March-April, 2022

SPACE & SATELLITE

Updates from the SA-ME-NA Region and Beyond

Table of Contents

PSN Selects Hughes Jupiter Ground System for New Nusantara Lima Satellite

Indonesian telecommunications company PT Pasifik Satelit Nusantara (PSN) selected Hughes Network Systems' Jupiter ground platform for its Nusantara Lima satellite. Under the contract announced, a total of 11 Jupiter gateways will power 100 Gbps of capacity across Indonesia and nearby countries. This will be used to provide internet access to people living outside the reach of terrestrial broadband. PSN announced the Nusantara Lima satellite in March. Boeing Satellite Systems is building the satellite, which is planned for launch in 2023 on a SpaceX Falcon 9 rocket. It will augment the capacity of SATRIA-1 and have a capacity exceeding 160 Gbps. PSN also said that the satellite ground system includes gateways in Indonesian cities Banda Aceh, Bengkulu, Cikarang, Gresik, Banjarmasin, Tarakan, and Kupang. The Jupiter system very small aperture terminal (VSAT) platform is in use at more than half of all VSAT implementations worldwide, Hughes said. The Jupiter system was previously selected for the Satellite of the Republic of Indonesia (SATRIA), which is currently under construction, and the Nusantara Satu satellite (formerly known as PSN VI), which is now in service. PSN also uses Jupiter equipment for Community Wi-Fi hotspots across Indonesia. "Hughes has been an essential technology partner to PSN for many years, helping us turn our ambitions for connectivity in Indonesia into reality," said Adi Rahman Adiwoso, PSN CEO. "We have put the Jupiter system to the test on several satellites, transforming satellite signals into efficient and cost-effective solutions that change people's lives, and we will do so again with the Nusantara Lima."

Kacific Brings Ka-band Enterprise Backup to Asia-Pacific

Next-generation broadband satellite operator, Kacific says it has introduced Asia-Pacific's first HTS (high throughout satellite) Ka-band enterprise backup service, which is described as a service that protects organizations against outages that, it says, happen all too frequently. It is also, says Kacific, the first enterprise backup service in the Asia-Pacific region designed to take advantage of the speed, efficiency and flexibility of Ka-band satellite connectivity. Kacific Enterprise Backup provides what is described as an affordable on-demand, hot-backup package that allows organizations, factories, and enterprise branches that rely heavily on real-time business operations to continue with normal activities if their primary internet access is compromised. The service includes installation of a satellite dish at each site, and a choice of low-cost per-month, per-site backup plans depending on the organization's size and needs. Working like an insurance premium, a minimal fee is paid for the site to act as a backup. In the case of an outage, high-speed first-priority bandwidth can be instantly activated and a fixed fee will be charged. The advantages of Ka-band for enterprise backup, says Kacific, include the reuse of Ka-band spectrum over spot beams; this creates higher capacity than traditional, wide coverage area satellites. The solution also offers download speeds up to 70Mbps and upload speeds of up to 20Mbps. In addition, using a diversity site for uplink, Kacific Ka-band infrastructure is able to achieve up to 99.93% availability. Enterprise Backup is now commercially available to ISPs, telecom operators, businesses and governments in countries Kacific serves throughout Asia and the Pacific.

TPG Launches Business Satellite Services for Regional Areas

TPG Telecom has launched its business-grade national broadband network (NBN) satellite internet across Tasmania, regional Australia and surrounding islands. Launched as part of a new suite of enterprise services, TPG will be targeting its Business Satellite Internet services across sectors such as government, mining, energy, manufacturing, logistics and healthcare. "This is a huge lift in coverage for our enterprise customers and means no matter where you are on the land in Australia, we may be able to provide the speed and capacity your business needs to stay connected and productive," said TPG Telecom head of product enterprise, government and wholesale Tom Sykes. "Remote businesses with remote sites may now have the ability to access enterprise-grade connectivity which could unlock a new world of possibilities through the internet of things, more efficient safety and monitoring tools, automation, cloud services and critical business applications." TPG Telecom's Business Satellite Internet is available in four data packs offering allowances up to 1,000GB a month. Customers can also choose between three assurance service level options, as well as three bandwidth speed options. Additionally, the Business Satellite Internet can be deployed as an alternative connectivity option for customers searching for redundancy solutions to complement existing fixed connectivity. TPG Telecom's Business Satellite Internet is a fully managed connectivity service delivered via NBN's Sky Muster satellite. The satellite uses 84 spot beams to cover mainland Australia and Tasmania as well as five major islands including Christmas, Lord Howe, Norfolk, Cocos and Macquarie Islands. Recently, TPG Telecom bagged its first customer in Moreton Bay Regional Council to use its private cloud service in Brisbane, announcing the deal earlier this month.

French Firm Invests in Satellite Internet

A French company is planning to invest €25 million (about Sh64 billion) in high-speed satellite broadband in a space of 15 years from now. Konnect Broadband Tanzania Limited, a subsidiary of Global Eutelsat Group launched the internet service in the country yesterday. Tanzania is among countries in Sub-Saharan Africa that will benefit from the new satellite broadband with speeds of up 100 megabits per second, thanks to the move. "We are investing €250 million in 40 countries in Africa whereby 10 percent of the capacity of the satellite is in Tanzania," the company's general manager in Africa, Mr. Philippe Baudrier, said during the official launch. As a direct result of rolling out their service, which is meant to up the internet penetration in the country, he said, some 100 jobs are expected to be created though partner sales, service and installation. As of January, this year, Statistics from Tanzania Communications Regulatory Authority (TCRA) shows that the internet penetration reached 50 percent with 30 million people currently using the internet. "We are not here to compete, but compliment what others are doing. Based on our research there is a need for high-speed internet everywhere," said Mr Baudrier. He revealed that Konnect internet services are designed to bolster the development of various economic sectors such as farming, tourism, education and healthcare. According to him the company has since October 2021 been in the country setting systems before the official launch. Their services are already in the market. Speaking during the launch, Hotel Association of Tanzania chief executive officer Kennedy Edward said: "Tanzanian tourism entrepreneurs need reliable internet to deliver a quality service, to develop skills and to unlock new markets." "Internet provider can help support the tourism sector by offering internet connection to both guests and employees at lodges, situated beyond the reach of traditional networks," he said. Federation of Miners Association of Tanzania (Femata) vice chairman Peter Kabepela said: "Connecting Tanzania remote mines to satellite internet will increase their productivity and contribute to securing their perimeter." The executive director for National Networks of Farmers Groups, Mr Stephen Ruvuga, said: "Connecting farms to satellite broadband will allow farmers to collect valuable data such as soil moisture as well as monitoring weather."

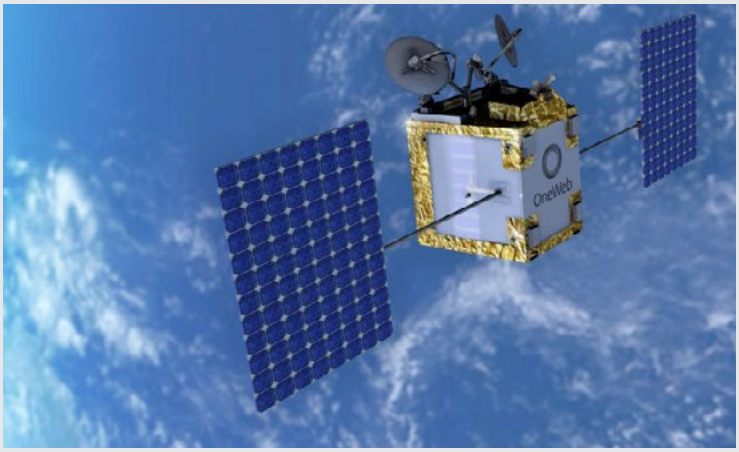
Hughes Wins Bid for 5G/Satellite Network Under DoD Experiment

Hughes Network Systems has scored an $18 million contract to create a satellite-enabled 5G wireless network at Whidbey Island Naval Station, Washington, as part of the Pentagon's high priority experimental effort to bring modern, high-speed connectivity to bases around the country, the telecommunications firm announced. "Over the course of this three-year project, we will demonstrate for the U.S. Department of Defense how 5G infrastructure from Hughes — including a packet processing core, radio access, edge cloud, security and network management — can power the resilient networking necessary to transform base operations," said Rajeev Gopal, Hughes vice president for advanced programs, in the company's announcement. "Today's walkie-talkies, paper-trails and telephone conversations will be replaced with a private, secure 5G network over which air station processes and systems will be automated and continuously optimized," he added. Hughes will serve as the prime contractor developing the standalone 5G network to support operations, maintenance and flight traffic management at the naval air station. The new 5G network will utilize spectrum from DISH Wireless, and will leverage satellites in both Geosynchronous and Low Earth Orbits (GEO/LEO). In GEO, the network will tap the JUPITER high throughput satellites (built by Hughes' parent firm EchoStar), including the new, ultrahigh density JUPITER 3 that will extend domestic coverage from coast to coast and provide download speeds of over 100 Mbps, Gopal told Breaking Defense in an email. "For LEO, Hughes has already tested the OneWeb LEO in the challenging Arctic area," he added. Once the full constellation is on orbit, "OneWeb LEO and its inherent latency advantages for 5G networks would create a global service for maximum coverage over oceans and landmasses." OneWeb's launch schedule hit an unexpected challenge this month, with Russia refusing to let the systems launch as planned on a Soyuz rocket unless the firm pledges that no country will use its internet satellites for military purposes. On March 4, Russia removed a Soyuz carrying OneWeb's next 36 satellites from the launchpad at Baikonur Cosmodrome in Kazakhstan, which is managed jointly by the Russian Aerospace Forces and Roscosmos, Russia's space agency. However, an alternative appears to have been found: OneWeb announced today that the company and SpaceX have entered into an agreement that will enable OneWeb to resume satellite launches. The first launch with SpaceX is anticipated in 2022, but the full extent of the launch agreement hasn't been disclosed. OneWeb currently has 428 satellites on orbit, or 66 percent of its planned constellation of 648 satellites. Cybersecurity is another key attribute that the Hughes 5G network will provide, Gopal explained in his email. "Security and management are key to fully benefiting from 5G capability for an enterprise or private implementation. For DoD applications, 5G needs high levels of cybersecurity. Stand-alone 5G networks, like the Hughes network, are inherently more secure than older networks where 5G is added onto the existing network," he said. "Hughes is using a modern Zero Trust Architecture (ZTA) that provides fine grained authentication and encryption even within the network parameters. The Hughes architecture is also compatible with Commercial Solution for Classified (CSfC) that has been designed by NSA." The new 5G contract is an Other Transaction Agreement (OTA), issued through the Information Warfare Research Project (IWRP) consortium of industry and academia, and aimed at helping the Navy and Marine Corps develop and mature technologies related to information warfare. But the effort is actually part of the Defense Department's multifaceted 5G experimentation initiative, called the Next Generation Information Communications Technology program, that involves numerous service bases — in this particular case, Joint Base Pearl Harbor-Hickam.

Starlink Receives Romanian Authorization

Starlink, the Low Earth Orbit (LEO) satellite broadband provider backed by Elon Musk's SpaceX venture, has been authorized in Romania, Ziarul Financiar reports. The announcement was made on LinkedIN by Sabin Sarmas, Chairman of the IT&C Commission of the Chamber of Deputies. 'Starlink, Elon Musk's famous satellite internet service, has also been licensed in Romania. What does this mean for us Romanians? That we are one step closer to having internet access in any corner of the country, no matter how isolated it may be, because in addition to high-speed fiber-optic internet, we will also have satellite internet on a large scale,' Sarmas wrote in his LinkedIN post. According to the National Authority for Management and Regulation in Communications (ANCOM), Starlink was issued a license to provide internet access services on 2 March. Although the operator has yet to begin taking orders in Romania, customers are invited to pre-order the service by paying a deposit of USD99.

OneWeb Seals Deals with SpaceX, Eutelsat, Speedcast, Telstra



OneWeb, the Low Earth Orbit (LEO) satellite communications operator part-owned by the UK government, has entered into an agreement with US-based SpaceX to enable it to resume satellite launches. OneWeb had cancelled an existing agreement with Russian space agency RosCosMos following Russia's invasion of Ukraine, and stopped launching satellites from Kazakhstan's Baikonur spaceport, leased to Russia. The first launch with SpaceX is anticipated in 2022 and will add to OneWeb's total in-orbit constellation that currently stands at 428 satellites, or two-thirds of its full planned fleet. OneWeb has so far activated its network for remote parts of the globe above 50 degrees north, with early partners already initiating services. OneWeb has meanwhile sealed a multi-year global Distribution Partnership Agreement (DPA) under which its second largest investor, French-backed geostationary (GEO) satellite operator Eutelsat Communications, will 'commercialize OneWeb services across key verticals including Maritime, Aviation, Enterprise, Telcos and Government.' Furthermore, US-based international satellite broadband provider Speedcast also announced the signing of a DPA with OneWeb, as it plans to integrate OneWeb's LEO satellite connectivity into the Speedcast Unified Global Platform (UGP), bringing LEO services for Speedcast's energy and enterprise customers in mid-2022 followed by maritime mobility in 2023. LEO joins GEO, Medium Earth Orbit (MEO) and 4G/5G as connectivity options on the UGP. Speedcast has also recently been commissioned to develop critical ground infrastructure for OneWeb to support the fleet operator's Earth Station requirements in parts of Latin America. In yet another deal this week, it was announced that Australian telecoms group Telstra will build three dedicated teleports across Australia to provide satellite gateway services for OneWeb in the Southern Hemisphere, under a ten-year agreement. London-based OneWeb's investors include: India's Bharti group (USD1 billion investment), Eutelsat (USD715 million, having upped its stake from 17.6% to 22.9% in October 2021), the UK government (USD500 million), Japan's SoftBank (USD350 million), South Korean electronics firm Hanwha (USD300 million) and US satellite services operator Hughes Network Systems (USD50 million).

NCC to Open Applications for Would-Be Providers of LEO Satellite Services in June 2022

Taiwan's National Communications Commission (NCC) has confirmed that it will begin accepting applications from companies which aim to offer low earth orbit (LEO) satellite services in June 2022. The Taipei Times reports that the plan to open applications comes after the regulator last week approved draft rules governing the appropriation and assignment of radio frequency bands for satellite communications. These rules are being consulted on for a 60-day period, with the NCC set to host information sessions in April or May, ahead of announcing its final regulatory framework. It is understood that the Executive Yuan, the executive branch of the Taiwanese government, has released four additional frequency bands for use by geostationary and non-geostationary satellite communications service providers, namely: 10.7GHz-12.7GHz; 13.75GHz-14.5GHz; 17.7GHz-20.2GHz; and 27.5GHz-30.0GHz. Notably, the 27.9GHz to 29.5GHz band is used by Chunghwa Telecom, Far EasTone Telecommunications, Asia Pacific Telecom and Taiwan Mobile for 5G and it was reported that satellite service operators that plan to acquire bandwidth in that range will be required to reach agreements with those operators to avoid interference between the two communications systems. Meanwhile, to be eligible to provide LEO satellite services applicants must be registered in Taiwan and Taiwanese-managed, according to the NCC, while direct shareholding by foreign parties must not exceed 49%, with indirect shareholding by foreigners limited to 60%. Foreign operators will, however, be permitted to form partnerships with Taiwanese companies to file applications, the NCC noted. Three overseas LEO satellite operators were reported to have already inquired about regulations in Taiwan with these named as SpaceX, OneWeb and Telesat.

Philippines to Host Spacex's First Starlink in Southeast Asia

The Philippines announced its plan to host US private space company SpaceX's Starlink project, making it the first Southeast Asian country to avail of the technology for better telecommunications services. Trade Secretary Ramon Lopez said SpaceX's proposed project will provide Internet services in the Philippines using its Low Earth Orbit satellite network constellation called Starlink. Lopez said the launch of SpaceX's Starlink in the country will enable a much faster broadband speed, better connectivity, more capacity for telecommunications service, and more affordable rates for consumers, particularly in areas where connectivity has been difficult or impossible. He said preparations are underway for SpaceX's registration and the project is expected to be finalized before Philippine President Rodrigo Duterte steps down on June 30 after completing a six-year presidential term. Discussions on establishing the SpaceX project in the country started last November. Lopez said the recent signing of the amended Public Service Act, which allows up to 100 percent foreign ownership of public services in the country, was a critical factor in its decision to invest. SpaceX is currently establishing a local Filipino entity that will be its wholly-owned subsidiary and is targeting to deploy three gateways in the first phase.

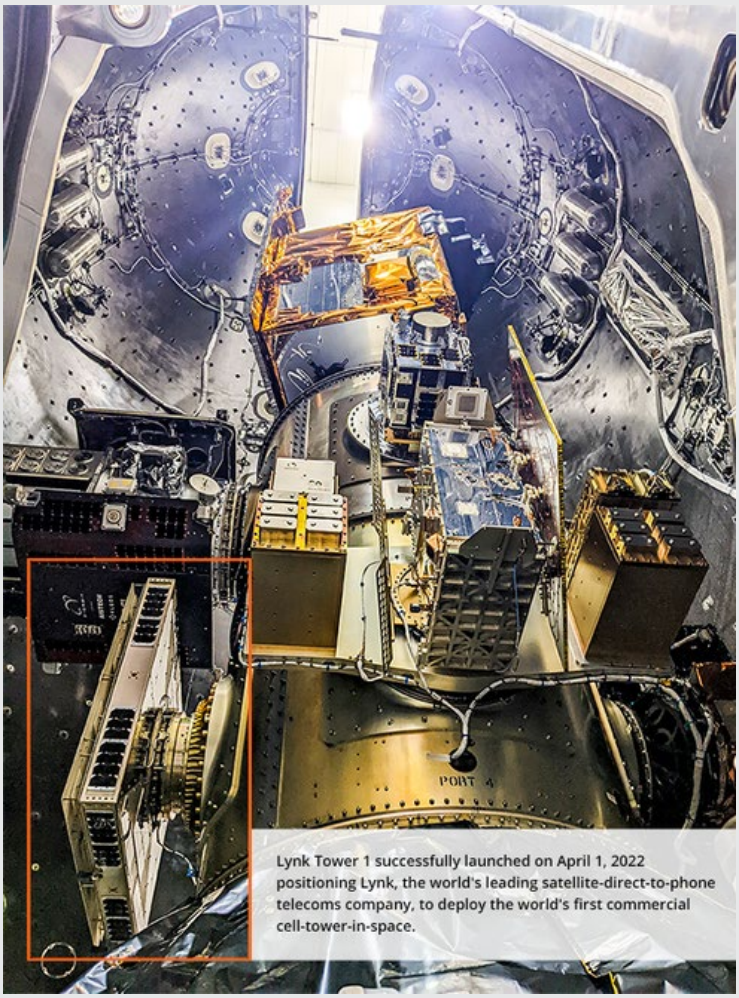
Orange Tests Satellite Technology to Boost Coverage in Africa

Orange is planning to use satellites to plug coverage gaps in one of its African markets, with a successful trial resulting potentially in a full rollout of the technology across its footprint. In a statement, US-based satellite company AST SpaceMobile revealed a non-binding memorandum of understanding with Orange, to examine the opportunity for the operator to test the company's technology in an unspecified African country. The test will use AST SpaceMobile's BlueWalker 3 satellite which beams directly to phones via 3G frequencies. It claimed the satellite is the first and only space-based cellular broadband network designed to be accessible directly by standard mobile phones. The satellite company said the test "paves the way" for a potential agreement to serve more Orange subscribers with the technology, orange has over 220 global subscribers. "AST SpaceMobile's satellite constellation could revolutionize how mobile subscribers connect. We look forward to working with AST SpaceMobile to explore expanding Orange's service offerings to geographic regions where it is difficult to build out cellular infrastructure," said Orange International Networks EVP Jean-Luc Vuillemin. "AST SpaceMobile seeks not only to fill cellular broadband coverage gaps for millions of existing subscribers, but also to extend mobile service to areas which currently have little to none at all," added AST SpaceMobile Chief commercial officer Chris Ivory. Other backers of AST SpaceMobile includes Rakuten Mobile, Vodafone and American Tower.

French Court Annuls Starlink License

France's highest administrative court revoked a decision by Arcep to grant frequencies to SpaceX's low Earth orbit (LEO) satellite broadband service Starlink, stating the French telecoms regulator had not carried out the correct proceedings. Arcep in February 2021 authorized Starlink to use two frequency bands to provide satellite-based broadband services in France. However, the Conseil d'Etat quashed the regulator's decision after it was challenged in court by two environmental groups. In its ruling published, the court noted Arcep failed to carry out a public hearing before granting the frequency licenses. Such a hearing would have been a legal requirement because the decision to grant the licenses to Starlink "could impact the market of access to high-bandwidth internet and affect the interests of end users", the court stated. Reuters reported Starlink is yet to comment on the ruling. Starlink had been authorized to use the frequencies 10.95GHz to 12.70GHz for space-to-Earth and 14GHz to 14.5GHz for Earth-to-space transmissions.

Lynk Announces Successful Deployment of Commercial-Ready Cell-Tower-in-Space



Lynk Tower 1 successfully launched on April 1, 2022 positioning Lynk, the world's leading satellite-direct-to-phone telecoms company, to deploy the world's first commercial cell-tower-in-space.

Lynk Global, Inc., the satellite-direct-to-phone telecoms company, announced the successful launch, deployment, and initial on-orbit check-out of Lynk Tower 1. The spacecraft is the company's sixth 'cell-tower-in-space' satellite and is now in position to become the commercial cell-tower-in-space. Lynk Tower 1 is the satellite covered by Lynk's application to the Federal Communications Commission (FCC) for a global commercial license to operate a satellite direct-to-standard-phone service. "With the launch of Lynk Tower 1, Lynk is positioned to begin commercial service later this year and provides the true satellite-direct-to-phone service to citizens across the globe," says Charles Miller, CEO and co-founder of Lynk. "For our flagship carrier partners, news means that we are only months away from helping them solve the world's '0G Problem' and enabling their subscribers to connect everywhere." The technology in Lynk Tower 1 is an upgrade of Lynk's fifth satellite, which connected to thousands of unique devices in the Fall of 2021, including smartphones, feature phones, and myriad cellular IoT devices such as cars, trucks, iPads, and John Deere tractors. Lynk Tower 1 was designed and constructed at Lynk's Falls Church, Virginia facilities. It incorporates significant improvements in power systems, reaction wheels, star trackers, Ka-band radios, and upgrades to Lynk's cell tower base station software stack. These improvements derive from Lynk's previous five test flights and are the result of the company's in-house 'rapid-do-learn-loop' satellite development process. "Most companies take years to design and test new spacecraft concepts. Lynk's spacecraft development process leverages a rapid-do-learn-loop strategy where we quickly iterate and fly new spacecraft technologies several times a year. We learned a ton from our fifth satellite in late 2021. Those lessons have already been implemented in our sixth satellite," states Tyghe Speidel, CTO and co-founder of Lynk. "Many told us this was impossible. It's not. This technology is now very real, with three more satellites launching in the next six months as we roll out initial commercial services." Today, only 10% of the world's surface is covered by terrestrial mobile connectivity. This means that 90% of the planet is in "coverage black spots," otherwise known as "0G". Over three billion people per year with a mobile phone experience extended periods of disconnectivity. Another billion people per year refuse to buy their phone because they don't have mobile coverage where they live and work. 0G is a problem for four billion people. The launch of the commercial cell-tower-in-space enables Lynk to begin solving the world's "0G Problem." Lynk Towers 2, 3, and 4 are already under construction and will also be launched in 2022. Lynk Towers 1-4 will allow millions of mobile phone owners to connect to a satellite using a commercial service provided by their mobile network operator (MNO). Lynk has signed nine contracts with MNOs to date and plans to begin global commercial service in 2022 with a dozen flagship operators.

Greek Satellites with Revolutionary Laser Technology Set for Space

A new generation of Greek satellites with revolutionary laser technology is in development according to Hellas Sat telecommunications CEO Christodoulos Protopapas. Speaking with radio station Praktoreio 104.9 FM, Protopapas said the design of the new generation of Hellas Sat telecommunications satellites has begun and the new versions will incorporate "revolutionary technologies, satisfying the much higher demands for data transmission speeds and security in communications." The design will include the use of laser optics, "something groundbreaking for the sector", and that the decision has already been made to launch either one large or two medium-sized new satellites into the orbital position occupied by Greece and Cyprus (39th eastern meridian in the geostationary satellite orbit). According to Protopapas, Hellas Sat 5 and 6 will be "satellites with an innovative payload using optical telecommunications", adding that a first cooperation protocol with the German firm OHB System AG has been signed, laying the foundations for a very innovative system for space technology, that will use laser beams from geostationary orbit to provide high speed telecommunication links. There will also be an effort to use the Helmos Observatory in Greece to implement the new satellite technology solutions, in collaboration with the Greek government and the Hellas Sat installations in Cyprus, where special permits have already been received for the installation of new optical telecommunications hubs for satellite communication using this technology. The benefits will include a massive increase in speed, from 100Gbs at present to several thousand Gbs, as well as greater security. "With two laser beams one could easily link two countries at high speed, something that will not be done with our familiar satellite 'dishes' but with optical means – telescopes. We are entering a new generation of telecommunications while – very importantly for national security – laser communication from a satellite at 36,000 kilometers cannot at that point be targeted by an enemy action nor disrupted by interference," he said. Protopapas also revealed that Hellas Sat, in collaboration with the Greek and Cyprus governments, was jointly submitting a proposal to the European Quantum Communication Infrastructure (EuroQCI) program, while one possible use of the new satellites will be to provide a rapid communication link to Gateway, the new space station in orbit around the Moon.

SES Speeds Up C-Band Clearing; Verizon to Gain Early Access to 5G Spectrum

Satellite operator SES has signed an agreement with Verizon to expand the US telco's access to a portion of 5G-suitable 3700MHz-3800MHz C-band spectrum in important regions across the US earlier than the relocation deadlines previously set out by the Federal Communication Commission's (FCC). SES previously completed its Phase I accelerated C-band clearing – ahead the first FCC deadline of 5 December 2021 – earning almost USD1 billion in accelerated relocation payments. To meet the Phase II deadline (5 December 2023), SES is already working to relocate its existing services from the 3700MHz-4000MHz band and complete equipment changes for its Incumbent Earth Stations across the entire contiguous US, earning an additional USD3 billion in accelerated relocation payments in the process. In a separate press release, Verizon notes that the accelerated C-band clearing timetable will allow it to launch 5G in at least 30 additional 'major population centers this year, including the likes of Atlanta, Denver, Baltimore and Washington, DC.

Inmarsat Selects Sandvine's Network Intelligence in Its OpenStack Private Telco Cloud

Inmarsat, the world leader in global, mobile satellite communications, has chosen Sandvine's Application and Network Intelligence in its OpenStack Private Telco Cloud. The three-year deal will support Inmarsat's work in building out its ORCHESTRA network – a first of its kind service for global mobility and government customers. ORCHESTRA is a dynamic mesh network combining ELERA (L-band) and Global Xpress (Ka-band) satellite networks, with terrestrial 5G as well as targeted low earth orbit (LEO) satellite capacity. Building on an existing seven-year relationship for network policy control between the two companies, the new contract spans Flexible Policy and Traffic Management, use cases for Satellite Networks, as well as Sandvine's ScoreCard, Insights exports, cloud-optimized Active Logic Hyperscale Data Plane, and Maestro Policy Engine. Bringing Sandvine's machine learning-based application classification and single-pane visualization into the cloud will enable Inmarsat to enhance traffic management capabilities and customer experience with greater scalability and lower costs. Our relationship with Inmarsat started with network policy control in 2015, and has since evolved towards new 5G network architecture for emerging 5G and satellite services. By migrating to our ActiveLogic Hyperscale Data Plane, Inmarsat can roll out new services that meet rapidly changing customer and market demands, and deploy use cases such as Network Optimization, Heavy User Management, Video Streaming Management, Wholesale and Peering Link Management, and Usage-Based Services.

Starlink Hits 250,000 Subs Milestone

Starlink – the Low Earth Orbit (LEO) satellite broadband provider backed by Elon Musk's SpaceX venture – has revealed that it is now serving around 250,000 subscriptions 'across consumer, enterprise and many businesses. Speaking during a panel discussion at the Satellite 2022 conference in Washington, DC this week, Jonathan Hofeller, VP of Starlink commercial sales at SpaceX, said that while Starlink is best known for its consumer broadband service, it is also working to provide connectivity for other sectors, including the aviation industry. SpaceNews quotes the executive as saying: 'Connectivity on airplanes is something we think is ripe for an overhaul. The expectation has changed faster than the technology has changed ... We're designing a service where every single passenger on that plane can stream simultaneously.' The SpaceX seeks to become the world's first high speed, low-latency satellite ISP, coordinating the largest fleet of operating satellites to deliver a consistent broadband service to the most disconnected areas. In March 2018 SpaceX was granted authority by the Federal Communications Commission (FCC) to deploy and operate a non-geostationary orbit satellite system comprising 4,425 satellites operating in the Ku- and Ka-bands for the provision of a fixed-satellite service constellation.

Rivada to Launch 600 LEO Satellites in 2024

Rivada Space Networks has disclosed plans to launch a constellation of 600 Low Earth Orbit (LEO) communications satellites in the coming years. Deployment will start in 2024 with full constellation deployment expected by mid-2028. The company seeks to provide secure, global, end-to-end enterprise-grade connectivity for the telecoms, enterprise, maritime, energy and government services markets. Rivada Space Networks has been established by US-based Rivada Networks and will be based in Germany.

Thuraya Launches Push-to-Talk Communications Solution

Thuraya Telecommunications Company, the mobile satellite services subsidiary of the UAE's flagship satellite solutions provider, Al Yah Satellite Communications Company PJSC ("Yahsat" or, together with its subsidiaries, "the Group") listed on the Abu Dhabi Securities Exchange ("ADX") under (SYMBOL: YAHSAT) (ISIN: AEA007501017) today announced that it has launched its new IP-based radio communications solution, Thuraya Push-to-Talk (PTT). Thuraya PTT has been developed with Cobham SATCOM, a market-leading provider of satellite communications solutions to the maritime and land markets. The solution will enable users across a wide spectrum of industries to extend the range of their voice communications beyond line of sight (BLOS) wherever their assets and teams are located. Thuraya PTT is an IP-based radio communications solution that works in conjunction with any Thuraya Broadband terminal to establish a private network. It gives users the ability to combine and integrate different technologies such as 3G/LTE/LMR (Land Mobile Radio) via Thuraya's advanced satellite system for seamless voice and data communications. The new solution has been designed so that it is simple to use and guarantees secure interoperability among multiple users with different communication systems on land and at sea. The solution manages communications from multiple devices and locations and provide real-time, uninterrupted switching between satellite, cellular and LAN, ensuring cost efficient and reliable connectivity. Thuraya PTT is designed for mission critical operations to support organizations in remote areas that often struggle with a lack of reliable connectivity - particularly when there is an urgent need to communicate across different areas, countries or continents. Thuraya's PTT service enables organizations to overcome this challenge, enhancing overall workforce productivity and safety as a result. Sulaiman Al Ali, Chief Executive Officer at Thuraya, said: "We are proud to announce the launch of the Thuraya Push-to-Talk solution today. Satellite connectivity and push-to-talk technology will provide unparalleled support to a wide range of sectors—most of which are currently being served and supported by Thuraya—by boosting efficiency, safety and security for troops and staff operating on-the-ground. The market has clearly shown a demand for PTT services which enables users to communicate through a single solution. We anticipate that market potential for such a service will continue to grow." "Our partnership with Cobham SATCOM has been a key component of this successful launch. It has enabled us to broaden and enhance our portfolio offering by creating a platform for further innovation and development of features and applications to increase our global market share. We're looking forward to more collaborations with Cobham SATCOM and reaching more milestones of this nature in the near future," he added. The global PTT (incl. hardware, solutions and services for all network types) market size is set to grow from USD 29.2 billion in 2021 to USD 45.2 billion by 2026, at CAGR of 9.1 % during this period, with the sectors of Public Safety, Government, Energy and Utilities occupying a significant proportion of growth. In addition, the global hybrid-satellite cellular terminal market is expected to reach around USD 700 million by 2031, with a CAGR of 22.81% during the forecast period 2021-2031. Thuraya PTT extends legacy push-to-talk capabilities to hybrid data networks such as terrestrial cellular networks where available, supplemented by the Thuraya satellite network where no terrestrial network coverage is present. With no user intervention required, the system automatically routes voice and data traffic via the least expensive and most reliable network available.

Swedish Regulator Promotes Satellite Broadband to Boost Rural Coverage

The Swedish Post and Telecom Agency (Post & Telestyrelsen, PTS) says that satellite broadband will need to play an important role in helping the country meet its target of having a minimum 30Mbps connection available to every household by end-2025. The regulator says that while satellite services are underused today, with just 150 subscriptions, operators should continue to raise customer awareness, particularly in rural areas which will not be covered by commercial fiber rollouts. TeleGeography's GlobalComms Database notes that under its 'Completely Connected Sweden 2025' program the country aims to have 98% of households covered by 1Gbps services by end-2025, with a further 1.9% to have access to at least a 100Mbps connection and the remaining 0.1% to be reached by a minimum 30Mbps service.

Lacuna's IoT Network to Offer LoRaWAN Direct-to-Satellite Connectivity

The idea is for satellite coverage to fill connectivity gaps in hard-to-reach areas that are without cellular or Wi-Fi signals. It is planned for the service to be available to customers and distribution partners in Q3 2022. Asset tracking, fleet management and data collection, globally, are seen as target applications. It will use LR-FHSS (Long Range-Frequency Hopping Spread Spectrum) technology, which has been designed for long-range and large-scale communication scenarios such as satellite IoT. The on-orbit operation has been validated by Lacuna through several years of their own sub-GHz ISM operations, and is now also being made available using Omnispace's licensed, 2GHz S-band spectrum rights. Basically, the idea is to integrate both companies' infrastructure to allow devices to connect between existing terrestrial networks and previously un-connected regions around the world. Lacuna Space is a UK and Dutch company – headquartered at Rutherford Appleton Laboratory Harwell Campus in Didcot, pictured right – that provides low-cost global connections, for short data messages to sensors and mobile equipment. The company describes it as an ultra-low cost tracking and detection service. Based in Washington D.C, with access to satellites and ground stations, Omnispace provides a 5G-based global cellular network via a non-geostationary orbit satellite constellation (MEO and LEO), and is eyeing the IoT market. "Omnispace is reimagining mobile communications solutions for users by employing standards-based solutions to deliver global, real-time connectivity," said Ram Viswanathan, president and CEO for Omnispace. "We're pleased to be working with Lacuna to introduce this new enterprise-class service, which is part of our broader vision to deliver seamless terrestrial and satellite communications." According to Lacuna, its initial set of sensors are smaller than the palm of a hand and can connect over satellite for several years off a single battery charge. "We are happy to announce this agreement with Omnispace which accelerates getting our technology to market and enables us to start delivering our IoT services around the globe," said Rob Spurrett, CEO of Lacuna. "Our customers will be able to access Lacuna's IoT service directly from inexpensive, battery-powered LoRa devices to extend connectivity to even the most remote areas of the world." Earlier in the year, Lacuna Space and Semtech trialed extending the coverage of LoRaWAN by adding IoT-to-Satellite connectivity. Semtech – which is the owner of the underlying Long Range modulation technology – has their radio silicon in proprietary radio links. It has become the foundation technology on which LoRaWAN protocol has been built by the LoRa Alliance (with 500 member companies, of which Lacuna is one). "We have trials and demonstrations underway in many countries and regions that were previously thought to be inaccessible to IoT," said Lacuna Space CEI Rob Spurrett back in January." In competition with Omnispace, other companies looking to provide satellite-based 5G and broadband networks include Elon Musk's Starlink, Jeff Bezos' Project Kuiper, the Lausanne-based Astrocast and the UK government-owned OneWeb. For Lacuna, competition in the Satellite IoT area include Skylo, a satellite-based narrow-band IoT specialist that uses Inmarsat, as well as Hiber and Fleet Space Technologies.

Hispasat Gets In Higher Orbit With Agreement to Acquire AXESS Networks

Just weeks after Spanish satellite-based communications operator Hispasat entered a joint venture to offer a high-capacity portable broadband system in North America and took the full share capital of Hispamar Satélites in Brazil, it has accelerated its growth with an agreement to acquire teleport operator and satellite services provider AXESS Networks. Founded in 2019 from two well-established companies in Europe and Latin America, AXESS Networks provides turnkey solutions, operating teleports in Germany, Colombia, Mexico, Peru, Saudi Arabia and the United Arab Emirates. It currently has a team of more than 200, operating about 8,000 sites in more than 50 countries on four continents. It has a broad customer base in industrial and corporate sectors related to telecommunications, oil and energy, and mining, among others, with critical operations in remote areas where service resilience and quality are extremely important. For Hispasat, the acquisition of AXESS Networks is part of the actions defined in its 2020-25 Strategic Plan, which aims to transform the company into a satellite solutions and services provider in its target markets. This sees greater involvement of Hispasat in the managed services value chain in order to increase its proximity to customers and be able to adapt and quickly develop its products in a sector that is experiencing a major technological boom. The acquisition implies a capital value of $96m for AXESS Networks and is designed not to affect the company's activities. After closing the deal, it will maintain its operations, management, work teams and relations with customers and suppliers, while the agreement aims to allow Hispasat to optimize its offering in areas such as the extension of cellular networks via satellite, connectivity networks for corporate clients and the digitization of remote areas in countries with large technological gaps. It will also enhance the development of technology for emerging markets, such as the internet of things or satellite 5G networks. The advantages of the merger will be especially notable in Latin America, a region where both companies maintain a significant portion of their business. "We are very pleased with the agreement reached with AXESS Networks, an action that responds to the increasingly essential collaboration among industry players with the aim of meeting society's demands for connectivity," said Miguel Ángel Panduro, CEO at Hispasat. "In recent years, several operations of this type have occurred in the sector and our partnership with AXESS Networks will provide us with optimum strategic positioning in two areas that have huge potential for growth in satellite communications – Latin America and the B2B solutions market." Mauricio Segovia, CEO at AXESS Networks, added: "The merger of AXESS Networks with Hispasat represents a major leap for the company, since it demonstrates great support from one of the industry's most relevant players and it allows us to integrate and strengthen the joint value proposition towards our markets. With this operation, we begin to form part of a leader that creates trends in the market and whose projects have a clear social background."

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