

APSCC Monthly e-Newsletter

June 2021

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 May 1 to May 31.

INSIDE APSCC

APSCC 2021 Webinar Series: LIVE Every Tuesday 9AM HKI Singapore Time

The most frequent and largest ongoing virtual conference in the Asia Pacific satellite community – the APSCC 2021 Webinar Series incorporates industry veterans, local players, as well as new market entrants in a single event to reach a wide-ranging audience. The APSCC 2021 Webinar Series continues to play a vital role in supporting the industry in the Asia Pacific region and beyond with a brand-new format, a lengthened timeline, and a potentially unlimited reach. Register now and get access to the complete APSCC 2021 Webinar Series with a single password. To register go to <https://apscsat.com>.

APSCC Welcomes Kymeta as New Platinum Member

May 24, 2021 - The Asia-Pacific Satellite Communications Council (APSCC) announced that antenna innovator Kymeta has joined the association, further broadening the industry group's participation from manufacturing sector of the space and satellite industry. "APSCC is delighted to welcome Kymeta as our newest member," said APSCC President Gregg Daffner. "Their participation will strengthen our representation of companies at every level of the space industry value chain. As the pre-eminent voice of the satellite industry in the Asia-Pacific region, APSCC strives to promote the mutual interests of all its members, from across the region and around the world." "Kymeta is proud to join APSCC, as the trade group dedicated to furthering the goals of the space industry in the region," said David Geiling, Vice President of Sales, Asia Pac, Kymeta Corporation. "At Kymeta, our mission is to provide comprehensive solutions based on ground-breaking research, and we are confident that our participation in APSCC will help shape our presence in the region." Kymeta brings to 72 the number of members in APSCC, which is headquartered in Seoul, South Korea and serves eighteen markets across the Asia Pacific region. Membership is drawn from private and public companies across the space industry, including government ministries and agencies, as well as academic and research entities. For more information, visit <https://kymetacorp.com>.

APSCC Welcomes Avealto as New Gold Member

May 17, 2021 - The Asia-Pacific Satellite Communications Council (APSCC) announced High Altitude Platform (HAP) provider Avealto has joined the association, breaking new ground in APSCC membership. "It is a pleasure to welcome Avealto into the Association," said APSCC President Gregg Daffner. "As the pre-eminent satellite industry group in the Asia-Pacific region, APSCC works to include companies from every part of the space industry, including HAPs manufacturers and operators. As our industry innovates and develops new ways to connect the people of the region, APSCC is a proud partner." "After many years of interaction with APSCC, Avealto is delighted to now become a member," said Walt Anderson, Avealto's Founder and CEO. "We see key opportunities for HAPS deployments in the markets of the region, and by working with APSCC, we are confident we will deepen our engagement with the Asian industry as a whole." Find out more at: <https://avealto.com/>

SATELLITE BUSINESS

Integrasys Opens a New Office at Dubai Trade Centre District

May 31, 2021 - Integrasys keeps its aggressive expansion plan by opening a new high-tech office in the Dubai Trade Centre area at the Nassima Tower, to cover the Middle East Market from UAE. The company has decided to focus on the United Arab Emirates, in order to continue with the worldwide expansion and to provide the best quality of service to its customers locally. The office is located at the Dubai Trade Centre district, the city's financial district, near to the downtown, and very convenient to visit during any

tradeshow or exhibition. Integrasys group has now one office in Asia, one office in the Middle East, one office in the United States, Head Quarters in Madrid and an R&D Office in Seville. This office provides a more globalized infrastructure to the existing Integrasys group.

Addvalue Secured New Additional Contract for its iFleetONE Terminals to CTTIC-Shanghai

May 31, 2021 - Addvalue Technologies Ltd, a leading player in the mobile satellite communications industry, announced that its wholly-owned subsidiary, Zhongxin Chuangzhi Technologies (Beijing) Ltd., Co. (ZXCZ), has secured new additional contract with CTTIC Shanghai Co Ltd (CTTIC-Shanghai) to supply its Addvalue iFleetONE-VMS™ Terminals to ZXCZ with a view to equip the Chinese fishing fleet of more than 1,000 vessels with new satellite communication capabilities that include solutions for complying with the regulations for fisheries sustainability (the “New Additional Contract”). The New Additional Contract is a follow-on contract to the first contract which both ZXCZ and CTTIC-Shanghai entered into in August 2020 that witnessed the successful roll-out of the first 100 units of Addvalue iFleetONE-VMS™ Terminals. The Addvalue iFleetONE-VMS™ Terminal is more than just an Internet Protocol (IP)-based satellite broadband product that is type-approved to work under the Inmarsat BGAN system. Embedded with a proprietary Vessel Monitoring (VMS) solution which is type-approved separately by several major fisheries authorities for fisheries sustainability, which include the US National Marine Fisheries Service (“NMFS”), the Pacific Islands Forum Fisheries Agency (FFA) and Western and Central Pacific Fisheries Commission (WCPFC), the Addvalue iFleetONE-VMS™ Terminal represents the most compelling solution to the fishing fleets today.

We4Sea Signs Inmarsat Application Provider Agreement as Roll Group Takes Vessel Performance Monitoring Package Fleet-Wide

May 27, 2021 - Dutch performance monitoring company We4Sea and Inmarsat have signed an agreement for We4Sea to join the fast-growing group of more than 40 certified providers offering applications via Inmarsat’s digital solutions Fleet Data and Fleet Connect. The announcement coincides with news of a first We4Sea-Inmarsat collaboration to secure fleet-wide uptake for We4Sea’s web-based vessel performance monitoring service. Heavy-lift shipowner Roll Group successfully trialled the benefits of the cloud-based ship performance management tool without commitment after the dual installation of Fleet Xpress with the Fleet Data IoT platform embedded. Requiring no hardware onboard, the We4Sea application uses a Digital Twin as the basis for comparison with the most easily accessible ship and operating profile data. Variations with the Digital Twin and ship data are flagged as potential inefficiencies that need action or correction reporting. Under the Certified Application Provider agreement, We4Sea cloud analytics uses the dedicated Fleet Data bandwidth to secure always-on, or on-demand ship-shore communication via an Application Programming Interface.

Hanwha Systems \$30M Investment into Kymeta Corp. Approved by CFIUS

May 26, 2021 - Kymeta Corporation announced today that the Committee on Foreign Investment in the United States (CFIUS) has approved a \$30 million investment by Hanwha Systems Co., Ltd. (HSC) (www.hanwha.com), a leading global solutions company that provides differentiated smart technologies in defense electronics and information infrastructure, in Kymeta. The approval provided by CFIUS clears the way for HSC and Kymeta to close on the transaction that was jointly announced last December. The investment moves Kymeta one step closer toward developing solutions that are future proof and interoperable with both LEO and GEO mega constellations. Today, the Kymeta™ u8 is the only commercially available flat panel antenna that is compatible with LEO and GEO satellite constellations and enabled to take advantage of the growing capacity within space. The investment from HSC will further Kymeta’s global market reach, accelerate production, and improve the overall growth trajectory of the company. The funding will support increased unit production, enhanced customer experience, and the ongoing development of Kymeta’s next generation capabilities. With the capital investment HSC will also receive a seat on the Kymeta Board of Directors.

Inmarsat Opens New Million Dollar Facility in Ottawa

May 26, 2021 - Inmarsat opened the company’s new, purpose built \$1 million facility in Ottawa, Canada. The world-class building represents a significant further commitment by the company to Canada and has been designed to meet the needs of the Canadian Armed Forces and to deliver a full Managed Service experience, conveniently located for Government clients in the national capital.

C-COM Antennas Deployed by Netsat in Pakistan

May 26, 2021 - C-COM Satellite Systems Inc., a leading global provider of commercial grade mobile auto-deploying satellite antenna systems, announced today that its Karachi based integrator has deployed

multiple C-COM 1.2m vehicle mounted iNetVu® antenna systems for the Punjab Land Record Authority. NETSAT, Pakistan's leading service provider and system integrator of satellite equipment, has been awarded a contract by Punjab Land Record Authority (PLRA) for establishment of mobile service vans for the Arazi Record Centers (ARCs) across the province. The scope of works includes delivery, integration, installation and commissioning of satellite equipment on vehicles, and establishment of satellite connectivity between mobile vans and the PLRA Datacenter. These vehicles will allow clients to receive various services at their doorsteps, including issuance of FARD (ownership document) and mutation of property. Five vehicles equipped with C-COM's iNetVu® 1200 Drive-away satellite antenna systems have been deployed to provide these services using satellite connectivity, in areas where Broadband Internet is unavailable, such as in the tribal regions of south Punjab. NETSAT has successfully delivered 20 vehicles to PLRA equipped with cameras, computers and satellite equipment, for delivery of seamless Internet services to the PLRA client.

Gilat Extends Multi-Million Dollar IoT Project in Latin America

May 26, 2021 - Gilat Satellite Networks Ltd. announced the extension of its multi-million dollar IoT project in Latin America. Tier-1 MNO extends coverage of Gilat's cellular backhaul solution as it expands its Agriculture IoT network. The Agribusiness IoT market addresses a critical need to better provide communication between the field and the office. Gilat provides the 4G network expansion to support the growing business with connectivity of machines that require real-time control and monitoring of harvesters and agricultural tractors. This ensures cost-effective decisions, better crop management and greater speed, efficiency and productivity in the production flow.

Comtech Awarded \$1.6 Million Contract for High-Power Solid-State Amplifiers

May 26, 2021 - Comtech Telecommunications Corp., a world leader in secure wireless communications technologies, announced today that during its third quarter of fiscal 2021, its New York-based subsidiary, Comtech PST Corp., which is part of Comtech's Government Solutions segment, was awarded an additional \$1.6 million contract for RF microwave solid-state amplifiers from a major domestic prime contractor, adding to an initial \$1.7 million contract awarded earlier this fiscal year. These very high-power solid-state amplifiers, which utilize the latest in solid-state GaN transistor technology, were developed in close cooperation with the prime contractor and are part of a complex RF microwave transmission system used by the U.S. Military.

Global Eagle Becomes Anuvu, a New Brand for a New Perspective on Mobility Markets

May 25, 2021 - Global Eagle, the leading provider of high-speed connectivity and entertainment solutions for demanding worldwide mobility markets, is rebranding as Anuvu, reflecting its focus on next-generation passenger and guest connected experiences in the air and at sea. Josh Marks, Chief Executive Officer, says: "Our recent sale to new owners and their investment in our business provides a unique opportunity to align our brand with our vision. We recently divested our non-mobility businesses to focus on mobility markets including airlines, cruise lines, yachts, energy transportation and government. Since we formed as a SPAC over a decade ago, we have operated under the Global Eagle brand as we acquired companies serving airlines and maritime markets."

NTT and SKY Perfect JSAT to Create New Space Enterprise to Aid Realization of a Sustainable Society

May 20, 2021 - NTT Corporation and SKY Perfect JSAT Holdings Inc. announced that the parties have agreed to jointly work together with the goal of creating a new space enterprise to aid realization of a sustainable society, and accordingly concluded a business collaboration agreement on May 19, 2021. NTT, which has global computing network technology and is working on the implementation of IOWN, and SKY Perfect JSAT, which has abundant technology and achievements in the space business including satellite communication and satellite broadcasting for more than 30 years, will collaborate to build a new space infrastructure through innovation in a space integrated computing network, thereby helping to realize a sustainable society. There is a pressing need to ensure the sustainability of economic and social activity, which makes it more important than ever to utilize outer space effectively and to the greatest extent possible. This involves ICT infrastructures for a variety of fields, such as energy, environment and climate change, disaster prevention, and smart cities. Novel technologies and architectures are needed to build these ICT infrastructures in outer space. NTT and SKY Perfect JSAT have proceeded with studies and discussions toward the realization of an ICT infrastructures in outer space, and have reached the conclusion of this business alliance agreement. NTT, which has global terrestrial infrastructures and is dedicated to making the IOWN concept a reality, and SKY Perfect JSAT, which has abundant technology and

achievements in the space business including satellite communication and satellite broadcasting for more than 30 years, will together take on the challenge of building a novel space integrated computing network to create the infrastructure needed for a sustainable society.

Telesat and TIM Brasil Partner for First-of-its-Kind LEO Test in Brazil

May 20, 2021 - Telesat and TIM Brasil, the leader in 4G coverage in the country, today announced the completion of on-orbit testing across several applications with Telesat's Phase 1 Low Earth Orbit (LEO) satellite. This first-of-its-kind LEO backhaul testing in Brazil was conducted with TIM Brasil's Innovation Department staff at their state-of-the-art teleport in Rio de Janeiro, leveraging an 85 cm Intellian parabolic antenna to uplink and downlink to the LEO satellite. Throughout the 5-day testing campaign, the teams measured 4G mobile data traffic performance over LEO, achieving an average 38ms round trip latency. All applications tested ran efficiently without interference, fading or performance breaks throughout the tests, including 1080p YouTube video streaming, video conferencing, WhatsApp voice over LTE and interface compatibility. The resulting low latency represents a compelling opportunity for operators like TIM Brasil to expand their mobile and Internet services. Brazil has very good 4G coverage in population centers, but remote communities usually cannot cost-effectively be connected to the core network through fibre or additional cell towers due to long distances and difficult terrain. These tests highlight how Telesat Lightspeed can bring multiple Gbps of affordable, high-performance backhaul connectivity to connect many underserved regions and reduce the digital divide in Brazil.

Gilat Awarded over \$4 Million in Orders for Support of Low Earth Orbit (LEO) Constellation

May 20, 2021 - Gilat Satellite Networks Ltd. announced today that it received orders of over \$4 million for support of gateways of Low Earth Orbit (LEO) constellations. Gilat's subsidiary, Wavestream, was chosen as the vendor of choice to supply Gateway Solid State Power Amplifiers (SSPAs) to a leading satellite operator to support the LEO constellation gateways. The orders were received as part of the previously announced contract. Wavestream is proceeding according to plan with delivery of orders for its Gateway-Class PowerStream 160Ka SSPAs, designed specifically for networks using wide bandwidth uplinks and high order modulation schemes. Wavestream's SSPAs were selected because of their best-in-class technical performance and their unmatched reliability in harsh environments, best addressing the stringent requirements of Non-Geostationary Satellite Orbit (NGSO) constellations installed in remote locations.

Network Innovations Launches DVB-S2X Network over ST Engineering iDirect's Evolution Platform

May 19, 2021 - Network Innovations has recently activated their biggest infrastructure in Asia, utilizing the latest technology powered by ST Engineering iDirect. Since investing in iDirect Evolution®, Network Innovations holds the capability to address any Ku-Band requirement in Southeast Asia, providing services that suit the needs of a wide range of enterprise markets, such as Energy, Oil and Gas, and Maritime. Being one of the first organizations to deploy this technology over the Evolution DVB-S2X platform, Network Innovations strives to expand business partnerships throughout Asia, providing customers with the highest speed, the greatest efficiency, and the most cost-effective solutions. Digital connectivity and internet services have become essential, with rural communication becoming a priority for many individuals and organizations around the world. This launch enables Network Innovations to expand their territory and allow flexible pricing for their customers.

Euroconsult Opens Australian Office to Help Grow Local Space Industry

May 19, 2021 - Euroconsult is opening a representative office in Australia to serve local and international clients in the fast growing Australian space sector, further expanding its global market reach. As part of recent work carried out on the Australian space market, including an assessment for Austrade on the development of potential Australian launch capabilities, Euroconsult had the opportunity to witness the dynamism and energy of Australia's space sector first-hand. This vitality has been catalysed by a renewed vision for the country to play a more substantial role in global space, resulting in a flourishing local space industry and an ambitious national space strategy. Euroconsult is now committing to join the Australian space ecosystem to support government and private sector decision makers in their strategic development of national capability. Euroconsult has appointed Dr Tim Parsons, a leader within the Australian space community, to act as local representative director.

Comtech Xicom Awarded \$1.0M Follow-on Contract for Ka-band Airborne SSPA/BUC

May 19, 2021 - Comtech Telecommunications Corp., a world leader in secure wireless communications technologies, announced today that during its third quarter of fiscal 2021, its Santa Clara, California-based subsidiary, Comtech Xicom Technology, Inc., was awarded a follow-on order valued at more than \$1.0

million for its Falcon 50Ka Solid-State Power Amplifiers (SSPAs) for an In-Flight Connectivity (IFC) application. These amplifiers feature a tri-band Block Upconverter (BUC) and are packaged in ARINC 791 compliant housings. Comtech Xicom's Falcon encompasses Ku and Ka frequency bands and offers high linear power with excellent gain flatness and phase noise performance to support the latest waveform technologies and networks. The Ka-band Falcon implements multi-sub-band switching, gain adjustment, gain equalization, power consumption control, and cooperative system calibration support such as OpenBMIP.

Cobham Mission Systems Awarded Thales Alenia Space Italia Contract for Orion ESM Life Support

May 18, 2021 - Cobham Mission Systems, the U.S.-based world leader in space life support systems, announced today it has been awarded a follow-on contract from Thales Alenia Space Italia for regulators and latch valves to be used on the European Service Modules for NASA's American-crewed Orion spacecraft. The ESM provides essential support functions for the Orion Multi-Purpose Crew Vehicle, which will be launched on the Space Launch System under the Artemis program to take astronauts to the moon and eventually to Mars. Cobham Mission Systems' components, used in the ESM's crew life support consumable gas and water delivery system, will provide water, oxygen, and nitrogen needed to create a life-sustaining environment for the crew onboard the vehicle. Components, including oxygen and nitrogen regulators, and water and gas on/off valves, will be delivered annually and designated for use on ESM 4 through 6, scheduled to launch in the 2026-2027 timeframe. Final Orion program approval by the European Union Ministerial Council for ESM 5 and 6 is expected to take place end of 2022.

Hughes Debuts First-Of-Its-Kind S-band Satellite/Cellular Hybrid Terminal

May 18, 2021 - Hughes Network Systems, LLC announced availability of the Hughes 4510 satellite/cellular hybrid terminal for customers in Europe. The first-of-its-kind dual-transport terminal intelligently routes IP traffic via terrestrial or mobile satellite system (MSS) networks, enabling reliable, ubiquitous connectivity for critical applications. As the terminal moves in and out of terrestrial cellular coverage areas, the S-band satellite service takes over automatically, ensuring constant connectivity. EchoStar Mobile, a sister company to Hughes, utilizes the 4510 to enable its new EM SYNERGY™ service, which delivers comprehensive, hybrid connectivity to customers across Europe from dense urban areas to the most remote corners of the continent utilizing S-band satellite service in combination with pan-European mobile roaming. Use cases for the Hughes 4510 span enterprise, government and maritime sectors, oil and gas industry, Smart-Grid monitoring, yachting and industrial Internet of Things (IoT) functions. The terminal contains an embedded SIM (eSIM) for global 4G cellular operation and intelligently and dynamically routes IP traffic between the terrestrial and S-band networks based upon path availability. IP67-rated and thus environmentally sealed, the terminal features an omnidirectional satellite antenna and requires low power, making it suited for simple deployment on a vehicle, fixed site or boat in off-the-grid locations. Operators can manage the 4510 terminal and update firmware remotely, and auto-context activation automatically restores power and connection following any disruption – without human intervention.

Viasat Obtains Full Suite of Operating Licenses in Nigeria

May 18, 2021- Working in partnership with the Nigerian Communications Commission, Viasat Inc., announced it was granted a full suite of operating licenses – Internet Service Provider (ISP) license, VSAT license and three Earth Stations in Motion (ESIM) licenses – in order to bring high-quality satellite internet connectivity to Nigerian communities where limited or no internet service is currently available. The NCC granted Viasat multiple licenses to operate within the 28GHz Ka-band satellite frequency band. The 28GHz Ka-band spectrum has enabled satellite broadband to be the fastest growing segment of satellite communications, and the leading global broadband solution to connect the estimated 3.6 billion people in the world left behind by terrestrial infrastructure. With access to the 28GHz Ka-band spectrum, Viasat will be positioned to expand its satellite-based internet connectivity service to more regions and citizens across Africa – ahead of the launch of ViaSat-3, its ultra-high capacity global satellite constellation comprised of three communications satellites. A ViaSat-3 satellite, aimed to serve Africa, as well as Europe and the Middle East, is planned for launch in 2022.

Onweb Establishes Key Distribution Partnership for Canada with Rock Networks

May 18, 2021 - OneWeb announced a distribution partnership for Canada with ROCK Networks, the end-to-end communications systems integrator focused on wireless and broadband solutions. The announcement was made during The Canadian Association of Defence and Security Industries Canadian Defence Marketplace event. OneWeb's partnership with ROCK Networks will utilize the power of

OneWeb's Low Earth Orbit (LEO) services with ROCK Network's industry-leading devices and services to bring strengthened connectivity to Canada's national defence and security protocols. It will provide innovative and reliable communications for Canada's Arctic Region for Canadian Armed Forces and other Government of Canada Departments and Agencies. Specifically, broadband low latency satellite communications will be available for those operating across Canada and, most notably, the high arctic. Headquartered in Ottawa, Ontario, ROCK Networks is an established Canada-wide telecommunications hardware systems integrator and service provider of wireless and broadband solutions to rural communities, commercial enterprises, government departments, agencies, and defence forces.

Taiwan Navigation Selects Inmarsat's Fleet Connect to Enable New Smart Ship Bridge Solution Application

May 17, 2021 - Inmarsat has announced that JRC (Japan Radio Company Co. Ltd.) has joined its fast-expanding group of Certified Application Providers (CAP) offering applications via Inmarsat's dedicated Fleet Connect bandwidth. The announcement follows the successful trial of JRC's Smart Ship Viewer (SSV) bridge solution onboard Taiwan Navigation's Handymax bulk carrier Tai Splendor. As a result of the successful trial Taiwan Navigation has now contracted to use Fleet Connect and JRC's Smart Ship Viewer across its eight newbuildings and eight existing vessels. Inmarsat's Certified Application Provider marketplace now hosts over 40 applications designed for ship owners and operators to reduce fuel emissions, enhance vessel performance, improve navigation, train crew and save lives at sea.

SES Government Solutions Provides MEO Satellite Services for Combatant Command

May 17, 2021 - SES Government Solutions in close partnership with a key U.S. Government customer, designed, developed and fielded an O3b Medium Earth Orbit (MEO) reachback capability to provide mission-critical communications for a key combatant command. The awarded task order for USD 11.8 million is against the single-award USD 516.7 million Blanket Purchase Agreement (BPA) for medium earth orbit (MEO) low-latency high-throughput satellite (HTS) services. This is the 15th task order awarded to SES GS on this BPA. With this agreement, SES Government Solutions expands its high-throughput, low-latency services in support of mission-essential combatant command requirements, as the customer needs evolve, by providing innovative, flexible and secure communications solutions. Using O3b services, U.S. Government customers can take advantage of the field-proven capabilities to support the provisioning of enterprise services to deployed warfighters. The solution leverages the MEO constellation by providing fiber-like connectivity to austere deployed locations.

Axelspace Raises \$24 Million, Closing Series C Funding Round

May 16, 2021 - Axelspace Holdings Corporation today announces that the company completed its Series C funding round raising approximately JPY 2.58 billion (equivalent to USD 23.8 million). The round sees the allocation of new shares to The Space Frontier Fund, several other venture capitals and corporate investors. Axelspace Corporation, a wholly owned subsidiary of Axelspace Holdings Corporation, has been developing a next-generation Earth-observation platform named AxelGlobe having the capability of obtaining images of the whole planet with high frequency. With the funding this time, Axelspace plans to manufacture and launch 5 more optical microsattellites named GRUS in 2023, which will evolve AxelGlobe as the Earth observation platform with a constellation of 10 satellites in total. The completion of 10-satellite constellation will enable us to monitor anywhere on the Earth on a daily basis and will create new business opportunities in wider fields than ever before.

Momentum Receives Draft National Security Agreement

May 14, 2021 - Momentum announced that it received a draft National Security Agreement (NSA) from the Committee on Foreign Investment in the United States (CFIUS). The draft NSA specifies CFIUS's proposed requirements to resolve its national security concerns about the foreign ownership and control of Momentum. Receiving the draft NSA is an important milestone toward overcoming a key issue that has delayed completion of Momentum's proposed merger with Stable Road Acquisition Corp. Momentum aims to be a trusted partner to the U.S. government and has taken swift action in response to government concerns. The Company obtained the resignation of its co-founder and former CEO and implemented trust and voting arrangements to ensure that the shares of its co-founders can only be voted by U.S. citizens. The Company voluntarily filed for CFIUS review to enable CFIUS and its member agencies to scrutinize any and all records of Momentum, and proactively proposed a U.S. national security mitigation plan intended to resolve the national security concerns that CFIUS and its member agencies have raised.

SoftBank and OneWeb Agree on Collaboration towards Satellite Communication Service Business Deployment in Japan and Global Markets

May 13, 2021 - SoftBank Corp. and OneWeb, announced an agreement for mutual cooperation to promote OneWeb's satellite communication services in the global and Japan markets. SoftBank and OneWeb will promote satellite communication services via the combination of OneWeb services and SoftBank's services, including advanced communication and Digital Transformation (DX) platform services. SoftBank and OneWeb will collaborate in market development for Japan and global markets, and jointly engage in technical and product development to enhance their competitiveness in these markets. This collaboration encompasses obtaining regulatory approvals and the setting up of ground stations in Japan. To deliver Internet connectivity worldwide, and to digitalize and revolutionize analog industries, SoftBank aims to provide advanced seamless connectivity services and DX platform services by using global connectivity solutions that incorporate OneWeb's services.

Google Cloud and SpaceX's Starlink to Deliver Secure, Global Connectivity

May 13, 2021 - Google Cloud and SpaceX today announced a new partnership to deliver data, cloud services, and applications to customers at the network edge, leveraging Starlink's ability to provide high-speed broadband internet around the world and Google Cloud's infrastructure. Under this partnership, SpaceX will begin to locate Starlink ground stations within Google data center properties, enabling the secure, low-latency, and reliable delivery of data from more than 1,500 Starlink satellites launched to orbit to-date to locations at the network edge via Google Cloud. Google Cloud's high-capacity private network will support the delivery of Starlink's global satellite internet service, bringing businesses and consumers seamless connectivity to the cloud and Internet, and enabling the delivery of critical enterprise applications to virtually any location. Organizations with broad footprints, like public sector agencies, businesses with presences at the network edge, or those operating in rural or remote areas, often require access to applications running in the cloud, or to cloud services like analytics, artificial intelligence, or machine learning. Connectivity from Starlink's constellation of low-Earth-orbit satellites provides a path for these organizations to deliver data and applications to teams distributed across countries and continents, quickly and securely.

SpaceLink and Mynaric Join Forces

May 12, 2021 - Mynaric and SpaceLink today agreed on the framework of a partnership to expand Mynaric's laser communication product portfolio for use in SpaceLink's data relay network. The strategic relationship will help drive forward the SpaceLink satellite relay service, which provides secure, continuous, high-capacity communications between low Earth orbit (LEO) spacecraft and the ground. The companies will work together to expand Mynaric's product portfolio with an optical inter-satellite link (OISL) terminal for satellites in medium Earth orbit (MEO), where the SpaceLink constellation will operate. The new terminal will also be compatible with the Space Development Agency (SDA) Transport Layer. Mynaric will supply more than 40 OISL terminals as part of the plan outlined in a term sheet, which includes units of the new, advanced product for satellites in MEO as well as units of Mynaric's CONDOR terminals for SpaceLink LEO customers. SpaceLink and Mynaric have also agreed to an option that would increase the number of terminals delivered upon SpaceLink's expansion of its MEO constellation.

Comtech Awarded \$2.0 Million Contract for 500W Ka-band Gateway Amplifiers

May 11, 2021 - Comtech Telecommunications Corp., a world leader in secure wireless communications technologies, announced today, that during its third quarter of fiscal 2021, its Santa Clara, California-based subsidiary, Comtech Xicom Technology, Inc., a world leader in high-power amplifiers, was awarded a \$2.0 million order for state-of-the-art 500W Ka-band high power amplifiers supporting a leading high throughput satellite (HTS) customer. The HTS market provides broadband internet service to geographic regions that are under-served by terrestrial networks. HTS systems are very high capacity, offering bandwidth and pricing competitive with more conventional terrestrial offerings, regardless of the customers' location. These systems serve consumer, small business, enterprise and government customers.

GSM Threats Mitigation for Military Forces at Sea

May 11, 2021 - Government and military forces around the globe that make use of ubiquitous civil GSM networks are being jeopardized when sailing from port to port with fraudulent cell towers able to intercept and spoof messages and calls, so personnel privacy and mission operations can be compromised. This kind of events typically occurs in frontiers between countries or strategic areas, where hacking activities are intense over one of the most accessible devices, soldier's cellphones/smartphones. In the RESISTO project (<http://www.resistoproject.eu/>) funded by the European Commission, Integrasy has

developed a tool named RANMONITOR for fraudulent cell towers detection that has been recently tested satisfactorily in the Spanish Navy MARSEC21 exercise. A fraudulent cell installed aboard the OPV Infanta Cristina was successfully detected by RANMONITOR, identifying the threat and properly differentiating it from the rest of the legitimate cell stations deployed on the close coast. With such capability, it is possible to make sure that own forces' mobile phones do not connect to the pirate station, minimizing attack possibilities. If any cellular phone connects to such an illegitimate station, Integrasys tools can record all of the signaling, calls and messages exchanged for further analysis. One of the most interesting key factors of this exercise is to match end-user needs with software tools providers to understand better government needs firsthand and customize such a solution to each end-user processes and operations. Integrasys is a telecommunication tool provider for improving the availability, resiliency, and performance in terrestrial and satellite networks, and with the work on RESISTO project has proven to develop tools that make government networks more secure and resilient with easy-to-use interfaces for forces operating in the field. RANMONITOR product is designed to protect not only 2G, but also 3G/4G and future 5G, in both fixed and mobility scenarios as demonstrated in MARSEC. These solutions will help governments around the globe to be less compromised and more secure in mitigating hacking on soldier smartphones.

Telefonica Global Solutions (TGS) Selects Gilat to Equip Strategic Teleport in Arica, Chile

May 11, 2021 - Gilat Satellite Networks has announced that it was selected by Telefonica Global Solutions (TGS) to equip the strategic teleport in Arica, Chile. The Arica teleport is located under gateway beams of multiple satellites with coverage over several countries in the region. Gilat's platform is designed to support social inclusion with rural Internet for schools and to provide significant potential for business opportunities for broadband access and cellular backhaul throughout Latin America. Gilat's SkyEdge II-c multi-service platform provides a significant advantage in Latin America, due to the local team presence and expertise, thus accelerating time to market and reducing risk. Gilat was able to answer TGS' requirements for urgent shipment and on-time delivery, overcoming difficulties imposed by the COVID-19 pandemic.

IEC Telecom Has Become an Official Iridium GMDSS Provider

May 11, 2021 - IEC Telecom has signed a partnership agreement with Iridium to become one of the official Iridium GMDSS service providers. For a long time, the GMDSS market was limited to only one satellite technology provider. This has changed with the introduction of the Iridium GMDSS service in December 2020. Offering truly global coverage, Iridium has become the only operator providing this type of service for vessels navigating in sea area A4, which includes the polar regions. Iridium GMDSS is first and foremost a life-saving service. Therefore, it was designed with a safety voice line to ensure efficient sea-to-shore communication. Now, in addition to sending a distress alert, with the same terminal seafarers are able to actually call the Rescue Coordination Center and explain the nature of the emergency. This addition will significantly improve the efficiency of RCC operations and ensure that resources allocated to rescue missions are proportionate to the gravity of the situation onsite.

Global Eagle Airconnect Ka Antenna Progresses Certification for IFC Deployment on Telesat Lightspeed

May 11, 2021 - Global Eagle, the leading provider of high-speed inflight connectivity (IFC) solutions, and Telesat have cleared a critical milestone in the verification phase for Global Eagle's Airconnect Ka IFC terminal to be used with the Telesat Lightspeed low-earth orbit (LEO) network. Telesat and Global Eagle engineers recently carried out network simulations to determine the efficiency of the antenna at flight speed and to mimic the real-world experience of use cases requiring fiber-like latency and high-speed throughput from the aircraft, including online gaming, cloud-hosted applications, and content-rich social media. Global Eagle's Airconnect Ka system provides industry-leading efficiency in satellite communications while maintaining full performance when the target satellite is close to the horizon. This news follows Global Eagle and Telesat's successful LEO demonstrations in October 2018, which were the first time an aircraft in flight had ever communicated at broadband speeds with a satellite operating at low earth orbit. Rigorous testing in multi-orbit configurations achieved round-trip latency of 19ms, compared to traditional geostationary satellite (GEO) networks which experience over 600ms of latency. As part of Global Eagle's Airconnect family of terminals, Airconnect Ka shares a common design philosophy with Global Eagle's Airconnect Ku and Airconnect Global Ku terminals with millions of flight hours of high-reliability service serving the world's leading airlines.

C-COM Announces Successful Satellite Test of Ka-Band Phased Array Antenna

May 11, 2021 - C-COM Satellite Systems Inc. has successfully tested its electronically steerable phased

array antenna over the Telesat Anik F3 satellite. These successful initial tests are a significant development for C-COM. The Company can now move forward with confidence and continue testing over several different satellites to confirm interoperability of this new antenna design. Ensuring interoperability with satellites is a key step before the Company dedicates additional resources needed to develop a commercial product based on this new technology. The new phased array Ka-band antenna is expected to open new mobile vertical markets (land based, marine, aero) for the Company. The prototyping of a 4000-element antenna using the same building blocks used to build the 1000 element antenna is in progress and so is the planning of the commercialization phase of this new antenna.

Scorpio Shipmanagement Upgrades its Entire Fleet with Marlink's Hybrid Network Solution

May 11, 2021 - Marlink and Scorpio Shipmanagement have signed an agreement to upgrade the hybrid VSAT network solution on all vessels in its fleet, with additional bandwidth to enable new data, applications and reporting. The service extension will provide Scorpio with higher bandwidth services to meet an increasing level of business need for higher data rates and usage volumes. Scorpio's global fleet of about 150 vessels will be able to satisfy current and future requirements from charterers and regulators, while also providing cost-efficient crew communications. The Scorpio fleet features Marlink's smart hybrid network combining Ku, Ka-band VSAT with global coverage for voice and data services, L-Band back-up and global 4G connectivity, bundled with security and optimisation tools. The agreement also includes equipment upgrades for new satellite access platforms to deliver best-in-class services on a global basis. Ship operators are increasingly looking to future-proof their connectivity to meet their digital ambitions, which include the use of collaborative cloud-based software and applications. With crew welfare and retention at its core, Scorpio will enable a new level of remote access to ship systems and provide crew connectivity with a high level of security.

OneWeb to Acquire TrustComm and Create New Government Subsidiary

May 10, 2021 - OneWeb has entered into a definitive agreement to acquire Texas-based TrustComm Inc., which will enable OneWeb to offer its Low Earth Orbit (LEO) network and connectivity services to U.S. government clients and TrustComm customers. Based at the highly secure Ellington Joint Base in Houston, Texas, TrustComm was established in 1999 as a provider of managed satellite communications and professional services to commercial organizations and governments. TrustComm offers services ranging from broadband Internet access, VoIP and voice, video conferencing and data communications for business continuity to emergency response, tactical field deployment and temporary use. Under the terms of the agreement, a newly acquired proxy subsidiary of OneWeb will be led by TrustComm CEO Bob Roe and focus on introducing OneWeb's enterprise grade network services to customers. Terms of the transaction are confidential, and it is expected to close in 2021, subject to customary closing conditions including regulatory approvals. OneWeb will offer DoD and other government clients a new suite of services with network speeds up to 195 Mbps, lower latency, smaller and more compact multi-orbit user terminals and built-in network management tools providing substantial economic savings over traditional GEO sales models.

Eutelsat Expands Use of Express Wi-Fi in Partnership with Facebook to Extend Wi-Fi Connectivity throughout Sub-Saharan Africa

May 7, 2021 - Eutelsat Communications is expanding its use of the Express Wi-Fi platform in partnership with Facebook to provide broadband services via satellite across several regions in Sub-Saharan Africa. With Express Wi-Fi, Eutelsat aims to connect thousands of people in rural and underserved communities spanning Democratic Republic of Congo (DRC), Nigeria, Côte d'Ivoire, Tanzania, Uganda, Zambia, Kenya, Madagascar, South Africa, Cameroon, Ghana and Zimbabwe. Express Wi-Fi is a platform developed by Facebook Connectivity that enables partners to build, grow and monetize their Wi-Fi businesses in a scalable way, while providing their customers with fast, affordable, and reliable internet access. Express Wi-Fi is used in more than 30 countries, including in multiple Asian, South American and African markets, helping millions of people connect over Wi-Fi. Eutelsat and Facebook have previously conducted successful pilots in rural and underserved areas of the Democratic Republic of Congo (DRC) enabling local businesses to offer affordable internet access to customers on a pre-paid basis. To date, Eutelsat's use of the Express Wi-Fi platform has enabled access to affordable broadband for thousands of individuals across the DRC.

Global Eagle Entertainment Signs Capacity Extension with ABS

May 6, 2021 - ABS, a global satellite operator announced today that Global Eagle Entertainment (GEE), the leading provider of high-speed connectivity and entertainment solutions for worldwide mobility markets,

has renewed and expanded its multi-year, multi-transponder agreements for its growing demand for mobility connectivity capacity. Besides securing existing ABS capacity on ABS-6 C-band, ABS-3A C-band and ABS-2 Ku-band beams, GEE has also expanded its services on ABS-2. Combined, the ABS capacity provides GEE comprehensive coverage across continents and oceans, from the Americas, across to Western Europe, the Middle East, North East Asia and into the Pacific Ocean. The capacity will be optimized to provide reliable connectivity and seamless connections for mobile communications and entertainment for a wide variety of mobility customers and their end-users. The connectivity network supports the provision of services such as Wi-Fi, VoIP, multi-media live and on-demand video streaming, and greater bandwidth for crew applications. The 34 antennas will augment KSATs already fully operational Ka-band network consisting of 6 polar antenna systems (4 Tri-band and 2 Dual-band) and comes in addition to already ongoing expansions and investments on the KSAT ground network this year.

KSAT Expanding the Smallsat Network Adding 34 Antennas in 2021

May 6, 2021 - KSAT is deploying 34 antennas this year, dedicated to increase the capacity on KSATlite, its network optimised for supporting Smallsats constellations. The antennas will be installed across the globe, adding capacity in already existing sites as well as expanding the coverage to new sites. The roll-out of the first batch of antennas is already well on its way, the second one beginning in June. This significant investment comes as a direct response to the growing demand for services on the KSATlite network. Last year the number of passes doubled on the lite network in only six months, from 10 000 to 20 000 passes per month. By June the network will be probably be handling 30 000 passes per month having exceeded 1000 passes daily.

AWS Ground Station is Now Available in the Asia Pacific (Seoul) Region

May 5, 2021 - Amazon Web Services (AWS) announces expansion of AWS Ground Station to the Asia Pacific (Seoul) region. This is now the 9th Ground Station connected to the AWS Global Network. AWS Ground Station is a fully managed service that lets you control satellite communications, process satellite data, and scale your satellite operations. Global expansion to the Asia Pacific (Seoul) Region now enables satellite owners and operators to connect with their satellites and process their space workloads more frequently. An additional mid-latitude AWS Ground Station Region reduces the time between contacts for Low-Earth Orbit satellites and offers increased utility for customers whose operations require downlink in this range. Governments, businesses, and universities can benefit from this more timely satellite data to make precise, data driven decisions. Customers can easily integrate their space workloads with other AWS services in real-time using Amazon's low-latency, high-bandwidth global network. Customers can either stream satellite data to Amazon EC2 for real-time processing or instead directly store data in Amazon S3. Additionally, customers can easily integrate their space workloads with other AWS services in near real-time using Amazon's low-latency, high-bandwidth global network. For example, customers who downlink terabytes of data daily can easily access AWS Services such as Amazon SageMaker to quickly derive useful information. With AWS Ground Station, you pay only for the actual antenna time that you use.

Hughes and OneWeb to Demonstrate LEO Service in Arctic Region for U.S. Air Force Research Lab

May 5, 2021 - Hughes Network Systems, LLC and OneWeb announced their selection by the U.S. Air Force Research Lab (AFRL) to demonstrate managed LEO satellite communications (SATCOM) services to connect the Arctic region to sites around the globe. Under the agreement, Hughes will test and implement these end-to-end services on the OneWeb system between selected U.S. Northern Command (NORTHCOM) locations, a first step in harnessing the power of LEO satellites for high-speed, low-latency broadband access in the Arctic. As the prime contractor on the project, Hughes will lead adaptation, integration, testing and ongoing management of this service demonstration with OneWeb and Intellian, who are developing user terminals for use on the OneWeb network. Designed for ease of installation, the new Intellian terminals will utilize next-generation technology to provide a cost-effective system to access the low-latency, high bandwidth connectivity offered by OneWeb. Under a separate agreement with OneWeb, Hughes is engineering and producing the gateway equipment and user terminal core module, making the company a logical choice for enabling high-speed, low-latency services above the 50th parallel North, an area that has been difficult to connect with other types of satellite services. The DoD contract is part of the U.S. Air Force's Defense Experimentation Using the Commercial Space Internet (DEUCSI) program.

SES Government Solutions to Support Major Combatant Command

May 5, 2021 - SES Government Solutions (SES GS) today announced it has been awarded a new USD 35 million geostationary (GEO) satellite communications program contract in support of a major Department of Defense combatant command. To provide reachback capabilities from forward-stationed units in

remote locations to Europe, the solution includes a Very Small Aperture Terminal (VSAT) network which has the performance to support emerging mission needs and is capable of handling smaller, sub-meter, antennas. The VSAT network provides over 100 Mbps of throughput using multiple access methods, from time division multiple access (TDMA) that is shared sequentially and frequency division multiple access (FDMA) allowing simultaneous transmission, to various types of remote deployments and end-users. The satellite service provides expansive coverage of countries from Turkey to Pakistan, with reachback to Europe, enabling collaborative tools and enhanced situational awareness in a distributed way.

Airbus Secures Multiple Contracts to Further Increase Communications Capability for the UK MOD

May 5, 2021 - Airbus has been awarded a series of contracts during the first quarter of 2021 from the UK Ministry of Defence (MOD) both as part of its continuing programme of upgrading and enhancing services for the Skynet 5 military satcom services contract, and continued work with the MOD's Defence Digital organisation. Activities in the Maritime domain include introducing further quality of service improvements for Maritime Network Evolution (MNE) services to enable continued Wi-Fi access for deployed personnel while on operations. Airbus has also completed a series of baseband upgrades and improvements for eight SCOT5 FMT ships. Airbus has agreed a contract to provide Ku-band airtime for the Poseidon P8 maritime patrol aircraft as they enter service, as well as also agreeing renewals to provide continued Ku-band airtime support for the UK Reaper UAV - highlighting Airbus' continued support to the RAF for future missions.

GMV Supplies a Galileo Second Generation Radio Frequency Constellation Simulator

May 4, 2021 - GMV has been selected to lead the consortium that will supply a Radio Frequency Constellation Simulator covering both the 1st and 2nd Galileo Generation. Galileo is Europe's global, civil, satellite-based navigation and positioning system. Galileo First Generation (shortened to G1G), running since December 2016, consists of space infrastructure (26 satellites to date) and ground infrastructure. GMV will lead from Portugal the development and supply of the Radio Frequency Constellation Simulator to support Galileo Second Generation Engineering and Experimentation activities in the Open Service and the Public Regulated Service domain. The main objectives of the Galileo Second Generation are to phase in new services, improve existing services and boost system robustness and security while also cutting both operating- and maintenance-costs, all with the prime purpose of cementing Galileo's position as one of the future's top GNSSs. Under the G2G RFCS contract GMV teams in Portugal and Spain, together with key partners OROLIA and TECNOBIT, are developing a constellation simulator covering both Galileo generations and Galileo Open Service and Public Regulated Service. The RFCS will simulate the progressive deployment of the G2G with its new signals and will be a key element to support the development of Galileo 2nd Generation infrastructure and for the testing of experimental user receivers.

KSAT and TESAT to Offer Groundbreaking Optical Downlink as-a-Service

May 4, 2021 - KSAT and TESAT are establishing an optical ground segment that is instrumental for the further development and growth of optical Direct-to-Earth onboard systems. KSAT and TESAT agreed three years ago that a missing optical ground segment had been a key hindrance to the development of optical DTE (direct-to-Earth) onboard systems. Together they are first movers in the industry and have since 2018 cooperated closely to close this gap. KSAT has invested in the Optical Ground Segment and has installed the world's first commercially available optical ground station in Greece, and TESAT into the PIXL-1 CubeSat in-orbit demonstration mission. The goal is to provide CCSDS O3K conform optical end-to-end solutions for LEO missions, where cost-efficient space terminals and a perfectly fitting ground segment are made available together. TESAT launched its first NewSpace CubeLCT terminal on PIXL-1 in February 2021. This was done in partnership with German Aerospace Center DLR IKN, who is also commissioning the PIXL built by GOMspace.

Semtech and EchoStar Mobile to Test Satellite IoT Connectivity Service Integrated With LoRaWAN

May 4, 2021 - Semtech Corporation and EchoStar Corporation subsidiary EchoStar Mobile, a mobile satellite services provider offering connectivity across Europe through a converged satellite and terrestrial network, announced the launch of an initiative to test satellite connectivity services enabled by the LoRaWAN® protocol. The LoRa Alliance, an open, non-profit global association that develops, maintains and promotes the LoRaWAN protocol for low power wide area networks (LPWANs), recently expanded the LoRaWAN protocol to include Long Range - Frequency Hopping Spread Spectrum (LR-FHSS) data rates. LR-FHSS extends the LoRaWAN protocol's support to enable direct data links from end nodes to satellites by leveraging either the Industrial, Scientific and Medical (ISM) unlicensed band, or, in the case of EchoStar Mobile, through licensed spectrum, which provides a differentiated service versus the ISM band. LR-FHSS

can support millions of end nodes and delivers a new level of robustness for IoT services.

Atos Selected by Eutelsat to Provide Next-generation Satellite Payload Monitoring Solution

May 4, 2021 - Atos has been selected by Eutelsat, one of the world's leading satellite operators, to deliver an innovative satellite payload monitoring solution, as part of a 5-year contract. Thanks to advanced satellite carrier management features, Atos' next-generation SkyMon solution will help Eutelsat meet the growing challenges of a new space era which include new satellite communications technologies, the need to integrate 5G and the potential increase of signal interferences caused by the growing number of satellite mega constellations. The new system will enable Eutelsat to continually monitor the radio-frequency payloads on all its commercial satellites and to identify and localize satellite interferences in one single and intuitive solution, to take counteractive measures immediately. The solution consists of a cloud-based state-of-the-art microservice architecture on top of a high-performance generic core, allowing flexible adaptation on changing requirements with minimal risks. By incorporating artificial intelligence, big data and cloud features, Atos makes the system more intelligent, with automated monitoring features. Seamlessly interacting with customer business applications, SkyMon can process data no matter where they are stored and enables to visualize and analyze metrics through a smart dashboard. By using Atos' next generation SkyMon solution, Eutelsat will be able to offer enhanced quality of service to its customers and to optimize its internal processes, thereby reducing its operational costs.

Gilat Enters High-value Strategic Agreement with a Large Government Corporation in Asia Pacific

May 4, 2021 - Gilat Satellite Networks Ltd. announced that Gilat entered a strategic agreement valued at tens of millions of dollars, including a potential for significant project expansions, with a large government corporation in Asia Pacific. The equipment and multi-year managed-services contract will enable connectivity for multiple applications across the nation. Gilat is responsible for building and operating the network to provide nationwide coverage for a range of applications. These include, but are not limited to enterprise applications, with strong opportunities for cellular backhaul, emergency-response and mobility applications such as Comms on-the-move and Comms on-the-pause. Gilat's multi-service single platform, SkyEdge II-c and its wide set of fine-tuned VSATS, will answer the government's requirement for robust connectivity to the country's most remote areas.

Intelsat Qualifies Paradigm's Ultra-Portable SWARM950 Terminal

May 3, 2021 - Paradigm's SWARM950 is now an Intelsat certified terminal, offering greater flexibility to operatives who need high performing, ultra-portable VSAT terminals with military-level security. Authorised to operate on the Intelsat Flex service, this latest qualification complements Paradigm's existing range of terminals with TRANSEC/FIPS140-2 capability, which includes the compact, rugged HORNET950, popular with military units and special operational forces across the globe. Powered by Paradigm's proprietary PIM® technology, the SWARM950 offers extreme user-simplicity through a common terminal interface that has revolutionised the ease of pointing and operation. The integration of modem, router, satellite alignment tool, management and power distribution, is conducive with rapid deployment and minimal training.

Eutelsat Capacity Selected by Global Eagle to Increase its Mobility Capabilities over North America

May 3, 2021 - Eutelsat Communications and Global Eagle have signed a multi-year contract for additional Ku transponders adding large amounts of capacity for Global Eagle's aviation customers. Under this multi-year agreement, agreement for the entire North-American coverage of the EUTELSAT 7A satellite, Eutelsat provides Global Eagle with extensive additional capacity to augment the company's connectivity services for mobility customers. This satellite will be renamed EUTELSAT 139WA.

Comtech Awarded \$6.2 Million of Additional Funding to Support the U.S. Army's Blue Force Tracking System

May 3, 2021 - Comtech Mobile Datacom Corporation was awarded \$6.2 million of additional funding for Option Period Four of contract GS03Q17DSC0002. The overall funded value to date, inclusive of the Base and Option Period 1 through Option Period 4, is \$35.5 million. This contract modification is part of the BFT-1 sustainment support contract for the U.S. Army's Project Manager Mission Command ("PM MC") Blue Force Tracking ("BFT-1") program. Comtech continues to perform engineering services, satellite network operations and program management through a Firm Fixed Price ("FFP") contract, with Time & Materials ("T&M") and Cost Reimbursement elements. Option Period Four's performance period began on April 15, 2021 and ends on April 14, 2022.

Viasat Completes Acquisition of Remaining Stake in its European Broadband Joint Venture, Inclusive of the KA-SAT Satellite and Ground Assets

May 3, 2021 - Viasat Inc. announced it completed the purchase of Euro Broadband Infrastructure Sàrl ("EBI"), the wholesale broadband services business created as part of Viasat's former partnering arrangement with Eutelsat Communications. By purchasing the remaining 51% share of EBI from Eutelsat, Viasat gained 100% ownership of the KA-SAT satellite and related ground infrastructure, which provides satellite coverage over Europe and the Mediterranean region. With complete ownership of these assets, Viasat can continue to diversify its business portfolio in Europe, while establishing operations, distribution and sales for its growing retail, enterprise, mobility and government businesses – ahead of its Europe, Middle East and Africa (EMEA)-focused ViaSat-3 satellite.

Marlink Group Closes the Transaction on ITC Global

May 3, 2021 - On Friday April 30, Marlink Group closed the transaction of acquiring ITC Global, strengthening its position as the global leader in business-critical smart network and digital enablement solutions for customer's remote operations. The acquisition, backed by Apax Partners sas, marks another milestone in the company's M&A strategy. Within the Marlink Group, ITC Global will focus on Energy and high-end customers who need specific and complex managed network solutions. ITC Global is also further extending the Group's global footprint with its strong presence in the US, the UK and Australia. The Marlink Group, now with ITC Global as an integral part, has very strong momentum in all its businesses and has repeatedly outperformed the market both commercially and financially. With the support of its investors, Marlink Group will continue to pursue its selective and successful M&A strategy to further develop and expand its growth potential.

BROADCAST

CBC/Radio-Canada Chooses ETL's RF Equipment for State-of-the-Art Broadcast Centre

May 27, 2021 - CBC/Radio-Canada's new production center in Montreal has been fitted with ETL Systems' RF distribution equipment to help ensure the reliability of RF signals being carried from the antenna parc, located on the rooftop, to the satellite reception facility. CBC/Radio-Canada is Canada's national public broadcaster. As Canada's trusted news source, CBC/Radio-Canada offers a uniquely Canadian perspective on news, current affairs and world affairs. Its broadcasting facilities need to be supported with reliable RF equipment for a consistent and uninterrupted broadcast feed. The new 420,000 square foot, state-of-the-art Maison de Radio-Canada will broadcast 13 radio stations and CBC's French-speaking arm with 20 TV channels and 80 radio channels operating out of the hub. The new center is completely fiber based; IP has become a core focus for many broadcasters as they look to create more flexibility and reliability in their operation - especially in the wake of Covid-19.

WORK Microwave Wins Contract with Major APAC DTH and Satellite Distribution Operator

May 20, 2021 - A leading APAC broadcast satellite owner and operator has deployed a comprehensive digital satcom offering from WORK Microwave comprising approximately 200 DVB-S2X modulators and redundancy switch units. The operator is using WORK Microwave's AT-61 satellite modulators and RSCC-T 1:1 redundancy switches to distribute satellite TV services with high signal quality and unparalleled reliability for its customers. The key objective of the project was to future-proof the operator's infrastructure. The operator needed a flexible, reliable solution for its IP-based distribution network. WORK Microwave's AT-61 satellite modulator now enables the customer to adapt to the industry transformations that are happening and provide streaming services with the utmost reliability and quality. In the future, the operator has the ability to offer IPTV and IP data services, as the AT-61 modulator supports these features.

Rohde & Schwarz Brings Seamless Ultra HD Convenience to R&S®VENICE

May 18, 2021 - Rohde & Schwarz, a global leader in broadcast media technologies, has extended the functionality of its R&S®VENICE platform for live studio production. In particular, it has moved to support 4k Ultra HD signals, using either 12G or 2SI formats. VENICE is a high-performance, high-resilience media platform designed to manage complex signal processing and storage requirements, particularly in live studio production applications. It provides uninterrupted operations including scheduled recording, clip transforms and layouts, across a network of processors and both Rohde & Schwarz storage and third-party qualified storage sub-systems. It also bridges the SDI and IP environments. VENICE servers can now be configured for multiple HD and Ultra HD signals, and units can work together as a single resource from a single user interface.

du Partners with ATEME on OTT and DTH Projects to Improve Offering across the UAE

May 6, 2021 - ATEME, the leader in video delivery solutions for broadcast, cable TV, DTH, IPTV and OTT, has announced that du, from Emirates Integrated Telecommunication Company (EITC) and a leading telecom operator in the United Arab Emirates (UAE), has selected its solutions for major OTT and DTH/IPTV projects. Across the two projects, du is adopting several of ATEME's innovative solutions and services. For its OTT platform, du will offer an excellent streaming experience with unmatched video quality for its home service customers, so they can enjoy their favorite movies and shows wherever they are. To ensure this, du has chosen to implement ATEME's geo-redundant TITAN Live encoder for 610 channels in Dubai and Abu Dhabi, as well as ATEME's TITAN File transcoder for offline encoding. du's DTH solution ensures high availability and reliability to all Samacom Teleport business customers. ATEME has delivered a TITAN headend based on ATEME's TITAN Edge IRD, Titan Live encoder and Statmux, which will provide du's DTH platform 28 bouquets based on 220 main channels and 220 backup channels to better serve its IPTV platform and affiliates. The completely software-oriented structure of these projects will allow du to seamlessly transition to cloud-based models in the future.

Slovak Telekom Selects Intelsat for New Transponder Expansion

May 5, 2021 - Intelsat has announced a monumental deal with Slovak Telekom that will change the landscape of its services, including direct to home (DTH), in the Central and Eastern European (CEE) region. Finalized last week, the deal will provide Slovak with three new transponders for extra capacity, so the company can bring more content to its customers. It demonstrates the strength of Intelsat's 1-West neighborhood, which plays a significant role in the PayTV business; Slovak Telekom plans to migrate distribution feeds from its current provider to 1-West. The deal will enable Slovak Telekom to expand its presence in the Central and Eastern European (CEE) region. With new channels dedicated to the Czech Republic, Slovak Telekom is taking another step to providing the region's with the best direct-to-home (DTH) services with the greatest quantity and quality of content available. The capacity extension also demonstrates Slovak Telekom's belief that DTH services will continue to have a significant place in its product portfolio. Slovak Telekom offers TV services using nearly all the possible technologies and platforms, such as OTT, IPTV, cable and satellite. Intelsat provides Slovak Telekom with a completely managed service, including space capacity, fiber, uplink and redundancy via Intelsat's teleport in Fuchsstadt, Germany. Intelsat has also provided customers across CEE region, including Slovak Telekom, with access to a rich selection of cutting-edge 4K content for market testing. This array of choices further enables Slovak Telekom to stand out from its peers by offering the strongest channel line up in the CEE region.

India Sees Huge Headroom for Growth across TV and Digital

May 5, 2021 - At the Asia Video Industry Association's (AVIA) recent Future of Video India conference, industry leaders remained upbeat on the potential for growth despite a painful 2020 which had seen a 25% drop in TV advertising revenue. The conference opened with an overview of the Future of Video in India with Mihir Shah, VP, India, at Media Partners Asia (MPA). With learnings from the last year and economic resurgence picking up in certain sectors, MPA predicts that in the next 5 years, with every new incremental dollar in the region, India will have 35% share, almost evenly divided between television and online video. While cable in general is going through a structural decline, Pay TV subscriptions will grow both in value and volume and continue to offer scale for the traditional media players. And with more than 60 online video services in India, the total addressable market will continue to expand.

Motor Presse TV Signs with SES for Video Cloud Services

May 4, 2021 - German pay-TV broadcaster Motor Presse TV GmbH, a subsidiary of Motor Presse Stuttgart, announced it has extended its long-term partnership with SES by migrating to the leading content connectivity solutions provider's cloud-based video services. Motor Presse TV will start using SES's end-to-end video cloud services, including the new Cloud Payout solution, to manage and distribute its two channels to Germany and Norway - 'Auto, Motor & Sport TV' and its Norwegian counterpart 'Auto, Motor og Sport TV'. Motor Presse TV's move from on-premise services to cloud-based services enables the broadcaster to streamline its operations while providing the best viewing experience to its audiences. As part of its robust cloud infrastructure, SES offers cloud payout solutions for reliable TV channel origination, rundown and monitoring based on efficient, automated workflows via a unified media platform - SES 360. SES's Cloud Payout, either self- or fully managed, provides inherent flexibility, scalability and cost advantages, allowing broadcasters, including Motor Presse TV, to set up their content for transmission in a matter of minutes, without on-premise hardware being required.

Successful Launch Brings OneWeb Closer to 'Five to 50' Ambition

May 29, 2021 - OneWeb confirmed the next successful launch of 36 satellites by Arianespace from the Vostochny Cosmodrome. This launch brings OneWeb a step closer to completing its 'Five to 50' ambition and the start of commercial service by the end of the year. Liftoff occurred on 28 May at 18:38 BST. OneWeb's satellites separated from the rocket and were dispensed in nine batches over a period of 3 hours 52 minutes with signal acquisition on all 36 satellites confirmed. This latest successful launch brings OneWeb's total in-orbit constellation to 218 satellites. These will form part of OneWeb's 648 LEO satellite fleet that will deliver high-speed, low-latency global connectivity. There is now only one launch to go until the company has the satellites required to enable its connectivity solution to reach all regions north of 50 degrees latitude by June 2021. OneWeb's satellites are built by OneWeb Satellites, a OneWeb and Airbus joint venture facility on Merritt Island, Florida that can produce two satellites a day with an innovative production-line process. Thanks to this advanced manufacturing capability, OneWeb is able to rapidly and reliably build its first-generation fleet for completion of delivery into orbit by mid-2022. With this launch, our Florida team can be proud of the 220 satellites it has built and orbited to date. This launch represents the fourth in a five-launch programme to fulfil the 'Five to 50' service, enabling OneWeb to offer connectivity across the United Kingdom, Alaska, Northern Europe, Greenland, Iceland, the Arctic Seas and Canada. This service is expected to be switched on before the end of the year and OneWeb intends to make global service available in 2022.

AAC Clyde Space Wins 260,000 GBP Contract to Support a Space Debris Mission

May 28, 2021 - AAC Clyde Space has been selected by Astroscale UK Ltd to co-engineer their satellite platform for a UK-based space debris removal programme known as End-of-Life Services by Astroscale (ELSA-M). The contract, valued at 260,000 GBP, is expected to be completed at the start of 2022. AAC Clyde Space will design and update its Starbuck power subsystem, Sirius avionics and other systems to meet the requirements of this specific mission. Founded in 2013, Astroscale is developing innovative and scalable solutions to create sustainable space systems and mitigate the growing and hazardous build-up of debris in space. Astroscale UK has been defining the business case for debris removal services since 2017, leading the Mission Operations and commercialisation of the company's End-of-Life services, including developing the ELSA-M multi-client service development. ELSA-M was recently funded by the UK Space Agency, European Space Agency and OneWeb 'Sunrise' programme award.

HISPASAT Forms Part of Consortium Selected by ESA to Study Lunar Communication and Navigation

May 26, 2021 - HISPASAT, the Spanish satellite telecommunications operator of the Grupo Red Eléctrica, has joined an international consortium selected by the European Space Agency (ESA) and led by Telespazio, whose purpose will be to study the design of a space infrastructure to provide lunar communication and navigation services (LCNS) by satellite, similar to those used on Earth. The study forms part of the ESA Moonlight initiative, which will define the economically viable satellite architecture and models to provide services on diverse platforms that orbit the Moon, as well as to the settlements on lunar bases and vehicles that astronauts use (rovers, landing modules, and more). Furthermore, in its final stage the study expects to select an operator to manage the LCNS, as well as to supply services. Lastly, the consortium will also analyse if it is possible for the LCNS system to work together with LunaNet, the infrastructure that NASA is currently developing to support the missions of its Artemis programme. In addition to HISPASAT, the consortium includes the satellite operator Inmarsat; manufacturers such as Thales Alenia Space, OHB and MDA; SMEs such as Nanoracks, Argotec and ALTEC; and universities and research centres such as SEE Lab SDA Bocconi and the Polytechnic University of Milan.

Enhanced Positioning System May Pave the Way for Autonomous Vehicle Operations

May 26, 2021 - The safe operation of autonomous vehicles may be enabled through enhancements to space based positioning systems being investigated in Europe, with benefits flowing to Australia. Thales Alenia Space has been selected by the European Commission for a new strategic contract to assess the extension of the Safety of Life system for aviation into the road, rail and maritime sectors. Thales Alenia Space will focus on the development of a new approach to combine several sensors (sensors fusion) including and complementing evolutions of EGNOS the European SBAS (Space Based Augmentation System) in order to provide the necessary Safety of Life integrity level to serve the high reliability and high accuracy positioning needs of new demanding applications such as road autonomous vehicles but also autonomous transport in maritime and rail sectors. With this contract, Thales Alenia Space will assess the extension of the integrity and safety of life services for aviation into the road, rail and maritime sectors,

having already won last year the EPICURE project, based on an integrity concept for road travel (tolls and insurance), as well as the IMPRESS project targeting an integrity service for rail signaling and train separation. The extension of Safety of Life integrity services beyond the traditional aviation certified capability, could deliver significant benefit to Australia and New Zealand including broader local industry benefits with emerging safety critical applications such as, mining and resources as well as ground transportation, maritime, rail and autonomous vehicles. Prime contractor for EGNOS (European Geostationary Navigation Overlay Service) for 25 years, a lead industrial contributor to Galileo system and ground mission segment and now responsible for providing 6 Galileo Second Generation satellites, Thales Alenia Space has always been at the forefront of navigation solutions in Europe.

SpaceChain Announces New Commercial Use Cases for the Blockchain Industry in Outer Space

May 25, 2021 - SpaceChain announced two launch missions slated for June 2021 which will see the successful deployment of its decentralized satellite infrastructure and multisignature services by corporate customers, including digital asset management firm Nexus Inc., digital currency exchange Biteeu, and community project Divine. Scheduled for June 3, 2021, the space node designed by SpaceChain will be launched into space aboard a SpaceX Falcon 9 rocket and installed at the International Space Station (ISS). This will be SpaceChain's fourth blockchain payload launch into space, and the first demonstration of Ethereum technology integration into its hardware on ISS. The mission is made possible by Nanoracks and its Space Act agreement with NASA. The Ethereum blockchain is one of the most popular open-source platforms as it offers easy deployment of decentralized applications and smart contracts. With Ethereum's smart contract platform running in space orbit, the node offers added physical security for the transmission of digital assets. The security of space infrastructures also ensures the independence of Ethereum contract operation from centralized terrestrial servers, thus providing more efficient smart contract operation and greater application scenarios. Once installed, tested and activated, the space node will enable SpaceChain customer Nexus Inc. to further develop its blockchain capabilities for enterprise business applications, including e-commerce management. It will also afford Nexus Inc. customers the ability to perform highly secure on-orbit Ethereum multisignature transaction services, especially since all data will be uplinked and downlinked directly through a dedicated space encrypted communication network.

Kleos Engages ISISPACE to Build Third Satellite Cluster

May 25, 2021 - Kleos Space S.A has signed a contract with Innovative Solutions in Space B.V. (ISISPACE) to build and support its third satellite cluster of four satellites, the Polar Patrol Mission (KSF2), scheduled to launch at the end of 2021 onboard a SpaceX Falcon 9. Specialising in small-satellite solutions, the Netherlands-based ISISPACE has more than 15 years of experience in the design, manufacture, and operation of nanosatellites and is currently also preparing Kleos' second satellite cluster, the Polar Vigilance Mission (KSF1) for dispatch to the launch site week commencing 31st May. Under the contract, ISISPACE will provide a turn-key solution including design, development, production, testing, launch integration services and early orbit phase support. The Polar Patrol Mission create an opportunity for higher value subscriptions, increasing revenues by adding more frequent cover over commercial areas of interest and additional data products to the Kleos inventory. The contract includes an optional addendum for a further three satellite clusters (12 further satellites in total) that will facilitate constellation growth with volume purchasing advantages.

SpaceChain and ESV Sign MOU to Spearhead Development of Joint Space Projects

May 25, 2021 - SpaceChain and Eurasian Space Ventures (ESV) have signed a Memorandum of Understanding (MOU) for ongoing collaboration and developing joint projects in the field of space and blockchain technologies. Founded by businessman and entrepreneur Shukhrat Ibragimov, ESV is a limited company registered in Kazakhstan which aims to serve as an international hub for space projects and related organizations looking to capitalize on the well-established space infrastructure and ecosystem in the country. Under the agreement, both companies will exchange information and expertise, and cross pollinate ideas and develop joint projects in the field of space technologies over a period of two years. SpaceChain will explore collaborative opportunities with its partners in the global space industry in leveraging the existing space facilities and infrastructure in Kazakhstan. ESV will facilitate communication with the National Space Agency of the Republic of Kazakhstan, also known as Gharysh Sapary, on behalf of both companies.

Virgin Galactic Completes First Human Spaceflight from Spaceport America, New Mexico

May 24, 2021 - Virgin Galactic Holdings, Inc. today completed its third spaceflight and the first ever

spaceflight from Spaceport America, New Mexico. Today's flight sees New Mexico become the third US state to launch humans into space. VSS Unity achieved a speed of Mach 3 after being released from the mothership, VMS Eve, and reached space, at an altitude of 55.45 miles before gliding smoothly to a runway landing at Spaceport America. On VSS Unity's flight deck were CJ Sturckow and Dave Mackay, while Kelly Latimer and Michael Masucci piloted VMS Eve. CJ, who flew as pilot-in-command, becomes the first person ever to have flown to space from three different states. The crew experienced extraordinary views of the bright, blue-rimmed curvature of the earth against the blackness of space. New Mexico's White Sands National Park sparkled brilliantly below. Their experience today gives Virgin Galactic's Future Astronaut customers a glimpse of what lies ahead.

NanoAvionics Aims for 30 Percent US-market Share for Nano-/Microsatellites

May 24, 2021 - NanoAvionics has laid out its ambitious growth and business development plans for the USA via its existing facility in Columbia, Illinois. The smallsat bus manufacturer and mission integrator will develop the only satellite manufacturing facility in the state to become its main hub in the US. Through this hub, NanoAvionics will further grow the portfolio and expand into other locations across the USA. The company is also using it to coordinate all business development activities in the LATAM region, exemplified by the existing "D-2/AtlaCom-1" rideshare mission with Mexican consortium partners Space JLTZ and Municipality of Atlacomulco among others. NanoAvionics US revealed additional plans to open a full scale MAIT (manufacturing, assembly, integration & test) facility for serial manufacturing of small satellites and establish a mission operations center. To enable and foster this growth, NanoAvionics intends to hire around 100 people by the end of 2022, about half of those for the Columbia hub. The company has already tested the first satellites at the facilities for its US customers missions.

Arianespace to Serve OneWeb's Ambitions by Increasing its Satellite Fleet to More than 200 Spacecraft

May 20, 2021 - Flight ST32, the fourth commercial mission performed by Arianespace and its Starsem affiliate from the Vostochny Cosmodrome, will put 36 of OneWeb's satellites into a near-polar orbit at an altitude of 450 kilometers. The mission will have a total duration of three hours and 51 minutes and will include nine separations of four satellites, which will raise themselves to their operational orbit. This seventh launch to the benefit of OneWeb will bring up to speed Arianespace's operations this year, and will raise from 183 to 218 the number of satellites deployed for the global telecommunications operator. OneWeb's mission is to bring internet everywhere to everyone, by creating a global connectivity platform through a next generation satellite constellation in low Earth orbit. OneWeb's constellation will deliver high-speed, low-latency connectivity services to a wide range of customer sectors including aviation, maritime, backhaul services, as well as governments, emergency response services and more. Central to its purpose, OneWeb seeks to bring connectivity to every place where fiber cannot reach, and thereby bridge the digital divide. Once deployed, the OneWeb constellation will enable user terminals that are capable of offering 3G, LTE, 5G and Wi-Fi coverage, providing high-speed access globally – by air, sea and land.

ESA Advances its Plan for Satellites around the Moon

May 20, 2021 - A bold proposal to create a commercially viable constellation of lunar satellites has taken a step closer. Two consortia of companies will be supported by ESA to devise detailed definitions of how to provide telecommunications and navigation services for missions to the Moon, under the agency's Moonlight initiative. Such a lasting lunar link will enable sustainable space exploration. ESA is going to the Moon together with its international partners including NASA. Dozens of international, institutional and commercial teams are sending missions to the Moon that envisage a permanent lunar presence. These will become regular trips to Earth's natural satellite rather than one-off expeditions. ESA is providing several service modules for NASA's Artemis programme to return humans to the Moon by 2024, including the ESPRIT communications module for the lunar Gateway's living quarters for astronauts. With its European industrial partner, ESA is helping to build the Lunar Pathfinder, showcasing lunar communications service provision by providing initial services to early lunar missions, including a complete lunar navigation in-orbit demonstration. The Moonlight initiative builds on both the ESPRIT communications module and the Lunar Pathfinder. The two consortia will articulate exactly how to achieve a lasting link with the Moon. Surrey Satellite Technology Limited will lead the first consortium, both in the service prime capacity through its lunar services brand SSTL Lunar and as the satellite manufacturer. The consortium also includes: satellite manufacturer Airbus; satellite network providers SES, based in Luxembourg, and Kongsberg Satellite Services, based in Norway; the Goonhilly Earth Station in the UK; and British satellite navigation company GMV-NSL.

Sierra Space Signs In-Space Manufacturing Agreement with Redwire

May 19, 2021 - Sierra Space announced the signing of a joint agreement with Redwire aimed at leveraging Sierra Space capabilities for a range of in-space services and manufacturing. The memorandum of understanding (MOU) in the emerging In-Space Manufacturing (ISM) industry is among new commercial agreements for Sierra Space across multiple industries – including space-enabled manufacturing, biopharma research, on-orbit satellite servicing assembly and manufacturing, and microgravity research. SNC announced earlier this month the transition of its space business to Sierra Space, a new commercial space company. By moving manufacturing and production into a microgravity environment, ISM offers efficiencies and capabilities not possible with terrestrial-based manufacturing methods. New Sierra Space partnerships hint at the exciting commercial potential of ISM, which can be leveraged to transform industries both on Earth and in space. ISM companies can utilize a LIFE habitat module, which at 27-feet in diameter is equivalent to three-stories of workspace in space, to host their research, development and manufacturing operations. Alternatively, they can dock their own modules to a multi-habitat configuration of a Sierra Space commercial space station and utilize only its services, such as power, communications, environmental control and transportation.

Astra Announces Multi-Launch Contract with Planet

May 19, 2021 - Astra named Planet as a holder of a multi-launch contract, with plans to begin launching in the near future. Astra also shared plans to launch payloads up to 500kg to a 500 km, mid-inclination (50 degree) orbit. This capability expands the services Astra can deliver for mega constellations, small satellite companies, and government agencies. This contract comes at a pivotal moment for the global economy, as demand increases for space infrastructure services. The World Economic Forum estimates that the industry is currently worth \$360 billion, and will triple to over \$1 trillion by 2040. Astra will enable companies in both the private and public sectors to capture this growth potential.

Spiral Blue Announces Launch Mission with Satellogic

May 18, 2021 - Spiral Blue has signed an agreement with satellite manufacturer and operator Satellogic, as part of Satellogic's Hosted Payloads Program. This initial agreement establishes Satellogic's intent to fly a Spiral Blue Space Edge 1 ("SE-1") prototype computer onboard one of its satellites scheduled to launch in March 2022. The Spiral Blue SE-1 is a prototype onboard satellite computer that enables in-space processing of satellite images. It is an upgrade of Spiral Blue's existing Space Edge Zero computer, which is planned to be tested in space later this year. The SE-1 uses the NVIDIA Jetson Xavier NX, which carries far greater processing power and storage than the NVIDIA Jetson Nano that powers the Space Edge Zero. This mission with Satellogic will be part of Spiral Blue's end-to-end testing and space qualification campaign for the SE-1. Satellogic is a vertically integrated geospatial analytics company that designs and builds its own satellites that operate in low Earth orbit. Satellogic captures, processes, and delivers high-resolution multispectral and hyperspectral imagery and full motion video. With its own constellation in service today and continued increase of orbital capacity of the constellation through a high-frequency launch schedule, Satellogic is one of the global leaders in high-resolution data collection from space.

Benchmark and Starfish Space Team up to Enable Precision On-orbit Services

May 18, 2021 - Starfish Space, a satellite servicing company, and Benchmark Space Systems, a leading provider of in-space mobility systems and services, today announced a strategic collaboration to advance precision on-orbit refueling and docking capabilities, beginning with demonstrations during Orbit Fab's Tanker 1 mission launching next month aboard a SpaceX Falcon 9 rocket. Starfish is integrating and testing its CEPHALOPOD rendezvous, proximity operations and docking (RPOD) software with Benchmark's non-toxic hydrogen peroxide-fueled Halcyon thruster, the primary propulsion system for Orbit Fab's Gas Stations in Space™ tanker, to optimize spacecraft control accuracy in preparation for the first-ever tanker maneuvers in space during simulated docking demonstrations. Both Benchmark's green chemical Halcyon propulsion system, set to power four separate spacecraft missions bound for launch in 2021, and Starfish's autonomous CEPHALOPOD RPOD software will accomplish flight heritage during the inaugural Orbit Fab mission aboard a tanker built by Astro Digital.

Rocket Lab Experiences Anomaly during Launch

May 16, 2021 - Following a successful lift-off, first stage burn, and stage separation, Rocket Lab experienced an anomaly during its 20th Electron mission 'Running Out Of Toes.' The issue occurred following second stage ignition during the flight on May 15, 2021 UTC, resulting in the loss of the mission. The launch vehicle's second stage remained within the predicted launch corridor and caused no harm to the public, Rocket Lab's launch or recovery crews, or the launch site. Electron's first stage safely completed

a successful splashdown under parachute and Rocket Lab's recovery team is working to retrieve the stage from the ocean as planned. Rocket Lab is working closely with the Federal Aviation Administration (FAA) to investigate the anomaly and identify the root cause to correct the issue for future missions. Today's anomaly occurred after 17 successful orbital launches of the Electron launch vehicle. With multiple launch vehicles currently in production, Rocket Lab is prepared for a rapid return to flight as soon as investigations are complete and any required corrective actions are in place.

LatConnect 60 Teams up with SSTL in First UK-Australia 'Space Bridge' Industry Partnership

May 13, 2021 - Smart satellite provider LatConnect 60 and Surrey Satellite Technology Ltd (SSTL) have announced the first partnership under the UK-Australia 'Space Bridge', a program launched earlier this year by the Australian Space Agency and UK Space Agency to boost investment and knowledge across both countries' space sectors. Under the partnership, Perth-based LatConnect60 will provide high resolution optical data from the SSTL S1-4 Earth observation satellite, significantly bolstering the firm's satellite imagery and data analytics capability in Australia. The announcement is a major milestone for LatConnect 60 which will now control its first operational asset and move into a growth phase ahead of the launch of its own smart satellite constellation above Australian skies in 2022. SSTL, which is a subsidiary of Airbus, has launched over 70 satellites for 22 countries over the last three decades. Its participation in the world's first ever 'Space Bridge' program, which was launched in February 2021, demonstrates the growing influence of Australian companies and paves the way for further collaboration that will create more jobs and opportunities in the space sector. Through the new satellite, LatConnect 60 will generate high resolution panchromatic and multispectral optical data which its team in Western Australia will further process to provide analytics-ready data products and insights. Clients from sectors ranging from mining, agriculture and government will benefit from the highly accurate, real time data sets which will have an immediate, practical impact on their operations.

Virgin Orbit to Launch Quantum Encryption Satellites for Arqit

May 12, 2021 - Virgin Orbit today announced it has been selected by UK-based Arqit Limited, a leader in quantum encryption technology, to conduct two launches to Low Earth Orbit (LEO) beginning in 2023. Arqit has pioneered a unique quantum encryption technology, QuantumCloud™, which makes the communications links of any networked device secure against current and future forms of hacking – even an attack from a quantum computer. Currently, Arqit's system delivers an unlimited number of encryption keys using terrestrial communications systems, but by incorporating satellites, Arqit can further enhance the system. Arqit's satellites will use a new quantum protocol that will create a backbone of secure keys within the data centers of Arqit's customers all over the world, and a quantum safe boundary protecting those data centers. Virgin Orbit will provide launch services for the two satellites via its LauncherOne system. The companies are discussing a further set of launches after the initial program, as Arqit seeks to address its growing market of government customers. This could potentially include future launches from Spaceport Cornwall out of Newquay, UK, where Virgin Orbit will commence operations beginning in 2022, providing the UK with its first in-country launch capability.

Spaceflight Readies 36 Spacecraft and Two OTVs for Launch on SpaceX's Transporter-2 Mission

May 11, 2021 - Spaceflight Inc. announced today it will be launching 36 customer payloads to Sun Synchronous orbit aboard the SpaceX Transporter-2 mission, scheduled to launch no earlier than June 2021. The company purchased three ports on the mission, dubbed 'SXRS-5' by Spaceflight, and is managing the launch integration and mission management services for 36 payloads, including six microsatellites, 29 cubesats and one hosted payload. The mission also represents the first time the company will fly two different orbital transportation vehicles (OTVs) and the launch of the industry's first-ever electric propulsion vehicle, Sherpa-LTE1. Spaceflight's first next-gen OTV, Sherpa-FX1, debuted in January and successfully deployed 15 spacecraft from SpaceX's Transporter-1 launch. The Transporter-2 mission will feature another Sherpa-FX (Sherpa-FX2), as well as debut Sherpa-LTE (Sherpa-LTE1), which features electric propulsion from Apollo Fusion. Spaceflight's Sherpa-LTC, which features chemical propulsion from Benchmark Space Systems, will fly on another SpaceX mission later this year.

ICEYE Introduces World's First Wide Area Imaging for Persistent Monitoring with New Space SAR Satellites

May 10, 2021 - ICEYE announced today the commercial availability of wide area imaging capabilities covering 10,000 km² data acquisitions with its SAR (synthetic-aperture radar) satellite constellation. ICEYE is the only New Space SAR satellite provider to achieve wide-area Scan mode imaging, with up to a 100-times larger area coverage from the closest alternatives in the marketplace. Thanks to the completely

unique system design of ICEYE's SAR satellites, ICEYE is now able to provide the world's single most comprehensive persistent monitoring capabilities both for land and sea data use cases. ICEYE's new Scan imaging is particularly effective for acquiring wide coverage imagery for maritime use cases, where national security authorities and maritime safety officials require persistent visibility into large sea areas. The alternative methods of monitoring these areas, such as airplanes and sending out patrol vessels to sea, are costly and not always feasible due to inclement weather or night time. Radar satellite imaging works both day and night, and even through cloud cover. ICEYE is the only New Space SAR data provider with a current system design that supports comprehensive wide area imaging.

Spaceflight Inc. Readies the Next of Four Dedicated Electron Launches for BlackSky

May 4, 2021 - Global launch services provider Spaceflight Inc. recently secured four dedicated Rocket Lab launches on behalf of its customer, BlackSky, a leading provider of real-time geospatial intelligence and global monitoring services. Spaceflight will provide the integration and launch services for eight BlackSky smallsats across four dedicated Electron missions throughout 2021. The agreement also includes options for an additional two dedicated missions on Electron in Q4 2021. The first of these four dedicated missions is scheduled to launch in May 2021 from Rocket Lab's Launch Complex 1 in New Zealand. The mission, called "Running Out of Toes" by Rocket Lab and "RL-7" by Spaceflight to signify its seventh mission with Rocket Lab, will carry two 55-kilogram class BlackSky smallsats to low Earth orbit. The following three dedicated launches under contract will each take two more BlackSky satellites, furthering BlackSky's goal to launch nine satellites in 2021. Following the successful deployment of one BlackSky smallsat on Rocket Lab's "They Go Up So Fast" rideshare mission (RL-6) on March 22, 2021, the new dedicated launches provide BlackSky additional scheduled launches and orbital control to get its constellation on orbit in an accelerated timeline.

Virgin Orbit Selects AVS to Build Infrastructure for Launches from Cornwall, UK

May 3, 2021 - Virgin Orbit UK Ltd., has signed a new manufacturing agreement with AVS Added Value Solutions UK (AVS) to build the Transportable Ground Operating System (TGOS) that will support Virgin Orbit's launch activities from Spaceport Cornwall. This manufacturing work, which will begin shortly in AVS' facilities in the UK, represents a major step forward in the journey to bring space launch to Britain. Virgin Orbit's unique air-launch system launches satellites to space from a rocket carried beneath the wing of a modified 747 aircraft, giving the system unparalleled flexibility and mobility. To conduct launches, the company requires only a runway, a launch license, and a set of ground support equipment (GSE) such as the one AVS is now building, which are designed to prepare the rocket for flight and to mount it on the wing of the aircraft. AVS was selected from a large pool of Tier 1 UK suppliers who responded to an open Request for Proposals. The AVS bid emerged as the top pick due to their proven expertise in complex and critical space and scientific equipment (including large space GSE and propulsion), product and quality assurance proposal, and the experience of their EN9100 and ISO9001 list of UK proposed suppliers. Manufacturing and acceptance testing of the new equipment will be completed prior to Virgin Orbit's first launch from Spaceport Cornwall.

Northrop Grumman Solar Arrays to Power Airbus OneSat Spacecraft

May 3, 2021 - Northrop Grumman Corporation has been awarded a contract by Airbus Defence and Space for the design, development and production of 24 ship sets of solar arrays to support the OneSat satellite product line. The solar arrays will power the OneSat communication satellites in geosynchronous orbit. The solar array technology features the Northrop Grumman Compact Telescoping Array (CTA) design that utilizes a telescoping boom system to deploy an accordion-folded flexible solar array blanket. The solar arrays are a 20kW-class system that deploys over 18 meters in order to provide energy to OneSat. The use of Northrop Grumman's solar arrays to support the OneSat product line builds on the company's history of mission-enabling capability through solar technology. These technologies are used to support various commercial and civil space programs, including the commercial resupply of the International Space Station through the company's Cygnus spacecraft, several of its commercial satellites and NASA's Insight and Phoenix Mars Landers. In addition to the solar arrays, Northrop Grumman will also provide heat pipes that are an essential element for payload thermal management as well as propellant tanks in support of a mono-propellant propulsion system for OneSat.

EXECUTIVE MOVES

Inmarsat Appoints Two Senior Leaders to Advance UAV Connectivity Offering

May 27, 2021 - Inmarsat has expanded its fast-growing division dedicated to connectivity for Unmanned

Aerial Vehicles (UAVs), commonly known as drones, with the addition of two new senior executives. The appointment of Jon Holmes as Senior Director of UAV Technology and Mark ter Hove as Senior Manager of European Market Development will drive forward Inmarsat's plan to be the leading connectivity partner in this burgeoning sector. The number of UAVs flying in airspace is expected to increase tenfold from 1.1 million to 10 million by 2027, with a far-reaching impact in various aspects of business and society, from emergency services, disaster relief and surveillance, to cargo delivery, inspection and urban transport. Jon Holmes will be responsible for creating Inmarsat's roadmap for UAV products and services, working with customers, partners and internal stakeholders. Jon has more than 30 years of experience in aeronautical satellite communications, most recently serving as Senior Director of Engineering and Programme Management at Cobham Aerospace Communications, where he led a 150-strong team to develop aeronautical satellite communication terminal products. Mark ter Hove will be responsible for evaluating customer and market opportunities in Europe to reinforce Inmarsat as the leading provider of connectivity products and services in the fast-growing field of UAV BVLOS (Beyond Visual Line of Sight) operations. He has over 25 years of aviation experience, including 12 years leading operations at British Airways franchise partners GB Airways and Astraeus Airlines, before serving as airline network manager at London's Gatwick Airport.

Viasat Advances Leadership Team with Two Executive Promotions

May 26, 2021 - Viasat Inc. announced Evan Dixon has been promoted to the role of President of Viasat's Global Fixed Broadband business and Craig Miller advances from Government Systems' Chief Technology Officer to now lead the segment as President. Evan Dixon has been named President of Viasat's Global Fixed Broadband business. In this role, which he has been acting in for most of last year, he is responsible for the Company's fixed broadband services business in the U.S. and globally, which includes Viasat's residential and business internet service as well as its Community Internet offering, which brings affordable internet service to the hardest-to-reach locations around the world. Evan joined Viasat in 2015, as Deputy CEO and Chief Marketing Officer of Euro Broadband Infrastructure Sàrl, a subsidiary of Viasat. In March 2018, he was appointed Vice President and General Manager of Viasat Europe, and in March 2020, he was appointed the Vice President of Viasat's Global Fixed Broadband business. Craig Miller joined Viasat in 1995, and has held numerous technology, business and strategic leadership roles. Prior to serving as President of Government Systems, he was the segment's Chief Technology Officer where he was responsible for establishing and communicating the technical strategy and roadmaps for a diverse portfolio of defense products and services: including satellite communications, tactical networks, information assurance, cyber/network security and Intelligence, Surveillance and Reconnaissance.

Boeing Appoints Ryan Reid to Lead Commercial Satellites

May 25, 2021 - The Boeing Company has named Ryan Reid as president of Commercial Satellite Systems International. In this role, Reid oversees the strategy, integration and execution of Boeing's commercial satellite business and is responsible for general management of all Boeing commercial satellite, ground system and services contracts. Prior to this role, Reid led the development of the 11-satellite O3b mPOWER program for customer, SES. Previously, he served as director of Space System Architectures at Boeing and has held engineering, management and program leadership roles across both commercial and government satellite businesses during his 20-plus years with the company.

Ksenia Drozdova Elected as New Director General of Intersputnik IOISC

May 24, 2021 - Ksenia Drozdova, Deputy Director General for Business Development of Russian Satellite Communications Company (RSCC), was elected Director General of the Intersputnik International Organization of Space Communications (IOISC). The decision was passed at the joint 49th session of the Board and 23rd session of the Operations Committee of the Intersputnik International Organization of Space Communications (Intersputnik IOISC), held from April 5 to May 14, 2021 in a remote format. Ksenia Drozdova was nominated to the post of Director General by the Ministry of Digital Development, Communications and Mass Media of the Russian Federation (Ministry). In this respect, the Ministry expressed confidence that Ksenia Drozdova being elected the Director General of Intersputnik would ensure stable operation and further development of the organization. Sixteen organizations acting as the members of the Board of Intersputnik IOISC and on behalf of the Members, and 19 organizations members of the Operations Committee took part in the voting for the Director General. From 2009 for more than 10 years Ksenia Drozdova had held office as the Chair of the Operations Committee of Intersputnik IOISC. Under her leadership, the Operations Committee established effective interaction between Intersputnik member countries and significantly expanded the satellite capabilities that organization members offer to their customers.

SpaceLink Rounds out Management Team with Robert Conrad and Phil Robinson

May 24, 2021 - SpaceLink, a company that is building an information superhighway for the space economy, welcomed two industry experts to its team. Robert Conrad joined the company as Vice President of NASA and Civil Space business development, and Phil Robinson is Vice President and Chief Security Officer. They join a group of exceptional business and technology professionals who have demonstrated confidence in the prospects for a relay service that provides secure, continuous, high-capacity communications between Low Earth Orbit spacecraft and the ground. Robert Conrad has supported dozens of satellite missions with NASA, NOAA, the NSF and JPL. He has deep domain knowledge of TDRSS and experience working with the NASA Space Communications Network and Satellite Ground Network. He spent 17 years at LJT & Associates, a small business government contractor that provided a range of aerospace services, where he was President and CEO. As Vice President and Chief Security Officer, Phil Robinson is responsible for SpaceLink's tactical and strategic security operations. A retired U.S. Army Special Forces veteran, his more than 30-year career encompasses protection of sensitive technologies and classified information, human and counterintelligence operations, and information systems.

Maxar Appoints Daniel Nord to Lead Earth Intelligence Products

May 11, 2021 - Maxar Technologies today announced that Daniel Nord will join the company as Senior Vice President, Chief Product Officer, effective May 24. Nord joins from Amazon where he first led Product Management for Games and then served as GM for Amazon Kids and Family's Mobile, Content and International divisions. In that role, Nord led a Product Management organization that tripled the mobile subscriber base, expanded the service to Europe and Asia and released Amazon's first original franchise, spanning games, shows, books and merchandise. Prior to Amazon, Nord spent 7 years at Electronic Arts as a studio GM and head of Product Management for Mobile and VR. He has a Master of Business Administration from Stanford University Graduate School of Business and a Bachelor of Science in Computer Science and Engineering from University of Pennsylvania. In his new role leading the Earth Intelligence Product organization at Maxar, Nord will drive strategy and vision for Maxar's product roadmap and user experience to accelerate growth across its government and commercial technology customers. He will lead a team of approximately 400 employees at several Maxar locations in the U.S. and Sweden.

AST SpaceMobile Expands Management Team with Key New Hires

May 4, 2021 - AST SpaceMobile today announced the addition of two executives to its senior leadership team. Brian Heller has joined as Executive Vice President, General Counsel and Secretary. Mr. Heller brings over 20 years of public company experience to AST SpaceMobile. Before joining AST SpaceMobile, he served as General Counsel of Castle Brands, Inc., a publicly traded spirits company, until its sale to Pernod Ricard, and as Senior Vice President - Business and Legal Affairs at Ladenburg Thalmann Financial Services, a publicly traded financial services company, until its acquisition by a portfolio company of Reverence Capital Partners. Mr. Heller was a partner at Steel Hector & Davis in Miami, Florida. Matt Wisniewski has joined as Executive Vice President and Chief Strategy Officer overseeing corporate development, treasury, investor relations and public relations. Previously, Mr. Wisniewski was Managing Director of Technology, Media & Telecommunications Investment Banking at Barclays, advising clients on raising capital and M&A for over a decade. While at Barclays, he advised AST SpaceMobile on the \$110 million private investment in 2019 and the recently closed business combination transaction, which raised \$462 million in gross proceeds.

REPORTS

NSR Report: Emerging Space Investment Analysis, 3rd Edition (ESIA3)

May 12, 2021 - NSR's *Emerging Space Investment Analysis, 3rd Edition (ESIA3)* provides critical assessment of the movements and trends of global New Space investment over the past two decades. Historically, most space investment has been driven by a handful of larger players; this is changing. Space markets are now picking up steam with investors. 2020 was a record year for investment, nearly \$36 billion has moved into space companies despite the COVID-19 pandemic. NSR's ESIA3 provides critical assessment of the Emerging Global Space economy, driving the development of new applications and approaches in the space industry.

Euroconsult Quarterly Report: Chinese Space Sector Continues World-Leading Post-Covid Rebound

May 11, 2021 - Following a record year for commercial space funding in China, and with 2021 showing further significant year on year growth, leading international consulting and market intelligence firm

Euroconsult have announced a new quarterly market intelligence report dedicated to providing the latest news, expert analysis and insights into the lucrative Chinese space market. The firm's China Space Industry report is evolving from an annual document to a series of in-depth quarterly reports in order to provide more current and actionable information about the Chinese space sector, including satellite industry, technological developments, funding updates and relevant M&A. The streamlined reports will enable a more responsive approach to providing unique insights into a market currently experiencing dynamic growth, drawing out a series of key themes to allow for better understanding of the strategic direction of the Chinese space sector, along with a timeline of recent government space activities and analysis of the country's tech sector in the space industry.

UPCOMING EVENTS

APSCC 2021 Webinar Series, Virtual Event, <https://apscsat.com>
LIVE Every Tuesday 9AM HK I Singapore Time

Global Space Technology Convention (GSTC 2021), June 7-8, Singapore,
<https://www.space.org.sg/gstc/>

Australasia Satellite Forum 2021, June 22-23, Sydney, Australia, <http://talksatellite.com/EVENTS.htm>

ConnecTech Asia 2021, July 14-16, Singapore, <https://www.connectechasia.com/home/>

SatelliteAsia Summit, July 15-16, Online Event <https://www.connectechasia.com/satellite-asia/>
The Asia-Pacific Satellite Communications Council (APSCC), in conjunction with Informa Tech, will present interactive online sessions at SatelliteAsia 2021 as part of Asia Tech x Singapore, 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. [GET FREE TICKETS TO SATELLITEASIA](#)

Satellite 2021: Future Space Digital Forum, July 26-29, <https://www.satshow.com/>

Satellite 2021, September 7-10, National Harbor, MD., USA, <https://www.satshow.com/>

CABSAT 2021, October 26-28, Dubai, UAE, <https://www.cabsat.com/>

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About APSCC

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