

APSCC Monthly e-Newsletter

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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 September 1 to September 30.

SATELLITE BUSINESS

Eutelsat and OneWeb Combination Heralds New Era in Space Connectivity as World's First GEO-LEO Operator

September 28, 2023 – Eutelsat announced the completion of its all-share combination with OneWeb, the global low Earth orbit (LEO) satellite communications network, following the approval today at the Ordinary and Extraordinary General Meeting of Eutelsat shareholders. This combination forms Eutelsat Group. The Company remains headquartered in Paris. OneWeb will be a subsidiary operating commercially as Eutelsat OneWeb with its centre of operations remaining in London. The Company remains listed on the Euronext Paris Stock Exchange and has applied for standard listing on the London Stock Exchange. The newly formed Eutelsat Group is strategically positioned to be a global leader in space communications. Eutelsat's powerful GEO fleet will combine network density and high throughput with the low latency and ubiquity of OneWeb's LEO constellation to offer customers global, fully integrated connectivity services. This combination confirms Eutelsat as a pioneer in the space industry and a leader in space technology innovation, showcasing its continuous commitment to pushing the boundaries of the satellite landscape.

Japanese Shipping GYK Line Selects Marlink to Equip its Owned Fleet with Smart Hybrid Network

September 26, 2023 – Marlink, the smart network and digital solutions company, has secured a contract to extend its innovative smart hybrid network solutions with Starlink LEO internet service to the owned fleet of leading Japanese shipowner Nippon Yusen Kaisha (NYK Line). Tokyo-based NYK Line has been a Marlink customer since 2013 with Marlink providing hybrid network services for NYK's huge fleet of containerhips, bulk carriers and tankers, car carriers, LNG/LPG carriers and other specialised cargoships. Following the successful assessment of Starlink on two vessels in 2022, NYK Line contracted Marlink to integrate and manage the LEO services as part of its smart hybrid network and to roll out the solution across the fleet. NYK Line will utilise the Starlink service alongside the existing high capacity VSAT provided by Marlink on its fleet of owned vessels, focusing the additional bandwidth on crew communications and welfare services. Marlink VSAT will continue to provide the primary business communications channel with L-band back-up.

GTMaritime Reaches 15,000-Vessel Milestone

September 26, 2023 – Leading provider of secure maritime data communications software, GTMaritime, has reached 15,000 installations amid accelerating growth in demand for secure and reliable maritime software solutions. The news comes just 16 months after the company announced that it had passed the 10,000-vessel milestone. GTMaritime offers ship owners and operators a portfolio of future-proof data communications solutions for email, file transfer, software deployment and cyber security. Specifically designed to overcome the challenges of remote connectivity, the solutions provide seamless integration with shore-based tools, which can be managed via GTMaritime's single fleetwide management dashboard.

Eutelsat and Can Marine to Enhance Global Maritime Connectivity over Asia-Pacific region

September 26, 2023 – Eutelsat Communications announces a partnership with Can Marine Systems, a prominent provider of maritime systems in Asia. The collaboration brings next-generation satellite communication services to the maritime sector across Asia, offering enhanced connectivity and capabilities for maritime businesses operating at sea (cargo shipping, passenger ferries, and offshore) in this vast region. The partnership leverages the Eutelsat ADVANCE hybrid GEO/LEO service portfolio, an innovative satellite network-as-a-service providing high-end connectivity to users through a global network of unparalleled coverage. Eutelsat ADVANCE offers a range of scalable versatile managed connectivity services that combine LEO constellation coverage ubiquity and low latency with robust GEO satellite reliability and predictable committed throughput. This unique combined offering will help Can Marine address business opportunities across Asia, tailoring solutions to customers' specific needs, and reinforcing their position as a leading provider of maritime systems in the region.

Schools in Remote Areas Empowered by CONNECTme NOW Services

September 22, 2023 – MEASAT Global Berhad ("MEASAT"), Malaysia's Rural Broadband Service Provider, is now connecting close to 600 school sites in remote locations nationwide through its CONNECTme NOW high-speed wireless satellite broadband services, in line with its commitment to provide greater access to connectivity for education, especially in underserved rural communities. The CONNECTme NOW service can dynamically allocate bandwidth on demand. As the quota allocation is provided on a per user basis, schools with populations of any size – small or large, can easily scale up using this architecture, addressing potential bandwidth congestion. The Internet connectivity services will benefit teachers and students by offering download speeds of up to 100Mbps per location. Beyond the allocated quota for the school, additional quota can be purchased on a per user basis to meet personal consumption demands. The service is supported by MEASAT's 24x7 Network Management Centre as well as an established local distributor network. Satellite broadband capacity is ideal for providing rapid, ubiquitous communications networks that are independent of geographical barriers or terrestrial infrastructure. It is suitable for very remote locations that are difficult to access, or in terrains that are less feasible for normal terrestrial services or mobile towers.

EchoStar and The Things Industries Collaborate for Hybrid Satellite and Terrestrial IoT Device Connectivity

September 21, 2023 – EchoStar Mobile Limited and The Things Industries announced a collaboration to deploy hybrid satellite and LoRa® Internet of Things (IoT) solutions to businesses across Europe. The companies have incorporated EchoStar's satellite IoT capabilities into The Things Stack, a reliable, cloud-based LoRaWAN network server, enabling customers to connect IoT devices for real-time, two-way communications over satellite or terrestrial networks using a dual-transport, generic node. The collaboration introduces satellite connectivity to The Things Stack LoRaWAN Network Server and its Generic Node Concept Edition, enabling customers to extend the reach and reliability of their connected IoT devices with one click. With the satellite capability – and a limited-time free trial for each device connected – businesses can effortlessly expand their IoT deployments to remote and challenging locations. Last year, EchoStar Mobile unveiled its pan-European LoRa-enabled IoT network, which is now delivering bi-directional, real-time LoRa connectivity for customers across Europe. Integration with The Things Stack Cloud propels this offering to a global scale, powering multi-country service continuity for customers in sectors such as utilities, transportation, logistics and agritech.

Intelsat Inflight Connectivity Expanded to All Airbus Aircraft

September 19, 2023 – Intelsat announced that its multi-orbit network offerings, relying on LEO and GEO satellites, will be available to airlines and aircraft lessors through Airbus' Airspace Link (HBCplus) solution. Intelsat will be the largest service provider in the manufacturer's flexible IFC service catalogue. Starting with aircraft deliveries targeting the first half of 2026, airlines may select Airbus'

Ku-band ESA terminal, which is designed for simultaneous connections to Intelsat's GEO network and LEO networks, like OneWeb. This data routing plan will deliver premium IFC service with an unmatched global level of resilience, low-latency and high throughput that is unique to Intelsat. As part of the agreement, Airbus will manage the HBCplus system installation in line and retrofit, as well as the related in-service support.

Intellian and OneWeb Announce Innovative Flat Panel Series for Global LEO Connectivity

September 19, 2023 – Intellian Technologies Inc., a global provider of resilient multi-constellation, feature-rich satellite user terminals and communications solutions, and OneWeb, the low Earth orbit (LEO) satellite communications company, have today announced a new product portfolio of Intellian Flat Panel user terminals for use on OneWeb's network. Intellian's Flat Panel Series is a suite of both Pro and Compact user terminals that deliver exceptional performance in sleek, small-footprint, and lightweight form factors. Designed for Land Fixed, Land Mobile, Maritime and Government markets, they're a game-changer for customers globally requiring low profile, easy installation, high performance. Through the Pro and Compact Flat Panels, customers have a choice of four different user terminals to address their specific market needs and use cases. Both the Pro and Compact models come in two versatile configurations: a fixed enterprise terminal and a mobility terminal. These Flat Panel terminals are meticulously designed to meet the unique demands of end users, ensuring reliable connectivity everywhere in the world, on land and at sea.

MEASAT Recognised as Regional Satcom Operator of the Year 2023

September 14, 2023 – MEASAT Global Berhad ("MEASAT"), Malaysia's Premier Satellite Operator, was recognised with the Regional Satcom Operator of the Year 2023 award at the 26th Annual Awards for Excellence in Satellite Business. The awards ceremony took place in Paris on September 13, 2023, as part of the World Satellite Business Week conference. The prestigious event was organised by Euroconsult Group, the leading global strategy consulting and market intelligence firm specialising in the space sector and satellite-enabled verticals. This is the third recognition for MEASAT by Euroconsult. In 2016, MEASAT received the Regional Operator of the Year award at the 13th Annual Awards for Excellence in Satellite Communications, while in 2008, the company received the Regional Satellite Operator of the Year award at the Excellence in Satellite Management Awards held in conjunction with the 12th World Summit for Satellite Financing.

Comtech Launches Network Agnostic Dynamic Cloud Platform for Satellite Providers

September 14, 2023 – Comtech announced today its Dynamic Cloud Platform (DCP) is now available for commercial and government satellite service providers in U.S. and international markets. Comtech's DCP will enable traditionally disparate satellite systems and ground station infrastructures to be easily integrated, creating a new path to introduce cloud-based applications, waveforms, and services. The company's DCP is designed to be infrastructure, cloud, and application agnostic-allowing satellite customers to easily orchestrate, integrate, and manage a wide variety of applications, waveforms, and services across private, public, and hybrid cloud-based networks. Comtech is conducting trials and initial testing that will enable multiple satellite-based waveforms to be deployed using DCP across different cloud-based infrastructures. As part of the launch, Comtech's DCP now offers a unique satellite-based software development kit to allow for the integration of virtualized ground stations and other applications across cloud networks. Comtech is also offering professional services to assist satellite customers with the integration of new applications on its DCP.

SES Introduces Cruise Industry's First Integrated MEO-LEO Service with Starlink

September 13, 2023 – For the first time ever, cruise operators can now depend on a single managed solution to reap the benefits of low-latency, high-throughput satellite connectivity services that are enabled by integrating Starlink's low-earth orbit (LEO) and SES's medium earth orbit (MEO) services, both companies announced today. The joint offering – SES Cruise mPOWERED + Starlink – seamlessly integrated, sold and delivered by SES – will combine the best of both MEO and LEO orbits to provide

high-speed and secure connectivity 24/7 to cruise ships and their guests, regardless of their route and location. Cruise operators will be able to enjoy SES's new offering that combines the truly global, high-throughput service of Starlink's LEO system with SES's unmatched performance MEO constellation to deliver a unique guest and crew experience by expanding existing capacity and reach. The solutions are available in either Premium tier (3Gbps/ship) – for the leading ships who wish to deliver the highest throughput in the industry or Pro tier (1.5Gbps/ship) – for the operators who wish to manage user experience by matching the right application to the right orbit. As a managed service provider that pioneered multi-orbit geostationary (GEO) and MEO-enabled networks and delivered connectivity services directly to cruise operators for the last 10 years, SES's partnership with SpaceX's Starlink to add LEO-based service into its cruise offering, demonstrates a joint commitment to delivering the best customer experience to cruise operators and guests.

Successful Entry into Service of EUTELSAT HOTBIRD 13F and HOTBIRD 13G Satellites

September 13, 2023 – Eutelsat Communications announces that its two high-power HOTBIRD 13F and HOTBIRD 13G satellites have entered into full commercial service. Located at Eutelsat's 13° East flagship video neighbourhood, the satellites are reinforcing and enhancing the broadcast quality of around nine hundred television channels into more than 160 million homes across Europe, Northern Africa and the Middle East. These new state-of-the-art satellites are also bringing advanced features to 13° East, including in-orbit redundancy ability and uplink signal protection and resilience. The HOTBIRD video neighbourhood is host to 7 premium TV platforms, over 600 pay-TV channels, 300 free-to-air channels, and 500 HDTV and UHD channels. With its unique pan-European coverage, in Europe alone HOTBIRD reaches 130 million homes. The satellites also distribute TV channels to 90% of cable and IPTV operators in the Europe and MENA region, making 13° East the leading DTH, cable, IP, and DTT provider across the region. With their entry into service, the HOTBIRD 13F and HOTBIRD 13G satellites are releasing the three satellites previously located at 13° East, to carry out new missions.

Intelsat, Aalyria Sign Deal to Advance Multi-Orbit Connectivity

September 12, 2023 - Intelsat, operator of one of the world's largest integrated satellite and terrestrial networks and leading provider of inflight connectivity (IFC), today signed a Memorandum of Understanding (MoU) with Livermore, California-based Aalyria, the advanced software-defined and optical networking communications pioneer, that includes financial commitments to advance the development of a new optical technology that will transfer record amounts of data between ground and space. The MoU creates a framework for the two companies to cooperatively deploy Aalyria's technologies, a software and hardware platform that can orchestrate bi-directional optical ground and space connectivity for satellites at speeds of hundreds of gigabits per second. These technologies will offer secure and ultra-fast ground-space connectivity for government and commercial customers. When operational in 2024, Aalyria will deliver massive data files in real time, as well as back up networks which are running short of capacity or compromised.

INTEGRASYS and Keysight Form Strategic Partnership to Elevate Customer Experience and Product Integration in Telecommunications and Satellite Industries

September 12, 2023 – INTEGRASYS is excited to announce a substantial expansion of its strategic partnership with Keysight, an S&P 500 company delivering market-leading design, emulation, and test solutions to help engineers develop and deploy faster throughout the entire product lifecycle. This strategic alliance ushers in a new chapter in the longstanding relationship between the two entities, with a fresh emphasis on cross-promotion to deliver a cohesive, top-tier experience to their valued clientele. Founded in 1990 by former Hewlett Packard engineers, INTEGRASYS boasts an extensive track record in developing advanced software solutions that optimize the efficiency and performance of telecommunications and satellite equipment. The collaboration between INTEGRASYS and Keysight has historically played a pivotal role in seamlessly integrating Keysight's cutting-edge test and measurement equipment with INTEGRASYS's forward-thinking software

solutions, offering customers the tools they need to streamline their operations and attain optimal results. With the rapidly evolving demands of the telecommunications and satellite industries, coupled with the escalating intricacies within these sectors, INTEGRASYS and Keysight are poised to elevate their partnership to a new echelon. This enhanced collaboration will center on mutually "upselling" each other's complementary products, culminating in an end-to-end solution that maximizes efficiency, reliability, and overall performance. These integrated technologies will find application in areas such as 5G NTN, constellations, virtualization, and electronic warfare, among others.

Comtech Unveils New BRIDGE Solutions to Increase Access to Global Hybrid Connectivity

September 12, 2023 – Comtech has launched its new blended, resilient, integrated, digital, global, end-to-end (BRIDGE) connectivity solutions. Comtech's BRIDGE solutions provide portable, adaptable, full-service communications networks that can be established in a matter of hours and help "bridge the gap" for traditional satellite and terrestrial infrastructures. Comtech's BRIDGE solutions are designed to overcome geographical and environmental challenges to deliver robust and resilient connectivity to places where it was previously unavailable or overlooked. The company's BRIDGE solutions are tailored to meet urgent needs of initial customer sets including emergency service providers, remote communities, military operators, and maritime customers. Comtech's BRIDGE solutions are designed to be infrastructure, cloud, and application agnostic—enabling new options for interoperable connectivity services and applications in the world's most challenging geographies. With Comtech's software-defined technology embedded at the core, BRIDGE solutions can continuously evolve over time to meet emerging government and commercial use cases as well as support future smart-enabled networks across a variety of global markets and geographies.

SoftBank and OneWeb Sign Distribution Partnership Agreement to Deliver OneWeb Services across Japan

September 12, 2023 – SoftBank Corp. and OneWeb announced today that they have signed a Distribution Partnership Agreement to deliver satellite communication services across Japan. SoftBank and OneWeb will promote the delivery and upgrade of satellite communication services. OneWeb's LEO satellite-based services will provide fast communication services with low latency, as LEO satellites are located close to the earth. By integrating with SoftBank's closed domain connection services, OneWeb's technology will make it possible to achieve even more secure communication in Japan. Furthermore, the agreement provides for a bandwidth guarantee to ensure that customers get the speed and stability they expect. SoftBank is developing new services to realize the full potential of the agreement, including customizing its communication network based on the various needs of enterprise customers and ensuring one-stop delivery of device terminals and customer support. OneWeb's satellite communication services will enable communication services in locations where conventional mobile networks are not available, including remote areas such as mountainous regions and disaster-affected areas. SoftBank aims to develop an environment where communications can be connected seamlessly everywhere by integrating Non-Terrestrial Network ("NTN") solutions that provide communication networks utilizing satellites in space, including OneWeb's LEO satellites, and HAPS (High Altitude Platform Stations) in the stratosphere with terrestrial mobile networks to create a Ubiquitous Network.

Hanwha Phasor Signs Agreement to Join OneWeb's Family of Terminals

September 12, 2023 – Satellite Technology company Hanwha Phasor has signed a User Terminal Development Agreement with OneWeb, the global communications company powered from space. The agreement will see the two industry leaders collaborate on the development of a new In-Flight Connectivity terminal that will enable airlines to connect their aircraft, passengers, and crew over OneWeb's Low Earth Orbit (LEO) satellite communication network. The User Terminal Development agreement means that Hanwha Phasor will formalise testing for Type Approval certification which will give the business access to the OneWeb network. Along this process, OneWeb will provide

support to Hanwha Phasor on modem integration, terminal debugging and satellite airtime. Hanwha Phasor has been working since December 2021 to meet the requirements to join the OneWeb network. The agreement between the two businesses formalises this work and marks an important step on the road to accessing the OneWeb constellation. The terminal is scheduled for certification in 2025. The announcement comes as Hanwha Phasor showcases their Phasor-A7700 at Defence and Security Equipment International 2023 (DSEI). The business will be on stand H3-240 alongside Hanwha Aerospace, and will be discussing its wider portfolio of satellite communications options and the business' plans for wider satellite communication development for military and civilian applications.

Sultanate of Oman Partners with Euroconsult to Launch Middle East Space Conference

September 12, 2023 – The Ministry of Transport, Communications, and Information Technology of Oman (MTCIT) has announced it will hold a conference to promote space in the Middle East and the country's role as a strategic gateway for attracting investments in space applications and technologies into the region. The conference is set to run from January the 8th-10th next year and will be delivered in collaboration with leading global space and satellite strategy consulting and market intelligence firm Euroconsult, leveraging their proven expertise and reputation for delivering informative and executive satellite events for C-level executives since 1997. The Middle East Space Conference will continue Euroconsult's established method of securing top level speakers from across the satellite and space sectors, including government agencies, private companies and investors, to share knowledge with the event participants. More than 350 experts are expected to attend the event in Oman from across the Middle East and around the globe.

Another O3b mPOWER Milestone Achieved with Successful RF End-to-End Testing

September 11, 2023 – Following the launch and IOT of the first two O3b mPOWER satellites, SES has been performing a series of system validation tests encompassing both space and ground components, including key Radio Frequency (RF) end-to-end testing. The recent successful RF tests efforts validated many key ground and space infrastructure components, and in particular SES's proprietary Adaptive Resource Control (ARC) software application which seamlessly configured the O3b mPOWER payload, gateway and modem platform. The tests confirm the readiness and reliability of various ground segment components to operate the O3b mPOWER constellation and also help establish performance baseline of the system. The RF end-to-end test will be followed by system ETE test, where end-to-end system characterisation and validation will be performed. During this time, the test set-up will also support demos for key customers.

U.S. Space Force Awards Viasat Contract for Proliferated Low Earth Orbit Satellite Services

September 6, 2023 – Viasat, Inc. announced that Inmarsat Government, now part of Viasat, was awarded a Proliferated Low Earth Orbit (PLEO) Satellite-Based Services (SBS) contract by the U.S. Defense Information Systems Agency (DISA) on behalf of the U.S. Space Force's (USSF) Space Systems Command (SSC). Inmarsat Government is one of 16 companies selected for the \$900 million ceiling, 10-year Indefinite Delivery, Indefinite Quantity (IDIQ) contract. As the United States and its mission partners become increasingly reliant on space-based capabilities for national security, it is critical to have resilient constellations that include satellites in geostationary (GEO) and non-geostationary orbits (NGSO). Under this contract, Viasat plans to leverage small satellite technology, reduced costs and increased launch service competition, facilitating the ability for pLEO constellations to provide persistent, global coverage with reduced transmission latency. The company will provide a suite of fully-managed pLEO satellite-based services and capabilities, to include space relay services, supplemented by GEO and NGSO satellites, supporting all domains – space, air, land, maritime and cyber. Viasat will aim to achieve this with a reliable, resilient low latency global pLEO offering that flexibly supports the needs of combatant commands, defense agencies, other federal government organizations and international coalition partners. It will provide a comprehensive managed end-to-end SATCOM solution via a multi-band, multi-orbit constellation of satellites. Furthermore, its new,

hyper-intelligent software-defined wide area network (SD-WAN) is designed to orchestrate and provide priority routing across mixed networks, enabling an automated primary, alternate, contingency and emergency (PACE) solution to deliver the flexibility and responsiveness required to meet customers' needs today and in the future.

Intelsat Selected by Air Canada for Expanded Fleet Connectivity

September 5, 2023 – Air Canada and Intelsat, operator of one of the world's largest integrated satellite and terrestrial networks and leading provider of in-flight connectivity (IFC), today announced an agreement for Intelsat to provide connectivity systems for nearly 100 additional aircraft across the airline's fleet, including Intelsat's new multi-orbit electronically steered array (ESA) antenna for aircraft in the airline's regional jet fleet. Intelsat currently operates in-flight internet on 240 aircraft spanning Air Canada, Rouge and Air Canada Express. The new program includes IFC installations on three types of Air Canada aircraft: Boeing 737 MAX aircraft – the fleet of 40 aircraft will be equipped starting this year with Intelsat's 2Ku IFC system. Embraer 175 and Mitsubishi CRJ-900 aircraft (currently installed with Intelsat's air-to-ground system) – The 55 aircraft are currently flown by Air Canada's Jazz regional partner and will be upgraded with Intelsat's new ESA antenna starting in 2024. Intelsat's 2Ku solution is the industry's leader due to its combination of a low-profile, fuselage-mounted antenna and its reliable on-wing performance. The smaller aircraft in the airline's regional jet fleet will benefit from Intelsat's new ESA which is less than three inches tall and interoperates on both Intelsat's family of geo-stationary satellites and on OneWeb's constellation of Low Earth Orbit (LEO) satellites. This strategy enables Air Canada to deliver the highest quality inflight internet experience available to airlines, wherever it flies.

Eutelsat Partners with Karista's Spacetechn Fund

September 5, 2023 – Karista and Eutelsat Communications today announced a new strategic partnership which will see Eutelsat become a new subscriber to the venture capital (VC) firm's Spacetechn fund. This will add to Karista's ability to fully harness the unprecedented momentum that is building up in the space economy. For Eutelsat, the new partnership consolidates its existing close ties with the industry's innovative start-ups and plays a key role in the development of a vibrant space ecosystem featuring the latest in space technology in France and across Europe. With the addition of a leading satellite operator, satcom players are increasingly turning their attention to the far-reaching changes taking place in this ecosystem and witnessing the emergence of a new space economy featuring a host of new applications.

INTEGRASYS Bolsters Expansion Strategy with the Acquisition of SCIURUS

September 5, 2023 – INTEGRASYS S.A, a pioneering leader in software satellite communications solutions, has announced the successful acquisition of SCIURUS, a Spanish dynamic technology company known for its cutting-edge innovation, and intellectual property with state-of-the-art prototypes. This strategic move marks a significant step in INTEGRASYS group's ambitious expansion plan, which has been steadily unfolding since 2017. The integration of SCIURUS and its know-how intellectual property rights into the INTEGRASYS portfolio opens new avenues for growth, innovation, and market leadership. By harnessing the synergies between the two entities, and the fast addition of know-how, INTEGRASYS aims to propel its mission of providing advanced, reliable, and competitive products that cater to the evolving demands of the global SatCom and Defense markets. SCIURUS brings to the table a wealth of technical expertise and a proven track record in developing groundbreaking software for constellations prototypes, in the national industry. These prototypes are poised to play a pivotal role in INTEGRASYS' endeavour to deliver more robust and high-performance solutions that meet the needs of a fast-moving industry. The collaborative efforts between the teams of both companies will facilitate the transformation of these prototypes into obtained by acquiring fully-fledged products, bolstering INTEGRASYS' ability to address the ever-increasing demands of the competitive market landscape.

Vodafone and Amazon's Project Kuiper to Extend Connectivity in Africa and Europe

September 5, 2023 – Vodafone and Vodacom plan to use Project Kuiper's high-bandwidth, low-latency satellite network to bring the benefits of 4G/5G connectivity to areas that may otherwise be challenging and prohibitively expensive to serve via traditional fibre or microwave solutions. Project Kuiper will connect geographically dispersed cellular antennas back to the companies' core telecom networks. This means Vodafone and Vodacom will be able offer 4G/5G services in more locations without the time and expense of building out fibre-based or fixed wireless links back to the core networks. As part of the collaboration, Amazon plans to partner with Vodafone to roll out Project Kuiper's high-speed broadband services to unserved and underserved communities around the world. The companies are also exploring additional enterprise-specific offerings to provide businesses with comprehensive global connectivity solutions, such as backup service for unexpected events and extending connectivity to remote infrastructure.

Sat One Secures OneWeb Capacity for Australia and New Zealand

September 1, 2023 – OneWeb and Sat One, the Perth based satellite service company that provides telecommunications services to enterprise customers, announced today a multi-year, multi-million dollar partnership to deliver OneWeb's low Earth orbit (LEO) connectivity solutions across Australia and New Zealand. Powered by OneWeb's LEO satellite communications network, Sat One will be able to offer connectivity services designed specifically for the most remote Australian enterprises, including mine sites and remote communities. With its constellation of LEO satellites now fully built out, OneWeb is set to complete its rollout of global coverage this year, and the partnership enables Sat One to support the digital transformation of enterprises, communities, civil, and military government users, giving high-speed access to digital information, productivity tools, and cloud services.

BROADCAST

Eutelsat and Eurovision Services Sign New Long-term Partnership to Deliver Live Sports Events over Europe and MENA

September 19, 2023 – Eutelsat Communications announces that Eurovision Services has signed a new agreement, renewing their long-standing partnership, for capacity on several satellites including 7° East and 10° East, two leading orbital locations for professional video services. This multi-year agreement enables Eurovision Services (ES) to support the live transmission of major sports events to audiences in Europe, the Middle East and North Africa, via Eutelsat's fleet. Eurovision Services underpins the global media content value chain, from in-venue content-capture and pop-up media control rooms, to rock-solid hybrid network capabilities – encompassing satellite, fibre, and internet. ES services major sports federations, rights holders, and media companies to connect hundreds of millions of people to unmissable sports and events in HD and UHD resolution.

Es'hailSat Launches Playout Services to Empower Broadcast Excellence

September 16, 2023 – In a significant stride towards advancing the media landscape of Qatar and the Middle East & North Africa (MENA) region, Es'hailSat – Qatar Satellite Company announced the launch of state-of-the-art Playout Services tailored for television broadcasters. This initiative comes as a collaborative effort between Es'hailSat and leading technology innovators & experts, aimed at bringing the very best of broadcast management and delivery to Qatar and the MENA region. With a commitment to providing television broadcasters an unparalleled edge, Es'hailSat's Playout Services offer a comprehensive solution encompassing scheduling, content preparation, graphics integration, and seamless transmission. Broadcasting professionals across Qatar and the MENA region can now optimize their operations, ensuring an uninterrupted and engaging viewer experience. Leveraging cutting-edge automation, real-time monitoring, and 24x7 multi-lingual professional support, broadcasters can focus on crafting exceptional content while entrusting the intricate aspects of scheduling and delivery to our robust and reliable platform. As a result, audiences can look forward

to enriched programming, while broadcasters maximize their efficiency and impact.

Intelsat Delivers New Reliable Broadcast Connectivity Service

September 15, 2023 – Intelsat announced a new content distribution system that will use the internet to transport quality video content around the globe. The IntelsatOne IP service capitalizes on Intelsat’s decades of satellite and terrestrial experience to deliver reliability, customer service, global reach, content backup capabilities and scalability. IntelsatOne IP is designed as a global interconnected network powered by a software platform eliminating the need for hardware which makes for faster deployment. Using Intelsat’s hybrid terrestrial and satellite infrastructure broadcasters are also able to access the full Intelsat Global Media Network, bringing connectivity that traditional IP providers are unable to provide. This empowers media customers with a secure, global solution equipped with full network visibility, controlled, multi-destination routing management and enhanced end-to-end video management and streaming protection. The product is available today for customers to begin testing use cases. IntelsatOne IP will become commercially available as an operational service at a later date.

wedotv Launches FAST Platform on Eutelsat’s HOTBIRD Satellites for Audiences in Italy

September 15, 2023 - Global AVOD and FAST channel programmer and distributor wedotv is expanding its distribution strategy to include satellite platforms, with the launch of a new wedotv FAST channel platform for audiences in Italy via Eutelsat’s HOTBIRD satellites, at 13° East. Through this launch, wedotv will be able to enhance and extend their current reach across Italy to a larger audience of connected TVs, as well as to reach a new audience of non-connected TV viewers. Starting this month, wedotv will add a lineup of 30 FAST channels, including its own proprietary FAST channels, wedo movies, wedo big stories and wedo sports. Viewers with a connected TV will be also able to watch the AVOD content through wedotv via an HbbTV App, which is accessible via an embedded link. This will enable viewers to switch between the linear channel and streaming content. This client-centric, technology-agnostic approach, using satellite distribution to deliver internet content, enables wedotv to extend the reach of their FAST native content to audiences in hard-to-reach areas beyond terrestrial networks. The HOTBIRD satellites are the reference video neighbourhood for audiences in Italy.

Eutelsat and NationalChip Deliver Ground-Breaking Sat.tv Features on Popular Set-Top Box Chipset

September 14, 2023 – Eutelsat Communications and silicon chip maker NationalChip are bringing an enhanced Free-To-Air satellite TV viewing experience to millions of homes around the world, thanks to the integration of the Sat.tv services in a chipset that is widely used in set-top boxes around the world. Over 1000 Free-to-Air TV channels broadcast by Eutelsat are viewed by 120 million homes in Europe, the Middle East and Africa. And while the content offer has grown massively, it can be challenging both for broadcasters to target new audiences, and for viewers to find new content. To meet this demand, Eutelsat developed Sat.tv, an electronic program guide for Free-to-Air TV channels. The Sat.tv service delivers a uni-directional flow of information about free TV channels via satellite, to set-top boxes containing a Sat.tv-compatible chipset, giving users a more visual display of available content, including logos, channel line-ups and programme information. To make this enhanced TV viewing experience available on some of the most cost-effective set-top boxes in the market, NationalChip has integrated the Sat.tv functional specifications defined by Eutelsat, into the GX6605S chip. With over 100 million units shipped worldwide, this is the most popular chipset used in set-top boxes in the Middle East and North Africa region.

UKTV Expands Partnership with SES in Multi-Year Agreement

September 12, 2023 – Viewers across the United Kingdom and the Republic of Ireland will continue to enjoy their favourite TV programming as SES and UKTV agreed to extend their capacity agreement at SES’s key TV neighbourhood at 28.2 degrees East through the end of the decade, both companies announced today. In addition to the renewed transponder for UKTV’s bouquet of channels, the

agreement will see SES provide new uplinking and ground services and give UKTV the flexibility to add additional capacity to expand to more channels in the future.

Open Broadcast Systems Demonstrates OneWeb Video Contribution at IBC

September 11, 2023 – Open Broadcast Systems to demonstrate OneWeb Low Earth Orbit (LEO) video contribution on its booth (1.A40C) at IBC. Working with Network Innovations, OneWeb and Zixi, the company will deliver a live broadcast quality video feed from the Network Innovations facility in Essel, Netherlands to the IBC Show floor. This demonstration follows the company’s world-first use of OneWeb to deliver a UEFA Champions League match from the Faroe Islands in July. In addition to the company’s RIST (Reliable Internet Stream Transport) implementation, the company is announcing an in-house high performance SRT (Secure Reliable Transport) protocol implementation. Built around modern, event-driven software development practices, the SRT implementation is interoperable with existing third-party solutions at very low CPU loads.

LAUNCH / SPACE

OQ Technology Prepares for MACSAT Launch aboard Arianespace’s Vega This October

September 20, 2023 - Fresh from a successful €13 million Series A funding round, OQ Technology, the leading 5G IoT satellite operator, is thrilled to announce the forthcoming MACSAT launch with Arianespace’s Vega on 4th October 2023 (mission VV23). This pivotal step will further fortify its space and ground infrastructure, as well as expand its satellite coverage. OQ Technology's trailblazing 5G IoT payload equips MACSAT to deliver universal communication services, setting a foundation for a seamlessly connected world. Managed by the European Space Agency (ESA) and funded by the Luxembourg Government, the MACSAT mission is set to augment their 5G IoT capabilities. These advancements cater to pressing needs like greenhouse gas monitoring, supply chain sustainability, and earth observation. They serve pivotal government mandates and numerous sectors, including transportation, agritech, utilities, smart cities, mining, maritime, and energy/O&G.

Sidus Space Secures Position on Upcoming Bandwagon Mission

September 18, 2023 – Sidus Space, a multi-faceted Space and Data-as-a-Service company, confirms its plan to reallocate two LizzieSats to launch on an upcoming Bandwagon mission with SpaceX. The updated LizzieSat constellation configuration will advance cutting-edge Low Earth Orbit data collection and provide enhanced orbital flexibility for government and commercial customers. While initially planning to launch its first LizzieSat on Transporter-9 in Q4 2023, the Company has adjusted its launch manifest to take advantage of the opportunity to cover more populated areas and increase data revenue. The updated schedule targets a first launch in Q1 2024 followed by two LizzieSats on a Bandwagon mission in Q2 2024.

Firefly Aerospace Successfully Launches U.S. Space Force VICTUS NOX Responsive Space Mission with 24-Hour Notice

September 14, 2023 – Firefly Aerospace, an end-to-end space transportation company, today announced the company successfully launched its Alpha rocket and deployed the VICTUS NOX spacecraft following a 24-hour notice to complete final payload operations and mission preparations. Led by U.S. Space Force Space Systems Command’s (SSC) Space Safari Program Office and in close partnership with the Rocket Systems Launch Program, the mission advances the nation’s capability to rapidly respond to on-orbit needs during a conflict or in response to a national security threat. Upon receiving the notice to launch and orbit requirements from the U.S. Space Force, Firefly completed all final launch preparations, including trajectory software updates, payload encapsulation, transport to the launch pad, mating to Alpha, and fueling, within 24 hours. Alpha then launched at the first available window, 27 hours after receipt of launch orders.

Arianespace Signs Agreement with Intelsat for Launch of IS-45

September 13, 2023 – Intelsat again chooses Arianespace to deliver next generation system IS-45 delivering Ku- band fixed-satellite services. Intelsat IS-45 is the 67th satellite to be launched by Arianespace to the benefit of longtime customer Intelsat (since 1983). Arianespace today announced a contract with Intelsat to launch the IS-45 payload with Ariane 6. IS-45 will fly aboard an Ariane 6 (in its heavy version Ariane 64, shared with co-passengers). The launch target is first half of 2026. This year marks the fourth decade since Arianespace began its storied relationship with Intelsat. Arianespace launched Intelsat 507 aboard an Ariane 1 from French Guiana in October 1983, initiating a partnership that has stood the test of time, and five different variants of the Ariane rocket. IS-45 will be the third Intelsat payload awarded to Ariane 6 after IS-41 and IS-44. IS-45 weighs about 1 metric ton at launch and is designed and built by SWISSto12, based on the company's innovative HummingSat platform.

Telesat and SpaceX Announce 14-Launch Agreement for Advanced Telesat Lightspeed LEO Satellites

September 11, 2023 – Telesat and SpaceX announced a multi-launch agreement to deliver the Telesat Lightspeed constellation to Low Earth Orbit (LEO). Telesat has contracted 14 launches on SpaceX's Falcon 9, the most reliable and only reusable orbital rocket flying today, which will carry up to 18 Telesat Lightspeed satellites to LEO per launch. The launch campaign is scheduled to commence in 2026 and will take advantage of SpaceX's high launch cadence to rapidly deploy the satellites and enable Telesat to begin providing global service in 2027. Launches for the campaign will lift off from SpaceX's launch facilities in California and Florida. Designed from inception to serve the demanding, mission-critical connectivity requirements of enterprise and government users, the optically-linked Telesat Lightspeed network will provide multi-Gbps data links and highly secure, resilient, low-latency broadband connectivity anywhere in the world. With the August signing of MDA as the prime satellite manufacturer and all necessary launch contracts in place for global constellation deployment, Telesat is well-positioned to begin delivering unmatched, enterprise-class connectivity in late 2027.

Thaicom Contracts Airbus for a OneSat Flexible Telecommunications Satellite

September 11, 2023 – Thaicom Public Company Limited, a leading Asian satellite operator and space technology company, has selected Airbus for its new generation software-defined high throughput satellite. Airbus will provide one of its latest designed satellites – a fully reconfigurable OneSat. This Thaicom satellite will provide extended connectivity in Ku-band over the Asia-Pacific region for millions of users. Thaicom has launched and operated eight geostationary satellites. This is Thaicom's first flexible satellite, allowing for more adaptability on coverage, frequency and capacity which is crucial in such a dynamic region. Positioned in orbit at 119.5° East, this state-of-the art satellite will enable Thaicom to propose to other partner operators a share of its satellite's payload capacity, lowering their costs and still ensuring they have separate control of their individual payload capacity and flexibility. Airbus will design and manufacture the satellite, and also provide ground control segment components. Airbus plans to deliver the satellite in 2027.

Lockheed Martin's Transport Layer Satellites Launch as Part of the SDA's Tranche 0 Mission

September 2, 2023 – Ten Lockheed Martin-built satellites have successfully been deployed into low-Earth orbit (LEO) in support of the Space Development Agency's (SDA) Tranche 0 Transport Layer (TOTL) mission. SDA's TOTL is a proliferated LEO constellation that will demonstrate low-latency communication and provide a resilient network of integrated capabilities. The small satellites launched aboard a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California. Soon after liftoff, SDA confirmed separation of all 10 of the Lockheed Martin-built satellites from the launch vehicle. Each satellite incorporates a Terran Orbital bus and payload processors and is equipped with SmartSat™, Lockheed Martin's software platform that makes it easier to dynamically add and quickly change missions in orbit through simple app uploads. The satellites also host Link 16 radios to introduce a terrestrial-proven network in space.

EXECUTIVE MOVES

Northrop Grumman Elects Robert Fleming Corporate Vice President and President, Space Systems

September 21, 2023 – Northrop Grumman Corporation announces that its board of directors has elected Robert Fleming corporate vice president and president, Space Systems sector, effective October 9, 2023. Fleming will succeed Tom Wilson, who has chosen to take a new role in the company for personal reasons. Fleming is currently vice president and general manager of the Strategic Space Systems division in the Space Systems sector. Previously, he led the Space Systems strategy and business development organization. In his nearly 18-year career with Northrop Grumman, he has led different businesses and functions in many of the company's sectors. He began his career as an aerospace systems engineer.

Speedcast Names James Feger as Chief Technology Officer

September 6, 2023 – Speedcast has announced the appointment of James Feger as Chief Technology Officer for the company, focused on driving enhancements to the multi-path connectivity service that it delivers to global customers operating in areas with limited or no terrestrial connectivity options. Feger has more than 20 years of management experience in network design, security, technology operations, and virtualization technologies. He previously served as Senior Vice President and General Manager of the Service Provider business at F5, a \$3 billion-dollar technology company specializing in application security, multi-cloud management, fraud prevention and application performance. Prior to F5, he served in multiple technology leadership roles at CenturyLink, where he successfully developed and deployed virtualized services replacing traditional infrastructure at more than 50 locations around the world.

REPORTS

Lunar Ambitions Boost Space Exploration Funding as Investment Set to Reach \$33 Billion by 2032

September 28, 2023 – Global government space exploration funding hit \$26 billion in 2023 and is projected to surge to nearly \$33 billion by 2032. Key areas of growth, revealed in Euroconsult's latest 'Prospects for Space Exploration' report, include lunar exploration, LEO human spaceflight and Mars exploration. The emerging lunar exploration duopoly between the U.S.-led Artemis program and China's International Lunar Research Station (ILRS) is highlighted along with increasing private sector involvement.

NSR's Consumer and Enterprise Broadband via Satellite, 22nd Edition Report:

September 5, 2023 – NSR's *Consumer and Enterprise Broadband via Satellite, 22nd Edition report (CEBS22)*, formerly known as the VSAT and Broadband Satellite Markets (VBSM) report, stands as the industry's longest-running assessment and analysis of the VSAT market, presenting a comprehensive view of two major satellite communication applications: Enterprise VSAT and Consumer Broadband.

UPCOMING EVENTS

APSCC 2023, October 10-12, Kuala Lumpur, Malaysia, <https://apccsat.com/>

Satellite Innovation 2023, October 17-18, Silicon Valley, CA, USA
<https://2023.satelliteinnovation.com/>

ITU World Radiocommunication Conference 2023 (WRC-23), November 20 – December 15, Dubai, UAE, <https://www.itu.int/wrc-23/>

OTT SUMMIT, December 8, Singapore, <https://ottsummit.asia/>

Middle East Space Conference, January 8-10, Muscat, Oman,
<https://www.euroconsult-ec.com/euroconsult-events/middle-east-space-conference/>

Convergence India 2024, January 17-19, New Delhi, India, <http://www.convergenceindia.org>

PTC'24, January 21-24, Honolulu, Hawaii, USA, <https://www.ptc.org>



Global Space and Technology Convention, February 14-16, Singapore,
<https://www.space.org.sg/gstc/>

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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.