer monitoring and tracking systems, data analysis and processes in areas such as: maritime, railways, aeronautical, agriculture & farming, oil & gas exploration, electric or critical infrastructure.

China Successfully Launches First Mars Mission

July 23, 2020 - China launched a Mars probe on Thursday, aiming to complete orbiting, landing and roving in one mission, and taking the first step in its planetary exploration of the solar system. A Long March-5 rocket, China's largest launch vehicle, carrying the spacecraft with a mass of about 5 tonnes, soared into the sky from the Wenchang Spacecraft Launch Site on the coast of southern China's island province of Hainan. About 36 minutes later, the spacecraft, including an orbiter and a rover, was sent into the Earth-Mars transfer orbit, embarking on an almost seven-month journey to the red planet. China's first Mars mission is named Tianwen-1, which means Questions to Heaven and comes from a poem written by Qu Yuan (about 340-278 BC), one of the greatest poets of ancient China. The name signifies the Chinese nation's perseverance in pursuing truth and science and exploring nature and the universe. Both the rocket and the probe were developed by China Aerospace Science and Technology Corporation. This mission marks the 340th launch of the Long March carrier rocket series.

Loft Orbital Selects LeoStella to Manufacture Satellites for Space Infrastructure-as-a-Service

July 21, 2020 - Loft Orbital Solutions Inc. (Loft Orbital), a Space Infrastructure-as-a-Service company, has signed a contract with LeoStella, a specialized satellite constellation design and manufacturing company, to build and integrate satellite buses for several upcoming Loft Orbital missions. Under the contract, Seattle-area LeoStella will use its state-of-the-art manufacturing facility, which opened in 2019, to produce multiple satellites based on ESPA-class buses for use in Loft Orbital's upcoming missions, including its YAM-3 and YAM-5 satellites. YAM stands for "Yet Another Mission." These buses will be nearly identical in design to the LeoStella satellite bus product line it has developed for other customers. Loft Orbital flies customer payloads as a service, handling the entire mission on behalf of its customers while ensuring that the customer remains in control of payload operations. Loft Orbital has developed the hardware and software technologies needed to fly multiple payloads on a common bus design without mission-specific customization. These technologies allow it to procure satellite buses in advance of knowing the payload configuration of the mission, supporting imagers and cameras, radio frequency sensors, scientific payloads for geophysical research or space science, weather and climate sensors, and specialized sensors focused on national security missions. This approach results in a service that provides unparalleled speed to orbit and reliability for Loft customers.

MHI Launches the Emirates Mars Mission, HOPE spacecraft

July 20, 2020 - Mitsubishi Heavy Industries (MHI) successfully delivered the Emirates Mars Mission's (EMM) HOPE spacecraft developed by the UAE Mohammed Bin Rashid Space Centre (MBRSC) into orbit via the H-IIA launch vehicle F42. The launch vehicle trajectory was executed as planned, and at about 57 minutes after liftoff, separation of the HOPE spacecraft was confirmed. HOPE will be the first probe to provide a complete picture of the Martian atmosphere and its layers when it reaches Mars in 2021 to coincide with the 50th anniversary of the founding of the UAE. The H-IIA launch vehicle is Japan's flagship launch vehicle and one of the most reliable launch vehicles in the world. Today's launch was the 45th consecutive successful H-IIA/H-IIB launch, with an accumulative success rate of 98.0%.

Airbus Signs Contract with UK Ministry of Defence for Skynet 6A satellite

July 19, 2020 - Airbus Defence and Space has signed a contract with the UK Ministry of Defence (MOD) to extend and enhance the Skynet fleet. This will involve the development, manufacture, cyber protection, assembly, integration, test and launch, of a military communications satellite, Skynet 6A, planned for launch in 2025. The contract also covers technology development programmes, new secure telemetry, tracking and command systems, launch, in-orbit testing and ground segment updates to the current Skynet 5 system. The value of the contract is more than £500 million. The Skynet 5 programme, managed by Airbus, has provided the UK MOD with a suite of highly robust, reliable and secure military communications services, supporting global operations since 2003. Airbus has been involved in all Skynet phases since 1974 and this phase builds on a strong UK commitment to space manufacturing in the UK. The recent programme commenced by using the legacy Skynet 4 satellites and then augmenting them with a fully refurbished ground network before launching the Skynet 5A, 5B, 5C and 5D satellites between 2007 and 2012.

Airbus Expands its SpaceDataHighway with Second Satellite

July 16, 2020 - The EDRS-C satellite, the second node of Airbus' SpaceDataHighway constellation, completed its commissioning tests on 15th July 2020 and is now ready to start operational services. Following its successful launch in August 2019 and manoeuvring to its geostationary orbital slot at 31 degrees east, in-orbit testing has been executed and laser communication links have been established to the Copernicus programme's Sentinel Earth observation satellites. EDRS-C doubles transmission capacity and the constellation is now able to relay the data from two observation satellites simultaneously. It further strengthens Airbus' commitment to serve the existing Copernicus programme as well as future Sentinel missions. The additional capacity will also enable Airbus to accommodate further customer needs. By 2030, about 15 satellites should use the very high bandwidth data connectivity of the SpaceDataHighway. The SpaceDataHighway is the world's first laser communication geostationary constellation. It represents a game changer in the speed of space communications, using cutting-edge laser technology to deliver secure data transfer services at a rate of 1.8 Gbit/s in near-real time.

Northrop Grumman Launches Minotaur IV Rocket Carrying Satellite for the NRO

July 16, 2020 - Northrop Grumman Corporation successfully launched its Minotaur IV space launch vehicle and placed a National Reconnaissance Office (NRO) spacecraft into orbit on July 15. The NROL-129 launch (L-129) was the seventh Minotaur IV flight. The Minotaur IV is capable of launching payloads of up to 4,000 pounds (or 1,800 kilograms) to low earth orbit. This mission's Minotaur IV configuration included three decommissioned Peacekeeper stages and a Northrop Grumman manufactured Orion 38 solid fuel upper stage. The Minotaur rockets are manufactured at Northrop Grumman's facilities in Chandler, Arizona; Vandenberg, California; and Clearfield and Magna, Utah. The vehicle used to launch the L-129 mission was procured under the OSP-3 contract administered by the U.S. Space Force Space and Missile Systems Center's Launch Enterprise Small Launch and Targets Division at Kirtland Air Force Base in New Mexico. Minotaur vehicles are currently available to customers under the OSP-4 contract.

Exotrail Raises 11M€ to Become a Leader in On-orbit Transportation for Small Satellites

July 16, 2020 - Exotrail has raised 11M€ (13M\$) to become a leader in on-orbit transportation for small satellites. This Series A round was led by two European Venture Capital firms, Karista (through Paris Region Venture Fund) and Innovacom. IXO Private Equity, NCI-Waterstart, Turenne Capital and returning investors 360 Capital, Irdi Soridec Gestion and Bpifrance also invested. This round will further boost Exotrail's development by allowing the company to extend its product portfolio and scale-up its manufacturing and business development capabilities. The Series A fundraising will enable Exotrail to continue to bring unique solutions to significantly enhance deployment, improve performance and reduce space pollution in the rapidly growing small satellite space market. Exotrail's innovative propulsion systems and mission design and operations software will now allow small satellites to optimise their deployment in space, choose their orbit, and prevent collisions thus reducing space debris.

Boeing to Support International Space Station Operations through 2024

July 15, 2020 - Boeing, NASA's lead industry partner for the International Space Station (ISS) since 1993, will continue supporting the celebrated orbiting laboratory through September of 2024 under a \$916 million contract extension awarded today. Boeing will provide engineering support services, resources, and personnel for activities aboard the ISS and manage many of the station's systems. Work will be done at the Lyndon B. Johnson Space Center in Houston; the John F. Kennedy Space Center at Cape Canaveral, Florida; and Marshall Space Flight Center in Huntsville, Alabama, as well as other locations around the

world. The contract is valued at about \$225 million annually.

Spaceflight Unveils Next-gen Orbital Transfer Vehicle to Fly aboard Next SpaceX Rideshare Mission

July 15, 2020 - Spaceflight Inc. announced that it will be flying its next generation orbital transfer vehicle, Sherpa-FX, on a fully dedicated rideshare mission with SpaceX. The mission, called SXRS-3 by Spaceflight, is scheduled to launch on a Falcon 9 no earlier than December 2020. Spaceflight has contracted 16 spacecraft for this mission from organizations including iQPS, Loft Orbital, HawkEye 360, NASA's Small Spacecraft Technology program, Astrocast, and the University of South Florida Institute of Applied Engineering. In addition to the customer spacecraft, Sherpa-FX will transport multiple hosted payloads including one for Celestis Inc., as well as several that will demonstrate technologies designed to identify and track spacecraft once deployed. By demonstrating these tracking systems on orbit, Spaceflight customers will have access to flight-proven technologies that can mitigate space congestion and provide the foundation of effective and responsible space traffic management. Technologies onboard Sherpa-FX include payloads by NearSpace Launch, Keplerian Technologies and their hardware partner Tiger Innovations, and Space Domain Awareness Inc. These innovative payloads will provide spacecraft developers an independent capability to identify and track their spacecraft without drawing on the host spacecraft resources.

JAXA and Australian Space Agency Joint Statement for Cooperation in the Hayabusa2 Sample Return Mission

July 14, 2020 - The Australian Space Agency and the Japan Aerospace Exploration Agency (JAXA) have been in close cooperation on JAXA's asteroid sample-return mission, 'Hayabusa2'. The sample capsule is planned to land in Woomera, South Australia and the Agency and JAXA are working towards the planned safe re-entry and recovery of the capsule containing the asteroid samples. Recently, JAXA indicated that 6 December 2020 is its planned target date for the capsule re-entry and recovery. The Australian Space Agency and JAXA are working through JAXA's application for Authorisation of Return of Overseas Launched Space Object (AROLSO), which will need to be approved under the Space Activities Act (1998). Successfully realizing this epoch-making sample return mission is a great partnership between Australia and Japan and will be a symbol of international cooperation and of overcoming the difficulties and crisis caused by the pandemic.

Northrop Grumman to Provide Extended Life Capability for Perseverance Mars Rover Mission

July 10, 2020 - This summer, Northrop Grumman is playing an important role in a historic phase of Mars exploration. Northrop Grumman's LN-200S inertial measurement unit (IMU) will provide extended life inertial navigation for NASA Jet Propulsion Laboratory's (JPL) Perseverance Mars Rover, a mission that will seek signs of ancient life on the Red Planet. The design life of the Perseverance Rover mission is about 1,071 Earth days (1.5 Mars year); however, NASA JPL required Northrop Grumman's technology to be rigorously tested to double that time. This is a performance threshold the company felt confident it could meet after the success of the Mars rovers Spirit and Opportunity, which launched in 2003 and featured the LN-200S. Both missions had a 90 Earth day design life, but the Opportunity rover ended up stretching to almost 15 Earth years (8 Mars years). The LN-200S - part of the LN-200 product line of fiber-optic gyroscope (FOG) IMUs - will provide attitude and acceleration information throughout the Perseverance Mars Rover surface mission. It will be mounted deep inside the Rover as the vehicle traverses the planet's surface and drills to collect core samples. The low cost, small size, weight and power (SWAP) LN-200S features three FOG gyroscopes and three silicon Micro Electro-Mechanical Systems (MEMS) accelerometers in a hermetically sealed package ideal for space applications, including asteroid and planetary probes.

Successful Launch of APSTAR-6D Satellite

July 9, 2020 - At 20:11 on the evening of July 9, APSTAR-6D satellite took off on the CZ-3B/E rocket at Xichang Satellite Launch Center. After half hour flight, APSTAR-6D separated from the rocket's 3rd stage, completed the first deployment of the solar array, and entered into transfer orbit. In the following days, the satellite will conduct multiple orbit raises, solar array second deployment and antenna deployment. After completing the in-orbit test, it will commission service at the orbital slot of 134°E. APT Mobile Satcom Limited (APSAT) owns and operates APSTAR-6D satellite, which is the first satellite of "Global High-throughput Broadband Satellite Communication System", as envisaged by APSAT. Based on the DFH-4E platform, APSTAR-6D was manufactured by China Academy of Space Technology. The satellite has totally 90 Ku-band service spot-beams with single beam capacity of more than 1Gbps, and total capacity of 50Gbps. APSTAR-6D satellite is capable of providing hundreds of Mbps broadband services for airlines, or

thousands of Mbps broadband services for maritime ships and cruise ships, so that it can meet all types of mobile satellite communication, as well as satellite broadband connection needs in the Asia-Pacific region. APT Satellite, as the co-founder of APSAT incorporated in Shenzhen, has been involved in orbital spectrum resources, payload design, manufacture supervision, and overseas gateways construction works for APSTAR-6D.

Airbus Defence and Space Proposals for the Copernicus Project Selected by ESA

July 8, 2020 - The European Space Agency (ESA) has announced the selection of Airbus Defence and Space for major Copernicus environment missions. Copernicus is the biggest provider of Earth observation data in the world – and while the EU is at the helm of this environmental monitoring programme, ESA develops, builds and launches the satellites. It also operates some of the missions and ensures the availability of data from third party missions. Airbus Defence and Space in Spain will serve as prime contractor for the Land Surface Temperature Monitoring mission (LSTM), with an order value of €375m. Airbus Defence and Space in France will also be responsible for the InfraRed instrument. The LSTM mission will carry a high spatial-temporal resolution thermal infrared sensor to provide observations of land-surface temperature for sustainable agriculture and to predict drought. Airbus Defence and Space in Germany will lead the development of the Polar Ice and Snow Topographic Mission (CRISTAL), with an order value of €300m and Thales Alenia Space will supply the altimeter instrument. The CRISTAL mission will measure and monitor sea-ice thickness and overlying snow depth. In addition to the LSTM infra-red instrument, Airbus Defence and Space will also be responsible for the L-band Synthetic Aperture Radar (SAR) payload for ROSE-L with Thales Alenia Space Italia as prime contractor.

Israel Ministry of Defense and Israel Aerospace Industries Successfully Launch Ofek 16 Satellite

July 6, 2020 - The Space Administration in the Directorate of Defense Research and Development (DDR&D), of the Israel Ministry of Defense (IMoD), and Israel Aerospace Industries (IAI), have successfully launched the "Ofek 16" reconnaissance satellite into space on July 6. The launch was performed from a launch site based in central Israel, using a "Shavit" launcher. The satellite began to orbit around earth and to transmit data, in accordance with original launch plans. IMoD and IAI engineers have started a series of pre-planned tests to determine the propriety and performance level of the satellite before it begins its full operational activities. The Space Administration in IMoD has led the development and production of the satellite and its launcher. IAI is the prime contractor, having assigned the program to its Systems, Missiles and Space Group together with the MLM Division, which is responsible for the development of the launcher. Elbit Systems is responsible for the development and production of the satellite's advanced camera and payload. The launch engines were developed by Rafael Advanced Defense Systems and Tomer, a government-owned company. Additional companies have participated in the program, including Rokar and Cielo.

China Launches High-Resolution Remote-Sensing Satellite

July 6, 2020 - China successfully sent a high-resolution multi-mode imaging satellite into the planned orbit from the Taiyuan Satellite Launch Center in north China's Shanxi Province on July 3. The satellite was launched by a Long March-4B carrier rocket at 11:10 a.m. (Beijing Time). The satellite is a civil-use optical remote-sensing satellite with a resolution up to the sub-meter level. It will operate in Sun-synchronous orbit. It can provide high-precision remote-sensing image data for several industries including surveying and mapping, natural resources, emergency management, agriculture, ecological environment, residential construction and forestry. Another satellite designed to popularize space science among teenagers was also launched in the mission. It will carry out science experiments such as image and voice data transmission. Both satellites were developed by the China Academy of Space Technology. (source: CASC)

Rocket Lab Mission Fails to Reach Orbit

July 4, 2020 - Following a successful lift-off, first stage burn, and stage separation, Rocket Lab experienced an anomaly during its 13th Electron mission 'Pics Or It Didn't Happen.' The issue occurred approximately four minutes into the flight on July 4, 2020 and resulted in the safe loss of the vehicle. As a result, the payloads onboard Electron were not deployed to orbit. Electron remained within the predicted launch corridors and caused no harm to personnel or the launch site. Rocket Lab is working closely with the FAA to investigate the anomaly and identify its root cause to correct the issue to move forward. Today's anomaly occurred after 11 consecutive successful orbital launches of the Electron launch vehicle. Rocket Lab currently has more than eight Electron vehicles in production, ready for a rapid return to flight as soon as investigations are complete and any required corrective actions are in place.

Optus Set to Launch Game-changing New Satellite in 2023

July 2, 2020 - Optus announced a giant leap in its satellite business, confirming a contract with Airbus Defence and Space for a brand new, OneSat software-defined satellite, Optus 11, to be deployed for Australia and New Zealand in 2023 at the current Optus D1 orbital location of 160°East. Optus has entered into a revised agreement with Sky New Zealand which will be the cornerstone customer leveraging the new satellite. Optus will be the first satellite operator in Asia Pacific to launch a software-defined satellite that can provide both flexible concurrent broadcast and broadband services via a very high throughput satellite (VHTS) design. The game-changing satellite is fully configurable in space, meaning its location, coverage, bandwidth and capacity can be changed in orbit as customer demands evolve – where traditional satellites are limited by on-ground configurations that cannot be altered after launch. Sitting 36,000km above Earth, Optus 11 is also able to host a satellite-based augmentation system (SBAS) payload – which has the ability to greatly enhance the accuracy and precision of existing GPS and positioning systems across the ANZ region and pinpoint a location to within a decimetre, without the need for mobile or internet coverage. Optus 11 will join five other Optus satellites in orbit and expands Optus' geostationary satellite fleet to become the largest in the company's and Australia's history. Optus will be the first operator in the world to utilise the Ku band (11-14GHz) spectrum for the software defined VHTS in both broadcast and broadband services.

Thales Alenia Space Proposals for the Copernicus Project Selected by European Space Agency

July 2, 2020 - Thales Alenia Space has recently been selected by the European Space Agency (ESA) in coordination and with the agreement of the European Commission, for major Copernicus missions. Copernicus is the core satellite Earth observation program of the European Commission and the European Space Agency ESA. It provides Earth observation data for environmental protection, climate monitoring, natural disaster assessment and other social tasks. Thales Alenia Space will serve as prime contractor for the following missions: Thales Alenia Space France for CHIME (Hyperspectral Imaging mission) with OHB system and Leonardo as main subcontractors; Thales Alenia Space Italia for CIMR (Passive Microwave Imaging Mission) with OHB system and OHB Italia as subcontractors; Thales Alenia Space Italia for ROSE L (L-band SAR Mission) with Airbus Defence & Space Germany as subcontractor. Thales Alenia Space will also be responsible for the payload on two further missions: Thales Alenia Space France for CO2M instrument (the CO2 Monitoring Mission) to measure global anthropogenic CO2 emissions and thus play a key role in studying the causes of climate change and monitoring it, with OHB system as prime contractor; Thales Alenia Space France for the CRISTAL (Polar Ice and Snow Topographic Mission) altimeter with Airbus Defence & Space Germany as prime contractor. The order volume resulting from the recent bid decisions is expected to be around EUR 1.8 billion.

EXECUTIVE MOVES

Panasonic Avionics Appoints Joe Bentley as CTO

July 28, 2020 - Panasonic Avionics Corporation has announced the appointment of Joe Bentley as Chief Technology Officer. Bentley, who joins Panasonic today, will be responsible for leading all aspects of the company's software and systems engineering teams, cloud, hardware, and IT/security. He will serve as a key member of Panasonic's executive team and be directly responsible for an organization of over 800 employees spread across Panasonic's Lake Forest, California headquarters, as well as the Bay Area office and other global locations. Bentley was previously Senior Vice President, Engineering at Hulu where he led its 700-person engineering, program, and research organizations across three international offices. During his tenure, Hulu doubled subscribers to over 30 million while becoming the largest digital multichannel video programming distributor (DMVPD) in the US.

EOS Welcomes Glen Tindall as CEO, EOS Communication Systems

July 16, 2020 - As CEO of EOS Communications Systems, Glen Tindall assumes control of all three recent communications company acquisitions – EM Solutions, Audacy Corporation, and Collinear – and will integrate those capabilities and assets with existing EOS resources to form a full-service communications company. This appointment means that EOS now has the critical technical resources and leadership required to move forward to offer an innovative range of high-value communication services. EOS can now uniquely offer compelling technology in space and ground segments, microwave and optical space communications, and the technology to transition from one to the other. Glen joins EOS after 17 years at SES, the world's largest commercial satellite operator, where he most recently developed and grew SES' nascent government satellite services business across the Indo-Pacific region.

Virgin Galactic Announces Michael Colglazier as CEO and George Whitesides as Chief Space Officer

July 15, 2020 - Virgin Galactic Holdings announced the appointments of Michael Colglazier as Virgin Galactic's new Chief Executive Officer and George Whitesides as Chief Space Officer, effective July 20, 2020. Michael assumes the CEO role at an exciting time for Virgin Galactic as the Company progresses through its test flight program and prepares for commercial service. He will also join the Company's Board of Directors effective July 20, 2020. Michael joins Virgin Galactic following a long and successful career at The Walt Disney Company, bringing over three decades of experience in developing and growing consumer-oriented multi-billion dollar businesses strategically, commercially, and operationally. Most recently Michael was President and Managing Director, Disney Parks International, where he was responsible for operations, strategy, and commercial and experiential development of Disney's international parks and resorts. George will assume the role of Chief Space Officer, focused on developing the Company's future business opportunities, including point-to-point hypersonic travel and orbital space travel. George will also chair the Company's Space Advisory Board, and in conjunction with his new role will step down from the Company's Board of Directors. George joined Virgin Galactic in 2010 as its first CEO, after serving as Chief of Staff at NASA.

Relativity Space Appoints Caryn Schenewerk as Vice President, Regulatory and Government Affairs

July 15, 2020 - Relativity Space announced the appointment of Caryn Schenewerk as vice president, regulatory and government affairs, effective July 15, 2020. In this role, Schenewerk will be a key member of the Executive Leadership Team, responsible for the development and execution of Relativity Space's federal, state, and local government strategy. She will increase Relativity's visibility, lead the company's participation in industry associations and expand Relativity's relationships with key government agencies. Schenewerk brings an extensive background in legislative affairs, aerospace regulation, acquisition and appropriation processes across twenty years of experience. She has worked extensively with U.S. Government agencies on commercial launch and recovery operations, particularly the Federal Aviation Administration's Office of Commercial Space Transportation, and has deep knowledge of the U.S. and international space industry.

Astroscale U.S. Appoints Becky Yoder as Senior Vice President for Finance and Business Operations

July 9, 2020 - Astroscale U.S. Inc., the U.S. unit of Astroscale Holdings, announced that Becky Yoder, an experienced and highly respected space industry professional, has joined the Astroscale U.S. management team. Ms. Yoder is serving as Senior Vice President for Finance and Business Operations as of June 2020. Yoder joins Astroscale with more than 25 years of experience in business, finance and operational management. Most recently, she was Director of Operations for the Orbital Technologies group at General Atomics Electromagnetic Systems. Prior to that, Yoder held leadership roles in financial and business operations as CEO and CFO for Surrey Satellite Technology US. Throughout her career, she has focused on creating and leading strong organizations. Yoder will help expand and enhance Astroscale U.S.' business and finance operations as it engages with partners, customers and other groups in the commercial and government space and technology communities.

Peter Anderson Appointed VP Business Development at AAC Clyde Space

July 7, 2020 - Peter Anderson has been appointed Vice President Business Development with responsibility for Sales and Marketing of AAC Clyde Space's portfolio of products and services. In his new role, Peter Anderson will also join the group's management team. Peter Anderson joined AAC Clyde Space in 2015 and has in his previous role as Head of Business Development Mission & Services, been instrumental in developing AAC Clyde Space's Space as a Service offering. He has also led negotiations on various key contracts.

Yona Ovadia Steps Down as Gilat's CEO, Adi Sfadia Named as Interim CEO of Gilat

July 2, 2020 - Gilat Satellite Networks has announced that Yona Ovadia will step down as Gilat's CEO effective immediately. Adi Sfadia, Gilat's CFO and Chief Integration Officer will assume the position of interim CEO. Ovadia will remain as a consultant of the Company and continue assisting in the integration with Comtech.

EUMETSAT Council Appoints Philip Evans as next Director-General

July 2, 2020 - Philip Evans will take over the reins of the 30-Member-State organisation from Alain Ratier, who will retire at the end of 2020 after serving nine-and-a-half years as Director-General. Evans achieved a highly successful career at the UK Met Office, where he held strategic and operational senior management positions and served as member of the Executive Board, after leading the remote sensing instrumentation

group in the 1990s. In his last position at the Met Office, Chief Operating Officer, Evans was responsible for the full operational delivery and infrastructure of the organisation, leading a team of 700 people. He also represented the United Kingdom on the EUMETSAT Council over the past two years. Most recently, he has been the Director of Physics Programmes at the UK Institute of Physics, where his responsibilities have included diversity in physics, innovation and education programmes.

Inmarsat's Nick Shave Appointed Chair of UKspace

July 1, 2020 - Nick Shave, Vice President for Strategic Programmes at Inmarsat, has taken over as Chair of UKspace, the trade association of the UK space industry. On his appointment Nick described space as a "critical strategic asset for the nation" and called for "even greater collaboration between the space industry and government as a new National Space Strategy is developed". Nick assumes the role from Graham Peters who was in the post from March 2018.

REPORTS

Euroconsult Report: Prospects for the Small Satellite Market

July 23, 2020 - In the 6th edition of its latest research titled "*Prospects for the Small Satellite Market*," Euroconsult forecasts that two mega-constellations will account for half of the smallsats to be launched between 2020 and 2029, yet only account for one fifth of the total smallsat market value due to economies of scale, mass manufacturing and batch launches. The report also addresses the impact of COVID-19 on the small satellite industry and provides updated analysis of the ongoing uncertainties related to the pandemic, smallsat constellations and the OneWeb bankruptcy, despite its recent acquisition. The 2020s are predicted to be the decade of small satellites with an annual average of 1,000 smallsats to be launched. By comparison, 2019 had the highest number of smallsats to date, with 385 smallsats launched. These spacecraft generated \$2.8 billion of market value in 2019, of which 70 percent for manufacturing and 30 percent for launch. From 2020 to 2029, the smallsat market value is projected to reach \$51 billion, of which \$33 billion for manufacturing and \$18 billion for launch. This is more than four times the market size of the previous decade.

NSR Report: Connected Vehicles and Broadband Drive Land Mobile Satcom in Next Decade

July 14, 2020 - NSR's *Land Mobile via Satellite, 8th Edition (LMvS8)*, finds that satcom land mobile markets continue to have a strong future, with over 750,000 new in-service units coming over the next decade, across 9 distinct applications. Many of these units will trend towards higher ARPU levels with enhanced revenue prospects, despite a near-term COVID-19 revenue dip. Connected vehicles play a major role in long term growth, as broadband overtakes narrowband demand across all land mobile applications. In the near-term, COVID-19 is having, and will have, a more muted impact on land mobile revenues with enterprise users, especially when compared with aeronautical and maritime mobility markets. Nonetheless, the greater uptake of satellite service by consumers in the last few years, especially for eco-tourism purposes, has resulted in a greater revenue decline in 2020 and 2021. However, the upside is that device de-activations remained at similar levels to 2019, so there will not be a "COVID-19 plunge" across land mobile, providing much-needed near-term optimism for the market.

NSR Report Forecasts HAPs Market to Generate \$4 Billion by 2029

July 7, 2020 - NSR's *High Altitude Platforms, 4th Edition report*, forecasts approx. \$4B in cumulative HAPs revenues over the next decade, for airships, balloons and pseudo-satellite platforms. High altitude balloons are expected to be the primary driver of units and revenues, followed far behind by pseudo-satellites and airships. Telcos are also taking greater interest in HAPs as a viable option for remote and rural connectivity around the globe. Following the COVID-19 dip of 2020, the HAPs market will remain in recovery before accelerated growth towards the end of the decade, with in-service units at a 8.7% CAGR through ten years. The Americas are forecast to generate the greatest service revenues across applications.

UPCOMING EVENTS

APSCC 2020 Conference Series, August 18 – November 17, <https://apccsat.com>
LIVE Every Tuesday 9AM HK | Singapore Time from August 18 to November 17

APSAT 2020, September 23-24, Jakarta, Indonesia, <https://apsat.assi.or.id/>

Satellite Industry Forum, September 24-25, Virtual Edition, <https://www.aviasif.com/>

ConnecTechAsia 2020, September 29 - October 1, Virtual Edition, www.connectechasia.com

APSCC Summit @ConnecTech Asia, September 29 - October 1, Virtual Edition,
<https://www.connectechasia.com/satellite-asia/>

Future of Video India, October 10, Virtual Edition, https://avia.org/all_events/the-future-of-video-india-2020/

IAC 2020, October 12-14, Virtual Edition, <http://www.iafastro.org/events/iac/iac-2020/>

CABSAT 2020, October 26 - 28, Dubai, UAE, www.cabsat.com

CABSAT now in its 26th edition presents SATEXPO, the only platform in the MEASA region bringing senior buyers in sat-comms, tech and business solutions together for 3 days under one roof. SATEXPO represents the entire ecosystem of satellite carriers, manufacturers, service providers and integrators serving government and military.

Asia Video Summit 2020, November 9-11, Singapore, <https://asiavideosummit.com/>

World Satellite Business Week, November 9-12, Paris, France, <http://www.satellite-business.com/en>

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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.